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THE PUBLIC, THE PRIVATE AND THE COMMONS: CHALLENGES OF A JUST GREEN TRANSITION

Scientific Texts of Students Participating in the Summer School of Political Ecology 2024

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Contents

Introduction

The Green Transition unfolds in different forms, involving different societal actors pursuing their interests through different discourses and conceptual solutions. For example, in the energy field, there are actors advocating for nuclear power, on the one side, and actors advocating for renewable energy, on the other; in the field of transport actors advocating for the electrification of car transport and actors supporting the development of public transport; in the field of agriculture between actors advocating sustainable food production and actors who support industrial food production, etc. An important dividing line between the actors taking part in the green transition is the public-private divide, which has gained its political and ideological meaning decades ago by neoliberal politics. In everyday debates, this divide is perceived as the market-state opposition and real social relations are pushed into the background and remain hidden from the everyday eye. The fusion of the meanings of the state, the public, and the private enables private interests to be promoted, market mechanisms strengthened and through the mechanism of public-private partnerships liberalization to arise.

To achieve just green transition for different socially positioned communities, to enable people to make decisions about the conditions of their own lives, namely to make communication and decision-making processes more democratic and not to leave important decisions in the hands of the few, the green transition debates need to be broadened and shifted from techno-managerial solutions and the established public-private partnerships to community practices that go beyond statist frameworks and private interests. Diverse practices and movements are emerging as an alternative for a just green transition, democratically oriented and committed to the collective good and environmental sustainability attempt to bring together large numbers of people and different so-

cietal groups; initiated from below new forms of solidarity, energy cooperatives, environmental trade unionism, etc., are breaking new ground. From this perspective, the green transition emerges as a question of transforming the organization of the society itself as a whole, and not just as a technological issue or a question of policy mechanisms. The participants of the summer school addressed and discussed these questions from different perspectives during the lectures, seminars, and workshops.

The International Summer School of Political Ecology 2024 addressed the challenges of just green transition with emphasis on and through consideration of the public, the private, and the commons. The summer school hosted students from all over the world, 16 students (Master's degree and PhD students and candidates) took part in the accredited program of the summer school and presented their research work at the panel discussions during the student seminars and at the poster fair. In the following proceedings are published scientific papers written by PhD students and candidates.

The following proceedings consist of 9 texts structured in four thematic sections. In the first part Albanese (Chapter 1) investigates the climate movements' critical perspective on the capitalistic system and global climate governance, recognizing the democratic deficit and the need to move from the technological and market-oriented tools in the solutions for the ecological crisis, Volpi (Chapter 2) identifies the public-private dichotomy as a significant feature of sovereignty in times of climate change, by taking on the historical background to the issue of sovereignty, its contemporary erosion, and the public-private divide, he argues that sovereignty should be reframed as a critical tool against the deep political-economic roots of our ineffective climate governance model and shows the importance of the public-private divide in understanding our current climate responses.

In the second part, King (Chapter 3) attempts to develop a framework for approaching the socio-ecological conflicts and relations in rural Ireland that transcends methodological nationalism, by examining how Ireland's socio-ecological relations are

situated within the global capitalist and neo-colonial system of dependency and exploitation, Vining (Chapter 4) through a multi-scalar approach analyses the case study of Romanian workers in Irish horticulture, how the agri-food system creates the conditions for exploitation and discusses food sovereignty as a form of resistance and innovative alternative based on compassion.

In the third part, Bülbül (Chapter 5) reveals the relevancy of the energy justice scholarship through different approaches and draws connections between environment, climate, and energy justice scholarships within the context of principles, Yousuf (Chapter 6) explores how the worsening energy crises in the South Asian coastal city of Karachi, Pakistan, affect subsistence fishers and their communities and analyzes how militarization, bureaucracy, and imbalances of power stand in the way of ensuring just transitions for South Asian fisherfolk in a time of energy scarcity, Žnidarič (Chapter 7) questions 'what green energy is at all' and presents the negative consequences of the construction of a hydroelectric power plant on the middle Sava.

In the last part Regazzi (Chapter 8) critically analyzes the European Union's policies for a green transition with a focus on housing and energy and the failure of the techno-managerial approach to offer concrete solutions to these problems, examines new forms of living as social innovations that redefine the public-private relationships, and their potential for an eco-social transformation, Janßen et al (Chapter 9) study the perceptions of citizens across Europe on sufficiency policies in the housing sector, focusing on whether the perceptions of the citizens vary with different linguistic framings of the policy objectives and explore the role of personal affectedness by the policy measures.

Sultana Jovanovska, Andrej Lukšič

Part 1:
THEORETICAL INSIGHTS

Alessandro Volpi[1]

The Role of Sovereignty in Climate Politics: From Obstacle to Ally?

Abstract: Can political sovereignty still be theoretically and practically useful in tackling climate change in a socially fair way? The global nature of climate change unequivocally demands a high degree of international coordination. Traditionally viewed as an impediment to effective climate action, sovereignty has been criticised for fostering nationalistic and isolationist tendencies that obstruct global environmental cooperation. This paper challenges the prevailing "sovereignty-as-enemy" thesis and argues for a nuanced reappraisal of sovereignty as a potentially valuable asset in addressing the climate crisis. This paper posits that sovereignty can be a critical tool for promoting decisive and equitable climate policies by examining its historical and theoretical underpinnings and complex relationship with neoliberal globalisation. The argument is rooted in a multidisciplinary literature comprising critiques of the neoliberal economy and globalisation model, the erosion of states' sovereign prerogatives, critiques of neoliberal environmentalism, the interaction between trade and climate regimes, and the intellectual history of sovereignty. The public-private dichotomy is identified as a significant feature of sovereignty in times of climate change.

Keywords: sovereignty, climate politics, neoliberal globalisation, public-private divide.

Introduction

Sovereignty is a highly polysemic notion (Walker, 2020, 370-1), having been revisited multiple times in different historical phases to achieve diverse political goals. Those have included the legitimisation of centralised states and monarchies, the legiti or, more infamously, the background for 19th and 20th centuries militarist nationalisms. Moreover, the concept has been deployed in postcolonial nations' struggles for independence and national liberation. Currently, populist and nationalistic movements have appropriated the vocabulary of sovereignty to reject globalisation and progressive liberal politics (Paris, 2020). All the more frequently, populist-sovereigntists from the Right have rejected progressive environmental politics and sometimes supported climate-sceptic positions (Vanderheiden, 2020, 184).

It is perhaps unsurprising that in political theory and environmental studies, the relationship between sovereignty and environmental protection – specifically between sovereignty and climate politics – is generally articulated negatively. Let us name this the "sovereignty-as-enemy thesis" (Litfin, 1997, 168). The mainstream position in Environmental Political Theory, International Relations, and climate justice studies regards sovereignty as a *direct obstacle* to successful climate action, "a relic of a bygone era in which significant transboundary issues did not exist" (Vanderheiden, 2008, 90; cf. Litfin, 1997, 194; Eckersley, 2004, xi). Over the last four decades, the mainstream approach to environmental policymaking ("neoliberal environmentalism", NE) has assumed roughly the same attitude against political sovereignty, opting for market-friendly policies and soft regulation (Fletcher, 2010; Dent, 2022).

The global nature of climate change is a radical and multifaceted challenge to the legitimacy of state sovereignty and the interstate system in general. Returning to (or persisting in) a world of purely national interest-driven and unconstrained sovereign states is not ideal. Nonetheless, this article aims to rectify the sovereignty-as-enemy thesis partially and show that the concepts, pra-

ctices, and values deeply associated with the "sovereignty frame"[2] (Walker, 2020, 372) can be valuable in promoting resolute and fair climate action. Four main considerations back this position:

1. The evils of the displacement of political sovereignty have been, over the last decades, a common critique against neoliberal globalisation (cf. Davies, 2014; Mitchell & Fazi, 2017) if we accept the premise that neoliberal capitalism as a variant of capitalism is more conducive to environmental destruction and loss of political capacity than other forms of capitalism (or alternative models of political-economic organisation) (Klein, 2014; Stoner, 2020; Parr, 2015), that would candidate sovereignty – e.g., *qua* a bulwark against "egoistic economic actors" and environmentally detrimental clauses in free-trade agreements (Liftin, 1997, 168,

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[2] Adopting Walker's "sovereignty frame" account, I refuse to validate one particular 'essentialist' definition of sovereignty (e.g., 'sovereignty is merely the principle regulating supreme authority in a state') as an oversimplification or a "descriptive fallacy" (Walker, 2003, 6; cf. Bartelson, 2014, 4-5), hence not reflecting the irreducible polysemy and ambiguity of the 'concept' of sovereignty. By essentialising sovereignty into one particular and contingent definition, we make it too easy prey for sovereignty's most bitter critics (e.g., Herzog, 2020, 290). Instead, the frame approach assumes sovereignty as a network of concepts, practices, values, and symbols that are kept together by a common history of being associated with a common interdisciplinary vocabulary that always exceeds any sectorial technical vocabulary (e.g., the use of "sovereignty" in constitutional theory or IR) (Koskenniemi, 2010, 222). Sure enough, a strong historical connection to the nation-state is part of the framework, but there is no reason to assume that the frame is reducible to any of its elements. Popular sovereignty, the "autonomy of the political" and public power from economic-private interests, and a normative attachment to the common good are also there (Loughlin, 2003; Duke, 2019). Moreover, the sovereignty frame is almost co-extensive with the (at least Western) tradition of political and legal thought. Therefore, despite some rejecting the sovereignty frame as not apt for the Anthropocene (e.g., Latour, 2016, 15–6), the frame is hardly escapable, whether we like it or not, to approach even transboundary global issues (Walker, 2020, 370; Matthews, 2021a; 2021b), at least if we are committed to retaining some of the institutional arrangements of constitutional democracy and public power (Vanderheiden 2020). Furthermore, an absolute cosmopolitan rejection of sovereignty as it was one coherent bloc risks triggering sovereignty to 'come back' as a "boomerang" (Walker, 2020, 370-1) or a "phantom" (Benhabib, forthcoming), possibly associated with the most undesirable elements in the frame (e.g., authoritarian rule, exclusionary practices, 'walled states'). By adopting the framework approach, I intend to highlight sovereignty's "theoretical and practical role as an imaginative framework for collective action" (Leijssenaar & Walker, 2019, 5) and especially to make explicit that, if we are to understand sovereignty claims as they are articulated today, the axiological-normative dimension of the sovereignty frame are not to be overlooked. The bottom line is that we should not replace the sovereignty frame entirely unless we are sure it does no explanatory or normative work for us anymore (Walker, 2003, 31; Grimm, 2015).

emphasis added; Gümplová, 2014, 102) – as a potentially valuable asset to criticise and reform the current socio-economic model and environmental governance regime.

2. Sovereign states are here to stay. We live in a world of sovereign states regardless of cosmopolitan scholars' well-intentioned critiques of sovereignty, and sovereignty never ceased to be a fundamental component of the language of environmental treaties (cf., e.g., the UNFCCC treaty). The stringent timeframe for political action for meaningful climate mitigation, as well as the urgent need for climate adaptation strategies (IPCC, 2023, 19), paired with the fact that we live in a world where sovereign states are still among the most influential political actors and have unique capabilities, resources, and legitimacy to transition quickly towards net-zero scenarios (IEA, 2022, 26), makes reinvesting in political sovereignty preferable to other possible ways to manage the climate crisis (private solutions, creation of novel post-sovereign political entities from scratch, or downscaling sovereignty to the local level).

3. As climate change gets worse, it will likely act as a "threat multiplier", exacerbating geopolitical tensions and inequalities and menacing the existence of fragile states (rather physically, in the case of some small island states) (Werrel & Femia, 2016; Moore & Roberts, 2022). Many have seen the pandemic as a "dress rehearsal" for the future climate crisis worsening (Matthews, 2021b, 171). A warmer planet will almost inevitably require more from existing state apparatuses just for the sake of preserving order, which implies a *return of sovereignty* to manage a "constant state of exception" (Habtom, 2023) in the shape of (more or less benign forms of) eco-authoritarianism (Mann & Wainwright, 2018; Coeckelberg, 2021; Mittiga, 2022).

4. If a return to sovereignty is mostly inevitable, we ought to make sovereignty 'look' as good as possible. Despite past and present misuses, political sovereignty constitutes a conceptual, practical, and axiological framework connecting

political authority and political capacity to normative elements such as pursuing the common good (*salus populi*). This indicates the *prima facie* adaptability and potential for climate politics of sovereignty. We are presently experiencing, on the one hand, the most undesirable elements associated with sovereign power resurfacing as a response to the shortcomings of neoliberal globalisation (i.e., in the populist-nationalist backlash) and, on the other hand, a growing consensus on the need for state intervention in the economy to foster and manage the energetic transition (IEA, 2022; Dent, 2022). In the face of contemporary regressive appeals to national sovereignty and the risk of eco-authoritarian tendencies in the face of a worsening climate crisis, we have a moral and political obligation to let the positive connotations of sovereignty emerge.

The bottom line is that in the face of the failure of four decades of climate responses inspired by neoliberal environmentalism (NE), based on market-based instruments (MBIs), commodification of nature, and soft-law corporate regulation (Fletcher, 2010), and top of the social and economic failures of neoliberal globalisation in general, sovereignty ought to be reframed as a critical tool against the deep political-economic roots of our slow-paced and (at best) ultimately ineffective climate governance model.

Sovereignty-as-enemy vs. sovereignty as a resource for climate politics

The current discourse about sovereignty and the environment[3] is frequently associated with nationalistic and populist political forces that ally with climate sceptic positions and impede the green

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[3] This is not to say that the sovereignty-climate nexus is a popular theme in the literature. An explicit treatment of the sovereignty-climate nexus remains rather infrequent, except for scholars analysis some partial aspects of the nexus – including the consequences of the rising sea level on small island nations' sovereignty and existence (Sharon, 2019), Indigenous people's sovereignty (Tramel, 2018; Liddel et al., 2022), the issue of climate refugees (Atapattu, 2014), the threat against fragile states and the sovereignty-based world order (Werrell & Femia, 2016).

transition in the name of a supposed national interest (Paris, 2020, 20; Vanderheiden, 2020, 184). Consequently, the mainstream position[4] in Environmental Political Theory, IR, and studies in climate justice regard sovereignty as a *direct obstacle* to successful climate action, "a relic of a bygone era in which significant transboundary issues did not exist" (Vanderheiden, 2008, 90; cf. Litfin, 1997, 194; Eckersley, 2004, xi). Territoriality and territorially-bound notions of responsibility, deeply seated in the "sovereignty frame" (Walker, 2020, 370), are considered major 'stumbling blocks' on the path towards effective environmental protection (Latour, 2018; Dalby, 2021; Harris, 2021; Walewicz, 2022). Furthermore, sovereignty is undoubtedly an anthropocentric concept (Matthews, 2021a; 2021b; Latour, 2016, 15–6; 2017; 2018) that does not attribute any intrinsic value to non-human nature if not as a 'natural resource'[5]. Sovereignty is also deeply associated with "national interest" and security, which often run against international cooperation or the pooling of sovereignty into supranational environmental institutions (Camilleri & Falk, 1992, 192; Gardner, 1996, 133; Elliott, 2008, 206).

The pro-sovereignty camp is minoritarian, and its boundaries are uncertain. Some argue that climate change may lead us towards global sovereignty, eco-authoritarianism and, in general, stronger instances of political authority (Wainwright & Mann, 2018; Latour, 2018; Coeckelberg, 2021; Mittiga, 2022). Interestingly, as a sign of a recent surge in interest for sovereignty and the 'Leviathan' in contemporary green political theory, one analogy is taking hold across disparate literature strands and political stances, i.e., the idea that *'we' are now contemporary to Hobbes* (Latour, 2017; Vanderheiden, 2020; Matthews, 2021a; Coeckelberg, 2021) – in the sense that, as Hobbes elaborated his account of political authority amidst (and because of) widespread social unrest, we ought to be as theoretically creative as he was. However, it is rarer to meet an argument explicitly aimed at defending the progressive value of sovereignty in the context of climate change. Some scholars have highligh-

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[4] These positions echo a wider array of critiques of sovereignty outside of the environmental domain, e.g., by cosmopolitan political theory (cf. e.g., Herzog, 2020; Benhabib, 2009).

[5] As testified by the relevance in international law of the principle of permanent sovereignty on natural resources (PPSNR) (cf. Mancilla, 2021).

ted that, despite being non-ideal, the sovereignty framework is inescapable, and we ought to reform it to make it more "apt for the Anthropocene" rather than abandoning it (which would turn out to be utopian) (Matthews, 2021a; 2021b)[6]. Moreover, there is a connection between the pragmatic argument concerning the inescapability of sovereignty and the positive treatment of sovereignty scholars and activists stressing the importance of *effective* political sovereignty for Global South countries as a condition for a fair global transition (Ajl, 2021; Klein, 2014; Menotti, 2007).

Scholars in the "green state" debate argued that states could help shape an effective and just global environmental governance structure by appealing to democracy, active participation, and a cosmopolitan global justice, on top of the capacity to mobilise resources and legitimacy on unparalleled scale (Eckersley, 2004; 2020; Litfin, 1997; 1998; Conca, 2019; Duit et al., 2016; Barry & Eckersley, 2005). However, only a few in the Green State debate, such as Robyn Eckersley, focused specifically on sovereignty (Eckersley, 2004)[7] . Nevertheless, contributions concerning sovereignty within the green state debate and green state studies, in general, have been widely marginalised in the academic debate and in the guidelines of global environmental and economic institutions over the last three decades (Dent, 2022).

However, despite some recent exceptions (cf. Vanderheiden, 2020), Environmental Political Theory has devoted little consideration to the *potential* of sovereignty and its semantic history as a critical and normative tool to address current economic and political constraints on climate action[8]. Additionally, despite some sparsed hints throughout very different kinds of literature (cf. Mische, 1989;

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[6] Even those aiming to develop alternative institutions to the modern nation-state—whether on a larger or smaller scale—must adapt the concept of sovereignty to establish the new polity (Vanderheiden, 2020, 239-40).

[7] Her position can be condensed as it follows: "Sovereign territorial rule is not necessarily ecologically problematic if it is contextualised and qualified by, say, ecological standards of membership, ecological standards of democratic legitimacy, or new ecological rights and responsibilities of states" (Eckersley, 2004, 232).

[8] This is also true the other way around: political and legal scholars who study sovereignty have often failed to appreciate the full relevance of climate change to their topic (Matthews, 2021a, 45).

Penz, 1996; Mitchell & Fazi, 2017; Bosselman, 2020; Coeckelberg, 2021; Piketty, 2020), a defence of sovereignty as a valuable asset for climate politics in an anti-neoliberal fashion – as a principle connecting popular legitimacy and democracy to the (relative) "autonomy of the political" and the "public" from economic forces and private interests (Loughlin, 2003, 56) – has yet to be elaborated fully.

Sovereignty, the private-public distinction, and the 'common good': hints of a genealogy.

What follows will especially privilege one aspect of the history of sovereignty: its intertwining with the private-public distinction, the normative commitment to the common good, and its "neutralising" aspect. As Carl Schmitt points out, the modern state lays the theoretical foundations of the private-public distinction as it overcomes the anarchy of the feudal estates, churches, and guilds (Schmitt, 1996, 56, 71). Sovereignty has always been intertwined with private ends, such as the protection of private property rights (e.g., in John Locke) (cf. Ruggie, 1983) and the execution of private (economic) goals to be enforced through (public) military, e.g., in the colonisation process (Arrighi, 2010). Nonetheless, the very existence of the public-private dichotomy makes it possible, in the last instance, to conceive *public* interventions in the name of the general interest, regardless of their sometimes twisted historical uses. This loosely corresponds to Cicero's account of a republic as qualified by the principle that "The health [welfare, good, salvation, felicity] of the people should be the supreme law") (*De Legibus* [c.51BC] Bk. III. ch 6; quoted from Loughlin, 2003, 63). Indeed, as Norberto Bobbio highlighted, "public" and "private" are distinguished primarily by a fundamental *normative* criterium, namely "that of the different persons and situations to which the general notion of *utilitas* applies": the utility of the private citizens and the utility of the community as whole (Bobbio, 1989; cf. Cordelli, 2020, 14). Consequently, connecting sovereignty to the 'public' side of the public-private divide means connecting sovereignty to a normative ideal of the common good – in other words, to make sovereignty the

principle articulating the fiduciary relationship between political authority and its subjects (Fox-Decent, 2011; Bosselmann, 2020).

By "neutralisation of private (or secondary) powers", I refer to the process of counteraction of "indirect powers"[9] (feudal, religious, "private" economic interest groups) by the centralising state in the late medieval age and early modernity and the creation of a "public sector" (vs. private) in economic terms. Sovereignty emerges here as a "final" and "supreme" authority, which is the "expression of public power" (Loughlin, 2003, 67) – more exactly, an "institutionalisation of public authority within mutually exclusive jurisdictional domains" (Ruggie, 1983, 275)[10]. Jean Bodin (1530-1596) offered the first account of sovereignty as a comprehensive, single secular authority that is autonomous and superior to any ecclesiastical or private power (Walker, 2020, 384; Philpott, 2020). Subsequently, Thomas Hobbes (1588-1879) emphasised the necessity to neutralise secondary power and create the conditions for true political supremacy by limiting the excessive power of towns and of corporations, which he describes as dangerous sub-commonwealths inside the Commonwealth ("wormes in the entrayles of a naturall man"), and of private monopolies (Hobbes, 1996, 229–30; Barkan, 2013, 37). Therefore, the emergence of sovereignty establishes the origin of the private-public distinction in the modern age.[11]

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[9] I borrow the term "indirect powers" from Carl Schmitt (1996, 73-4) to generalise what we would recognise as private powers today. A synonym could be "intermediate powers" (Grimm, 2015, 24). I chose not to use the term 'private' because its use for the Middle Ages and early Modernity is problematic, as I argued in the previous sections, the private-public distinction, as we presently understand it, was largely 'in the making'. In Schmitt's use, 'indirect' refers to the indirect rule exercised by unofficial actors, granting them immunisation from political accountability (cf. Schmitt, 1996, 74).

[10] "Finality" (i.e., having the final decision over a particular domain) and "Supremacy" (i.e., having supreme authority over a territory) as attributes of sovereign power can be traced back at least to 13th c. France (Grimm, 2015, 4–15; Walker, 2020, 383; Philpott, 2020). In the pre-sovereignty medieval times, for example, if a "final word" even existed, it was the effect of a systemic output rather than being concentrated in a single authority. The deliberation comprised powers and actors that today we would understand as private (guilds, monasteries, local feudal lords, churches, banks, merchants, and comuni) (Anderson, 1979; Walker, 2020; Arrighi, 2010; Bellamy, 2006).

[11] Strictly speaking, a "birth" can only be relative to modernity since Roman law clearly distinguishes between public and private law (Bobbio, 1989), indirectly affecting modernity through ancient law scholars.

Although the distinction has not conserved a stable meaning in the last four centuries (Cordelli, 2020, 22), it is particularly interesting to emphasise a possible analogy between the pre-sovereignty lack of distinction between private and public powers and actors and our current political situation that, for this reason, is sometimes termed "neo-feudal"[12]. From this perspective, sovereignty might represent a progressive force against the evil of re-feudalisation.

The "erosion" of state sovereignty, the blurring of the public-private divide and the role of free-market globalisation.

Despite the commonplace idea of sovereignty being "eroded" within the globalisation process, the "erosion thesis" needs some clarifications, which leads us to the public-private distinction and its connection with sovereignty. It is broadly assessed that the market-versus-state opposition, as well as the supposed "autonomy" of free markets or even their factual degree of "freedom", are largely political myths and that the state's role in setting up and supporting neoliberal globalisation was (and is) crucial (Polanyi, 1944/2024; Davies, 2014; W. Mitchell & Fazi, 2017; Peck, 2010). Moreover, international law (including multilateral environmental agreements,

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[12] Over the last two decades, and especially in the last, numerous scholars argued that pre-Westphalian conceptions of sovereignty were re-emerging (Philpott, 2020; Paris, 2020). In particular, the literature on "re-feudalization" (or "neofeudalism") has pointed out how mature neoliberal capitalism partially reversed the original neutralisation of indirect powers accomplished by the sovereign state by providing (especially high-tech) TNCs and financial powers unprecedented shares of power, creating an a-political, centreless global governance system, new dependencies and hierarchies, and questioning the public-private dichotomy (Dean, 2020; Cordelli, 2020). Putting sovereignty back at the centre means bringing together the neo-feudal critiques of neoliberal capitalism to overcome its general lack of democratic accountability and control, especially concerning environmental issues. It should thus revive the original "neutralising" function of sovereignty during the shift from the polyarchic medieval system to the state-led political modernity to reaffirm the prevalence of a public sphere (salus publica) and its interest over the neoliberal resurface of feudal features (Dean, 2020). Given the inefficiency of the current global environmental governance model, scholars have already begun to question the endurability of the current model and to foresee a return to state-centric or, in general, more hierarchical forms of environmental governance (Brad et al., 2022).

MEAs) still recognises "sovereignty" and "national interest" as foundational elements (Philpott, 2020). International legal sovereignty is not at risk – at least for rich nations well above sea level (Badrinarayana, 2010). Therefore, although now acting under different settings, neither domestic nor Westphalian sovereignty underwent essential changes during the neoliberal era.

Appreciating the normative content of the private-public divide provides a clearer picture of "neoliberal sovereignty": what has undergone the biggest shift is in *whose name* sovereignty is currently exercised. In the neoliberal sovereignty regime, sovereignty's main source of legitimisation is to be found in preserving the optimal functioning of the machine of private capital accumulation – to sustain markets and *create* them when needed (Harvey, 2005) – as the economy itself was the real repository of sovereignty. As neoliberal ideas became increasingly mainstream, sovereign states increasingly appropriated market logic to justify their legitimacy, recognising a sort of "immunity from critique" to macroeconomic policies through a recurrent appeal to technical necessities to justify existing or new liberalisation policies (Davies, 2014). Rather than a substantial weakening of sovereign states vis-à-vis private powers, what happened is that neoliberal sovereignty itself, hyperbolically speaking, went from *public* to *private* – in this sense, Chiara Cordelli uses the formula "the privatised state" (Cordelli, 2020). Under the hegemony of free markets and influential private actors, "legal and executive power blend with forms of economic rationality", generating a "sovereign-economic ambivalence" in neoliberal sovereignty (Davies, 2014, xii). Although the crucial decisions that bind states to the new governance model have primarily been taken by sovereign states spontaneously, contrary to the "there is no alternative" rhetoric, sovereignty was indeed turned into a "bipolar governance machine" oscillating between sovereign power and the economy (Vogl 2014). A blurring between private and public spheres has reportedly been a trend in national and international politics over the last decades, and public decision-making became increasingly informalised as private actors became involved in norm-making governance networks (Hadfield 2009; Williams

& Zumbansen, 2011; Zumbansen, 2013; Davies, 2014; Cordelli, 2020; Callison, 2014). Private-public partnerships, privatisations and out-sourcing of state's functions have been promoted in the name of efficiency by "New Public Management" (NPM) from the 1980s onwards (Dardot & Laval, 2013; Davies, 2014). Additionally, TNCs reportedly reinvested their growing power to infiltrate regulative agencies to favour self-serving legislation (Barley, 2007) and exert "criminal negligence" in the context of corporately funded disinformation campaigns (Torcello, 2022). In the process, sovereignty merged with private corporate power: the state began aspiring to work as a firm, competing against other states and private firms in a global positive sum game, while corporations and financial firms acquire a quasi-sovereign power, confronting sovereign powers almost as equals (Barkan, 2013; Vogl, 2014).

For what concerns climate and environmental governance, studies underscore the same neoliberal slip from a "public", state-led international cooperation to a private-public mixed governance model ("transnational arena of climate governance") where states are just a part of the actors involved (public agencies, private firms, private-public hybrid solutions, entirely private mechanisms, transnational networks of sub-national entities and cities) (Pattberg & Stripple, 2008; Vatn, 2018). The hegemonic solution for environmental protection under neoliberal environmentalism has been systematically delegating to markets the management of natural resources or creating new markets for resources particularly difficult to commodify, such as the atmosphere (Fletcher, 2010; Stoner, 2020; Dent, 2022). Concerning global environmental governance, it progressively developed as a decentralised, multistakeholder, multilevel decision-making process (Pattberg & Stripple, 2008) as it was formalised, for example, in the Paris Agreement of 2015 (Bäckstrand et al., 2017). As in the case of neoliberal globalisation in general, within environmental (and climate) governance, the state still retains an important role in setting up and regulating market mechanisms such as carbon markets. Overall, critical environmental politics studies tend to be very sceptical of Global Environmental Governance (GEG) as a panacea for

any environmental problem in neoliberal globalisation, as GEG research "tends to overrate the democratic potential of GEG [...] largely ignoring the root causes of socio-environmental problems by eliding questions of power and interest" (Brad et al., 2022).

Critiques of neoliberal globalisation

Critics of neoliberal globalisation, including anti-capitalist scholars[13], see the territorial state and/or popular democratic sovereignty as a possibility of resistance against the harms of neoliberal globalisation, sometimes overlapping with the claims of (especially left-wing) populist movements (Kallis, 2018; W. Mitchell & Fazi, 2017; Piketty, 2020). They condemn national autonomy erosion by private economic actors, rating agencies and international economic institutions (Vogl, 2014; Callison, 2014) and complain about the weakening of democratic control and accountability of neoliberal governance (Crouch, 2004; Brown, 2017; Mouffe, 2018; Kallis, 2018). In their view, among other factors, growing economic-political inequalities and the demise of the "public" made our societies more vulnerable to crises that require radical political decisions and collective action in the name of the public interest, accountability, and fairness in the cost distribution (Klein, 2014; Piketty, 2020; Mazzucato, 2015; 2024)[14].

Following these insights, the present proposal is meant to underline the possibility of using the "sovereignty frame" (Walker,

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[13] Some scholars, following an ecological Marxist insight, have affirmed a structural incompatibility between capitalism and adequate climate response, mainly due to the degree of GDP degrowth that would be necessary to match significant emission reduction (M. Li, 2020; Wainwright & Mann, 2018; Malm, 2020). Either way, a more interventionist approach to policymaking and regulation, driven by the public interest and long-term planning, still appears better than business-as-usual. Interestingly, some eco-socialist scholars, generally dismissing the statist frame as irremediably compromised with capitalism, also recognise the green potential of public power vs. private interests (e.g., Malm, 2020).

[14] Regarding the fossil fuel industry, Timothy Mitchell argued that Western democracies' oil dependence on the undemocratic Middle East caused an impoverishment of political life in the West and a structural inability to counteract the causes of the climate crisis (T. Mitchell, 2011). Moreover, fossil fuel extraction's high technology- and capital-intensiveness causes a small set of massive corporations to rule the market, concentrating political power and using their influence to obtain self-serving regulation (Edou et al., 2022).

2020) to restore the partial autonomy of a "public sphere" as a democratically accountable (but not necessarily nationally based) political space dominated by the public interest, avoiding nationalistic and identarian ends[15].

"Free" markets and TNCs vis-à-vis the environment

Despite growing concern in the business world for climate change and new "green" corporate theories (Benjamin, 2021), neoliberal globalisation is still far from environmentally friendly. Some critical scholars created the term "neoliberal environmentalism" (Stoner, 2021) as an umbrella term to criticise the dominant environmental governance model of the last four decades, as opposed to previous state-led environmental regulation policies during the 1960s and 1970s (Wright & Nyberg, 2015). In a way, the inadequate climate response has arguably been caused by the "bad timing" between neoliberal capitalism and the securitisation of climate change (Klein, 2019)[16]. Both free-trade globalisation and multilateral environmental agreements (MEAs) on climate change took off during a key transition phase between the late 1980s and early 1990s[17] (Klein, 2014, 83; Wright & Nyberg, 2015; Rich, 2019), exactly while an internationalising free-trade variant of neoliberal economic ideas was spreading among international

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[15] In the perspective of using 'sovereignty' in an anti-neoliberal fashion, one possible objection needs to be anticipated concerning its similarities to some sovereigntist and populist movements, which are usually associated, among other negative traits, with climate scepticism. In light of this, Thomas Piketty recently accentuated what is at stake in the debate on sovereignty while arguing for a new green socialist project: "[it] must be internationalist in its ultimate objectives but sovereignist in its practical modalities", adding that "the difficulty is that this universalist sovereignty will not always be easy to distinguish from the nationalist type of sovereignty that is currently gaining momentum" (Piketty, 2020, 21).

[16] As Klein sums up, "climate change is a collective problem demanding collective action on a scale that humanity has never actually accomplished. Yet it entered mainstream consciousness amid an ideological war being waged on the very idea of the collective sphere" (Klein 2019; cf. 2014).

[17] UNFCCC and NAFTA were signed in 1992, the WTO was instituted in 1994, and the Kyoto Protocol was signed in 1997.

institutions and national governments and replacing the Keynesian-Fordist compromise (Harvey, 2005; W. Mitchell & Fazi, 2017; Linsi, 2020). Nevertheless, free trade and free market were prioritised over environmental concerns every time they clashed significantly. Several times, free trade agreements, especially the WTO[18], reportedly overshadowed green energy domestic policies due to alleged discriminatory policies against foreign firms (Zhang & Assuncao, 2001; Menotti, 2007; Condon, 2009; Green, 2008; Lee, 2012; Klein, 2014)[19]. Furthermore, the so-called investor-state dispute settlement (ISDS) legal mechanism, allowing private investors to sue sovereign states directly through international arbitrations, has reportedly trumped sovereign states' capacity to enforce environmental protection (Tienhaara, 2010; Tienhaara, 2018; Berge & Berger, 2021; Moehlecke, 2020)[20].

These are clear-cut examples of how external commercial and financial constraints on state sovereignty can undermine a state's climate action and determine the inefficiency of a

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[18] However, the WTO is not the only international organisation trumping environmental concerns and the efforts to address them under the UN: similar results are to be found in the clash between emission targets agreed upon at UN Climate Change conferences and other international organisations, such as the International Monetary Fund (IMF) or the World Bank (WB), which promote conventional (neoliberal) strategies of economic growth (Biermann, 2014). This is despite Kyoto's Art. 2 allowing "Annex 1" (developed) countries a degree of flexibility in domestic policy to meet their carbon commitments. Moreover, shifting the focus on limiting sovereign state's possibility to regulate in the public interest via the ISDS mechanism, rather than on lowering trade tariffs, seems to especially be a trend for the latest range of free-trade agreements, e.g., Trans-Pacific Partnership (TPP) and the proposed Transatlantic Trade and Investment Partnership (TTIP) (W. Mitchell & Fazi, 2017).

[19] The case of Ontario's 2009 clean energy legislation, severely downsized because of a WTO dispute due to its allegedly too protectionist incentives for local energy production and employment (Lee, 2012; Klein, 2014), is just one of the many possible examples in this field.

[20] To offer some anecdotal examples of the phenomenon, in 2015, when the local government in Alberta (Canada) announced it would phase out coal-fired power plants by 2030 within its Climate Leadership Plan, US-based Westmoreland mining company sued Canada under NAFTA for $357 million in damagesICSID Case No. UNCT/20/3. The NAFTA court eventually dismissed the case this year: https://www.italaw.com/sites/default/files/case-documents/italaw16469.pdf last visit 29/08/22. More recently, in 2021, as a consequence of a 2016 local popular mobilisation in Chieti (Italy) that caused the halt to the exploitation of an offshore oil reservoir owned by the British fossil multinational Rockhopper Exploration, the firm won an international arbitration against Italy for 190M euros under the Energy Charter Treaty (ECT) (Giannopoulos, 2021). Cf. https://rockhopperexploration.co.uk/2022/04/ombrina-mare-arbitration-update-3/ last visit 29/08/2022

polycentric global environmental governance. However, this is far from the full picture. Austerity politics, systemic short-termism, lobbying and regulatory capture (Etzioni, 2009) and astroturfing by fossil companies are additional factors that hinder the transition to green energy production (Klein, 2014; 2019; Wainwright & Mann, 2018). Furthermore, scholars studying the evolution of international environmental treaties argue that neoliberalism not only undermined but also deeply influenced international climate legislation on climate change since UNFCCC and caused the inability to drive adequate ambition, transparency, equity, and accountability (Hartwick & Peet, 2003; Ciplet & Roberts, 2017; Newell & Paterson, 2010)[21].

Sovereignty changed its function while corporations were simultaneously gaining greater political influence, and combining the two processes risks locking us in a short-term, inefficient approach to climate change. While corporate "substitution" of the sovereign state has been seen as beneficial in improving efficiency in some contexts, it still retains *normative* and *structural* incompetence in taking care of the public interest as long as binding regulation is not implemented and enforced. The inefficiency of corporate environmentalism[22] is not sim-

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[21] According to this view, international neoliberal environmentalism is characterised by a libertarian view on justice, marketisation, "governance by disclosure" (primary obstacles to sustainability are to be found in 'imperfect information' and in regulatory structures that inhibit innovation) and "exclusivity" (multilateral decision-making reduced to "minilateral voluntarism") (Ciplet & Roberts, 2017). Moreover, although finance and firms already recognise climate risks as an integral part of their risk management strategies (Benjamin, 2021), markets still struggle to deal with the correct pricing of environmental "externalities" (Stern, 2006, xvii) and to implement efficient market-based climate solutions (Hsu & Wang, 2013; Klein, 2014; 2019; Chamayou, 2021). Rather, a "commodification of climate change", for example, through new ad hoc financial derivatives, carbon markets and firms self-imposing "carbon offsetting" measures, is often perceived as the only non-utopian possible policy response, binding us even more to the very same logic that contributed to generating the problem (Lohmann, 2006; 2009; 2017; Wright & Nyberg, 2015; Chamayou, 2021). Unfortunately, as early evidence on carbon markets had already suggested, they hardly encourage sustainable development nor substantially contribute to investments in new infrastructure and technology (Pearson, 2007).

[22] "Corporate environmentalism", indicating tendencies to avoid external regulation, self-regulation, faith in private-led technologic innovation, and private-public co-production of environmental regulation, is mainstream among policymakers and company directors (Castree, 2008; Wright & Nyberg, 2015).

ply a matter of environmentally irresponsible TNCs: firms are embedded in a polycentric network of economic actors (banks, hedge funds, institutional investors, rating agencies) that apply systemic pressure on directors for environmental issues to be externalised (Wright & Nyberg, 2015; Benjamin, 2021)[23]. Due to these principles and despite the (ultimately futile)[24] rhetoric of Corporate Social Responsibility (CSR) (Sjåfjell, 2011; Vatn, 2018), there is systemic pressure to see "any attempt at environmental protection […] as an agency cost to be avoided" (Benjamin, 2021)[25]. Consequently, even if acting quickly on climate change would be profitable in the long-term for both states and TNCs, businesses and stakeholders who are remarkably exposed to climate-related risk (e.g., the fossil and mining industry) are highly incentivised to minimise the risk in their assessments, since it would abruptly worsen their status in the short term[26].

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[23] Moreover, corporate governance theory supporting principles such as "shareholder wealth maximisation" and "shareholder primacy", developed during the second half of the 20th century in a progressive process of "privatisation" of corporations and loss of their public function, came to the fore during the 1970s and 1980s (Barkan, 2013; Benjamin, 2021).

[24] It is worth noticing that corporate power never ceased pursuing political and social legitimisation for marketing reasons, claiming to act in the collective interest. To this extent, CSR and "corporate citizenship" rhetoric (Wright & Nyberg, 2015, 169) promote unbinding, voluntary-based agreements (such as the 2000 UN Global Compact). Limiting ourselves to environmental regulation, this kind of business-friendly rhetoric fuels corporate environmentalism's unaccountability and arbitrariness (Benjamin, 2021).

[25] In the constant competition for investors' thrust on financial markets, a company that fails to make environmental protection profitable in the short term or to retain the trust of financial markets is highly disincentivised to act, as well as for the state that pushes its environmental regulation too far is at risk of foreign capital flight (Lazonick, 2014; Wright & Nyberg, 2015). Moreover, after decades of deregulation and financial boom, financial markets became the most prominent source of revenue for companies (and for executives) and the largest profit re-investment destination, decoupling economic growth from prosperity and tying corporate choice to the market's short-term approach (Lazonick, 2014).

[26] For example, cutting them off from long-term borrowing, causing capital reallocation, draconian regulatory interventions, and repricing stranded assets (Wright & Nyberg, 2015; Dine, 2015; Benjamin, 2021). Additional factors contributing to structural short-termism are mainly to be recognised in financial market liberalisation, electronic trading's increased volatility, and short-term accounting models (Benjamin, 2021).

Claiming back sovereign control to fight for climate justice.

Arguing for a return of sovereign, more hierarchical and public control over resources and environmental regulation hardly entails preserving the integrity of historical nation-states or the ethnic homogeneity of "the people", like numerous sovereigntists and populist movements would support (W. Mitchell & Fazi, 2017; Kallis, 2018). Nor should we defend the inviolability of "national interest" when dealing with Multilateral Environmental Agreements as liberal nationalists do, nor endorse green authoritarianism (cf. Y. Li & Shapiro, 2020; Moore & Roberts, 2022). We should rather leverage the potential of the sovereignty frame to envision new political arrangements to address our problems structurally and with proper ambition. This hardly entails that a state-led or "democratically sovereign" climate policy would automatically successfully tackle climate change. The point is that public political control can act radically, according to the collective interest, and with legitimacy. In contrast, an economic-driven governance where private and public interests are deeply tangled is structurally incapable of achieving the same *potential* outcome. Claims for "food sovereignty" or "clean energy sovereignty" are a practical example of what we are dealing with here, representing both risks and promising features of the approach we are defending. Agrarian, popular movements with alter-globalisation agendas, such as *La Via Campesina*, together with scholars advocating progressive green deal projects focused on the global South, have been supporting for decades claims of "food sovereignty"[27] (Guerrero, 2018; Ajl, 2021) and "clean energy sovereignty". If a "return to sovereignty", a "Climate Leviathan", is inevitable, the more beneficial and normatively qualified we can make it, the better it is. This requires, among other things, reforming international free trade agreements, subordinating them to accountable public institutions operating with a long-term vision (preferably UN, and if not

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[27] "The freedom of regional, national and local communities to promote and protect their own autonomous and ecologically sustainable energy systems" (Menotti, 2007).

possible, regional or national sovereign polities)[28], ensuring that domestic regulation over green transition programs "stays under the control of domestic democratic policy processes" and is not hindered by market-based international arrangements (Menotti, 2007; Klein, 2014; 2019). As we can see, this hardly rules out the role of international climate and energy agencies, but it demands a structural reform to subordinate purely economic agencies to political power. Nor does it presuppose a political-realist "selfishness" of sovereign bodies: climate change's collective and global nature require the highest degree of international cooperation and fairness, balancing developing countries' needs for development and clean energy technologies and avoiding intellectual property traps that hinder the technological transfer (Menotti, 2007).

Proposing a reform of global environmental governance that revolves around state sovereignty equates to a call for a return of a more direct intervention of public actors in favouring an efficient and fair green transition, minimising the inevitable trade-offs between environmental protection, democratic accountability, social welfare, and fairness (Ciplet & Harrison, 2020) Such a call resonates with a growing trend between economists calling for the return of state intervention in the economy, interrupting a decades-long neoliberal suspicion against government action and with the EU's and some national states' efforts to implement the Green New Deal (Brad et al., 2022). In its latest report, the International Energy Agency (IEA) states that "there are many parts of society that need to work together to deliver a new global energy economy […]. But *governments have unique capabilities to act and to guide the actions of others*" (IEA, 2022, emphasis added). IEA's recent recommendations meet the view of economists and innovation scholars arguing for stricter public control and fiscal pressure over business and finance as well as a renovated role of the state in leading innovation ("creating the market, not just fixing it"),

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[28] Indeed, there is a strong ground to argue that even state sovereignty is not incompatible with freely signed agreements limiting sovereign prerogatives (or pooling them in a supranational organisation) for the sake of the common good, as this is required by the fiduciary relationship between sovereign power and its subjects (Fox-Decent, 2011; Bosselmann, 2020; Vanderheiden, 2020).

especially in the face of climate change (Mazzucato, 2015; 2024; Hickel & Kallis, 2020). In this view, national governments are our best chance to quickly green up our "techno-economic paradigm" and deliver enough fairness (Mazzucato, 2015; Mazzucato & Semieniuk, 2017). These scholars are evoking a return to a more "command-and-control" environmental regulation and policymaking model, which was prevalent between the 1950s and 1970s before being superseded by neoliberal market ideology (S. F. Bernstein, 2001; S. Bernstein, 2002; Dent, 2022). Some degrowth supporters also share this view about the government's role (Hickel & Kallis, 2020), with numerous scholars calling for wartime economies during World War II as a model for ideal climate action (Delina & Diesendorf, 2013; Malm, 2020). Finally, while scholars have argued for climate activism as the most probable driver of change in the world economy (Klein, 2014; Wainwright & Mann, 2018; Malm, 2020)[29], studies have nonetheless shown that activists succeed better when they focus on national-level politics (Nulman, 2015), as movements like Extinction Rebellion partly already acknowledge (de Moor et al., 2021).

Pulling the threads of what has been said so far, what sovereignty should stand for in the middle of the climate catastrophe is democratic political control, accountability, transparency, and fairness in climate governance. It should acknowledge the failures of neoliberal capitalism in dealing with climate change, presupposing that the public interest and fairness should be prioritised over private actors' interests. It demands a re-embedding of the economy in society and the reaffirmation of politics over the spurious economic-political neoliberal sovereignty. It requires subordinating TNCs, free trade agreements, and the financial sector to environmental and social goals, radical (as much as

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[29] Moreover, as noticed by Andreas Malm, the Climate-Corona comparison, and the stark difference between states' policy measures against COVID-19 and the lack of sufficient climate response, reveals states' "relative autonomy" in tackling public problems. During the pandemic states tackled collective action issues by enforcing strict rules on citizens and businesses, leading to a cohesive top-down effort that limited free-riding behaviour. The example suggests the potential of public-led solutions to climate change and exposes states' lack of commitment to the transition rather than some structural impossibility (Malm 2020, 26–27).

needed, and not more) policy responses, inverting de-regulation and privatisation trends, empowering environmental regulation and antitrust legislation, removing any legal/economic constraints to local green energy policies, subordinating monetary and fiscal policy to social-environmental goals.

Conclusions

It has been suggested that any adequate response to climate change is currently resisted by deep-lying structural features of our political and economic system and that appealing to an "updated" concept for sovereignty can help us fix many of these issues. Moreover, bringing together critiques of neoliberal capital with climate justice, this paper hints at a wide compatibility between responding to climate change and attaining social justice. This aligns with the 2022 IPCC report, stating that "prioritising equity, climate justice, social justice, inclusion and just transition processes can enable adaptation and ambitious mitigation actions and climate-resilient development" (IPCC, 2023, 33).

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Raffaele Albanese[1]

Movements for Climate Justice: Anticapitalism and critical the perspective on the Conference of the Parties

Abstract: This paper aims to investigate the main critical elements of the climate justice movements, in particular by referring to Fridays For Future (FFF) and Extinction Rebellion (XR). These movements argue that to adequately address the climate crisis and the inequalities it causes, it is necessary to overcome the capitalist system. Their criticism of the instruments (new technologies and carbon markets) put in place by politicians to combat climate change aims at introducing a social change oriented towards climate justice, which is the master frame of their collective action.

Keywords: climate change, Fridays For Future, Extinction Rebellion, Conference of the Parties, climate justice.

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Introduction

Since 2018, climate movements have captured the attention of the world by mobilizing millions of young students and adult people to join their climate strikes: they have stressed the urgency of global warming and asked politicians to listen to the science and take action (Svensson and Wahlström 2021). They usually act through both direct social actions and conflictual and global mobilizations: the first could be defined as forms of action that focus upon directly transforming some specific aspects of society by means of the very action itself, instead of claiming something from the state or other power holders (Bosi and Zamponi 2015). The second include the more transgressive protests of Extinction Rebellion (XR), and its strategy oriented at mass arrests, and the enormous protest campaigns of the FfF global strikes (De Moor et al 2020).

Starting from this frame, this paper aims to illustrate the solutions to face the climate change by the critical perspective of climate movements, focalizing specifically on the issues of Fridays for Future and Extinction Rebellion, which represent the research topic of my PhD thesis. Particularly, my PhD research focuses on the development of two interconnected trajectories of analysis: the first aims at investigating the main characteristics of intergovernmental policies counter the ecological crisis, the second focuses on protest and opposition platforms supported by the climate movements. The latter can be defined as informal networks of interaction that engage in collective actions motivated by a shared identity or by concerns about environmental issues (Rootes and Brulle, 2013). Transnational movements, made up of different social realities, need to carry out a work of negotiation aimed at elaborating a master frame (or dominant frame) capable of combining and connecting the different realities (Andretta, 2005). For example, the coalition of movements, groups, and NGOs, called COP26 Coalition, which mobilized in Glasgow on the occasion of COP26, has been able to connect the many social articulations around the dominant frame of the climate justice.

Climate movements are strongly connected with theoretical-critical approach of political ecology, that identifies a line of studies which is rather varied from a disciplinary point of view (anthropology, sociology, history, geography, economics, philosophy, but also agricultural and forestry sciences, etc.) but clearly recognizable in its focus on the relationship between political, economic and social factors and environmental issues and changes (Pellizzoni, 2019).

To conduct the qualitative research on climate movements, I have prepared a panel of 50 privileged witnesses, activists of movements which fight the ecological crisis, that I interviewed with semi-structures interviews. My empirical research work has also enforced thanks to the experiences of participant observation at assemblies and mobilizations carried out by climate movements, conducted in Milan and Glasgow on the occasion, respectively, of pre- COP26 and COP26. Furthermore, I also experienced participant observation in Turin (Climate Social Camp) and in Naples (the last Global Climate Strike).

Starting by the literature on social movement, the political ecology studies and the first outcomes of my research, I will report the critical perspective of climate movements to counteract the climate change. I argue that, in their view, the intergovernmental policy arena of the Conference of the Parties is not adequate to address the ecological crisis; moreover, it is not enough implementing some specific politics to act efficiently in this field, because it is necessary to go beyond the capitalistic system by pursuing the achievement of the climate justice.

Pursue the climate justice for overcoming the capitalist system

The collective identity of social movements is the result of a negotiation activity through which specific identities recognize themselves as "similar" (Melucci, 1996; Pizzorno, 1966). Such work on meaning is functional in several aspects for a movement: symbolically constructing a collective subject (e.g. environmentalists, feminists, and so on), integrating the potential for structural

mobilization (movement organizations and other mobilization structures), convincing people who sympathize with the movement to take part in the actions, to persuade the broader public opinion of the correctness of its claims (Andretta, 2005).

The climate movement is highly heterogeneous, in fact its identity is negotiated by the subjects that compose it within the context of the framing process, which can be defined as a work of elaboration of the definition of reality that gives meaning to collective action (Benford and Snow, 1988; 1992; 2000). Through framing, mobilized actors «frame, or assign meaning to and interpret, relevant events and conditions in ways that are intended to mobilize potential adherents and constituents, to garner bystander support, and to demobilize antagonists» (Benford and Snow, 1988, 198). So, the concept of frame refers to an «interpretative schemata that simplifies and condenses the "world out there" by selectively punctuating and encoding objects, situations, events, experiences, and sequences of actions within their life space or the world a large» (Benford and Snow, 1992, 137). The results of this activity are cognitive frames through which to know the portion of reality "framed" by a specific frame: the latter, if applied to collective action, allows us to perceive the world as unfair and provides the motivation to try to overcome this injustice (Gamson, 1992).

The climate movement is composed by numerous organizations and souls of movement (environmentalist, workers, feminist, anti-speciesist, etc.) which have built different frames; for this reason it is reasonable to believe that the process of negotiating meanings has played a fundamental role in the formation of its collective identity; the outcomes of this negotiation activity is the elaboration of a master frame, a dominant interpretative scheme that made it possible to combine and connect the different identities: it derives from the mechanisms of frame condensation, which redefines the numerous causes of a problem by unifying them (Tarrow, 2005) , and of frame bridging, which connects themes, experiences, problems, treating them as conditioned by the same events (Snow et al, 1986).

According to the outcomes of my research, the master frame elaborated by climate movements is the climate justice. On the one hand, it derives from the reduction of the causes of the environmental crisis to one main one, the capitalist mode of production (frame condensation); from the other, through the construction of a common cause, the connection of different experiences of injustice and multiple values is favored (frame bridging): the master frame built by the movements (adhering to the climate movement) acts as a bridge between the different sectoral frames: workers' rights, women's rights and gender issues, anti-racism, anti-speciesism, environmental justice, more generally social justice, and so on, come to converge under the climate justice.

To understand the master frame's binding function, it may be useful to report some data from my experience of ethnographic observation conducted in Glasgow, in November 2021, during the days when the twenty-sixth Conference of the Parties (COP26) was taking place. Civil society activists which protested the inaction of governments (engaged in the COP negotiations) in effectively countering global warming, had gathered in the COP26Coalition, which is:

> a UK-based civil society coalition of groups and individuals mobilizing around climate justice at COP26. Coalition members include environment and development NGOs, trade unions, grassroots community campaigns, faith groups, youth groups, migrants, and racial justice networks, to name a few (COP26Coalition website).[2]

So, it is evident that all the climate activists' claims may be framed around the climate justice, which represents a way to think the world completely different from the capitalistic system. To go beyond the capitalism, it is necessary to intersectionally connect the numerous struggles and claims:

> When we talk about climate and environment, we are also talking about oppressed minorities, racism, indigenous people … The approach must be holistic: a phenom is never linked only

2   COP26Coalition: https://cop26coalition.org/about/the-coalition/. (Last Access: 15/09/2023).

to a part of a factor or an actor … If Cargill, the most important meat producer in the world, goes to deforest the Amazon Forest to provide products to KFC or McDonalds, in this large mechanism there are indigenous people, looted territories, the water problem, the animal question and therefore the anti-spiciest issue (Interview to Brenda, XR);

Intersectional means that many struggles come together, it means that the collectives that come from the university, the anti-speciesism collectives, and the trans-feminist ones, unite the struggles; all this to conquer our spaces and to shout in the streets the environmental issues (Interview to Ida, LINK).

How mentioned, the climate activists have formulated the dominant interpretative scheme of the climate justice, which includes their numerous claims. In this context, one of the more important frames refers to worker's rights, considered in terms of both the trade union struggles and the workplace health:

All the people here are aware that the environment level cannot be distinguished from the level of work ([e.g.] if you close the coal plants you damage the workers who work there); they try to divide the struggles … Maybe if you work in coal plants you have a minimum salary to support you, but you are killing yourself (Interview to Anne, XR).

The common objectives between those who lead environmental battles and the actors engaged in the struggle to promote better conditions for workers was one of the most debated topics during the Climate Social Camp in Turin (25-29 July 2022), where numerous activists for climate justice from around the world gathered to discuss the link between the environmental devastation of climate change and its impacts on civil society. Several arguments are related to this kind of convergence: first, it is fundamental to reject the dichotomy between environmental (and health) protection and employability, building a new model representing a social alternative to capitalism, and that can protect the workers guaranteeing both health and environmental protection. Second, the field of this

"alliance" between Fridays for Future and GKN was clearly outlined, removing any doubts about the commonality of the battlefield: it is in fact inadmissible to assume that there are separate struggles depending on whether they are focused on ecology, workers, on gender issues, or even on the rights of students or migrants. In reality, these are all central nodes of capitalist production: for example, in almost all cases, in the workplace there are male and female workers, migrants, there are harmful substances: this offers the possibility of constructing a socially articulated critique in these nodes, and it is important to put it into practice with the subjects who suffer the violence, harmfulness and all the other negative consequences of the capitalist model of production.

The intersectional character of the struggles conducted by the climate activists engaged in the climate justice, involve also, how mentioned, the gender, anti-racist and anti-speciesism issues, and so on. Also in this case, the protests of the activists are conducted around a critical perspective of the capitalist system, which is considered as a patriarchal, racist and speciesism model:

> About the gender issue, women are one of the categories most exposed to the problems of the climate crisis, especially in the poorest countries. In many countries, women still have the role of care, and perhaps they must treat the sick of a pandemic that derives from climatic condition (therefore they are more exposed to contagion). If there is a problem of drought in Africa, women have the task of carrying water; women are more exposed to sexual violence during migration, they are left more aloof and are less protected (Interview to Brenda, XR);

> The system generates inequality, in this sense environmentalist and trans-feminist struggles go hand in hand. Anti- speciesism, which pays attention to bodies, is a bridge between these two themes. All bodies are seen to the same matter, that's why anti--speciesism is a bridge. We need an emancipation of these bodies, it is a sort of alliance between bodies struggling to be able to survive, from environmental issues, to violence, to social inequalities (Interview to Ida, LINK).

According to what I reported, I argue that the dominant frame of the collective action negotiated by the climate movements is that of climate justice. Both Fridays for Future and Extinction Rebellion tend to adopt a holistic approach in solving the ecological crisis, which is able to prepare intersectional battles, with regard to environmental, workers, gender, anti-racist and anti-speciesism issues, in order to undermine the dominant system of capitalism, which pursues the sole purpose of making profit at the expenses of environmental and social devastation. For these reasons, FfF and XR activists do not define themselves as merely environmentalists, precisely because this term hides a sectoral nature of the claims: it is therefore more appropriate to refer to these organized groups of civil society as ecological movements who fight for climate justice.

So, I have highlighted the anticapitalistic perspective of climate movements; this criticism is accompanied by the idea of the necessity to fight for a social change oriented towards climate justice. In the next paragraph, I report the critical perspective of climate activists with regard to the global climate governance, and particularly on the Conference of the Parties (COP) system.

How the climate activists consider the global climate governance?

How affirmed in the previous paragraph, the critical thinking of climate movements is focused on an anticapitalistic perspective. Here I report another part of the critical discourse carried out by the activists, concerning the considerations on global climate governance, that is characterized by the institutional and regulatory international regime of the Conference of the Parties (COP), annually realized within the United Nations Framework Convention on Climate Change (UNFCCC). Starting from the second half of the Seventies, a radical paradigm shift has occurred in the international governance, from the Fordist Keynesian structures of Western policies supported by the Bretton Woods institutions to the affirmation of the Washington Consensus of

monetarist and neoliberal doctrines, at the basis of a new phase in the process of the capitalist accumulation (Moini and D'Albergo, 2016). Over the last three decades, the neoliberal paradigm led to a profound change in the context of global climate governance, making sure that the general regulatory criterion in adopting policies in this field was the market, capable of also taking charge of adaptation and mitigation measures to climate change.

The most recent shift towards a more aggressive version of the neoliberal paradigm has further strengthened the centrality of the market as a regulatory criterion to counter the effects of the climate change. This process has therefore further emphasized an approach based on privatization, commercialization and commodification of ecosystems and natural resources (Bakker, 2005). This relevant role of markets and private sector in addressing social and political issues, has favored a depoliticization of the decision-making process of the global climate regime, with the result of producing common sense, neutral or objective rules rather than proceeding through a political normative regulation that could reinforce values such as equity and justice (Garau, 2013). In this phase, liberalism is fully implemented by expanding the role of the market, the economic rationality, and the private gain, which are considered primary goals and the only mechanisms useful in protecting the public and environmental goods (Ciplet and Roberts, 2017). Also Emanuele Leonardi (2017) has criticized the "marketization" of the ecological crisis, which is led by the green economy device; this system entered into full force starting from the Kyoto Protocol (COP3), which implemented the carbon trading dogma. According to Leonardi, climate justice movements have many times denounced the low price of pollution permits, the fraudulent practice of double counting emissions and the colonial-like attitude of the countries of the global North which, having exhausted their share of air pollution, have come into possession of that due to the countries of the global South, hindering any alternative ways of development.

To highlight the critic to global climate governance addressed by the climate movements, I refer to my experience of partici-

pating observation in Glasgow, during COP26, when the climate justice activists converged in COP26 Coalition, and to some semi-structured interview that I have conducted with FfF and XR activists over the last three years.

According to COP26Coalition, that is the coalition between movements, groups, trade unions, people who fought for climate justice during the COP26 in UK, the Glasgow climate negotiations had to be defined a failure: their outcomes were not appreciable because they provided an occasion for multinational companies to act greenwashing policies. The aspect of the COP26 most criticized by climate movements was the climate finance: the rich Western countries didn't allow the payment of adequate investments, to help the poorer countries of the Global South in implementing mitigation and adaptation measures to face the effects of the climate change. Not only the amounts of the monetary promises, but also the type of financial instruments was not appreciated: in fact, the climate finance was not really oriented to achieve an ecological transition, but it consists in loans filtered through financial institutions, and these loans further weaken and indebted developing countries. The lack of agreement on loss and damage, a measure that provides compensation for vulnerable countries for the losses and damages suffered because of climate change, was the point that most agitated the protests of climate activists.

Another central aspect criticized by the activists was related to the measures in the energy topic: the negotiations within the COP26 were too oriented towards an economy fossil fuel based. To achieve an equal ecological transition, it was necessary to completely phase out of the fossil fuels energy sources, but the outcome which came from the activity of COP26 delegates has predicted a gradual phase down. Also, in terms of greenhouse emissions, climate movements were not aligned with politicians: the COP negotiations pursued the logic of net zero emissions, which is a misleading term according to activists; they believe that it was necessary to prosecute the real zero logic, without including the system of emissions compensation.

Climate activists contested also that the logic of the COP is the same of the capitalistic system: in fact, during the negotiations, politicians were only interested to find methods to reduce the emissions, throughout new technologies or market orientated and voluntary tools, without pursuing objectives in order to improve the conditions of women, poor workers, ethnical minorities (which are the most affected groups by the global warming effects). They also challenged the solutions to the crisis based on technological innovations and carbon markets, considered inadequate and potentially harmful measures to address the environmental issues.

Finally, the COP26 Coalition opinion about the COP26 was very negative because its outcomes were not good to pursue a real ecological transition: for example, the main goal of maintaining the increase of temperature under the cap of 1,5 degrees will be failed, in fact with the environmental policies currently in force, a growth of 2.7 degrees is expected. Also, the mechanism of COP system was contested because this policy arena is seen as not very inclusive, especially towards the representatives of the most affected people and areas (MAPA). The thought of COP26 Coalitions on the Conference of the Parties is in large part confirmed by the other climate activists I have interviewed also in other contests, over the last two years and a half. For example, the distrust of the climate activists regarding the COP system, was very strong also before the COP26 negotiations:

> Within the COPs in general the decision-making power is in the hands of the governments; therefore, youth consultations and associations have a relative value in the COP. COP and pre-COP must be totally rethought; in fact, the UN's instrument of governance of the climate issue, through the annual COP, has not determined much. The Treaty of Paris, which envisaged a whole series of things, remained a dead letter, because it was not legally binding and evidently did not envisage a whole series of mechanisms which somehow forced the execution and acceptance of that treaty by individual governments, so we have no elements to say that these pre-COP go differently (Interview to Daniel, FFF).

The negative opinion about pre-COP COP systems is determined not only by the fact that in the last three decades the greenhouse emissions have increased, but also by the consideration that this intergovernmental policy arena is totally immersed in the capitalist system, with all its contradictions:

> Now the COP is preceded by an event that calls together the young climate movements so there will be a series of conferences and debates that will also involve the climate movements [pre-COP]. The problem is that it is never a systemic breakthrough, the previous 25 COPs have all failed, and I don't think the twenty-sixth can go any better: until we understand that capitalism cannot be ethical, it cannot be good, and until this point of view is taken, these great global demonstrations and meetings remain just smoke and mirrors (interview to Gabriel, FFF).

To synthesize, we can assume that according to the climate movements, the COP could be defined as a big meeting where "poor countries vent, and rich ones make promises". Another interesting element of this critical perspective, is that the climate activists argue that the COP's failure is assumed also by scientific data; so it is not an opinion, it is a fact:

> They have completely failed, and what emerges from Glasgow at a scientific level proves it. According to the final report, if the policies proclaimed in Glasgow were to be respected, we would still go towards an increase in temperatures of 2.4 degrees, which means catastrophe. You don't even need my opinion, it's a scientific fact. I would also like to point out that since the day the COPs started taking place, emissions have increased tremendously. Governments keep meeting but emissions rise. So it's a failing situation (Interview to Andrew, XR).

The COP system is characterized by the paradox to the fact that the main important actors in the decision-making process are at the same time the most polluter States. So, it is necessary to rethinking the whole process:

> The UN Council has 5 permanent members with the right of

veto and they are the main polluters, arms exporters, promoters of the capitalist system as we know it today … we speak of green growth, which does not exist, we need to reconsider the concept of growth, reconsider the idea that a society can stand on economic growth, reconsider the idea that society stands on the economic pillar as the main foundation of the building of governance (Interview to Eliza, XR).

Some activists have concentrated their critical thinking on COP system referring to its lacking democratic accountability:

the COPs are a series of top-down assemblies made up of the elites of the States, which have the privilege of deciding laws and rules, of elites in terms of managing directors, bankers, insurance executives, pharmaceutical lobbies, extractive companies of oil, coal, gas (ENI, SHELL, IP) have been participating since these conferences began, and have much more bargaining and political power than Namibia, Tanzania, Botswana ... The COPs are not going to solve the climate crisis, they are just a circus that keeps the focus on the UN's work on the climate crisis but only lets the years and decades go by as the problem gets bigger. It would be solved by going with twisted decisions, going against the trend, what they said in Paris but then didn't put into practice (Interview to Tim, FFF).

On the same time, this activist explains how the main problem of the COP system is that it excludes the citizens in actively participating while the power positions of the most important governments and companies are guaranteed:

The problems that these meetings have is that any participation of citizens is excluded: there are only a few delegates from the countries that bring the interests of the government, which in turn does not have the political strength to face the crisis in its own countries, let alone in the international context; and then another very big problem is the representation of the lobbies of the industries, especially the fossil one, which in the last COP were so numerous that they almost exceeded the number of delegates from the countries. it is absurd, we cannot give our present and our future to these companies that continue to make extra profits

on our lives, and as if we were a wrong starting system to deal with the problem. it is obvious that you will never be able to solve the problem with this tool (Interview to Vincent, XR).

In their view, the intergovernmental decision-making process is not adequate to act around an ecological perspective:

In principle, a COP, or even worse a G7 8 or 20 (which occasionally make them on the climate), we are extremely critical of the structure more than of what is being addressed. A G7 that talks about the climate, the environment, ecology, makes no sense to exist: it is inherent in the ecology of talking to all people and creating a structure like the G7 where the richest decide for themselves and for everyone else, just because they have all the money, it's not smart. The COP is the same thing (Interview to Damian, XR).

It is also important highlighting, through the activists' observation lens, the behavior of the media mainstream, which often exalt some COP outcomes in terms of engagements of the governments, and avoid to clearly explain the real critical situation:

I am therefore skeptical even when [the COPs] are proposed by the media as successes. There is a narration that is reproduced but which does not even show the real criticalities, there is also always pursuing a problem and postponing it from year to year … There is a lot of climate reductionism behind it. Focusing on emissions causes the concrete depth of the climate and ecological crisis to disappear in the places and ecosystems; one cannot speak only of climate and quantity of emissions, but the places where these emissions are produced, people and ecosystems destroyed, biodiversity lost, extractive industries that put local communities in difficulty must be seen. At the media level, staying alone on that issue is a bit dangerous, it becomes only an abstract and numerical discourse (Interview to Maria, XR).

In general, according to the outcomes of the research that I have exposed, the COP system is an harmful and failure meeting: harmful because it is not a democratic process and the power positions of both main States and big companies are maintained;

in this logic, there is not an ecological perspective and so the people and areas most affected by the climate change effects are not protect enough. Only the carbon market e new technologies tools are implemented, and this fact could be dangerous for the environment. Failure because in the last three decades the greenhouse gas emissions have grown up and with the current environmental policies in force the temperature will increase.

Conclusion

In this paper I have reported the climates movement's critical perspective on capitalistic system and global climate governance.

I have argued that, according to their view, to face efficiently the climate change effects it is necessary rethinking the whole system: it is in fact impossible obtaining an ecological transition without the deconstruction of the capitalism, responsible of all a series of social inequalities. To pursue this goal, the climate activists have organized their collective action around the dominant frame of the climate justice. Both Fridays for Future and Extinction Rebellion tend to adopt a holistic approach in solving the ecological crisis, which can prepare intersectional battles (environmental, workers, gender, anti-racist and anti-speciesism, and so on issues), in order to undermine the dominant capitalistic system, only focalized on making profit, causing environmental and social devastation. For these reasons, FfF and XR activists do not define themselves as merely environmentalists, precisely because this term hides a sectoral nature of the claims: it is therefore more appropriate to refer to them as ecological movements who fight for climate justice.

After that, I have also analyzed the critical opinion of the climate activists about the global climate governance, particularly on the Conference of the Parties system. It has emerged that activists for climate justice consider the COP as a failure meeting: it is not a democratic process and the power positions of both main governments and big companies are maintained; there is not an ecological perspective and so the mechanism lacks democratic

accountability (the people and areas most affected by the climate change effects are adequately represented). Therefore, the choice to concentrate the measures to face the climate change in developing carbon market e new technologies tools, could be dangerous for the environment. Furthermore, over the last three decades the greenhouse gas emissions have grown up and with the current environmental policies in force the temperature will increase.

In conclusion, the point of view of the climate movement is totally irreconcilable with the one of the intergovernmental perspective: the latter intends to solve the ecological crisis starting from new technologies and market oriented tools, concentrating the efforts on reducing the greenhouse emission and not considering the possibility to correct the capitalist system, which is characterized by numerous social inequalities; the climate activists believe that, to really contrast the environmental crisis is fundamental rethinking the whole system, and this consideration is based on the idea that we need to realize a new word around the climate justice frame.

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Part II:
FINANCE AND DEPENDENCY

Criostóir King[1]

The "Green" Transition, (Sustainable) Development and Ireland: Political Ecology of a Semi-Periphery

Abstract: Although nominally an attempt to address socio-ecological crises and inequalities, the so-called "green" transition is today reproducing many of the injustices of the capitalist and imperialist world-ecology. Oftentimes, this leads to conflicts on the frontlines of the injustices caused by the transition. However, such conflicts are intricately tied into global structural injustices that have led to the overdevelopment of some places at the expense of the development and socio-ecological wellbeing of others. In this paper, I explore how Eurocentric "development" has permeated Northern environmentalism and mainstream approaches to the "green transition". However, movements for environmental justice in such conflicts need not always unsettle the dominant ideologies of the system they oppose or seek solutions which dismantle systems of socio ecological injustice globally. Therefore, in this paper I also attempt to think through how Ireland's socio-ecological relations are situated within a global capitalist and neo-colonial system of dependency and exploitation, and how various anti-capitalist and anti-colonial critiques of development can form a useful political ecology lens for my research.

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[1] Written under the supervision of Dr Patrick Bresnihan, Department of Geography, Maynooth University.

Introduction

The so-called "green" transition is underway today, in Ireland, Europe and worldwide. The term "green transition" essentially refers to the phase out of fossil fuels and their replacement with "clean" or renewable energy alternatives in response to climate change, as well as measures to tackle biodiversity loss and other ecological issues. Targets for emissions reductions have been set at various levels: the UN's Paris Agreement, the European Green Deal (EGD) and Irish law commit respectively to a 43%, a 55% and a 51% reduction in greenhouse gas emissions by 2030 (*Paris Agreement*, 2015; *Climate Action and Low Carbon Development (Amendment) Act 2021*, 2021; European Commission, no date). Although we can be sceptical about how realistic it is for the measures being taken to meet these targets, or about whether those leading the transition are driven by benevolent motives, the transition is definitely having real, material impacts on the ground in specific places. As has been pointed out by many scholars and activists, the transition, in most cases, is (re)producing capitalist and (neo-)colonial relationships (Ajl, 2021; Sultana, 2022; Vela Almeida *et al.*, 2023; Bresnihan and Brodie, 2024).

Much work in political ecology, especially from anti-colonial, anti-capitalist and feminist scholars, has sought to unsettle dominant ideas of environmentalism as expressed or pursued by movements, governments, and international organisations, predominantly in the Global North. It is well accepted within critical political ecology that concepts such as "sustainable development" or "climate action" are not necessarily benevolent, instead often reproducing old forms of violence and oppression, as well as innovating new ones. This leads to a plethora of terms to describe the capitalist/colonial/patriarchal organisation of nature-society relationships, often in the name of the "environment", such as green capitalism (Tienhaara, 2014; Goldstein, 2018), green colonialism (Hamouchene and Sandwell, 2023; Lang, Manahan and Bringel, 2024) or climate coloniality (Sultana, 2022), (green) extractivism (Acosta, 2013; Bruna, 2022), the Capitalocene

(Moore, 2016a), Plantationocene (Davis *et al.*, 2019; Haraway and Tsing, 2019; Ferdinand, 2022) and others.

In this paper, I attempt to outline and build connections between various approaches within and beyond political ecology, in order to develop a framework for approaching my PhD research. My research focusses on contestations of the "green" transition in various socio-ecological conflicts in rural Ireland, and what these can tell us about contesting dominant paradigms of green capitalism and neo-colonialism. In my approach, I intend to transcend methodological nationalism - as well as a narrow focus on local contexts - by understanding place-based socio-ecological conflicts within the context of imperialism and the global history of accumulation, and the global interdependencies and structural injustices that this creates (Ajl, 2023b).

To do this, it is important to understand Ireland's place within the global capitalist and imperialist systems that shape the development of socio-ecological relations in specific places, and how movements interact within this context. To do this, I draw on world-systems theory (Wallerstein, 2004) and world-ecology (Moore, 2011), and work that positions Ireland as a semi-peripheral space within this system, especially with regard to its ecological regime (O'Hearn, 2001; Deckard, 2016; Bresnihan and Brodie, 2024). This is important because neither the "green" transition as it manifests in Ireland nor any specific contestation of it can be fully understood without contextualising it within "Ireland's status within a fluid network of capitalist states" (Beatty and McCabe, 2024). Ajl (2021) and others have shown how Northern "progressive" Green New Deal plans have tended towards a methodological nationalism that obscures globally unjust flows of value and distributions of labour, and this is something which I wish to avoid.

Key to this paper will be an engagement with the question of (sustainable) development – i.e. what do the various imaginaries embodied in contestations over the "green" transition have to say about what alternatives should look like? Eurocentric notions of linear development – long critiqued by Marxist, feminist and post-development scholars (Rodney, 1972; Mies, 1993; Escobar,

2012; Moyo, Jha and Yeros, 2013) - became a "powerful mechanism for the cultural, social, and economic production of the Third World" (Escobar, 2015, p. 454) and increasingly came to mean expanded economic production (Schmelzer, 2024). Such logics pervade the "green" transition and environmental policies pursued by governments and environmental organisations in the Global North today (Vela Almeida *et al.*, 2023).

Many anti-capitalist, anti-colonial, feminist and other critiques of the "green" transition and hegemonic approaches to ecology share (either explicitly or implicitly) a critique of Eurocentric developmentalism. There is a reasonable consensus that the linear notions of development imposed on the Global South and peripheries through global processes of capitalism and imperialism have been damaging. However, a tension arises between different visions of alternatives: i.e. "whether emancipation lies in a distinct form of economic development or in alternatives to paradigms of development that are rooted in relations of coloniality" (Riofrancos, 2017, p. 278). For example, while Escobar (2015) considers the inclusion of the Indigenous/Latin American concept of *buen vivir/sumak kawsay/suma qamaña* within the Bolivian and Ecuadorian constitutions – when those states, he argues, are continuing extractivism - as form of appropriation, Ajl (2023b) argues that such approaches dismiss the role of monopoly capital and imperialism in frustrating such state socialist construction, ignoring many alternative development projects that have been part of the history of socialist construction. In other words, is Eurocentric developmentalism reproduced within state projects of ecosocialist transition, or are large, antisystemic movements and state projects needed in order to achieve environmental justice in specific local contexts?

In what follows, I trace connections between Eurocentric environmentalism and development, and how these have become embodied within Northern "green transition" approaches. I then outline some approaches for understanding socio-ecological injustices within the capitalist world-ecology, and how they can be applied to Ireland's semi-peripheral context. Lastly, I explore the

tensions between different imaginaries of alternative transitions and (post)development models, and contemplate how such tensions can be reconciled.

Environmentalism, development and the "green" transition

The term "environmentalism", although often associated with a specific set of aesthetics within Northern media and political discourse, can refer to a variety of social movements, socio ecological philosophies, or specific policies and forms of governance. Much work in political ecology, especially from anti-colonial, anti-capitalist and feminist scholars, has sought to unsettle dominant ideas of environmentalism as expressed or pursued by movements, governments, and international organisations, predominantly in the Global North. The critique I outline here is against what Carrara and Chakraborty (2024) refer to as "hegemonic mainstream environmentalism (HME)". I will use this term to refer broadly to the set of movements, philosophies and governance practices that embody a Eurocentric approach to ecology and are commonly understood as synonymous with "environmentalism" in the Global North. In this section, I outline how HME movements and thought have internalised and reproduced Eurocentric and colonial notions of ("sustainable") development, that have since come to permeate the "green" transition.

The environmental movement is often commonly understood as emerging in the 60s and 70s in the Global North off the back of quite radical protests by a public becoming more aware of the health and ecological impacts of industrial capitalism (Sills, 1975; Slocombe, 1984; Hajer, 1990; Lifset, 2014), subsequently leading to the institutionalisation of environmental concern and governance (Rootes, 2003). However, this story about HME needs to be contextualised within a much longer history of ecological thought and action. Although concern about an explicitly imagined "environment" emerged in the Northern environmental movements of the late twentieth century, this was not the first

time that people developed – either implicitly or explicitly - specific socio-ecological imaginaries. The construction of an "environment" as separate from humanity or culture has a much longer ontological root in Global North societies. The Cartesian separation of the world into "closed totalities of Society and Nature" was crucial to the early development of capitalism and colonial conquest, resulting, for example, in the monoculture landscapes of the plantation and the expelling of certain humans from "Humanity" (Moore, 2017, p. 606). Furthermore, many anti-colonial thinkers and movements thought explicitly about the socio ecological relations of colonialism and how they could construct alternatives (Bresnihan and Millner, 2023).

For the purposes of this paper, it is important to briefly outline here how the Eurocentric paradigm of *development* became influential within HME. This paradigm embodies an evolutionary and linear understanding of history, which explains spatial differences between places as temporal differences along a linear line of "development" towards European and North American standards of living (Massey, 2005). This has been a "powerful mechanism for the cultural, social, and economic production of the Third World" (Escobar, 2015, p. 454), while discounting the continued role of colonial and imperialist structural injustices in maintaining differences in prosperity and living standards between places. Famously, Walter Rodney outlined how Europe underdeveloped Africa, arguing that Africa's underdevelopment was tied to Europe's development (Rodney, 1972). A developmentalist approach has been promoted for former colonies and the Global South by international organisations such as the UN; advocating for states to push industrialisation-led growth, the underside of which, however, is a continued relationship of dependency of the periphery on the core (Féliz, 2024). As such Eurocentric notions of development in the twentieth century became increasingly economised and progress increasingly came to mean expanded production, the paradigm of economic growth became an important component of development (Schmelzer, 2024). Growthism – the idea that wellbeing comes from the endless increase of economic production – was

influential in Fordist economic regimes in the North but has also been influential within other schools of economic thought, such as neoliberalism. It was the key ideology in most actually existing socialist state projects of the twentieth century (Schmelzer, 2024) and has remained stubbornly unbudging within large swathes of the Northern left and trade union movement (Barca, 2019).

Although Global North environmental movements may have in their early days expressed various critiques of Northern, capitalist development, HME has largely ended up reproducing Eurocentric ideologies through its embrace of eco-modernist and one-worldist visions. One clear example is the framework of "sustainable" development. Following the emergence of "environmentalism" throughout the Global North, a liberal consensus emerged in international politics around "sustainable development", especially after the Earth Summit in Rio, which sidelined many alternative voices and perspectives (Bresnihan and Millner, 2023). Sustainable development displaced environmentalism's earlier critiques of development within HME (Kaul *et al.*, 2022). According to Stiernström (2023, p. 662), it is "a political concept ascribed to activities (political programmes, investments, etc.) that seemingly pursue a 'state of sustainability'" while containing "normative, contentious or contradictory understandings of what sustainability and development entail". There is a trajectory from the concept of sustainable development to the notion of "green economy" and eventually the "green transition" that we know today (Vela Almeida *et al.*, 2023). "Sustainable" development embodies a reframing of the earlier Eurocentric idea of development, for example through the uncritical pursuit of growth within the SDGs (Kaul *et al.*, 2022). The contestation over what is "sustainable" or considered necessary for human progress contained within the logic of sustainable development is exemplified, for example, in how mining – an extractive activity – can be justified by its contribution to "sustainable development" (Stiernström, 2023).

However, counter-hegemonic ways of thinking about and shaping socio-ecological relations have always existed alongside HME. The rise of modern "environmental" concern among the Northern,

white middle classes must be situated within the context of similar concerns expressed by oppressed groups who made broader connections between ecological issues and other layers of oppression. For example, the concerns around pesticides raised in Rachel Carson's *Silent Spring* received much more attention than those of migrant farm workers in California (Bresnihan and Millner, 2023) or the 1974 strike by workers in Martinique against the use of pesticides and for safter working conditions (Ferdinand, 2022). Indeed, many movements throughout the world have mobilised around ecological issues but from radically different worldviews to that of HME. In response to the socio-ecological violence of colonialism, many decolonial movements and thinkers have given explicit thought to the construction of alternative socio-ecological regimes (Bresnihan and Millner, 2023), what Ferdinand (2022) refers to as *decolonial ecology*. Various terms have emerged to describe the myriad of socio-ecological movements that developed in the Global South and among racialised and marginalised peoples in the Global North, but which often differed significantly from HME in character and expression, such as the *environmentalism of the poor* (Guha and Martínez Alier, 1997) or *environmental justice* (see Bullard, 1990). The role of labour struggles in addressing socio-ecological crises and injustices has been highlighted in discussions of *working-class environmentalism* (Barca, 2012; Bell, 2020). Furthermore, anti-capitalist movements are increasingly centring climate and ecological crises in their critiques of capitalism. *Eco-socialist* thinking is increasingly in conversation with *degrowth* (see Hickel, 2022; Saitō, 2024), thus unsettling the Northern, capitalist logics of growth and productivity that had often remained unchallenged within socialist movements and state projects (Barca, 2019; Schmelzer, 2024).

In Ireland specifically, socio-ecological conflicts and various forms of environmentalism have been framed as a contestation between competing visions of development (Tovey, 1993). Whereas "official environmentalism" resembled the HME of Western Europe, "rural populist sentiment" emerged out of dissatisfaction with the state's development model. Many rural, place-based conflicts have involved a resistance to the effects of the state's

FDI-led model of development on the ground (e.g. objection to industrial facilities). This does not mean that such movements always develop explicitly progressive political visions or sophisticated critiques of imperialism and capitalism, but such contestation is nonetheless significant. Contemporary conflicts span a spectrum of interpretations: from sometimes limited and local understandings of energy justice and democracy (for example, around opposition to private wind farms), to anti-mining campaigns that are actively advocating for degrowth and forming alliances with Indigenous anti-mining struggles across the world.

While all these approaches vary in what they emphasise, the point is that HME and one-worldist approaches do not have a monopoly over how we think about restructuring socio-ecological relations in just and sustainable ways, and more liberatory alternatives are available. Therefore, "environmentalism", as it is commonly discussed in the Global North, usually refers to a very specific set of movements and socio-ecological imaginaries. Recognising this is an important first step towards analysing contemporary crises and imagining their resolution.

The socio-ecological imaginaries of HME have permeated dominant state and industrial approaches to ecology worldwide, leading to a focus on solutions such as "authoritarian protectionism through conservation policies and climate adaptation/mitigation projects predicated on visions of "pristine" nature, and ecological stewardship rules which nominate the individual as the critical and thus fail to hold accountable the powerful machinery of the market and state alliance" (Carrara and Chakraborty, 2024, p. 88), and what Kaul et al. (2022, p. 1150) call "one world sustainable development". These dominant ways of making socio-ecological problems visible today prevent us from adequately addressing the crises at hand (Bresnihan and Millner, 2023).

However, various counter-hegemonic forms of socio-ecological movements and thought have been instrumental in critiquing the ways in which HME has become translated into visions of "sustainable" development and "green" transitions in the Global North and international organisations. From the one-worl-

dism of the 1972 UN Conference on the Human Environment in Stockholm (Bresnihan and Millner, 2023), to the Necropolitics of COP26 in Glasgow (Sultana, 2022), hegemonic international approaches to the climate and ecological crises have prioritised the class interests of the world's (largely Northern) minority at the expense of the (largely Southern) majority. The COP15 Climate Change Conference in Copenhagen in 2009 is an infamous example of this. There, the refusal of the US to consider the demands of many Global South countries, as well as Indigenous and climate justice activists, led to the failure of the negotiations. This event stood in stark contrast to a completely different form of "environmentalism" and vision of "development" expressed at the World People's Conference on Climate Change and the Rights of Mother Earth, organised in Cochabamba, Bolivia in 2010, where an alternative framework around global justice and decolonial development was created (Dearing, 2023; Dawson, 2024). Though the distinction between Global North and South is still useful, it should not be a simple binary, and Ajl's (2023b) focus on how global processes interlock with local class structures is useful for illuminating possibilities for solidarity and paths forward. This is useful in thinking about Ireland, where a consideration of the comprador class helps us think about Ireland's position within global capitalist and imperial systems (McCabe, 2013, 2022).

In recent years, more and more large-scale climate transition plans have emerged globally. While many of the neo-Keynesian "Green New Deal" (GND) frameworks aim to reduce both emissions and inequality, they often reproduce ecomodernist frameworks and fail to address globally unequal value flows and distributions of labour, usually positioning the Northern (white) working class as the principle agent of change (Ajl, 2021; Heron and Heffron, 2022; Dawson, 2024). Meanwhile, clearly green capitalist appropriations of the GND, such as the European Green Deal (EGD), have been critiqued for their reproduction of neo-colonial relations that serve Northern capitalist interests (Dunlap and Laratte, 2022; Vela Almeida *et al.*, 2023). In this sense, such plans embody a methodological nationalism that has been common in approaches to sustainable

development (Kaul *et al.*, 2022), ignoring the global interdependencies that make a "just transition" in one place possible.

Such transition plans are examples of the ways in which HME and associated ideas of "sustainable" development have become internalised within Northern capitalist environmental governance. They continue to ignore the imperialist structures that allow for unjust distributions of labour and flows of value globally, enabling a resource-intensive energy transition in the North at the cost of more extraction in the South and peripheries. Meanwhile, on an ideological level, the transition maintains Eurocentric notions of what development should look like. These are essentially unchanged under the paradigm of sustainable development: Northern capitalist societies are to simply be made "green". Furthermore, it is still seen as possible for the whole world to reach these standards too, despite the fact that those structures and processes that make the transition possible in the North simultaneously make it impossible in the South.

"Sustainable" development remains largely unchallenged both within explicitly green capitalist approaches and the seemingly more progressive or social democratic GND plans, and even within certain left-wing and eco-socialist transition paradigms. Adequately addressing the socio ecological crises, therefore, involves not just addressing capitalism or reducing inequality, but also dismantling unjust socio-ecological relations on a global scale and unsettling the ideas that have been central to capitalist and colonial development.

Political ecology of a semi-periphery

We live in a highly unequal and unjust world when it comes to the distribution of wealth, resources, environmental burdens, labour and flows of value. Here, I explore how this has been theorised through world-systems theory and world-ecology, what Ireland's position is within the world system, as well as what certain frameworks for understanding the socio-ecological injustices of this system tell us about how to rupture from it and create alternati-

ves. I then contemplate how best to approach questions of socio--ecological justice in a European semi-periphery such as Ireland.

Countering the Eurocentric notion that poorer states can catch up with richer ones through economic innovation and growth, World Systems Theory (WST) emerged as an attempt to account for the structural underdevelopment of the periphery to the benefit of the core, and the unequal divisions of labour and flows of value that this entails (Wallerstein, 2004). When world-systems theorists talk of core and peripheral states, they are really talking about the relationship between production processes. They are not, then, talking about stages along a linear trajectory of development. There is a constant flow of surplus value from producers of peripheral products to producers of core-like products, and thus from peripheral to core states (Wallerstein, 2004). This is essentially a relational and spatial understanding, one that does not flatten spatial differences between places into temporal differences of stages of development (Massey, 2005). WST helps us to understand how the integration of various regions of the world into the core-periphery division of labour created and perpetuated poverty, rather than alleviating it (Sullivan and Hickel, 2023).

World-ecology has its roots in WST, but with a more explicit ecological focus, and an understanding of capitalism itself as a socio-ecological regime, rather than something that acts upon nature (Moore, 2011). Jason Moore contextualises ecological crises within the long history of imperial and capitalist development, demonstrating how capitalism and ecology developed through each other, and how capitalism acts through socio-ecological relations (Moore, 2016a). In this understanding, the anti-ecological character of capitalism did not emerge with the burning of fossil fuels for industrial production in England in the 18th century, but rather with the plantations of early colonial conquest in the 15th century, and the new ways in which this system started to organise both human and non-human nature (Patel and Moore, 2017; see also Ferdinand, 2022). Understanding contemporary ecological conflicts in Ireland, therefore, means understanding how its socio-ecological relations were shaped by British colonial conquest

and its consequent incorporation into global capitalism, as well as its place within capitalist and imperialist structures today (Deckard, 2016; Ruuskanen, 2018; Bresnihan and Brodie, 2024).

WST and world-ecology approaches have been used to examine Ireland's ecological regime, situating Ireland as a semi-periphery within the global capitalist system. Although by many mainstream measures one of the wealthiest countries in the world, its heavy reliance on foreign investment and its unique mix of core and peripheral economic activities (O'Hearn, 2016), as well as its role as a "transistor zone" for the transmission of value between the core and periphery and for new modes of financialisaton and speculative entrepreneurship (Deckard, 2016), tell a different story. Although this neoliberal development model has improved living standards by some indicators in recent decades and there are class interests that benefit enormously from it, the idea of Ireland's miracle transition from being an impoverished, colonised nation to a wealthy core state is, in many ways, merely the illusion of deceptive economic statistics (e.g. GDP). For example, Ireland's labour income share of the total wealth generated in the country is the lowest in Europe by a significant margin (International Labour Organisation, 2024). Ireland is also predicted to have the lowest public investment as a percentage of GDP in the EU in 2025 (European Commission, 2024).

For the purposes of this paper, "ecology" is not only about trees, rivers, climate and wildlife, but also the legacy of the Celtic Tiger, the International Financial Services Centre (IFSC), and Ireland's role as a tax haven: Ireland's "neoliberal ecological regime" (Deckard, 2016). Bresnihan and Brodie (2024) describe how the state's pursuit of foreign direct investment (FDI) since the 1950s attracted investment not only through low corporation tax rates, but also through a "postcolonial ecological regime" that devalued and differentially produced landscapes, resources and infrastructures, particularly in rural regions. They place an emphasis on how the state's development model since the 1950s has created the ecological conditions for foreign multinationals in Ireland and trace a continuity of extractive logics across distinct phases of postcolonial development.

An early example of contestation of this ecological regime was the state's strategy of attracting pharmaceutical industries to rural Ireland in the 70s and 80s, leading to the transplanting of hazardous production from core countries (mainly the US) where environmental awareness and regulation was growing. This led to a series of place-based protests around the local consequences of this development (see Allen, 2004). Today, in order to facilitate the extraction and infrastructures needed for the "twin green and digital transition" (European Commission, 2022), over 25% of land area on the island of Ireland has had prospecting licenses issued to foreign mining companies (Greene, 2022), while in the South, the amount of energy projected to be used by data centres is predicted to be 10 times higher than the European average by 2030 (Ryan-Christensen, 2022). Although these issues are increasingly the concern of movements, there is very little willingness to question the logics of growth and extraction within state climate policy. Instead, resources are prioritised for transnational capital-based development rather than any type of sovereign development aimed towards the provision of social needs. Therefore, thinking spatially about Ireland's position as a semi-periphery within the capitalist and imperial world-ecology is a useful starting point for understanding place-based socio-ecological conflicts in my research. However, it is important to bear in mind how the Irish state participates in globally unjust structures which perpetuate neocolonial patterns of exchange, even in the name of sustainability, for example, through the European Green Deal (Vela Almeida *et al.*, 2023). Next, I explore three concepts used to frame and theorise such spatial and socio-ecological injustices: ecologically uneven exchange, (green) extractivism and (green) sacrifice zones.

Ecologically uneven exchange

Ecologically unequal exchange (EUE) has its roots in world--systems theory's and critical development studies' concept of uneven exchange, which links a country's economic performance not to its internal dynamics, but its position within an unequal

transfer of labour and value from periphery to core (Emmanuel, 1972; Amin, 1976). This has remained an important means of maintaining colonial economic relations in the post-colonial period (Hickel, Sullivan and Zoomkawala, 2021).

Countering the failure to consider the material substance of traded commodities within much development studies, EUE aims to theoretically explain the uneven transfer of natural resource assets and ecologically damaging production and disposal activities between countries or regions (Jorgenson, 2016; Givens, Huang and Jorgenson, 2019; Hornborg, 2023). This theory has highlighted the material dimension of global trade, which orthodox economics – with its conceptual separation of society and nature – usually fails to do (Hornborg, 2023). Recent work has been concerned with how industrial relocation displaces or aggravates pollution, the unequal use of atmospheric space for the absorption of CO_2, inequalities in the mass of material exchanges, and on unequal climate vulnerability (Ajl, 2023b).

(Green) extractivism

The concept of extractivism (*extractivismo*) has roots in the Latin American context, especially in relation to the resistance of Indigenous peoples and peasants against the ecological and social damage caused by the extraction of natural resources. Chagnon et al. (2022, p. 763) define extractivism as "a complex of self-reinforcing practices, mentalities, and power differentials underwriting and rationalizing socio-ecologically destructive modes of organizing life through subjugation, depletion, and non-reciprocity. Extractivism depends on processes of centralization and monopolization, is premised on capital accumulation, and includes diverse sector-specific development and resistance dynamics." Extractivism is a popular lens in political ecology, and increasingly scholars are using it to examine efforts to "green" capitalism and empire. In the era of the "emissions imperative", Bruna (2022) uses the term "green extractivism" to refer to both the resource grabbing and the expropriation of emissions rights

from the rural poor that is associated with many environmental policies. Green extractivism is differentiated from its traditional variety not only in its material nature (e.g. extracting lithium for batteries as opposed to oil for combustion), but also through the discourses and imaginaries created to legitimise it in the name of progress and sustainability (Voskoboynik and Andreucci, 2022).

However, extractivism has not only been used to critique capitalist relations, but also socialist and state-led development projects in which activists criticise the continuation and reproduction of extractive logics, even though the projects themselves may be attempting to rupture with the imperialist and capitalist system that has produced such injustices in the first place. For example, following Latin America's "pink tide", there was a realignment around the discourse of extractivism as the critique once levelled against foreign capital and imperialist power was now levelled by movements against their own states, with whom they had previously been aligned but who they saw as reproducing a development model based on colonial logics of extraction (Riofrancos, 2017).

(Green) sacrifice zones

The concepts of extractivism, EUE, and the capitalist world-ecology all imply a spatial relationship in which healthy socio-ecological relations in one place are *sacrificed* for the benefit of another. Such spaces are often referred to as sacrifice zones – places where "the physical and mental health and the quality of life of human beings are compromised in the name of economic development or progress - but ultimately for the sake of capitalist interests" (De Souza, 2021, p. 220). Infamously, in 1991 a chief economist from the World Bank explicitly called for the relocation of the most polluting industries to the "Least Developed Countries", because, among other reasons, mortality is already high in these places and the demand for a clean environment low.

Like extractivism, the lens of sacrifice zones is increasingly being applied to the green transition. Zografos and Robbins (2020) describe *green sacrifice zones* as ecologies and spaces where

the sacrifice associated with green energy physically manifests itself. They associate this with the coloniality of practices whereby pastoral or Indigenous lands are considered underutilised and in need of "salvation by newness". Stiernström (2023) critiques the justification of mining in rural areas of the Global North in the name of "sustainable development". He defines a sacrifice zone as a "region whose continued existence is dependent on a willingness to sacrifice resources in order to sustain itself" (p. 665). Peripheral countries and regions, as discussed above, are usually dependent in this way. This definition frames the extraction in the sacrifice zone not as an anti ecological choice, but rather as a way of surviving within the broader system. Whether this happens by force or by coercion, we need to understand the ways in which a sacrifice zone in one particular place is connected to global systems of injustice.

Rupturing with the system and planning for the future

These concepts are all useful for developing understandings of how the injustices of the world ecology materialise in and between specific spaces, and what the logics driving this are. It is relatively easy to critique the fact that a certain place is reliant on the extraction of resources, or that there is unequal ecological exchange between core and periphery. However, it is when we try to envisage alternatives that these concepts become trickier. One clear example of this is Riofrancos' (2020) account of contestation around continued extractivism under a left-wing government in Ecuador.

Riofrancos (2020) explores contested "resource radicalisms" in Ecuador: a state-led project of collective ownership of oil and minerals (and the redistribution of revenues for social goals) versus movements that reject extraction altogether. People and movements that were initially opposed to the same logic of extraction by foreign companies at the expense of local communities and national revenue became divided, as the price of redistributing wealth and increasing living standards was continued dependency on the extraction and export of natural resources. For many rural and Indigenous communities at the frontline of the extraction,

this simply represented a substitution of corporate actors with state ones. However, as Riofrancos (2020, p. 4) points out, natural resources in such conflicts are "intensely local" in their social and ecological impacts, while simultaneously being tied up in international supply chains and trading structures. The developmental options of a country like Ecuador are often limited, and such decisions need to be seen in the context of the subjugation of (semi-) peripheral ecologies to global capitalist and imperialist interests.

At the same time, I have earlier referred to how colonial and extractivist logics of development have often been reproduced and sustained within socialist movements and projects (Barca, 2019; Schmelzer, 2024). This is where postdevelopment would argue for an ontological reorientation of what the goals of any transition should be (see Escobar, 2020), away from "paradigms of development that are rooted in relations of coloniality" (Riofrancos, 2017, p. 278). However, cases such as that of Ecuador raise important questions about alternatives. Ajl (2023b) argues that the lens of extractivism does not give adequate attention to planning for the future and that it displaces politics onto the periphery. For him, it usually undertheorises "development", conflating a variety of production processes that embody different class interests. Clearly, although from the perspective of frontline communities, an end to extraction is "vital to the project of decolonising a continent in which the history of resource extraction is intimately tied to that of conquest and subjugation" (Riofrancos, 2020, p. 12), such claims run into difficulty when attempts to enact change come into conflict with global structural injustices that limit a country or region's developmental paths. It is not enough, it seems, to oppose specific place-based extractivist projects without thinking about how to rupture with these systems that they are tied into, and contemplating alternatives.

Ajl (2023b) levels similar critiques towards EUE, for its failure to engage with value flows and the global structure of monopoly capital and imperialism. Instead, he reframes the theory to consider "the unequal use and access to non-human nature through monopoly/imperialist control of world trade relations, as

they interlock with local class structures, which are implicated in national-level primitive accumulation – neocolonialism" (2023b, p. 28). The uneven exchange which causes socio-ecological underdevelopment of and injustices in the peripheries cannot be understood outside of the capitalist and imperialist world-ecological system. However, this position also considers the local dynamics with which these systems interact. The response to extractivism (or the local effects of EUE, or the creation of a sacrifice zone), therefore, are informed by "local rationalities" (Cox and Nilsen, 2014; Biocca, 2023): i.e. how people on the frontlines of these processes relate to the structural injustices imposed on them in a myriad of ways, depending on various local factors.

Political ecology of a semi-periphery: Ireland

The lenses of (green) extractivism and sacrifice zones are becoming increasingly popular to understand contested ecological transitions in Ireland; from mining (Cirefice, Mercier and O'Dochartaigh, 2022; McGovern, 2023) to data centres (Brodie, 2024). Such lenses often help people make sense of experiences at the front lines of extraction, and, to an extent, the spatial injustices this entails. But, as argued throughout, the phenomena of extractivism or sacrifice zones emerge within a broader capitalist and imperialist world-ecological system. Understanding how this can be transcended in any one localised place also requires an engagement with this system and its structures and power dynamics.

I argue that there is a need for a complex understanding of Ireland's position in the capitalist and imperialist world-ecology which can transcend methodological nationalism, but does not fall into the binary trap of seeing Ireland either as a victim or culprit in unequal exchange. This understanding must also transcend a localism which fails to see place-based struggles in the context of the wider political economy (I elaborate on this further later). In reality, these global structural injustices are mediated by both global and national class interests which create unjust socio-ecological relations at different scales and in different spaces. This means that, for example, challenges to the extractivism

of data centres – often expressed by NGOS in terms of moratoriums and legal regulations (e.g. Friends of the Earth Ireland, 2024) - need to reckon with how the intense concentration of data centres in Ireland is related to the country's position within the capitalist and imperialist world-ecology, its current development model, how this form of development impacts on other places, and the factors that would hinder or facilitate alternatives. As Moore (2016b, p. 94) has argued "Shut down a coal plant, and you can slow global warming for a day; shut down the relations that made the coal plant, and you can stop it for good." Similarly, preventing one data centre or one gold mine will not change the underlying socio-ecological relations that have led Ireland to be so dependent on multinational capital.

Alternative visions of transition

The discussion so far has centred around questions of development in socio-ecological transitions. There is, more or less, a consensus within critical political ecology and adjacent fields that the current hegemonic model of (sustainable) development reproduces Eurocentric notions of progress in service of capitalist accumulation. However, as discussed already, antisystemic, state-led projects to take natural resources into national ownership have also sparked conflict due to their continued extraction of those resources, continuing the hardship for those on the frontlines of extractive violence (Escobar, 2015; Riofrancos, 2020). This raises many questions about the material and ecological reality of meeting the developmental needs of the world's population, normative ideas of wellbeing and human progress, and the role of states and national liberation struggles in breaking with the structures that prevent socio-ecological justice and sovereign development.

Transitioning away from the current capitalist and imperialist system and towards more just alternatives will necessarily be messy. One broad school of thought that is trying to grapple with the messiness of this transition, and around which many of the tensions I am describing become clear, is degrowth. Degrowth

refers to the overall reduction of material economic throughput globally, in order to reduce ecological impacts and redistribute resources towards human needs and development. Although there is some legitimate scepticism of degrowth positions that actually perpetuate colonial injustices (e.g. Kothari, 2024), degrowth scholarship is increasingly anti colonial and ecosocialist in nature, dealing explicitly with the question of development: i.e. how can we bring the world towards socio-ecological convergence, where genuine developmental needs can be met in the South without the plunder that feed the excesses of Northern consumption? (see Hickel, 2021).

Although the term degrowth itself largely originated within Northern academia, many critiques of growth that have influenced it come from the South (Hickel, 2021), as well as European socialist and world-systems thinkers (Heron and Eastwood, 2024). However, the term's Northern roots have led to scepticism by some Global South scholars. On the one hand there is a fear that degrowth may not be appropriate for the South, where people are still deprived of basic needs (Kothari, 2024), while some degrowth positions fail to differentiate between the developmental aims of different kinds of economic activity (Ajl, 2023b). On the other hand, there is a fear that even radical degrowth, with its focus on leaving space for Southern, decolonial development, implies a continuation of the "catching-up" logic of Eurocentric developmentalism (Escobar, 2015). Both Kothari (2024) and Escobar (2015) point to worldviews and practices of well-being that are Indigenous to or rooted in Southern societies, such as *swaraj*, *ubuntu* and *buen vivir,* as more appropriate than Northern-imposed "transition discourses" (Escobar, 2015) that potentially reproduce Eurocentric developmentalism. Both point to the potential and need for advocates of degrowth and of these worldviews to work on commonalities while respecting diversity, existing together in a pluriversal perspective. Such *postdevelopment* scholarship perspectives remain largely sceptical of state power and large-scale developmentalist projects: i.e. of the control, domination and the denial of the 'village world' by the 'state world' (Escobar, 2020, p. 18).

Meanwhile, to many others, "development" has a very different meaning, focussed instead on rupturing with the capitalist and imperialist world-ecology and *developing* towards genuine human needs and self-determined goals. Ajl (2023) argues that Escobar's pluriversal approach emphasises a vague "modernity" instead of neocolonialism and imperialism, and ignores alternative, socialist developmental projects. Development, therefore, is not understood as synonymous with Eurocentric *developmentalism*, but instead as inclusive of "counterforces" to imperialism, such as Zimbabwe, Venezuela, Cuba, Bolivia, Ecuador and Nepal, and their respective questions of national liberation (Moyo, Jha and Yeros, 2013, p. 113). While acknowledging that Eurocentric developmentalism has been a weapon of imperial domination, the work of scholars such as Walter Rodney (1972) has shown the existence of *Third World* or *anticolonial developmentalism* (Temin, 2023). Though not necessarily degrowthers, such scholars have much more in common with radical degrowth positions (a consideration of the capitalist and imperialist world-ecology and its underdevelopment of the peripheries, and an understanding of *development* beyond *Eurocentric developmentalism*) (see Hickel, 2021; Hickel, Sullivan and Zoomkawala, 2021; Hickel *et al.*, 2022). Féliz (2024) argues that an increased convergence between degrowth and Marxist dependency theory in the peripheries, involving a focus on delinking and an elaboration of new goals and policies, has the potential to strengthen the degrowth position.

It is important to highlight that the tension I am outlining here is not a complete disagreement or contradiction. Such scholarship is in general thinking about how to counter the socio--ecological violence and injustices of the capitalist and imperialist world-ecology. Of course, any attempt to do this will require both an unsettling of hegemonic ideas and goals, as well as an engagement with the material realities and constraints of imperialist global structures. And while it is fair to say that some socialist projects and movements have reproduced Eurocentric goals of developmentalism and growth, it is important not to conflate distinct models of development and to recognise the many

peripheral, Indigenous and subaltern projects and movements towards an anti-imperialist, anti-capitalist and ecological form of development (Ajl, 2023a). Furthermore, engaging with large-scale transitions thinking, and the role of states and national liberation struggles, does not preclude the existence of multiple worldviews, and bottom-up democracy and sovereignty within this.

While Escobar (2015) does acknowledge the possibility for Northern "transition discourses" to exist alongside a plurality of other worldviews, and degrowth literature is increasingly less Eurocentric, I argue that there is useful work within and adjacent to political ecology that integrates these different perspectives much more holistically. Ferdinand's (2022) *Decolonial Ecology* does this quite well: through the poetic metaphor of the slave ship, he shows the contestation between and erasure of epistemologies and relationships with the non-human world, while also positioning the Caribbean's colonial plantation economy within the relations of the capitalist and imperialist world-ecology (though without using that language). Such work approaches the socio--ecological crisis through different language and epistemologies than (mainly) Northern Marxist WST and world-ecology scholars, but their work is highly compatible and complementary.

Ferdinand defines decolonial ecology as follows: "Beyond the anticolonial reappropriation of collective responsibility for resources, it is concerned with overthrowing the economic ideology that turns humans and non-human living environments into resources serving an unequal capitalist enrichment" (p. 177). He points to numerous concrete struggles encompassed by decolonial ecology, which are needed to bridge the gap between social and environmental movements. Thus, it is about overthrowing the capitalist and colonial world-ecological system, unsettling its dominant ideologies, and allowing the centring of others. Perhaps this can be achieved by what Bresnihan and Millner (2023, p. 130) refer to as *resonance*: building connections between "diverse forms of struggle and inquiry, rather than the building of momentum around a single way of framing and solving a problem".

However, although the tension I have described is not ir-reconcilable, I argue it is important to take a stance on some of the issues it raises. I remain wary of approaches that romanticise peripheralised places and ways of life, or which approach the local dynamics of a conflict as separate from the material conditions and relations of the capitalist and imperialist world-ecology. Furthermore, I do not follow approaches which outright reject movement engagement with state power, in the same way that we must avoid state-centric approaches. Instead, I aim to "steer a strategic course between anti-statism on the one hand and state-centrism on the other hand", acknowledging how "movements from below develop historically in relation to the hegemonic projects of social movements from above" (Nilsen, 2010, p. 200).

Ireland is an interesting case study due to its semi-peripherality: there is a need to address the immense wealth being created here, and both the domestic and foreign underdevelopment which facilitates that. Challenging Ireland's development model will require an unsettling of our conceptions of wellbeing and progress. The FDI-led model is commonly understood as having brought increases in living standards in recent years. Therefore, such a challenge means rethinking what prosperity looks like and where it comes from. This will also require a deep engagement with the reality of actually existing global capitalist and imperialist relations, Ireland's place within them, and what projects for sovereign and ecological development may look like in that context. These two approaches are not mutually exclusive, but rather complementary and essential: decentring the epistemologies that led to led to Eurocentric developmentalism and growthism is essential so as not to let them become reproduced within any proposed alternatives.

In Ireland, some movements involved in place-based socio--ecological conflicts are doing the work of building *resonance* with Indigenous and other Global South communities facing similar threats (e.g. see Cirefice and Sullivan, 2023; Derry Now, 2024). I argue that while such practices are essential for movement building and for building an understanding among communities and activists of the historical and spatial processes of the world-eco-

logy that are leading to such injustices, it is also important to avoid any romanticisation or essentialisation of an intrinsic pre-colonial and ecological way of life in Ireland (e.g. see a discussion of paganism in Irish environmentalism Lane, 2023). To argue for the preservation of a plurality of "Indigenous" and local worldviews and ways of life (Escobar, 2015), in a place like Ireland, is tricky, due to the *mestizaje* (McVeigh and Rolston, 2021) of Irish society and the increasing use of such concepts of purity by the far right. Rolston and McVeigh (2021) argue for an embrace of *mestizaje*: the messiness and openness of Irish society and identity, rather than romantic or purist notions. This is essentially a call for a politics not built on identity, but rather choice, thus opening up the possibility of making imaginative decisions about liberatory and just futures. Dealing with the actually-existing realities of the interdependencies and relations of the capitalist and imperialist world-ecology will require imagination and innovation. Decolonising our ideas of the wellbeing and progress, then, comes from this, rather than notions of returning to romanticised local worldviews or pre-colonial socio-ecological relations. This does not at all mean that the transition must be top-down and dismissive of local variations in worldviews and practices, but rather it is a call for a more participatory democratic transition (see the following dicsussion of the Cuban agroecological transition: Ratchford, 2021), which allows for differentiation between people and places, and is also cognoscente of interconnections and relations within the capitalist and imperialist world-ecology.

Conclusion

To conclude, I will recap the main arguments of this paper and briefly outline how the political ecology approach I have outlined is relevant to my research project. First, I have shown how colonial and capitalist notions of development permeate today's "green" transition, perpetuating older structures and processes of injustice. Second, I have positioned Ireland within the semi-periphery of the capitalist and imperialist world-ecology, and argu-

ed that understandings of place based socio-ecological conflicts must take account of this. Third, I have argued that we need to bridge the tensions between ideological and materialist critiques of development in the "green" transition. This will require a deep engagement with questions of what kind of progress and development movements want, and how different levels of power (e.g. the state) can be leveraged effectively. Although these approaches are not necessarily antagonistic - a just transition will look different in different places, and will necessarily incorporate many worldviews and ways of life - building resonance and solidarity between movements and peoples will require engagement with the state and global scales, as well as with large-scale transition projects. The structural injustices of the world-system cannot be avoided, and the space for such a politics is opening up more and more. For example, the ongoing colonial genocide in Palestine is increasingly being framed as an ecological issue in its own right, with commonalities between the systems that drive colonialism and the climate crisis being highlighted (Hughes, Velednitsky and Green, 2023; Abu Zuluf, Bresnihan and Rowan, 2024). Meanwhile, some climate justice movements (originating from very different positions) are increasingly seeing the decolonisation of Palestine as part of their own struggle (e.g. Thunberg and Fridays for Future Sweden, 2023). Equally, the absence of such an analysis, given the capitalist and imperialist structures and relations underpinning colonial and socio-ecological violence, should be indicative of a type of politics that does not offer the type of analysis needed to address the crises at hand.

A key question then, is how thinking through all of this is useful for researching socio-ecological conflicts in rural Ireland? In my research, I will be analysing where movements and campaigns position themselves on the issue of development in the "green transition" and how they position their struggles in relation to the capitalist and imperialist world-ecology. I am interested in observing this in how they articulate their politics and through their actions. Research on socio-ecological conflicts in Ireland up until now has tended to focus on the place-based conflicts

themselves, their grievances and dynamics (e.g. Cirefice, Mercier and O'Dochartaigh, 2022; Gorman, 2022). Instead, incorporating a global perspective, my research should broaden this by looking at what elements of the political ecology approach I have described above are articulated by or influential to movements in place-based struggles, or whether their praxis actually raises other dimensions not explored here or in the literature. I am, therefore, not just interested in how a Just Transition looks in the specific sites of my research, but also how these sites fit into a globally just transition.

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Rebecca Vining[1]

Romanian Bodies, Irish Berries: A Multi-scalar Approach to Migrant Horticultural Work

Abstract: Previous research has extensively documented the poor living and working conditions experienced by migrant agricultural workers on the island of Ireland, but has failed to fully analyse how the agri-food system relies on that exploitation to continue functioning. This paper uses a multi-scalar approach to analyse the case study of Romanian workers in Irish horticulture. Labour agency is then used to identify ongoing strategies used by workers and their allies to contest their living and working conditions. In the context of the ongoing climate crisis, it becomes critical to form coalitions between environmental justice and migrant rights movements if a just transition is to be achieved.

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Introduction

In February 2023, Ioan Lacatus was apprehended at his home in Portadown, County Armagh and given his second deportation order from the UK (Armagh I, 2023). From Romania originally, Lacatus had a history of labour trafficking offenses dating back to 2013. His victims testified that Lacatus recruited them from Romania and that on arrival to Ireland, they were forced to sign over their wages to his bank account. They reported living "like rats" in cramped, unsanitary conditions, being routinely denied food, and working up to 70 hours per week in local food processing factories (Craigavon Court Reporter, 2023; The Irish Times, 2016). For these crimes, Lacatus was imprisoned for nearly four years and deported (once in 2020, before returning in 2023 – hence the second arrest). Presumably, in this case, justice has been served.

It would be easy to treat this as an isolated incident. The villain in this case is "greedy, ruthless, and manipulative" (BBC News, 2016) and unaffiliated with any employers, who can claim—perhaps truthfully—that they were unaware of the situation. Yet decades of research have documented conditions like these for migrant workers across the island of Ireland. Since the early 2000s, studies have been conducted with migrants working in fishing (Murphy et al., 2023), meat processing (Migrant Rights Centre Ireland, 2020), domestic work (Murphy et al., 2020), and horticulture (Migrant Rights Centre Ireland, 2006; Potter & Hamilton, 2014), uncovering clear evidence of exploitation and abuse. The problem here is not one greedy man; the problem is systemic. While it is important to condemn the actions of individual human traffickers, it is important to also understand whose interests are served by migrant worker exploitation.

Numerous factors have the potential to make migrant workers more vulnerable to exploitation, such as lack of English-language skills, lack of familiarity with legal protections, fear of deportation, unemployment or homelessness (Doyle et al., 2019; Murphy et al., 2023; Walsh et al., 2022). Within legal scholarship, there is a growing recognition of the role of state policy in making migrant workers vulnerable to exploitation and abuse, such as the use of

criminal rather than labour law to address labour rights violations for migrants (Murphy et al., 2023). Despite the known links between agri-food and the poor treatment of migrant workers, research has not yet thoroughly examined the role of the agri-food system in shaping migrant worker exploitation in Ireland.[2]

This case study emerged out of a PhD that investigates power dynamics in Irish horticulture and the role of migrant workers in a just transition for Irish agriculture. It deals with Romanians working on horticulture sites near Portadown, County Armagh. Since the early 2000s, migrant workers from Romania have often filled the need for seasonal agricultural labour across Europe (Stan & Erne, forthcoming). Many migration scholars have looked to economic explanations, highlighting instability and poverty in post-socialist countries and the relatively higher wages available elsewhere. However, the push/pull model has been critiqued for failing to account for migrants' agency (Hear et al., 2019), and in any case may not hold true in the case of Romanian-Irish migration as there is not as large of a wealth disparity between the two countries as compared to most sending-receiving country pairs[3]. Other explanations emphasise the role of social networks or recruitment infrastructure (McCollum & Findlay, 2015), which play an important part but do not account for the whole picture.

A multi-scalar approach has been developed in order to begin untangling the flows of people, capital, and products that make up the Irish horticultural system. Scale, defined in this work as simply the spatial reach of actions, has been used by geographers to understand how capitalism builds uneven relationships between space and power (Jones et al., 2017; Xiang, 2013). Geographical scale "defines the boundaries and bounds the identities around which control is exerted and contested" (Smith, 1992, p. 66) and it is both political and social, framing scaled places as "the embo-

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[2] Note that in this work, "Ireland" will refer to both Northern Ireland and the Republic of Ireland.

[3] According to International Labour Organisation statistics, Ireland is ranked the lowest in Europe for labour income share as a percentage of GDP, while Romania is second-last. Its unemployment rate is slightly higher than Romania's (5% vs. 4.5% in 2021), though it performs better in other metrics such as job stability and average wage overall. See more at https://ilostat.ilo.org/.

diment of social relations of empowerment and disempowerment and the arena through and in which they operate" (Swyngedouw, 1997, p. 169). In this work, scale is used as an epistemological tool to unpack capitalist relations around agri-food and migration, rather than as an ontological reality (Moore, 2008).

Multi-scalarity in migration research recognises that migration is shaped—or rather, constructed—at multiple geographic scales by institutions, policies, and governments (Williamson, 2015) as well as by migrants themselves. It emphasises the importance of the place-based and the local in creating alternative imaginaries (Escobar, 2001) and acknowledges that "scaling up" strategies to contest capitalist relations at the global level should be complemented by "scaling down" strategies which reaffirm local particularities (Leitner & Miller, 2007). Multi-scalar ethnography is explicitly radical, seeking to "detect cracks in the established systems, identify rising opportunities for changes, and thus envisage possible paths of change and points of entry for intervention" (Xiang, 2013, p. 285).

This paper aims to construct a multi-scalar snapshot of contemporary Romanian-Irish horticultural labour migration and to identify new ways of building a more just agri-food system. It first discusses the context at the micro, meso, and macro scales before situating Irish horticulture and Romanian migrant labour within the global agri-food system's networks of capital accumulation. The scales to be discussed are:

- **Micro:** bodies; e.g., personal experiences of various stakeholders
- **Meso:** sites; e.g., Portadown and surroundings or home communities
- **Macro:** processes; e.g., migration patterns/governance or global agri-food

The concept of labour agency is then used to identify what strategies are currently being used by migrant workers to improve

their situations and/or challenge capitalist relations. The findings are situated in the context of the ongoing climate crisis and the need for a just transition for Irish agriculture.

Micro-scale: Migrant workers and recruiters in Irish agriculture.

Irish agriculture companies often find it difficult to recruit locally because the working conditions are harsh and the pay is low (Teagasc, 2018). Since Romania joined the EU in 2007, Romanian migrants have often filled this labour gap. Public data on intra-EU migration is lacking, but a 2018 Teagasc (Irish agriculture development agency) report estimated that 77% of the Irish agricultural workforce were non-Irish (Teagasc, 2018). Keelings, Ireland's largest producer of fruits and vegetables, has been cited in the *Irish Mirror* as admitting that the business was fully dependent on migrant workers, mostly Romanian or Bulgarian, with a need for 1,500 workers for the 2020 growing season (Roberts, 2020). However, that same year, a mushroom grower reported that recruitment in Eastern Europe had been largely unsuccessful and that their business had been forced to recruit from Thailand instead (Healy, 2020). A preliminary review of Central Statistics Office data has not revealed any remarkable changes in numbers of non-EEA employment permits issued to agriculture companies in the past few, but this may change moving forward.

Previous research has extensively documented the poor living and working conditions sometimes faced by migrant agricultural workers in Ireland. Exploitation can occur in the form of extremely low wages, rates of pay based on units picked/processed rather than per hour (which is preferred by some workers), late or incomplete payments, or even human trafficking/forced labour, as in the case outlined above (Migrant Rights Centre Ireland, 2006; Murphy et al., 2023; Potter & Hamilton, 2014). There are high rates of workplace injury, usually from machinery, or respiratory illness from working in cramped, poorly ventilated spaces. Living conditions are also a concern, as housing is typically

provided by the employer and can be overcrowded and unsanitary (Bell et al., 2004; Murphy et al., 2020; Potter & Hamilton, 2014).

In a recent systematic review, Rye and Scott (2018) identified four risk factors that make migrant workers in Europe more likely to experience exploitation: employment duration (seasonal workers are more at risk), degree of informalisation (i.e., verbal contract), indirect employment (e.g., subcontracted through an intermediary), and form of renumeration (with piece-rate workers experiencing more intense and difficult conditions). Others have focused on the role of legal status or housing precarity in increasing risk (Potter & Hamilton, 2014). Some may also be subjected to racialised abuse or harassment from supervisors and the general public. These injustices are exacerbated by the fact that migrants face barriers in accessing healthcare and legal and social supports (Potter & Hamilton, 2014).

While economic drivers may influence some peoples' migration decisions, research has also highlighted the importance of third-party recruiters and social networks in determining who and where is able to migrate for work. Xiang (2013) in their study of migration within China makes visible the role of "middlemen" recruiters in managing the movement of money, information, and contracts between sites and in negotiating relations between migrants and the state apparatus. When establishing new migration networks, employers typically go directly to other countries in order to recruit workers, but as networks are established employers are more likely to use existing employees' social networks or third-party recruiters. Labour providers/gangmasters who recruit, pay, and manage the entire migrant labour force are particularly common (Findlay & McCollum, 2013)[4]. They are usually from the same country of origin as their employees, are themselves mobile, and often have a mono-

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[4] Anecdotally, horticulture producers in Ireland perceive smaller farms as more likely to recruit (typically well-off young adults) through programmes such as World Wide Opportunities on Organic Farms or Workaway, while larger producers are more likely to recruit using labour providers and social networks. Exploitation is considered to be rampant amongst the latter group, while the former are understood to be gaining valuable knowledge, skills, and travel experience; however, research has not yet assessed the validity of this claim.

poly over information flows between migrant workers and the employer. The use of gangmasters has been linked to an increased risk of worker exploitation (Findlay & McCollum, 2013). Within the Irish context there is a need for further research on the role of recruiters and in particular their role in shaping migration patterns and experiences by linking migrant labour markets and potential employers.

Figure SEQ Figure * ARABIC 3. Completed large-scale land deals in Romania and surroundings.

Meso-scale: Agri-food sites in Portadown, Co. Armagh

Several Irish agricultural sites with high numbers of migrant workers have been identified: mushroom farms in the border counties (Monaghan, Cavan, Armagh), soft fruit farms in the Southeast (Wexford and Waterford), and meat-processing across the island (Migrant Rights Centre Ireland, 2020; Potter & Hamilton, 2014). This case study focuses on Portadown, County Armagh, for its high concentration of agri-food industry and migrant workers. Portadown is a former market town located about 40 kilometres southwest of Belfast and 45 kilometres north of the border with the Republic of Ireland (see Fig. 2). In the 2021 census, the normally resident population was 32,933, 8% of whom were immigrants (Armagh City, Banbridge and Craigavon Borough Council, 2021). The area has been a part of the Belfast industrial complex since the 18th century when it emerged as a centre for linen production. Currently, its industry is dominated by food processing with other major employers in steel and carpet manufacturing.
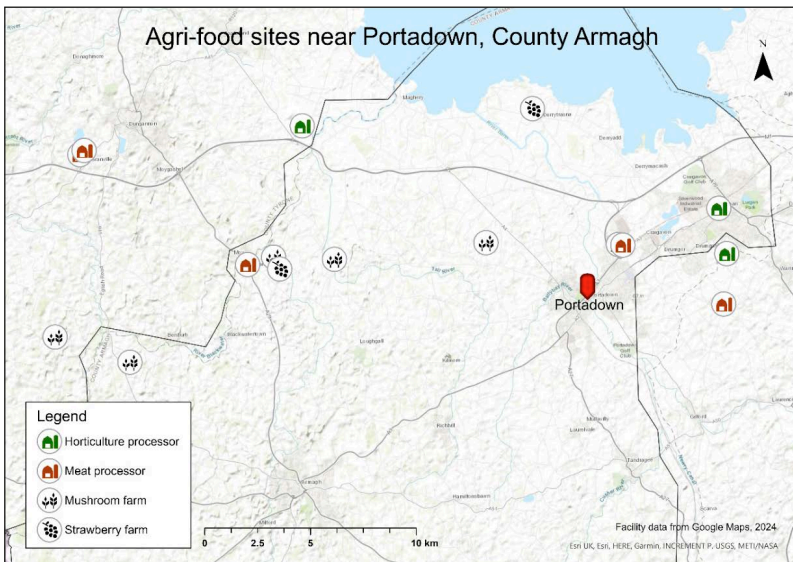

Figure 2. Agri-food sites near Portadown. Site data from Google Maps; map created using ArcGIS.

Since the early 2000s, foreign workers have travelled to Co. Armagh for seasonal jobs in horticulture (strawberry and mushroom picking) and food processing (Bell et al., 2004; Eaton, 2008). Earlier generations were predominantly recruited from Portugal, but since the accession of the A8 countries to the European Union in 2004 and Romania and Bulgaria in 2007, the number of workers recruited from Eastern Europe has increased. Migrant workers, defined in this paper as people who arrive in a host country either with a job to go to or with the intention of finding one quickly (Bell et al., 2004), have been concentrated Portadown and the nearby towns of Lurgan, Dungannon, and Craigavon. Figure 3 shows a map of horticulture and food processing sites in the area. Many migrants work on multiple sites, living either on-site or in rented accommodation in the villages. Interactions with permanent residents can be limited due to linguistic and cultural barriers, existing geopolitics (e.g., Catholic and Protestant divisions, xenophobia), or other factors like long working hours (Bell et al., 2004; Eaton, 2010), though some workers have reported positive integration experiences (Migrant Rights Centre Ireland, 2006).

Macro-scale: the agri-food-migration nexus

Former colonies, including Ireland, have had export-oriented agri-food systems for centuries, but recent agri-food development has been marked by a global shift from small-scale subsistence farming to state-led industrialisation to market-led intensive agriculture (Fraser, 2017; Weis, 2007). In the 1960s, the Green Revolution, financed by the Global North, disseminated packages of credit, fertilisers, and high yielding seeds that were dependent on machinery and irrigation. Globally, and most famously in Mexico and India, agricultural production increased dramatically. From 1970 to 1990, total food available per person globally increased by 11%. However, there were a number of drawbacks: increasing inequality in rural areas, dispossession, environmental degradation, and pollution. Additionally, while global hunger levels

decreased, many countries, particularly in South America and South Asia, experienced a significant increase because their people were too poor to buy food, despite its increased availability (Holt-Gimenénez & Patel, 2009).

In the post-war era, states were considered the appropriate body through which to advance development, but starting in the 1980s, the rise of neoliberalism meant that the free market became considered the key pathway to prosperity. Lenders such as the World Bank and International Monetary Fund took a new approach to agri-food, requiring governments to implement structural adjustment programmes (SAPs) in order to receive loans (Holt-Gimenénez & Patel, 2009; Wittman et al., 2010). SAPs cut government spending on agriculture and liberalised Global South economies, opening them to investment by multi-national corporations. The impacts have been beneficial for Global North economies, but for much of the Global South, the impacts have been a growing dependence on cheap imports, displacement of agricultural production of food for local consumption in favour of cheap exports, and the consolidation of land by agri-business. The 1990s and 2000s also saw the rise of North-South free trade agreements, which have heightened the Global North's market dominance and decimated local food systems in the Global South (Holt-Gimenénez & Patel, 2009).

Farming modernisation, regulation, and integration with vertically-integrated supply chains have led to a cost-price squeeze (when the costs of inputs increase more quickly than the price received for outputs) and the economic failure of many small farms across the world. This has been linked to the rise in migrant agricultural labour, leading to some scholars to conceptualise the "agriculture-migration nexus" wherein agri-food production and human migration are co-constructed (King et al., 2021; Palumbo et al., 2022). At the same time as agri-food companies demand cheaper workers, ever-more-stringent migration policies increase migrants' legal and social precarity. The COVID-19 pandemic brought to light both global agri-food's dependence on migrant workers and their vulnerability, particularly around unsanitary

living and working conditions and lack of access to healthcare and social protection (Kleine-Rueschkamp & Ozguzel, 2020). Migrant workers' vulnerability is no accident; in fact, the creation of an "edge population" that is to exploitation is "instrumental to the functioning of economic systems globally" (Palumbo et al., 2022, p. 186).

Further, responses to exploitation at the national and international levels have focused on punishing "bad" employers/labour providers, thus contributing to the idea that exploitation is "contingent, exceptional and produced by pathological individual relationships" (Palumbo et al., 2022, p. 185). Recently, Article 14 of Regulation 2021/2115 was introduced. Under this new regulation, farmers in receipt of EU Common Agriculture Policy subsidies will be required to meet minimum labour standards or risk a reduction in their support payments. While this represents a promising acknowledgment of the fact that exploitation is rampant in European agri-food, it does nothing to address the differential vulnerability of migrant workers in particular. Legal scholars have argued that changes are needed to both state immigration policy and labour policy in order to meaningfully address exploitation within Irish agri-food (Murphy et al., 2023)

Multi-scalar understandings and new pathways for resistance

Stan and Erne (forthcoming) argue that labour migration from post-socialist countries is due not to different levels of development between Western and Eastern Europe, as is typically assumed, but by the development regimes adopted after 1989 and how post-socialist countries were integrated into international markets and production circuits. A few scholars have begun conceptualised labour migration as a fundamental component of globalised capitalism, rather than as one of its unfortunate side effects (Sassen, 2007). This section applies this approach to the seasonal movement of Romanians to work in Irish horticulture (growing and/or processing fruits, vegetables, and grains), high-

lighting the role of global agri-food in producing both vulnerable workforce on one hand and a need for precarious workers. Horticulture was selected as the area of interest because many tasks within horticulture production cannot be mechanised, meaning labour will remain a major input indefinitely, and because it offers some of the highest potential for expansion within Irish agriculture as governments work towards climate targets.

Romanian bodies: Land grabbing and labour migration

In 1989, 90% of Romanian agricultural land was either state- or cooperative-owned. Under communism, agriculture was based on large-scale production which drove rural-urban emigration; this was seen as favourable because urban workers were needed to support industrialisation. Following the revolution of 1989 and the transition to capitalism, land was privatised and either returned to former owners or transferred to private corporations (Attila et al., 2015; Franco & Borras Jr., 2013). While in some ways the transition was good for small farmers who could return to their lands, the government's support for agri-business expansion and industrialisation since has led to an agrarian structure that is highly polarised, with very small family farms on one hand and large agricultural holdings on the other (Attila et al., 2015; Popovici et al., 2018). In 2013, large holdings used 48% of agricultural land while representing only 0.45% of farms (Popovici et al., 2018).

In 2014, the land market was opened for EU investors under the Romanian EU accession agreement. While land grabbing had been ongoing since the 1990s, its pace has accelerated since 2014 due to the low cost of Romanian land compared to elsewhere in Europe, favourable government policy, availability of subsidies under the EU Common Agriculture Policy and the economic fragility of existing small-scale farms (Attila et al., 2015; Franco & Borras Jr., 2013). As of 2015, transnational corporations and foreign investors owned approximately 30% of Romanian agricultural land (Kay et al., 2015); activists report that these companies often use coercion or intimidation to force people to sell or give usage rights. Most of this land is then used

Filtering for deals in Romania only, top purchasers include agri-business Al Dahra Agricultural Company, headquartered in the United Arab Emirates (for farming), Swedish furniture company Ikea (for timber), and Canadian mining conglomerate Eldorado Gold Corporation (for mining).

for natural resource extraction or industrial agriculture, at great cost to people and environments (Attila et al., 2015). Using publicly available data from Land Matrix, Figure 3 maps recent large-scale land deals [5]. Filtering for deals in Romania only, top purchasers include agri-business Al Dahra Agricultural Company, headquartered in the United Arab Emirates (for farming), Swedish furniture company Ikea (for timber), and Canadian mining conglomerate Eldorado Gold Corporation (for mining). Land grabbing in Romania has resulted in widespread dispossession and the degeneration of rural livelihoods, leading to a growing class of people in seek of waged work either as employees under the new landowner, in cities, or abroad (Attila et al., 2015; Rizzo, 2021). This process of de-peasantisation has sometimes been considered a natural part of development as

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[5]   The Land Matrix defines a land deal as any intended, concluded, or failed attempt to acquire land through purchase, lease, or concession for agricultural production, timber extraction, carbon trading, renewable energy production, industry, mining, oil and gas extraction, conservation, tourism, and land speculation in low- and middle-income countries.

it supports urban industrialism (McMichael, 2015). However, more often than not it results in urban slums when cities lack the industrial capacity to absorb the influx of additional workers (Popovici et al., 2018).

At the global level, land grabbing has been defined as one of the new drivers of migration (Rizzo, 2021), but there is no evidence as of yet to support a direct connection in the case of Romanian-Irish labour migration (i.e., studies have not systematically asked migrants about their experiences before coming to Ireland). It is possible that many Romanian agricultural workers are themselves former farmers or peasants, or (more likely) that land grabbing has a range of consequences for Romanians, and that some of these consequences then factor in individuals' decisions to migrate. Migrants generally have a heightened level of access to information and resources (de Haas, 2010) and previous studies have identified that Romanians who migrate have at least a secondary-level education and come from "areas better connected to modern infrastructure" (Sandu, 2005). Future work should explore this area in more detail while highlighting the importance of migrant workers' individual experiences and autonomy.

Irish berries: Agricultural intensification and the need for exploitable workers

Globally, agricultural producers participate in the only sector where inputs are bought at wholesale prices and outputs are sold at retail ones (Weis, 2007). Large companies monopolise the sale of inputs (seeds and chemicals) to farmers, while supermarkets are often the only way farmers can access consumers. As a result, food producers must sell their outputs at a fraction of the cost of production—or not sell at all. This is done in the name of consumer affordability and food security, but realistically it concentrates power and profits in the hands of input companies and supermarkets (Fraser, 2017) and increases demand for a precarious, flexible, and exploitable workforce in food production and processing (Findlay & McCollum, 2013).

As in Romania, Irish agri-food development has resulted in the destruction of rural livelihoods and widespread rural-urban migration. Irish agriculture now is defined by industrialisation, extreme income inequality and ever-decreasing numbers of farmers (from 250,000 in 1973 when Ireland joined the European Union to 85,000 in 2022). Horticulture is the smallest sub-sector, covering just 2% of arable land in the Republic of Ireland (Central Statistics Office, 2020) and 2.6% in the UK (Department for Environment Food & Rural Affairs, 2023).[6] Horticulture producers experience some of the most adverse conditions due to a lack of structural supports, relatively poor weather, degraded soil after generations of industrial farming, and competition with cheaper imports, for example from Spain and Morocco. Most horticulture producers struggle to make a living or break even, and with labour being one of the most expensive inputs, they are under constant pressure to minimise its costs (O'Hagan et al., 2021; Weis, 2007).

The intensification of British horticulture coincides with a shift to migrants as the main workforce, especially in labour intensive tasks such as harvesting and packing (Rogaly, 2008). Daly (2016) connects Irish growers' cropping choices from the 1990s onwards to the sudden availability of cheap Eastern European labour, noting that labour-intensive production is in some ways protected from external shocks because it does not require high capital investment in machinery. Concurrently, consumer habits shifted to favouring pre-packaged produce and the availability of migrant workers allowed for the expansion of on-farm food processing facilities (Daly, 2016). Most horticultural products in Ireland, with the exception of mushrooms, are sold domestically, and it has been suggested that migrant workers have acted as a subsidy to keep consumer prices low without sacrificing company profits (Geddes & Scott, 2010).

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[6]   Note that Northern Ireland is not measured separately in these metrics.

Labour agency, scale jumping, and a just transition for Irish horticulture

Even in the era of globalisation, capital remains to some extent dependent on physical spaces where labour and technology are combined to extract value and in which workers engage in efforts to reshape workplace conditions and power relations (Ackroyd & Thompson, 2022; Merk, 2009) and in associated struggles over social reproduction (Merk, 2009). To overcome this dependency, labour geographers (Merk, 2009; Peck, 1996) have argued that companies will constantly seek to upscale their own operations while simultaneously downscaling workers' struggles, allowing them to continue relocating production to the most favourable areas while sidestepping questions around working conditions. In many industries, branded companies use labour contractors in order to recruit and control workers who are "flexible enough and cheap enough to absorb required changes in production, that is, to externalise to them possible costs of adjustment" (De Angelis, 2007, p. 107) or, more bluntly, make them somebody else's problem (Merk, 2009). In Irish horticulture, this outsourcing happens twice: first, large companies outsource the actual horticultural labour of harvesting, processing, and packaging to independent suppliers; second, those suppliers outsource the task of recruiting and managing migrant workers to labour providers. Outsourcing represents a major challenge to workplace organising in the modern era (Merk, 2009).

Scale jumping can be used to understand how workers translate their claims for power from the local to the global—how they move "up" the power gradient (Smith, 1992). Historically, workers' rights movements have done so by using collective action to appeal to the state or to force employers to change their behaviour. For example, in the 1960s, Mexican table grape harvesters in California expanded their movement horizontally (to include white middle class consumers) and vertically (to appeal to the state's regulatory authority and to threaten industry profits) through strikes and boycotts. Their narrative linked the use of harmful

pesticides to the health of their bodies, the fruits they harvested, and the eventual health of people who ate those fruits, and they were successful in banning some of the most toxic pesticides. Yet despite the success of the table grape strikes, most strategy has been developed for the factory floor, not the strawberry field, and rely on understandings of industrial relations between workers, employers, and the nation-state which are outdated when considering the contemporary politics of globalised production and precarious work (Lier, 2007). Traditional (union-centred) organising strategy may still be effective in some food processing contexts, but farmworkers in general and seasonal migrant workers in particular face heightened barriers to collective organising (Theodoropoulos, 2021).

Worker organising is mediated by unions, NGOs, the state, and sometimes social networks and family, religious, or kinship ties (Merk, 2009), but in the case of migrant workers in Ireland, social movements and social movement organisations (SMOs)[7] are central (Magill, 2014). For example, Migrant Rights Centre Ireland not only provides advisory and litigation services to migrant workers, but also aims to bring about immigration policy change through migrant-led activism (Magill, 2014). It is often the only structure with which migrant workers interact while in Ireland. Pipers' (2015) analysis of the global migrant rights movement, which outlines how grassroots activism has been scaled up through the strategic collaboration of migrant rights associations (such as NGOs) and trade unions, is useful for understanding how Irish SMOs such as MRCI can be linked to broader transnational efforts. In the global rights movement, political struggle has been translated into calls for a rights-based approach to global migration governance (the right to decide whether to migrate) representing a bottom-up and politicised challenge to the traditional top-down and apolitical approach (Piper, 2015). While a full discussion of what qualifies as migrant activism

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[7]   SMOs are formalised organisations that align their goals with those of a social movement (McCarthy and Zald 1977), which in this case represents a subcategory of migrant-related NGOs.

and what its impacts are or can be is out of scope for this paper (Lentin & Moreo, 2012) it nonetheless may represent a potential multi-scalar approach to improving conditions for Romanian horticulture workers.

Alford et al. (2017) use labour agency, defined as the proactive activities of workers in contesting their conditions, to better understand the range of actions that contributed to the success of the 2013 farmworker strikes in the South African fruit sector. Labour agency can be split into three categories of action: resilience (getting by), reworking (improving conditions), and/or resistance (directly challenging capitalist relations). The concept emerged out of labour geography's attempts to explain how workers create their own organisations and challenge the demands of capital, typically focusing on the role of trade unions (Coe & Jordhus-Lier, 2010). Table 1 adapts labour agency to the Irish context, outlining what

Table 1. Labour agency and scale in Romanian-Irish labour migration

	Micro	Meso	Macro
Resilience	Workers access advisory supports to understand their rights	NGOs support migrant access to healthcare, housing, and other supports	
Reworking	Workers take legal action to regain missing wages, obtain contracts, punish bad employers etc.	Unions/NGOs support workers in collective action (rare)	Social movements/ SMOs advocate for immigration policy changes European Union changes CAP subsidies to be dependent on good treatment of workers
Resistance			Social movements/ SMOs advocate for the right to migrate or not to migrate, potentially transforming migrants' relation to capital

is currently being done at each of the three scales discussed earlier based on the current literature. It identifies a lack of resistance, compared to resilience or reworking. More research is needed to determine whether that lack is due to a research gap, as well as into what workers themselves perceive as resilience vs. resistance.

This table can be instructive in directing future strategies for migrant workers and their allies. Not only is there clear potential to expand on strategies that are centred around challenging capitalist relations a bit more explicitly, but there is a need to build better connections across scale. For example, to the researcher's knowledge, there are few, if any, well-established links between workers pursuing litigation to regain lost wages and social movements working in global arenas to change what it means to be a migrant. However, a multi-scalar analysis reveals that the two are inextricably linked, and that justice at one scale requires justice at the other.

The elephant in the room throughout this analysis is, of course, the climate crisis. We live in the era of global climate catastrophe and it is clear that dramatic reforms are needed to make agri-food more sustainable. Irish agricultural policy reflects the growing importance of ecological sustainability to development agendas. It pursues what could be termed a green transition by aiming to make beef and dairy farming more efficient and to expand horticultural production, while not sacrificing continued economic growth or export expansion. Horticulture offers high potential for low-carbon expansion, in particular mushroom farming (Department of Agriculture, Environment and Rural Affairs, 2023; Department of Agriculture, Food and the Marine, 2021).

However, both activists and scholars have argued for a just transition rather than merely a green one, which emerged out of environmental justice and labour movements and aims to centralise the concerns of workers and marginalised groups (Stevis & Felli, 2015). Since its inception, the focus has expanded from protecting workers in vulnerable sectors (e.g., energy, mining, manufacturing) to analysing how the costs and benefits of a green transition are distributed (Dekker, 2020). When it comes to Irish horticulture,

that means taking into account the costs to migrant workers, not just to beef and dairy farmers. A just transition means involving migrant agricultural workers in climate and agriculture policy moving forward. Some environmental justice movements have been working tirelessly towards a just transition, but thus far there has been little dialogue between these movements and migrant rights activists. The agri-food-migration nexus offers a critical site of resonance between movements and it is important to consider by and for whom these visions for the future are written. Plans for achieving ecological sustainability must also uplift and support those upon whose labour our food system is built.

Conclusions

Contemporary agri-food depends on the systematic exploitation of migrant workers to continue functioning. While the state can attempt to limit the harm caused to migrants by punishing bad employers or recruiters, it has thus far failed to address, and in many cases worsened, the institutionalisation of migrant workers as an "edge population" willing to work in precarious, low-paid jobs. While changes to immigration and labour policy are warranted, in the context of global agri-food, national-level policy change may simply re-shape migration patterns or drive companies to re-locate production, rather than ending exploitation and abuse altogether. In fact, a common argument *against* improving working conditions is that it will encourage more local people to work in horticulture, and migrants will be forced to work in other countries where conditions are much worse. While recognising that this argument is flawed (just everyone else is exploiting migrants doesn't make it right), a multi-scalar approach does allow for more nuanced and mindful identification of interventions. A range of other strategies become relevant—for example, improved access to land, stricter regulation of land purchases at the international level, targeted supports for farmers that guarantee living wages for workers, or imposing limits on the power of large supermarkets.

This case study attempted to untangle some of the ways in which the agri-food system creates both a need for cheap workers in Irish horticulture and an exploitable workforce in Romania, thus driving Romanian-Irish seasonal migration to work on farms and in food processing facilities in rural Ireland. Further, it identified some of the ongoing ways in which migrant workers and their allies are contesting the conditions under which they live and work. Labour agency happens in many ways besides traditional workers' unions/ collective action, but research thus far has been limited on how this happens in Irish horticulture. This ties in to the researcher's ongoing PhD on power dynamics within Irish horticulture, and a more thorough integration of labour agency and migrant worker autonomy, combined with the planned qualitative analysis, will be useful for identifying additional pathways for resistance.

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Part III:
ENERGY
AND
DEMOCRACY

Eda Bülbül[1]

Principles of Energy Justice: Looking at the Environmental and Climate Justice Principles with Energy Justice Approaches

Abstract: This paper examines environmental and climate justice principles with different energy justice approaches to support the literature on energy justice principles. By revealing the unique nature of energy governance and responsiveness of different energy justice approaches with regards to environmental and climate principles, I argue energy justice principles are important to pursue to lay the groundwork for forming quality oriented, measurable standards of energy justice. In a world divided on what just transition means, without principles and standards of energy justice translating normative ideas into actionable information, it will be not possible neither to track the success of projects such as Just Energy Transition Partnerships (JETPs), nor claim any justness in their results.

Keywords: JETPs, energy justice, principles, standardisation.

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[1]   Written under the supervision of Prof. Dr. Markus Lederer

Introduction

In recent years Just Energy Transition Partnerships (JETPs) are forming in between Global North (International Partners Group)[2] and South (South Africa, Senegal, Indonesia and Vietnam).[3] Yet, the world is far from agreeing on what 'just energy transition' means. Is it the same as 'just transition'? What makes a transition a 'just transition' and not 'just a transition'? Where and how does 'energy justice' come into the discussion of justness of energy transitions?

To deal with these complicated questions and aspects in a structural way, this paper focuses on principles. As the next sections will show, we know a) energy justice scholarship is built on to the environmental and climate justice scholarships, and b) in retrospect, the formation of environmental and climate justice principles served in line with the 'justice' goal. However, I argue this may not serve the JETPs and energy justice the same way. Firstly, due to the current state of the global governance of energy, and secondly due to the nature of the notion of 'principle'. The extensive literature from IR shows that the issue of energy governance is closely tied to security and development, especially in the Global South where countries with energy supplies have been exposed to colonial exploitation practices and their remedies. Today, at least in energy governance, there is very little buy in for developed countries' 'kicking away the ladder'[4] style restrictive strategies to be imposed on developing countries. This complicated nature and history is proved by the fact it is not possible to point out one principal actor responsible for global energy governance (Newell et al., 2013). When it comes to the notion of 'principle', in the most simplistic way I use the Oxford definition of 'principle': 'a moral rule or a strong belief that influences your actions' (Oxford, 2024). However, principles by definition and in practice do not refer to process, outcome or their quality

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[2] Consists of Japan, the USA, Canada, Denmark, France, Germany, Italy, Norway, the EU, and the UK

[3] It is reported that negotiations with the Philippines and India are ongoing - although with India coal phase-out stands as an issue still.

[4] 'Kicking away the ladder' refers to Chang's book with the same title (2001) where they discuss how developed countries put restrictions on developing countries about the same policies which helped them develop in the first place.

which is a fundamental requirement for governing foreign funded partnerships (i.e. JETPs). If there is not a principal actor with a set agenda and the principles are not sufficient then what is an alternative way to govern these just transitions globally?
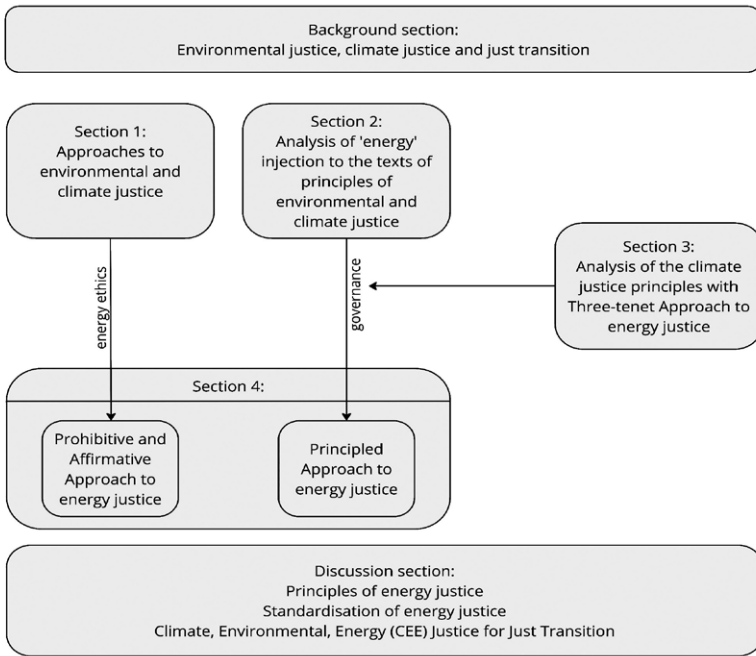
Here I argue that standards can fill this gap. Standards are 'normative ideas about quality to be expected' and they concern 'things, processes and outcomes' (Singer, 1996). However, the process of standardisation is not immune to invested interests of standard setters, historical power dynamics and contestations (Linklater, 2016). Therefore, understanding principles of energy justice can serve as ground-laying for standardisation of energy justice. Following the same thread, this paper focuses on understanding the principles of energy justice to serve the larger literature on energy justice as well as to inspire solutions to essential and pressing policy problems around energy transitions.

In order to reveal new insights for energy justice principles I raise the questions below:

1. How energy was and is relevant in the establishment of environmental and climate justice principles?
2. How did energy justice scholarship with different conceptualizations respond to the energy questions arising from environmental and climate justice principles?

As illustrated below (Visual 1), the background section will present the birth of the concepts of environmental justice, climate justice and just transition. Section 1 will look at different approaches to environmental and climate justice and the evolution in between (Table 1), then Section 2 will analyse two main texts on environmental and climate justice principles; 17 Principles of Environmental Justice and Bali Principles of Climate Justice with an energy lens (Table 2). Section 3 will introduce Three-tenet approach as the most predominant approach to energy justice and analyse Bali Principles with respect to the different tenets (Table 3). Section 4 will tie different preliminary results from previous sections together with two important approaches to energy justice: prohibitive and affirmative approach and principled approach.

Discussion section will present the findings in response to the questions raised in the introduction and show the limitations of just transition as an alternative solution by elaborating on the principles of just transition. Finally, in the conclusion I will remind the importance of utilising principles in energy justice research while discussing the shortcomings of the paper. I will then conclude with references to the future research.

Visual 1: The structure of the paper

Background

Environmental justice starting in the 1970's initially focused on the uneven distribution of negative environmental externalities. In the US, this literature predominantly focused on environmental racism which reveals how different racial and ethnic groups are disproportionately objected to the health risks. Scholars of

environmental justice took an interest in the intersectionality of race/ethnicity and class (Mohai et al., 2009). Robert Bullard, who is considered the father of environmental justice, worked on 'American apartheid' and called for equal protection of all communities by environmental laws and regulation (Bullard, 1994). This is a valuable analytical lens while inspecting previous and current apartheid states and their colonial approach of using energy access as a stick and blocking most of the population from accessing energy decision making.

Building on the globalisation of environmental justice as a movement, the climate justice movement was born. It is important here to highlight that both concepts are initially highly influenced and shaped by US politics and justice issues there. In the literature, there are various understandings of climate justice in connection with the locality of the movement. While one perspective focuses on understanding the global climate governance and inequalities it causes, another perspective frames the issue around environmental justice by defining climate justice based on the environmental impact over communities caused by climate change (Mohai et al., 2009).

If we follow up on the second perspective; there we see how Hurricane Katrina had an immense role in uniting these two movements (Schlosberg et al., 2014). The US being the largest historical perpetrator of climate change became also the 'victim' of it. The unprecedented proximity between those who benefited from warming the globe and who had to pay the cost of it with their lives and properties suddenly brought climate justice as a focus of attention for environmental groups. Suddenly, the negative externalities went beyond polluting the environment surrounding the production sites and included communities all around the world losing so much to the impact of climate change and often while being subjected to other forms of injustices simultaneously. Then how did this new perspective impact the development of the climate justice principles?

Before moving into the next section where I will discuss different approaches to climate and environmental justice, it is

important to make a note of just transition from a chronological perspective. Although the energy justice scholars tend to present energy justice as a new kid in the block after environmental and climate justice movements, I believe this only holds if you omit 'just transition' and only in scholarship where the close ties between energy justice and just transition are sometimes overlooked. Closely related to the growing environmental justice movement in the '70s, the term just transition was coined by Tony Mazzocchi, a trade unionist, who believed the social and environmental concerns should be addressed simultaneously (Leopold, 2007). Therefore, by positioning just transition at the intersection of the social justice trade unions (mainly coal miners) were seeking and the environmental justice, he at least in practice inspired the idea of energy justice. It is only decades later energy justice has been conceptualised and became relevant not only for scholars but also for policy makers partially due to rising concerns of global warming and because of growing movement of climate justice. Later in this paper, after discussing the concepts of environmental, climate and energy justice, I will discuss just transition as a potentially unifying framework with its roots in the soils of solidarity, however showing very little use of that potential.

Section 1

There are several approaches that help us to grasp the main differences between environmental justice and climate justice. Based on Schlosberg and Collin's work, Table 1 presents two different approaches; historical and human rights (Schlosberg et al., 2014 & Bond et al., 2010). Historical approach underlines the weight of historical actions in moving forward. The UNFCCC's 'common but differentiated responsibilities and respective capacities' understanding is based on polluters pay while similarly the 'climate debt' principle is based on 'full compensation and reparations for damage'. In the human rights approach the environmental justice puts emphasis on equality (in receiving protection by environmental regulations and laws) while climate justice focuses on the idea that any outcome

generated by burning fossil fuels is against the fundamental human rights since in many locations around the world people's access to their fundamental rights are worsening as a result of climate change. Furthermore, climate justice underlines the right to development out of poverty before getting any climate debt.[5]

Table 1: Early approaches to laying out intersection between climate justice and environmental justice principles[6]

	Environmental Justice	Climate Justice
Historical approach	Polluters pay	Common but differentiated responsibilities and respective capacities
	Full compensation and reparations for damage	Full compensation and reparations for damage - Climate debt
Human rights approach	Equal right to be protected by environmental regulations and law	Burning fossil fuels is limiting access to fundamental human rights (of vulnerable communities)
		Right to develop out of poverty before gaining any climate debt

Here two bodies of text can help a) translating these different approaches into concrete principles, b) tracing overlaps between

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[5] To briefly illustrate how complicated this principle is in reality; the available data shows us that rapid decoupling is only achieved partially by some countries in the Global North and for the rest of the world the decoupling will take longer. Then, as soon as the coupling issue is recognized, 'the right to development' becomes 'right to emit'. However, simultaneously, those who decoupled claim to have a right to have mechanisms that establish competitiveness in the markets. The Carbon Border Adjustment Mechanism (CBAM) of the EU is a great example where we observe punishments for those who want to emit their way into European borders. However, technically they should have no problem accessing other markets with their emitting products. Therefore, it is important to say the implementation of these principles in the world of carbon markets and climate negotiations is highly complicated and therefore should be read within a larger context of complexities.

[6] Author's own visualisation based on Schlosberg and Collins' ''From environmental to climate justice: climate change and the discourse of environmental justice'' WIREs Clim Change 2014, 5:359–374. doi: 10.1002/wcc.275

environmental justice and climate justice and presenting the evolution of differences, and c) bringing in an energy lens into the conversation. First body of text is 17 Principles of Environmental Justice published in 1991, the first set of principles set by the First National People of Colour Environmental Leadership Summit as it is the first time such a detailed text on environmental justice came about in the USA (*The Principles of Environmental Justice (EJ)*). The second text is the Bali Principles of Climate Justice, created in 2002 during the Earth Summit (*Bali Principles of Climate Justice | Corpwatch*). This is again the first set of principles agreed by and published to a wide range of audience from an international stage (Schlosberg et al.,2014). The next section will look at these texts and analyse the differences with an energy lens.

Section 2

Looking at these two texts can give a fundamental idea about how energy, and not yet energy justice, came into the conversation. Firstly, Table 2 shows the adoption and evolution of principles from environmental justice (column 1) to climate justice (column 2). To do so, I list the relevant principles that correspond to climate principles in the first column. For instance, while #2 Principle of Environmental Justice corresponds to #19 of the Climate Justice Principle, we see no change in the language and therefore can see clear adaptation of the principle. Secondly, the table shows how the changes between two principles include energy issues. For example, in the fourth line, we see that the principle (#4) has widened from 'protection from nuclear' to suspending nuclear and fossil fuels exploitation as well as the large hydro plants. These changes are highlighted and noted on the third column where specific mentions of 'energy', 'fossil fuel', 'renewable', 'nuclear', 'hydro', and 'just transition' are noted. To ensure no energy related changes are missed, here I apply reverse scan by first reviewing the both texts and then name all related concepts in the third column - as opposed to randomly deciding what should be an important energy concept to look at in the texts.

Table 2: Reading the evolution of energy topic in the texts of 17 Principles of Environmental Justice 1991 and Bali Principles of Climate Justice 2002

17 principles of Environmental Justice 1991	Bali Principles of Climate Justice 2002	Specific mention of 'energy', 'fossil fuel', 'renewable', 'nuclear', 'hydro', 'just transition'
#1 ...the right to be free from ecological destruction.	#1 ...the right to be free from climate change, its related impacts and other forms of ecological destruction.	
#2 ...public policy be ... free from any form of discrimination or bias.	#19 ...public policy be ... free from any form of discrimination or bias.	
#4 ...universal protection from *nuclear testing, extraction, production and disposal of toxic/ hazardous wastes and poisons*	#10 ...*moratorium on all new fossil fuel exploration and exploitation*; a moratorium on the construction of new nuclear power plants; the *phase out of the use of nuclear* power worldwide; and a moratorium on the construction of *large hydro* schemes	*Broader scope:* Shift from 'protection from nuclear' negative externalities to *fossil fuel* and *nuclear suspension* and *halting large hydro schemes*
#5 ... environmental self-determination of all peoples #7 ...right to participate as equal partners at every level of decision-making... #11 ... recognize a special legal and natural relationship of Native Peoples... affirming sovereignty and self-determination. #13 ...strict enforcement of principles of informed consent	#20 ... right to self-determination of Indigenous Peoples #21 ...right of indigenous peoples and local communities to participate effectively at every level of decision-making...(and) strict enforcement of principles of prior informed consent	

#6... cessation of the production of all toxins, hazardous wastes, and radioactive materials, and that *all past and current producers* be held strictly accountable to the people for detoxification and the containment at the point of production.	#8 Affirming the principle of ecological debt, Climate Justice demands that *fossil fuel and extractive industries* be held strictly liable for all past and current *life-cycle impacts* relating to the production of *greenhouse gases* and associated local pollutants.	*Directly links fossil fuel* and extractive industries with *greenhouse gases* and pollutants From 'at the point of production' to *taking out the limitation by the proximity* - which can be seen as understanding global scale impact of activities causing climate change From 'all past and current producers' to 'past and current life-cycle impacts' which recognises the future impact of past and current production and brings a *holistic understanding with life-cycle approach*
#8 ...right of all workers to a safe and healthy work environment without being forced to choose between an unsafe livelihood and unemployment. It also affirms the right of those who work at home to be free from environmental hazards.	#14 ...the *right of all workers employed in extractive, fossil fuel and other greenhouse-gas producing industries* to a safe and healthy work environment without being forced to choose between an unsafe livelihood based on unsustainable production and unemployment.	Direct reference to the *fossil fuel and other GHG producing industries'* working conditions. *Indirect reference to just transition* and its uniting efforts to respect miners' rights and environment simultaneously.
#9 ...protects the right of victims of environmental injustice to receive full compensation and reparations...	#9 protects the rights of victims of climate change and associated injustices to receive full compensation, restoration, and reparation for loss of land, livelihood and other damages	

#14 …opposes the destructive operations of multi-national corporations.	#6 …opposes the role of transnational corporations in shaping unsustainable production and consumption patterns and lifestyles… #7 …recognition of a principle of ecological debt that industrialized governments and transnational corporations owe the rest of the world…	
#15 …opposes military occupation, repression and exploitation of lands, peoples and cultures, and other life forms.	#24 …*opposes military action, occupation, repression and exploitation* of lands, water, oceans, peoples and cultures, and other life forms, especially as it relates to *the fossil fuel industry's role in this respect*	Includes recognition of *fossil fuel industry's impact on security*
#16 …education of present and future generations which emphasises social and environmental issues…	#25 …the education of present and future generations emphasizes climate, *energy,* social and environmental issues…	Includes *energy alongside with climate as a pressing issue* in which present and next generations should be educated
#17 …personal and consumer choices to consume as little of Mother Earth's resources… (and) reprioritize our lifestyles to ensure the health of the natural world for present and future generations.	#26 …personal and consumer choices to consume as little of Mother Earth's resources, *conserve our need for energy…* (and) while *utilising clean, renewable, low-impact energy*; and ensuring the health of the natural world for present and future generations. #27 …rights of unborn generations to natural resources, a stable climate and a healthy planet	Refers to *energy sufficiency* discussions way ahead of its time while highlighting the limitations of negative externalities of energy usage

	#11 ...*clean, renewable, locally* controlled and *low-impact energy resources* in the interest of a sustainable planet for all living things	Referring to *decentralisation* and (one can argue) *democratisation of energy* while highlighting renewable and clean nature of the new energy sources
	#12 ...the *right of all people*, including the poor, women, rural and indigenous peoples, to have *access to affordable and sustainable energy*.	Laying the ground for *SDG7 (Sustainable Development Goal)* which is to ''ensure access to affordable, reliable, sustainable and modern energy for all''
	#15 ...need for solutions to climate change that do not externalise costs to the environment and communities and are in line with the *principles of a just transition*.	Gives clear reference to *just transition principles*; not to explanation on what those are but to highlight the need to ensure climate change solutions are not counterproductive for just transition

Analysing the references to energy (the third column) may not be sufficient on its own to understand the contemporary conceptualizations of energy justice but it is a necessary first step. Before looking at the larger themes, here it is necessary to talk about nuclear. While we see consistent and growing attention from environmental and climate justice principles (and the movements) towards nuclear energy, in reality we know the same united front does not exist for energy. This is another example referring back to the introduction where I argued the close link between energy and security and development. On top of this important differentiation, first group of themes that comes out from this analysis is drawing links between the fossil fuel industry and a) greenhouse gas emissions, b) security, c) just transition via improving health and safety of the workers, d) global negative externalities it causes rather than solely local ones. Second group of themes rising enriches the understanding of energy governance by introducing a) energy sufficiency, b) life-cycle approach, c) decentralisation and (less directly) democratisation of

energy and d) energy access which would be adapted as SDG 7 later with some adjustments. Later in this paper, Section 4 will reveal close ties between these findings regarding energy governance and principled approach to energy justice by Sovacool. But first, the next section will investigate an earlier and a more dominant approach of energy justice named three-tenet.

Section 3

On top of this historical understanding of energy justice which shows how it is rooted in environmental and climate justice movements and principles, it is crucial to look at the different conceptualizations; mainly the three-tenets approach by McCauley et al. (2013), principled approach by Sovacool et al. (2015), affirmative and prohibitive approach by Jones et al. (2015). In this paper I will mainly focus on the three-tenets approach because it is the first articulation of energy justice in 2013 and still most predominant among all. It focuses on the three tenets of justice; recognitional, distributional and procedural and shortly after the first publications, restorative justice also gains attention and becomes the fourth tenet. Then I will discuss other two approaches in the next chapter as they are also relevant in the pursuit of energy justice principles. In this early period, there is clear reference to tenets of environmental justice developed by Schlosberg et al., used as well in climate justice, clearly, this time with a new object; energy.

Here, instead of repeating the literature on how tenets of energy justice evolved from tenets of environmental and climate justice, I will build on the previous section on principles and illustrate the link between principles and conceptualizations. An important contribution of this analysis is to exemplify the interconnectedness of different tenets which recently was described as a weak point of the three-tenet approach (for energy justice) by Wood (2023).[7] I argue, if we start our analysis by looking at how

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[7] Wood's article inspires the initiation of the matrix analysis I conducted above. In their article, Wood explains the overlaps between the three tenets which brings authentic clarity

a single principle may refer to multiple tenets of justice, it brings tenets closer by enriching our understanding of the overlapping questions, issues and overall causality. It therefore brings more clarity to the tenet approach. For instance, instead of putting the indigenous people (recognitional) and their right to consent (procedural) in different boxes under different tenets, I bring them together to highlight the fact that it is not a coincidence that indigenous people are the ones that are not asked for consent. This also shows why analysing principles matter; in one sentence they can bring causality, history and reality to the table.

For this section, I use Bali Principles for four reasons; 1) as presented in the section above they are more comprehensive as they build on environmental principles, 2) as shown in the previous analysis, energy is mentioned more in the climate justice principles as it is perceived as a more relevant contemporary issue, 3) due to their scope they reflect on global issues and not necessarily only of USA's and 4) as clearly stated above there is no 'the energy justice principles' transcribed and agreed upon to use instead here. It is important to highlight that in these two cases of environmental and climate justice, the grassroot movement, often entangled with research, pushed forward for the establishment of the principles. However, for energy justice, the same does not apply. There is neither a strong grassroot presence for energy justice nor a set of principles published and accepted as widely as others yet. From observation, the impact is rather in the opposite direction; energy justice scholarship has been discussing the principles without the bottom-up push from the people specifically for energy justice.

The table below shows the outcome of the analysing the principles by following Jenkins et al. (2016)'s "what (distributional), who (recognitional), how (procedural)" questioning to see if there is a corresponding answer for the first three tenets. For the restorative, I look for references to 'the ecological debt', 'restoration', 'compensation', 'reparation', or 'common but differentiated

to the interconnectedness of the approach. They build on from the original work of Gordon Walker on environmental justice.

responsibilities. Here, in line with the previous analysis, I apply reverse scan by first reviewing the text and then name all related concepts around restorative justice. If there is an answer or reference; it is noted following the logic of:

#principle(x axis, y axis).

The Y axis is underlined for the convenience of the reader in this table to prevent confusion caused by other comas in the cell. For instance, if we look at the principle #12 (x: +3, y: -2): ''Climate Justice affirms the right of all people, including the poor, women, rural and indigenous peoples, to have access to affordable and sustainable energy'' (*Bali Principles of Climate Justice | Corpwatch*, n.d.). First, it refers to 'who' (the right of all people, including the poor, women, rural and indigenous peoples) and then continues to refer to 'what' (**access to affordable and sustainable energy**). Then, accordingly and while respecting the order of appearance, this principle (#12) placed on the (recognitional, distributional) cell.

Before looking at the results, I will discuss several limitations of the analysis as they are also linked to the results.

1. By limiting the analysis with 4 tenets, I had to disregard an important principle referring to intergenerational justice such as principle *#27 'Climate Justice affirms the rights of unborn generations to natural resources, a stable climate and a healthy planet.'* By proving this limitation, the analysis also shows the limitation of three-tenet (and updated version of four-tenet) approach.

2. There are principles that only refer to one tenet 'strongly'. For the simple understanding of the analysis and to keep analysis relevant, I only show the ones with strong indications for one tenet. For instance, principle #15 '*Climate Justice affirms the need for solutions to climate change that do not externalise costs to the environment and communities and are in line with the principles of a just transition'* is placed on (distributional, distributional) cell because of the reference given to externalisation of cost

Table 3: The matrix of tenets where the tenets are used as lenses to look at the Bali Principles

	Distributional	Recognitional
Distributional	#15 (solutions to climate change that do not externalise costs to the environment and communities)	#12 (right of all people, including the poor, women, rural and indigenous peoples, have access to affordable and sustainable energy)
Recognitional		#14 (the right of all workers employed in extractive, fossil fuel and other greenhouse-gas producing industries to a safe and healthy work environment) #22 (need for solutions that address women's rights) #23 (the right of youth as equal partners in the movement to address climate change)
Procedural		#3 (indigenous peoples and affected communities, represent and speak for themselves) #5 (particularly affected communities, play a leading role in national and international processes to address climate change) #20 (recognizes the right to self-determination of Indigenous Peoples, self-determination) #21 (affirms the right of indigenous peoples and local communities, participate effectively at every level of decision-making and asked for consent)
Restorative		#9 (rights of victims of climate change, receive full compensation, restoration, and reparation)

Procedural	Restorative
#6 (role of transnational corporations ...influencing national and international decision-making) #19 (public policy be...free from any form of discrimination or bias)	
#4 (democratically accountable to their people, common but differentiated responsibilities)	#7 (principle of ecological debt that industrialised governments and transnational corporations owe) #8 (principle of ecological debt...fossil fuel and extractive industries be held strictly liable)

(what) and lack of specific mention of which communities (who) and lack of the mechanism (how). However, there is no fixed definition of 'what strong is' for this analysis and this therefore stands as a limitation.

3.   The matrix relies on only two dimensions and therefore can be limited in showing a spectrum of connection with the third and fourth tenets. Therefore, I welcome any future work that can establish itself in the three and even four-dimensional world.

One interesting outcome of this analysis is to see how the distributional aspect is underemphasized in the text of climate justice principles by being the least mentioned tenet with only two strong mentions. This does not match with what is out there in the literature of energy justice which is often criticised for being too distribution oriented. This then signals the important gap between climate justice principles and energy justice scholarship by 1) illustrating the tangible nature of energy commodities, different than climate or environment, which supports initial claim made in the introduction regarding the complex nature of energy governance, 2) strengthening the pro-standards argument as standards concern the distribution of social goods (i.e. energy) therefore important instrument of governance (Bursch, 2011) for distribution of energy. Following these results, the next section will build on the governance aspect and introduce two remaining frameworks for energy justice.

Section 4

Built on an extensive model of application of energy justice onto energy problems, Sovacool et al. presents eight principles of energy justice; availability, affordability, due process, good governance, sustainability, intergenerational equity, intragenerational equity and responsibility (Sovacool et al., 2015). This principled approach is widely responsive to the issues of energy governance and distribution. However, when in 2017, Heffron and McCauley combined Sovacool's principles with 1) three-tenets of energy justice,

2) cosmopolitan justice across the energy life cycle (system) and 3) restorative justice throughout the model, they also present the most mature framework to this date (Heffron et al.,2017). This new conceptualisation also corresponds to this paper where the analysis showed that there was 1) lack of intergenerational justice, and lack of emphasis on distributional justice (Section 1 and 2) and, 2) lack of attention to concepts rising from the climate justice principles (Section 2); energy sufficiency, life-cycle approach, decentralisation and democratisation of energy, and energy access.

Table 4: Revisiting Table 1 with now energy justice column focusing on the prohibitive and affirmative principles

	Environmental Justice	Climate Justice	Energy Justice
Human rights approach	Equal right to be protected by environmental regulations and law	Burning fossil fuels is limiting access to fundamental human rights (of vulnerable communities)	The Prohibitive Principle: 'energy systems must be designed and constructed in such a way that they do not unduly interfere with the ability of any person to acquire those basic goods to which he or she is justly entitled' (Jones et al., 2015)
		Right to develop out of poverty before gaining any climate debt	The Affirmative Principle: 'if any of the basic goods to which every person is justly entitled can only be secured by means of energy services, then in that case there is also a derivative right to the energy service' (Jones et al., 2015, p. 165)

The final important framework as shown in Table 4 brings the influence of ethics on energy justice by producing the prohibitive and affirmative principles. They are placed next to the human rights approach from Section 1; not to claim strong similarities with environmental and climate justice but to show how energy justice has taken a step further in defining its principles.

With three most prominent approaches presented; three-tenet, principled, and prohibitive and affirmative, and discussed with respect to previous analysis of environmental and climate principles, I will finally discuss in the next section what this means for guiding questions of this paper.

Discussion section

With respect to questions raised in the introduction on 1) the relevancy of energy issues in the environmental and climate justice principles, and 2) different conceptualization of energy justice in response to that, analysis in this paper shows:

1. Energy is problematized in climate justice principles beyond nuclear energy and its negative externalities

2. Either modified or inspired by environmental and climate justice scholarships, energy justice researchers continue producing meaningful, reflective approaches to the issues of energy transitions

3. These approaches however have neither inspired by grassroot energy justice movement nor evolved to principle and/or standard setting in a mainstream sense

Regarding the last point, the empirical analysis of why, and the future projections on energy justice principles and standardisation is beyond the scope of this paper. However, in order to highlight the necessity of future work on principles of energy justice I will discuss just transition as non-sufficient alternative solutions.

Despite being coined decades before energy justice, just transition has become a buzzword for a variety of actors to hide the vagueness of their statements, policies and action plans. The most prominent proof of this can be traced with the help of principles. ILO presents its guiding principles for just transition which highlights labour front (*Guidelines for a Just Transition towards Environmentally Sustainable Economies and Societies for All | International Labour Organization*, 2016); while through the Alliance for Just Energy Transformation with WWF, KPMG, EDF, ITUC; UNDP publishes 8 core principles of a just energy transformation with vague statements such as 'Be centred on climate justice' (*The Alliance for a Just Energy Transformation*, n.d.). Asia-Pacific Economic Cooperation (APEC) publishes their 'Non-Binding Just Energy Transition Principles' with general statements such as 'Promote healthy lives and well-being for all' (*Non-Binding Just Energy Transition Princi-*

ples for Apec Cooperation | Chair's Statement of the 13th Apec Energy Ministerial Meeting, n.d.). On the other side of the ocean in the US, Climate Justice Alliance presents 'Buen Vivir' (*Just Transition - Climate Justice Alliance*, n.d.) as a principle for Just Transition. It is important to remind those who would claim this is due to different needs; principles are not supposed to be a menu of needs but representatives of morality and here, Table 4 where I presented a right-based approach, becomes even more informing.

A new just transition approach built on Climate, Environmental and Energy Justice as Heffron et al. calls for, is necessary to get rid of all the vagueness presented above (Heffron, 2018). Furthermore, calls for re-politicising the just transition concept in academia stay valid (Jenkins et al., 2020). However, it is important to highlight that neither is possible without the comprehensive understanding of principles of energy justice in and beyond academia.

Conclusion

The commonalities in our understanding of energy justice have a growing material impact in all corners of the world now more than ever due to funds being poured into Just Energy Transition Partnership and similar projects. While it is the interest of scholars to conceptualise these commonalities into frameworks, it is equally important to translate these frameworks into actionable information for our common future. In the scope of this paper I looked at the principles - as a ground-laying step for measurable, quality-focused standards- to understand how our normative ideas can be transcribed as principles.

Furthermore, this paper by looking at the environmental and climate justice principles with an energy lens revealed the relevancy of energy justice scholarship through different approaches. However, it should be interpreted carefully as this paper only focuses on two texts of principles and three main approaches of energy justice. The results are fragile against different sets of principles and approaches. Tracing processes around 1991 and 2002 to understand how these principles came to life is beyond

the scope of this paper. However, what this paper argues is that energy governance is complex and dominated by interests and injustices, therefore it is a crucial first step to draw connections between environment, climate and energy justice scholarships within the context of principles. An important contribution of the paper is the cross examination of principles and approaches by bringing in different texts from environmental and climate justice and several approaches from energy justice scholarship.

JETPs and similar projects that are presented with a normative goal of justness require intense empirical attention from researchers as well as more conceptual clarity on energy justice. Therefore, the future research should focus on the principle and standard setting processes for energy justice with reflection on power, ideas, and values of not only those from Global North but also Global South.

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Energy Crises and Discard in Pakistan: A Case Study on Korangi's Fisherfolk

Abstract: Subsistence fishing has increased in its energy requirement in the last few years. More fuel is required for longer fishing expeditions due to declines in fish stock at the coast as a result of overfishing and effluent dumping in water bodies. Fuel and energy use is crucial to the fisheries sector, but there is little note of this in food and natural resource management. This paper intends to study how discard and the rapidly worsening energy crisis in the South Asian coastal city of Karachi, Pakistan, affects subsistence fishers, their households, and their communities at large. I specifically want to understand how inadequate governance, dispossession, and the scarcity of fuel and energy has affected indigenous knowledge and local traditions of fishing, as well as the transformations in the nature of the historic relationship that small-scale fisherfolk have had with the sea as a result of the same. Drawing on discard studies and using an ocean grabbing lens, I analyze how militarization, bureaucracy, and imbalances of power stand in the way of ensuring just transitions for South Asian fisherfolk in a time of energy scarcity.

Keywords: energy justice, energy scarcity, material discard, ocean grabbing.

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Introduction

Small-scale fisheries are responsible for nearly half of the world's seafood catch but utilize only 11% of the total amount of fuel used to extract seafood (Anderson, 2020). Although artisanal fisheries in the Global North are receiving more academic attention and policy protection given their sustainability as compared to industrial fisheries, South Asian small-scale fisheries remain under-studied. A lack of policy and implementation has also led to coastal deterioration and a decrease in fish catch and associated livelihoods for South Asian fisherfolk (Ilona et al., 2006).

Understanding how small-scale fisheries' traditions, ecologies, and communities in South Asia have changed over time through the lens of energy will help present solutions and policy recommendations to preserve communities that form part of the backbone of the world's food supply. The ties that indigenous small-scale fishers have with the sea are wide--rooted in caste, ethnicity, and/or tradition--and deep: fishing is often more than a means to make a living; it is a way of life within itself. Breaking down discard and energy poverty as consequences of inadequate governance and identifying their roles in the deterioration of South Asian indigenous fisherfolk's livelihoods and communities is central to rehabilitate them in a sustainable manner.

The peripheries of South Asian cities are often occupied by low-income districts that rely on either daily wage work or subsistence livelihoods involving fishing, livestock farming, or agriculture. Korangi in Pakistan's most industrialized city, Karachi, is an example of such a district; its inhabitants are mostly small--scale subsistence fisherfolk. While this is the city this paper will study, there are also other examples that are valuable for future research. Bangladesh's capital, Dhaka, also has similar areas to Korangi: the Port of Dhaka has several fishing districts close by, such as the Khilkhet neighborhood. The Indian city of Mumbai is home to the world's oldest fishing village, the 800-year old Worli Koliwada. These cities are homes to their respective indigenous fisherfolk: Sindhis in Karachi (Azeem, 2021), the Koli

tribe in Mumbai (Harad & Joglekar, 2017), and the Bagdi, Malo, and Rajbonshi communities in Dhaka (Rahman, 2020, pp. 188).

These are all also port cities that are undergoing rapid urbanization that have sprawled due to housing crises and rural-to-urban migration (Eren, 2014, pp. 943; Hasan, 2015, pp. 217; Rahman et al., 2020, pp. 7439) and have, in some cases, extended to informal housing settlements on the outskirts near the coast or resulted in the creation of satellite cities by the government as part of a solution to urban overpopulation. Residents of these informal settlements and satellite cities are increasingly the targets of marginalization carried out by their respective states (Hasan, 2016; Hasnat & Hoque, 2016, pp. 50; Shaw, 1995, pp. 254). These cities have been facing energy crises, hikes in fuel prices, and increasing energy poverty, made worse by the COVID-19 outbreak, the Russian war on Ukraine, and climate change disasters such as floods and cyclones (Kessides, 2013, pp. 272; Nandy, 2016, pp. 2; Rabby, 2022).

There has been a significant body of work carried out about how energy poverty has affected subsistence livelihoods in rural areas of these South Asian countries (Khandker et al., 2011) and comparative studies of how rural and urban access to energy differs (Rehman et al., 2018). However, there is little empirical evidence of how individuals relying on subsistence fishing and living in or at the outskirts of these cities are affected by energy crises in the long term, and how the scarcity of energy affects their food security. The link between energy and economic development is generally well-accepted; households that are energy poor cannot have a high level of well-being in terms of security and livelihood. Energy is among the necessities for development (Khandker et al., 2011, pp. 894).

Over the last decade, the Korangi Creek's coastline and the Arabian sea coast it is attached to have deteriorated due to the timber mafia, which cut down the mangroves at the Korangi Creek to sell for profit as a cheap source of fuel (Dawn News, 24 January 2022). However, the mangroves are essential to sustain marine life at the Korangi coastline, where they harbor the prawn and crab

species that are the most lucrative catches and therefore central to the livelihoods of local fisherfolk. Other community members who are not fishing themselves nevertheless are mostly involved in the fisheries sector; women and children in Ibrahim Hyderi and Rehri Goth work as fish cleaners or shrimp peelers, while the non-fishing men often work as processors or transporters. Due to the destruction of mangroves, the subsequent decline in fish catch, and the resultant hike in seafood prices, a vast proportion of Korangi's fisherfolk and fisheries workers cannot afford to make ends meet, or even eat the fish they catch (Idrees, 2021).

Solid waste dumping by industries and municipal authorities is also routine at the Korangi coast—governmental institutions such as the provincial Sindh Solid Waste Management Board (SSWMB) and the Karachi Municipal Corporation (KMC) passively allow or ignore the misuse of low-income districts as dumpsites for Karachi's municipal and industrial solid waste, which is between 18,000 and 20,000 tonnes daily (C40 Cities, January 2020). Karachi has no proper landfills; Deh Gondal and Jam Chakho, the city's only dedicated solid waste disposal sites, are in reality dump sites that have been choked for the last ten years (Imran, 2019).

The land mafia—a mix of politicians, police, and, most importantly, land developers—is an active player in the garbage dumping, land grabbing, and land reclamation in Karachi. These individuals' campaigns are forceful and hard-hitting, and since 2005 have centered on reclaiming land from Karachi's seas through the use of compacted, weighted garbage (Guriro, 2017). This reclamation leads to hazardous chemicals in the solid waste leaching into the sand and toxic effluent being dumped into fishing grounds. Marine life has been depleted from the coastline: a combination of the timber mafia's actions, the water from the Indus Delta running low, and erosion (Aeman et al., 2023; Ali, 2018; Baker, 2022). The aquatic zone's health has also deteriorated and there are not enough mangroves to remedy this.

These circumstances have forced the fishing communities at the Korangi coast to venture farther and farther offshore to obtain their catch, now more expensive as more fuel is used and more

dangerous due to choppy waves and the risk of crossing over into Indian waters and being interrogated or detained on suspicion of being spies by Indian authorities (Imtiaz, 2014).

Against this background, this paper concentrates on the following main research questions:

- How has the fishing communities' relationship with the sea changed on the Korangi coast due to energy poverty and material discard?

- How do military and governance institutions change definitions of legality and uphold a narrative of "greater good" against dissenting fishing communities, and how are these communities discarded by these institutions?

By applying a Foucaldian lens to discard studies, this paper will posit that the discard as relates to Korangi is two-fold: there is discard *at* Korangi (of materials) and there is discard *of* Korangi (its ecosystem, people, and traditions). A core part of this paper's findings is based on how changes in landscape due to garbage dumping and development at the coastline (i.e. shifts in geography) have rippled out and caused physical and socio-economic harm for the fishing communities, including energy poverty, damage to their health and the loss of centuries-old traditional fishing practices and monsoon-time culture. The history of fisherfolk presented within this paper will explain the content and extent of this harm, while the theoretical frameworks used will highlight the violence involved in this type of economic development at the coast marginalizing and dispossessing fishing communities of their livelihoods, fishing rights and their physical and mental health.

Theoretical framework and literature review

This paper explores how the energy poverty that Korangi's subsistence fisherfolk face due to inflation and rising fuel prices is further worsened by discard, inadequate governance, and ocean grabbing. Similar to its counterpart on terrestrial systems, land grabbing, ocean grabbing literature explains what kinds of ma-

rine reallocations by governments or the private sector can be considered detrimental to ecosystems and the populations that rely on these ecosystems for survival. According to Barbesgaard (2016), ocean grabbing is a means of accumulation by dispossession. Harvey (2003, 2005) highlights state redistribution as one among the neoliberal mechanisms that enable and uphold accumulation by dispossession. These state redistributions happen routinely at the Korangi coast in the form of ocean grabbing, both implicitly and explicitly, through the auctioning of trawlers (Aamir, 2020; Baloch, 2002; Baloch, 2021; Business Recorder, 2005), repurposing of the fisherfolk's residential coastal land into garbage dumps (Ahmed, 2015; Guriro, 2017; Idrees, 2021; Kaimkhani, 2007), and the consolidation of fishing power into the hands of large companies (Mehmood, 2021). These factors, all combined, have enabled the unraveling of two of the Korangi coasts's neighborhoods'--namely Ibrahim Hyderi and Rehri Goth--communities over the last two decades especially.

These reallocations can be considered ocean grabbing if it fulfills one of the following three conditions: it is brought about by inadequate governance, it harms livelihood or human security, or it causes socio-ecological damage (Bennett et al., 2015; Govan, and Satterfield, 2015). This strand of literature is mainly relevant for small-scale subsistence fishers, especially those of the Global South. Ocean grabbing "deprive[s] small-scale fishers of resources... and/or undermine[s] historical access to areas of the sea" (ibid, pp. 61). In the case of the Korangi coast, the deprivation and undermining of historical access occurs mainly through garbage and effluent dumping, enabled by police violence and inefficient city planning. Ocean grabbing studies tend to typically focus on policy making and governance (Bennett et al., 2015) and blue growth (Barbesgaard, 2016) from a perspective more centered around the Global North. Global South perspectives are key to understanding how the policies and redistributions that enable ocean grabbing are upheld in systems that are more informal in nature, with a variety of stakeholders. The dispossession of indigeneity should be a core part of reporting ocean grabbing, as it is with land grabbing globally (Albarenga & i Dalmases, 2022; IDMC, 2013; OHCHR, 2020).

Discard studies has emerged as a way of understanding "aspects of waste [that] are entirely hidden from common view, including the wider social, economic, political, cultural, and material systems that shape waste and wasting" (Liboiron & Lepawsky, 2022, pp. 2). Therefore, discard studies looks beyond the traditional confines of waste studies, which focuses primarily on material waste and the techniques and systems used to manage it. More specifically, it questions "how some materials, practices, regions, and people are valued and devalued, become disposable or dominant" (ibid, pp. 3). The emphasis, in discard studies, is on how harm is determined, and by whom (Vogel, 2012), and which materials, peoples, communities, and places are discarded. For the dominant system to continue functioning, it rids itself of "people, places, and things that actually or potentially threaten the continuity of [the system]" (Liboiron and Lepawsky, 2022, pp. 3). Discard studies conceptualizes wasting as a "technique of power" (ibid), and analyzes the necropolitics involved in placing value on some places and people above others. What is discarded shows who possesses power within the system; as Michel Foucault put it, "power… produces reality [and] domains of objects and rituals of truth" (Foucault, 1991, pp. 27).

The concept of governmentality was introduced as a power analytic by Foucault, and has further inspired the term eco-governmentality in the political ecology literature. Eco-governmentality has now become a concept often used by political ecologists to show how environmental concerns can become a "rationality of rule" (McCarthy et al., 2015, pp. 389) in neoliberal, governmental systems. Biodiversity conservation efforts, extractive processes, and other environmental concerns have been largely governmentalized, with "new governing apparatuses [producing] new knowledge about natural and social bodies of proper conduct and rule" (Valdivia, 2015, pp. 471). The opinions and decisions of those actually affected by environmental policymaking are not invited, nor are they consulted (Demeritt, 2015). The dispossession of these marginalized communities-and treatment of individuals as subjects to be governed without

the right to self-govern or dissent--is a built-in feature of eco-governmentality. Accordingly, a governmental state uses tools to proliferate "techniques and knowledges to manage social life" (Valdivia, 2015, pp. 470). It regulates institutions, and uses the complementary technologies of disciplinary power and control mechanisms to remove deviations from behaviors, populations, economic outcomes, etc. that are considered undesirable by the biopower state (Foucault, 2000). Eco-governmentality therefore questions power relations: how power is used, and against whom, within the context of nature-society relations. The term is often utilized to analyze power relations in cases of dispossession and extractivism in the Global South (Ayub et. al, 2022; Andreucci & Kallis, 2017; Goldman, 2001; Himley, 2008).

Rashid (2020) analyzes the Pakistani army's role in governance, and defines it as the British Indian Army's direct successor in the country, having direct rule over the population for over thirty years. The position of Prime Minister (the most powerful political position in Pakistan) coincided with the Chief of Army Staff position through the enactment of martial law between 1958 and 1971, then between 1977 and 1988, and finally between 1999 and 2008. Therefore, this paper also aims to examine the Pakistani military's role in dispossession of marginalized communities today, and establish how it produces and enforces power over those it governs with respect to the fisherfolk.

Methodology

This paper utilizes in-depth semi-structured interviews that were conducted with members of the fisherfolk living in Rehri Goth and Ibrahim Hyderi. These interviews are organized into different sections thematically using open-coding methods. Local newspaper articles pertaining to the Korangi coast's fisherfolk were used to construct a historical overview of how the coast has changed over time, including how the fisherfolk's own relationships with the sea have been affected by the shifts in their space and place.

These interviews--combined with my literature review and news articles from high-impact English-language local news sources such as Dawn News and The Express Tribune--form the basis of my arguments and allow for a holistic picture of how Ibrahim Hyderi and Rehri Goth have changed over time.

Results

This section presents the key findings and analyses based on the in-depth interviews that I conducted with the fisherfolk of the Korangi coast in Karachi. The analysis is complemented by archives on Pakistan's and Karachi's history and news articles on fishing communities living at the Korangi coast.

Creation of the land mafia

The land mafia came into being due to Karachi's housing crisis, which began in 1947 with the partition of the Indian subcontinent and worsened in 1971 due to the separation of Pakistan and Bangladesh (then "West Pakistan" and "East Pakistan," respectively), causing two mass migrations into Karachi. At the time of the partition, Karachi's population was approximately 400,000, so housing was not an issue for the city, which is the twelfth-largest in the world. However, refugees and rural-to-urban migrants created new housing challenges, which "land sub-dividers"--what is now referred to as the land mafia, grabbers, or developers--stepped up to control by dividing vacant land in Karachi into plots.

These land sub-dividers were typically government officials, *zamindar* (landowners), bureaucrats, politicians, or members of the Sindh police. They let or sold these plots to migrants for cheap without involving the government or producing proper paperwork. The majority of low-income migrants had left behind their generational homes before migrating and required this affordable housing, even if it was an impermanent solution. Essentially, the land mafia came into existence due to the lack of affordable housing plans put in place by the national government, and their unwillingness to cater to lower-income individuals and migrants (Ahmed, 2015).

Korangi was among the first districts to be re-settled with migrant groups. The administration of the then-Governor General, Ayub Khan, defined *jhuggis* (informal housing constructed with corrugated iron and mud) as an eyesore where "unhygienic", "unclean" populations lived. Migrants from India living in Karachi's jhuggis were resettled in Korangi "without any housing or infrastructural support" (Ashfaq et al., 2020, pp. 1) as the administration lauded the creation of satellite towns such as Korangi. Rajani & Rajani (2016) state that the displacement of these individuals is an example of "colonial patterns," wherein states exert control over subjects, instead of subjects having the power to exercise their rights in how they are governed. These satellite towns are populated without possession documents, through political backdoors and bribes. Informal settlements are institutionalized and make up for around half of Karachi's housing needs, and are characterized by the lack of sanitation infrastructure (Hasan, 1996). These units allow individuals without due documentation (National Identity Cards, birth certificates, etc.) to access housing affordably without resorting to "long-drawn, complicated government [housing] schemes" (Ashfaq et al., 2020, pp. 13).

Over time, as land became an even more precious commodity due to overpopulation, the land mafia turned to the sea to produce more valuable land at the coast. The aggressive land reclamation campaigns at the Korangi coastline are carried out using solid waste, as a violent form of ocean grabbing. These campaigns use compressed plastic waste (including toxic medicinal waste, since source separated waste is not the norm in Pakistan) to push the coast further into the sea, and the land is rented or sold to illegally operational, environmentally damaging factories. These factories pay a huge one-time cost to the ocean grabbers to carry out operations without the legal paperwork it requires and dump effluent into the sea without the requisite treatment, and unprocessed fumes into the air (Guriro, 2017; Ahmed, 2015). The fishers are intensely connected to the coast; the dispossession of their means of livelihood and dismissal of their well-being and core identity is a feature of ocean grabbing (Pedersen et al., 2014).

The Pakistan Fisherfolk Forum (PFF) has requested the municipal authorities to set up a sewage and effluent treatment plant multiple times so the water at the coast does not get dirtier with time. They proposed that this be financed by the commercial sea lords--private fishing company owners who have multiple jetties on the Korangi coast and employ fishers to work on commercial boats. However, these sea lords--*sarmaydaar*--are reluctant to finance what they believe is too expensive a project. The gutter water that Korangi's coast receives incorporates the wastewater of 5,000 farmhouses that are located in Bhens Colony--one of the foremost reasons, according to an interviewee, that the water at the coast is brown now. There is a lack of sewage and city planning, and the mangroves dry out as a result. This observation is in line with Van Bijsterveldt et al. (2021), who found that mangroves' growth and development is adversely affected by pollution. When the fisherfolk get out of their boats and pull their boats towards the jetties, their feet remain greasy and blackened with residue that does not wash off for days.

Karachi's sprawling buildings and informal settlements can therefore be viewed as a failure to plan, wherein "illegality becomes part of planning" (Ayub et al., 2022, pp. 4). Since the provincial government and municipal urban planning institutions failed to allocate adequate land for housing to migrants and refugees, these individuals had to resort to residing in temporary houses, resulting in various communities that have generationally lived in informal settlements.

The manifestation of "Othering" in Korangi

Stereotyping and "Othering" of fisherfolk

Many of the Bengali migrants who were given government-issued computerized national identity cards (CNICs) have had them revoked. CNICs are used by the state to police and exclude individuals from national rights and governmental services "along arbitrary lines of citizenship and non-citizenship" (Ashfaq et al., 2020, pp. 13). The Bengali and Rohingya members of Korangi are consi-

dered "foreign" and therefore ineligible to apply for a CNIC, but even residents who are eligible for citizenship are subject to violent policing if they lack a valid CNIC. Daily wage workers (including fisherfolk) are routinely stopped by the Sindh police and asked to hand over their CNICs for examination. A CNIC--or the lack of a CNIC--becomes a pretext for arrest and extortion for lower-income men or those from marginalized communities (Anwar et al., 2016). Many of the Korangi coast's fisherfolk have been made to pay bribes to the Sindh police on multiple occasions due to their lack of CNICs; those who cannot are sometimes detained and sometimes let off (Mughal & Baloch, 2017). The bribes they are made to pay are "financially crippling" (Anwar et al., 2016, pp. 151), with the police demanding a significant percentage of their daily wages. If they are unable to pay, they are harassed and beaten (Ashfaq et al., 2020). Interviewee #6 explained that customs and maritime officers check CNICs as the boat enters and leaves the harbor.

Against this background, I argue that the focus on differences regarding ethnicity and class with respect to the issuing of CNICs by the Pakistani government is a form of "discard" in line with the "stereotyping" concept discussed in discard studies literature (Leboiron & Lepawsky, 2022). It is essential to study difference when it comes to power relations or issues of justice. I posit that "Othering" in the Foucauldian sense is upheld via stereotyping in the case of the Korangi coast. Bhabha (1994) suggests that stereotypes are "complex, ambivalent, contradictory mode[s] of representation, as anxious as [they are] assertive," and demand of the dominant group that they "change the object of analysis itself" (Bhabha, 1994, pp. 138). Dominant groups stabilize knowledge about "aliens" using stereotypes, which are often contradictory (Liboiron & Lepawsky, 2022), as in the case of the Bangladeshi migrants: the Pakistani federal government uses the specific narrative implying they are lazy, immoral thieves, but also that they are taking jobs away from "legitimate" Pakistanis. These two ideas are at odds with each other, and yet both contribute to the idea that Bengali migrants are 'less than' the dominant normative group, in the same way that those living in

Korangi's informal housing are Othered through narratives of sanitation and cleanliness, while municipal authorities actively and passively allow garbage and effluent dumping to take place.

In line with this, Interviewee #5 stated that the garbage dumping takes place because the dominant middle class would not care whether a neighborhood was converted into a heap of rubbish as long as it was not within their areas. These attitudes of not-in-my-backyard, and the stereotypes that perpetuate them, are also a production of knowledge about the types of people that it is acceptable for institutions, states, and societies to discard. Essentially, "stereotyping is a foundation of annihilation" (Liboiron & Lepawsky, 2022, pp. 111). The impacts of this stereotyping are damaging across generations; Interviewee #10, for instance, found it immensely difficult to raise her three children in Ibrahim Hyderi, saying that she cannot make herself ask her children to stop playing in the trash, since the trash is everywhere.

Ibrahim Hyderi and Rehri Goth's residents are low-income, marginalized individuals who are stereotyped on the basis of ethnic or casteist value systems. This grouping together of the residents is based on the "idea that there are fundamental differences between different types of people" (Liboiron & Lepawsky, 2022, pp. 100). Governments exercising necropolitics utilize this stereotype by enforcing hierarchies and creating "truths" that protect the "greater good;" in the case of Korangi, the greater good is economic development, which is given value over the human lives of the fisherfolk. However, the valuation of life by the governing system puts the stereotyped Other at substantial risk (Dias & Deluchey, 2020) by exposing them to environments and situations that harm their lives and livelihoods. Therefore, stereotyping is a technique of "discarding through differentiation" (Liboiron & Lepawsky, 2022, pp. 100) so as to uphold dominant power structures and dynamics.

The COVID-19 pandemic brought the middle class's anxieties around disease and uncleanliness to a peak, and engendered a global narrative centered on the importance of living in green, healthy, sustainable cities (Ayub et al., 2022). The Karachi Mu-

nicipal Corporation (KMC) has used this anxiety as a tool to further neoliberal development agendas by revoking the legality of 99-year leases that the Corporation itself granted to many residents living in *katchi abaadiyaan* and demolishing informal settlements such as those along Gujjar Nullah (Ayub et al., 2022). The Korangi coast faces a similar fate; although its residents are not being evicted by the municipal authorities, they are being "forcibly displaced" (Ashfaq et al., 2020, pp. 9) further away from the coast due to environmental degradation and ecological shifts in its landscape. Land reclamation using compressed garbage, the formation of sludge at the coast due to wastewater dumping, and the decline of health as a result of residing in Ibrahim Hyderi and Rehri Goth are all external pressures displacing these communities. In addition, land value decides land use in Karachi; this is the reason that many factories and workshops are located in and easily available in Ibrahim Hyderi, Rehri Goth, and other districts that house *katchi abaadiyaan*, thereby causing mass displacement of working-class communities (Ayub et al., 2022).

The mainstream discourse around cleanliness and the pandemic enables the stereotyping of Korangi's fisherfolk as "dirty" among the middle and upper classes. The district is also subjected to the stigmatization that occurs alongside the waste dumping due to their proximity to the waste. These "inherently classist vocabularies and prejudices" (Ayub et al., 2022, pp. 6) enable the state to justify its violent rationale and ensure that the cycle of Othering marginalized communities remains intact.

Further, the heavy policing of residents including the fisherfolk at the Korangi coast is in line with the control mechanisms utilized in political systems reliant on governmentality as theorized by Foucault (1998). The constant surveillance, extortion, and harassment that they undergo can be seen as a control mechanism employed by a governmental state employing "a more diffuse form of power" (Bakker and Bridge, 2008, p. 225) as opposed to older sovereign states that depended on overt forms of punishment to ensure order. Governmental systems rely less on absolutist power, and more on disciplinary and judicial powers

(Foucault, 1998). At the Korangi coast, these powers manifest as surveillance, stereotyping, and bureaucratic control.

Legality, dissent, and "making/letting die": Korangi fisherfolk's deteriorating well-being and mental health

The residents of the Korangi coast, including the fishing communities of Ibrahim Hyderi and Rehri Goth, are subject to discriminatory policies (such as refusal to issue identity cards to Bengali fisherfolk) and state-enabled garbage dumping. This deteriorates their well-being and leads to severe mental and physical health problems (Ahmed, 2015). The groundwater at the Korangi coast is immensely polluted as a result of chemicals leaching into the ground from the dumped solid waste, and can cause stomach infections which may be fatal for infants (Waseem et al., 2014). Allergies and skin diseases are a common complaint for many of the residents, and as summer draws closer, a significant portion of the population suffers from chikungunya, a viral fever borne by mosquitos (Mughal & Baloch, 2017). The "330 million gallons of industrial and domestic effluent" (Guriro, 2017) and resultant decline in fish catch and, by extension, fisherfolks' livelihood, has taken an enormous emotional toll on Ibrahim Hyderi's residents, with a sharp rise in mental health issues such as drug addiction, depression, and schizophrenia (Ahmed, 2015). All of these are examples of "making die"; these financial, mental, and physical issues cause the breakdown of the fishing community and render it unable to mobilize effectively due to the imminent threats to its residents' survival.

These "technologies of control", in Foucauldian terms, are comparatively diffused and covert. Garbage dumping is heavily protested by the fisherfolk at the coast, who utilize non-violent means of protest including sit-ins, surrounding the garbage trucks so they cannot dump the garbage until the trucks leave. However, it is enabled by the municipal government. Those who dissent actively against the state's control mechanisms face severe disciplinary and increasingly militarized consequences. One of the interviewees, as a young fisherman in his twenties, protested against the garbage

dumping in 2007, whereupon Sindh police authorities detained him and falsely accused him of murder. He was an influential part of the protests, and regularly interacted with the media to highlight the extent of disrepair in Rehri Goth as a result of garbage and effluent dumping. He was bailed out by his community and the charges against him were dropped when he was proven innocent, but the detention was an excuse for torture. His right ear was broken by the Sindh police. The means of torture and alienation from community are deliberate; he was not taken to the jail from his own district when he was detained, but rather one much farther away that his community members would have difficulty accessing. His whereabouts were not given to his family. He is only one of many protestors who have been jailed or tortured. In 2011, two members of the PFF were assassinated for fighting against mangrove deforestation and the land mafia (AHRC, 2011).

Muhammad Ali Shah, arguably the most respected among all the Chairmen of the PFF, spent decades resisting the Rangers, a paramilitary unit of the army (i.e. civil armed forces, tasked with maintaining internal security in Pakistan) that was deployed at the Korangi coast in 1977. The Rangers supported the *beopari* (middlemen who work for private fishing companies and sea lords) at the coast who utilized an exploitative contract system, so that Korangi's fisherfolk (as well as Badin's, a small city in Sindh near Karachi) could not sell their fish catches at market rates. Instead, they would have to sell it for a twentieth of the price to the *beopari*. Thus began a system wherein the fisherfolk could not afford to eat the fish they caught, or to even take any of the fish they caught home, since the *beopari* would complain to the Rangers, who would then torture the fisherfolk. The relentless nonviolent protests that the PFF held against this restrictive contract system and the public attention gathered through Shah's arrest helped them, in Shah's words, "win against an army" (Down to Earth, 2005) when the Rangers officially withdrew from Badin under the then-Prime Minister Pervez Musharraf's orders.

However, state control against the fisherfolk did not die down. The Karachi Fisheries Harbour Authority (KFHA) is a

part of the Sindh government, and announces auctions where private fishing companies outside Pakistan can buy fishing rights. These auctions are the primary means by which foreign corporate trawlers gain access to Pakistani waters (Business Recorder, 2005). The PFF has historically staged sit-ins outside these auction halls. In 2005, after the Rangers withdrew from the coast, Shah was arrested after a sit-in and kept in custody for 22 days. According to Shah, it was all the same whether it was the Rangers, the Sindh government, or politicians--all these factions attempt to profit off the increasingly degraded Korangi coast at the cost of its biodiversity and indigeneity (Down to Earth, 2005).

Pakistan's military and paramilitary forces exercise full control over the population. On the 16th of January 2016, Saeed Baloch, a prominent PFF activist, was "disappeared" by the Rangers after he was taken into custody for protesting against the Fisherman Cooperative Society's (FCS) corruption (AHRC, 2016). At the time, the Chairman and Vice Chairman of the FCS had extorted millions of dollars, and hired hundreds of unregistered employees (Dunya News, 2015). Pakistan's Anti-Terrorism Act made it entirely legal for the Rangers to detain a person who is deemed suspicious at their discretion even without official charges. Therefore, "legality" is often used by the army and national and municipal governments as a control mechanism against dissenting populations. Baloch was released on bail in August 2016, after international uproar over his arrest (Front Line Defenders, 2016).

These continuously changing definitions of legality target marginalized communities and keep them in a state of flux. Legality is, therefore, used as a means to discard by way of justifying violence against those who protest for their right to reclaim the sea in the case of Korangi. This can be seen in how the PFF's activists have been physically assaulted by the police for a myriad of reasons: campaigning to find members of the timber mafia who have caused mangrove depletion, protesting against the killing of their colleagues by the state, and holding peaceful sit-ins against illegal occupation of their seas and lands by ocean and land grabbers even as the Sindh government protects those who harm the fisherfolk (AHRC, 2011).

This paper argues that the shifting of legality to serve the purposes of the biopower state which exercises total control over populations--and, indeed, labeling entire communities of marginalized peoples as "illegal"–can be conceptualized as "Othering" and an example of "making die" (Foucault, 2003). While the state and its agents, namely, the police, military sea lords, municipal officers, etc. may not be physically killing the residents of Ibrahim Hyderi and Rehri Goth, the discriminatory policies and state-enabled garbage dumping steadily worsens their quality of life and causes them deep physical and emotional harm.

Chinese industrial fishing and maritime development threatening Korangi's fisherfolk

In 2017, a 40-year lease brought about by the China-Pakistan Economic Corridor (CPEC) surrendered control of the Gwadar Port to the China Overseas Port Holding Company (COPHC). Gwadar is a coastal region in the province of Balochistan along the coast of the Arabian Sea. In 2020, fisherfolk from Karachi and Gwadar, Balochistan, protested against the arrival of twenty Chinese trawlers, stating that their local fishing equipment did not stand a chance against the trawlers. These grievances are part of local workers' growing resentment against China's growing economic hold over Pakistan as a result of the CPEC. The PFF wrote a letter in protest to the FCS, who had issued the permit to the Fujian Hengli Fishery, which owned the trawlers (Aamir, 2020). These efforts ultimately culminated in the Chinese trawlers being ousted from Pakistani waters. However, China's depletion of fish stocks, and its cultural dependence on seafood, results in Chinese fishing companies looking to sustain their fish catch elsewhere. In 2021, Pakistani authorities detained five Chinese trawlers on suspicion of illegal fishing. Although the boats were full of fish, the president of the COPHC maintained that they were docked to shelter from storms. Despite the then-Prime Minister's reassurance to the Pakistani fishers that there are not and would not be any licenses granted to Chinese trawlers, reports state

that around one hundred trawlers have been licensed to carry out fishing activities in Pakistani waters (Baloch, 2021). Given that bottom trawling is an especially detrimental way of industrial fishing for the marine ecosystems, damaging entire seafloor habitats (Coastal and Marine Hazards and Resources Program, 2016), these licenses are likely to have further negative impacts on the fish stocks and livelihoods of Korangi coast fishers.

Development of maritime infrastructure occurring at Karachi's Arabian Sea coast and Indus Delta also threatens the fisherfolk's survival in Korangi. The Muhammad bin Qasim Port (Port Qasim for short) was opened in 1980, and handles 35% of Pakistan's total cargo. Port Qasim was built on the Indus Delta's northwest edge. Its construction, the sheer volume of cargo it handles, and the dangers associated with the latter have caused the mangrove species surrounding the port to decrease from 8 in 1972 to 4 in 2009 (Dehlavi, 2017). The mangroves are an immense asset to carbon sequestration and a source of protection for Karachi's coast, directing cyclones away from the city. They are also rich ecosystems that are integral to harboring the most lucrative catches for Korangi's fisherfolk, such as prawn and crab species. Although mangrove cover all through Pakistan has increased since 2009, it is unlikely to go back to its 1980 levels (Baker, 2022). There is an active timber mafia in Pakistan, which cuts down mangrove trees from within the thick of the forest to sell wood for profit. Fuel is an expensive commodity in Pakistan, and with year-to-year inflation at 31.5% as of February 2023--the highest in 50 years (Al Jazeera, 2023)--timber from mangroves is an inexpensive, long-burning source of fuel. It takes between 50 and 100 years for a mangrove tree to mature fully, but the timber mafia takes it for free and sells it for cheap.

Port Qasim's unchecked industrial activity and rapidly increasing shipping volumes threaten the well-being of local bird and fish species. When the port was being built, the authorities assured the fisherfolk that there would be minimal pollution and that the indigenous Sindhi population at Korangi would be given lucrative jobs within the newly built port. However, none of Ko-

rangi's fisherfolk work there to this day. Many families living in Rehri Goth and Ibrahim Hyderi have documents proving their family's legal residence at the Korangi Coast from 400 years ago. The Port Qasim authorities are only open to hiring *uttar* (upper-caste) Sindhi people, who mostly come from the neighboring city of Hyderabad and are better educated than the fisherfolk, whose caste is classified as *laad* (lower-caste), despite the latter having historic right to the sea. The Port Qasim authorities prevent them from going into the sea area that "belongs" to the port. The port authorities and governance institutions have ways of making the *laad* fisherfolk feel out of place or inferior. Those who work in state offices are usually *uttar*, and despite the common language they share, the *uttar* officials never speak Sindhi to the *laad* fisherfolk. They use Urdu instead--due to the "hegemonic role of Urdu" (Rahman, 1995, pp. 1007) in Pakistan.

Large boats unloaded at Port Qasim cut through the water so fast that sometimes it upends the fisherfolk's smaller boats. When the fisherfolk spread their nets out on the water within sight of the authorities, they are told to pack up their nets and leave so the boats headed for Port Qasim can make their way through and unload. Korangi's fisherfolk are aware that they are not welcome there, or near the coast at Defense, which is an economically privileged neighborhood with a coast just 17 kilometers away from Korangi. The policing means they cannot fish there anymore, at least not comfortably--"our people are not thieves. It's our sea. We are of and from the water. When we catch a fish, its scales are moist with saltwater. That salt, that water, that fish, is ours. Our lives and our livelihoods are from the sea."

Forms of discard at the Korangi coast

Material discard: Garbage dumping on the Korangi coast

Karachi's land mafia has capitalized off the city's housing issues, which began with the large-scale displacement that the 1947 partition and the 1971 war brought, and were exacerbated by the influx of Afghan refugees in the 1990s and 2000s. Refugees and

migrants from different countries or from rural areas created unique housing difficulties for the city. The land mafia divided Karachi's vacant land into plots and set up temporary housing for low-income migrants. The existence of the land mafia is due to municipal carelessness and unwillingness to service lower-income factions of the city (Ahmed, 2015). As land in the central locations became scarcer due to overpopulation, the land mafia began carrying out aggressive land reclamation campaigns at the coast using compressed plastic (Guriro, 2017).

It is not only plastic waste that is dumped at the coast, 330 million gallons of effluent--both domestic and industrial--is dumped directly or indirectly at the coast (Guriro, 2017), further decreasing fish catch and causing declines in small-scale fisherfolk's livelihoods. Waterborne diseases such as chikungunya are immensely common (ibid). Organizations such as the Aga Khan University Hospital, HANDS, and Aman Foundation have all operated in Ibrahim Hyderi to provide healthcare to the residents (Ahmed, 2014), but no amount of medicine can cure that the water is filthy, the air unbreathable, and the land covered with litter. The fisherfolk community's breakdown is deliberate; the physical, mental, and financial issues they face have caused them immense harm and taken away their resources of mobilization through imminent security- and health-related threats.

In addition, local and international private fishing companies began building jetties for their trawlers at the port that the fisherfolk would have to pay to use in the early 2000s. These deep-sea trawlers run for 24 hours in a go without stopping, and remain the most responsible for overfishing and biodiversity loss (Baloch, 2002).The fisherfolk have to pay the price of rental space to keep their boats at the harbor, which was bought by land developers and sea lords. These rental prices keep on increasing and are paid by the fisherfolk daily for each day they use the jetty space. These jetties have another negative effect. They drive down the natural speed of the water and do not allow the seafloor to be cleaned, since the coast has been replaced by jetty concrete. The water where the jetty starts, therefore, is immensely dirty; there is effluent and sewage

water coming from one way, and not enough current to drive it away. The water being dirty causes immense harm to the underside of the boats. Boats now have a much shorter life than the past as a result of the gray sludge that gathers at the coast.

Discarding the marginalized Other: Marginalization through loss of fishing livelihoods and informal settlements

Small-scale fishing communities on the Korangi coast are especially at risk of losing their livelihoods due to overfishing by foreign trawlers, the increase in the number of individual fishers, and the resultant depletion of marine stocks. This is a vicious cycle: the indigenous fisherfolk have also started utilizing equipment that is harmful to aquatic life; one such example is under-gauge fishing nets that catch fish species before their full maturation period, which ultimately leads to a greater decline in these species (Naqi, 2016). While Pakistan's fisheries sector is not sustainably managed or technologically adept in general, Karachi's fisheries are in worse condition than others. Ibrahim Hyderi suffers from arguably the worst conditions, facing not only the biodiversity loss and overfishing challenges that other fisheries face but also being labeled and utilized as a "Garbage Transfer Station" for its peripheral districts--Ibrahim Hyderi being part of Bin Qasim Town--in 2007 by the City District Government Office in the Karachi Strategic Development Plan 2020 (Kaimkhani, 2007).

Moreover, Ibrahim Hyderi and Rehri Goth's *mohallay* primarily comprise *katchi abadiyaan*--the colloquial Urdu-language term for informal (literally "impermanent") settlements. These *katchi abaadiyaan* were a way for individuals who migrated from India to Karachi in 1947 during and after the partition to have homes in a city with little to no urban planning. While many of these informal settlements are generational houses with leases, the term *katchi abadi* in itself is indicative of marginalization and impermanence (Gazdar & Mallah, 2011, pp. 4). The term, like its English equivalent "slum," is associated with dirt, poverty, and other stigma-heavy connotations. The use of this language and

these narratives results in *katchi abadiyaan* being widely perceived by judiciary and middle classes alike as encroachments, even though they "are not necessarily illegitimate or unrecognized by the state, having instead resulted from a planning failure and lack of affordable housing in Karachi" (Ayub et al., 2022, pp. 6). These two factors, namely, the loss of fishing livelihoods and living in *katchi abaadiyaan*, have further contributed to the marginalization of fishing communities at the Korangi coast. This is a more implicit discard: the discard of the Other, which further adds to material discard through garbage dumping described in the previous section.

Discarding through ocean grabbing

Andreucci and Kallis (2017) focused on extractive practices situated in the Peruvian state enabling unchecked development and the enactment of violence against those who resist natural resource extraction, which is very similar to the case of Korangi. This paper argues that the nature of governmentality and governance organizations (and their associated structures, permissions, and practices of development) are quite similar across the Global South, wherein the well-being of indigenous and/or low-income communities is secondary and discarded as and when it hinders or counters economic growth and "the greater good."

One of these "greater goods" for the Pakistani government comes in the form of the imminent "Blue Revolution" that aims to maximize profits from the marine sector (Patil et al., 2018, pp. 17). This "Blue Revolution" agenda refers to the renewed foreign investment interest in Pakistan's maritime sector, for which the China-Pakistan Economic Corridor (CPEC) is largely responsible (Mehmood, 2021). It also aims to consolidate the fisheries sector into the hands of a few large, hegemonic corporations with well-oiled value and supply chains (Patil et al., 2018), thereby rendering small-scale fisheries obsolete. Pakistan's lack of dedicated protections for indigenous fisherfolk, as well as this consolidation of power as a result of the CPEC, are forms of ocean

grabbing, following Bennett et al.'s (2015) definition of the same: small-scale fishers are deprived of resources, coastal populations are dispossessed of their lands, and their historical access to the sea is restricted and undermined. The fisherfolk's consent is not taken before their coastline is irreversibly altered by foreign policy, auctioning, overfishing, and garbage dumping. The violence levied by the military against dissenters at the Korangi coast also contributes to ocean grabbing by undermining the fisherfolk's "historical tenure" (Bennett et al., 2015, pp. 63).

The discard at the Korangi is therefore three-fold: Korangi's coast is *a site of discard* for waste, Korangi fishing communities are *discarded as "Others"* and *the coast is likely to be further discarded* by the neoliberal growth agenda via Blue Revolution to profit from its destruction rather than its rehabilitation. All societies and systems will generate waste to produce value (Gidwani & Reddy, 2011; Liboiron & Lepawsky, 2022, pp. 52), but what a society chooses to discard (and who it collectively decides to accept or ignore harm for) is deeply indicative of the societal values around low-income communities: although the Korangi coastline is located only 17 kilometers away from the upper-class ocean-facing neighborhood Defense Housing Authority (DHA) coastline, fisherfolk are banned from fishing in these waters since DHA residents complain about the smell of the fish (Ahmed, 2015). This speaks to the values of a neoliberal capitalist economy focused on economic growth and profit and the societal structuring of these values, wherein an elite neighborhood's criticism of the way fisherfolk smell has a large enough place to discard the fisherfolk struggling to make a living from these spaces (through exclusionary policies such as banning, fining, and the like).

Discarding, therefore, is a "technique of power" (Liboiron & Lepawsky, 2022, pp. 83) at the Korangi coast. All systems utilize resources and discard objects, places, and people that do not fit within their orders, giving rise to various types of unevenness; Liboiron & Lepawsky (2022, pp. 83-84) define power as "the maintenance of such unevenness." Keeping the city's center and elite spaces relatively cleaner can only be viewed as "good", if there is a

dismissal or erasure of the fact that garbage dumping in low-income areas is the mechanism by means of which this cleanliness is produced. This erasure is also an act of discarding; it is how Korangi's fisherfolk are shuttled away to the city's peripheries while also being dispossessed of these peripheries that they built and sustained for generations, which in turn sustained them.

Discard of fishing traditions, culture and enjoyment

The eighties were the time when fishing traditions and tools began to change at the Sindh coast. Prior to the Indus Delta drying up, agriculture and livestock were viable means to make a living. Once the waters dried up, many of the individuals involved in the agricultural and livestock sector near the delta started to become fishers, with a large number of them moving to informal and/or temporary housing along the Korangi Creek. This was a key contributor to the initial decline in fish catch, before authorities began dumping garbage and effluent at the coast. The indigenous Sindhi fisherfolk historically used a *doro jaal,* or hand woven rope nets, to fish in the sea. These nets were woven specifically to ensure that only mature species were caught, and that younger fish that were smaller could escape through its eye. In the eighties and nineties, newer fisherfolk working on commercial fishing boats popularized the *katla jaal,* or wire net, that held on to younger fish too. These nets quickly became popular among the Korangi coast's indigenous fisherfolk as well due to their lower costs, durability, and the efficiency of catch.

The fisherfolk who were born into the practice were well--versed in the knowledge and tools of fishing at the Korangi coast. Fisherfolk who had just moved into the profession did not have the generational knowledge that was indigenous fisherfolk's birthright. They would overfish near the mangroves. The *katla jaal* was threatening biodiversity at the coast; the openings on the machine-made nets got smaller and smaller with time. In the early 2000s, packaging companies began making fishing nets with high-density polyethylene or nylon, which are especi-

ally damaging to sea life and make up a significant proportion of plastic in Karachi's sea (WWF Pakistan, 2020). The opening of wire nets is so small that even the head of a matchstick cannot pass through it. The use of these plastic nets, combined with the population increase of the fisherfolk, caused a rapid decline in many of the species integral to the fisherfolk's livelihood over the years (Naqi, 2016). Since the 1970s, the interviewees personally witnessed the decline of multiple shark species, including the winghead shark, the whale shark, the blacktip reef shark, and three species of hammerhead sharks: smooth hammerhead, scalloped hammerhead, and great hammerhead. The river shad, barramundi, or pompano fish cannot be found in Karachi's waters anymore, although these used to be common three decades ago. Prawn and crab species flourish at the mangroves, and come back to the same mangrove where they were born to give birth. There are 32 species of aquatic life at the Korangi coast that are dependent on the mangroves to thrive. But young prawns are not allowed to mature due to the usage of machine-made nets. Since the population of mature fish has declined so greatly, using a hand-woven net would yield a lower fish catch for fisherfolk using them. Mass-produced nets are also vastly cheaper than handmade nets, so even indigenous fisherfolk now use them. Most of Korangi's fisherfolk, whether indigenous or not, have now resorted to working on commercial boats. 77.5% of Ibrahim Hyderi and 49.7% of Rehri Goth's populations cannot afford the expense required to carry out boat upkeep, and instead work on commercial fishing boats (Dehlavi, 2017).

Machine-made nets are indicators of an era in disposability and discard. Plastic nets are made to be discarded, but the *doro jaal* was made to be used, repaired, and used again, until it wore out. There were residents--primarily women, but also members of minority ethnicities--at the Korangi coast who used to be hired specifically to weave nets. As machine-made nets were popularized, they had to resort to working elsewhere. Discard and disposability, therefore, were not normative to Korangi's fisherfolk. They became norms over time due to disruptions in the

environment and to the indigenous fisherfolk's way of living. It is quicker, cheaper, and more efficient to buy a machine-made net than to construct a *doro jaal*, and quicker to construct a boat now than ever before. It would take a year in the seventies and eighties to construct a single boat. Now, it takes maybe a month. Even so, there are too many commercial boats, and fisherfolk cannot afford to keep up with the competition independently.

Previously, the boats used to have a *baadbaan* (sail) that only experienced, skilled fisherfolk would know how to guide. When fishing motor boats were popularized, there was a rapid increase in the number of fishers without prior expertise or knowledge about the Korangi coast and its biodiversity. There is not enough work for the women to move to the islands due to the sharp decline in shrimp catch. The increasing inflation in Pakistan has also made it difficult for fisherfolk to afford fuel, but the pollution at the coastline means they have to venture farther and farther offshore each time to make up their fish catch, thereby running the risk of greater expenses, losing their lives, or being captured by the Indian authorities (Imtiaz, 2014) on suspicion of being spies. The fisherfolk's tradition of moving to the islands for the monsoon seasons is now over; there are simply too many fisherfolk and too few fish, thereby increasing competition and internal politics among the fisherfolk themselves. I therefore posit that the fisherfolk at the Korangi coast being forced to let go of their communal forms of enjoyment is another form of discard. Leisure is a core part of both individual and communal well-being (Oncescu & Neufeld, 2019). While detainment, fines, and torture mechanisms are overt forms of breaking up the fisherfolk's communities, the taking away of spaces and times of leisure is a covert mechanism for the same.

There are islands along the creeks where the fisherfolk used to move to during the fishing season, where they would stay throughout the monsoon with their families. These are all empty now, and they look like they have always been empty, but the fisherfolk still sometimes visit the Sufi saints' shrines for protection. Karachi's mangrove forests have proven to save the city on a number of occasions, including from the Cyclone Phet in 2010, Cyclone

Nilofar in 2014, and Cyclone Shaheen in 2021 (Ayub & Ilyas, 2021; John et al., 2014; Popalzai, 2010). Many Muslims in Karachi believe that it is solely the shrines that act as protection, but the interviewees believe that the mangroves are a gift of protection from the Sufi saints. They are well-versed in the science behind the mangroves, but with an added layer of spirituality; to them, the mangroves are holy and their last line of defense against the degradation their geography has gone through.

Conclusion

This paper focuses on small-scale indigenous fishing communities on the Korangi coast of Karachi, Pakistan, by analyzing the socio-ecological context of a coastline that has gone through immense social, ecological and political turmoil. Although it is true that the area has changed and become unrecognizable over the last three decades, Korangi's fisherfolk continue to fight for their access to the sea and their right to sanitation, safety and well-being. Small-scale fishing communities are crucial to the culture of the coast, and form the backbone of Pakistan's fisheries sector. Therefore, there is a dire need for the development of policies that protect, center, and rehabilitate the fisherfolk, their rights, and their livelihoods, and legalize those fisherfolk who are considered "alien" by central and municipal governments.

The discarding of waste is also a discarding of local indigenous fisherfolk's mobility, well-being, fishing culture and fishing grounds at the same time. Discarding waste has become synonymous with discarding those who live in proximity to the waste in Pakistan. It is therefore imperative to further study widely-accepted rationales and agendas of central and local governments in Pakistan, as well as in other Global South countries, to uncover the increasingly dire impacts of this socio-ecologically unsustainable, anti-poor neoliberal model of discarding of marginalized communities in urban contexts, as well as on coastal zones where small-scale fisheries constitute and sustain coastal communities' food sources, livelihoods and culture.

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Davorin Žnidarič[1]

The Introduction of Green Concepts in the Zasavje Region and a Constructively Critical View Through the Desire to Produce Green Energy of the Waters of the Sava River.

Abstract: Due to the consequences of the fossil era, humanity is faced with developmental and environmental issues of how to meet resource needs. For several years, green energy from RES has been the solution to all major environmental problems. At the same time, the question of the impact of production on the environment arises. The hydropower segment, with its negative effects on the environment and space, calls into question the fundamental idea of green energy as an environment-, nature- and people-friendly alternative. In the article, I want to present the negative consequences of the construction of a hydroelectric power plant on the middle Sava, which, if placed in the last untouched part of our longest river, would cause irreversible environmental and social consequences.

Keywords: fossil era, renewable energetic resources, environment, green energy, hydroelectric power, river Sava.

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Introduction

The development of so called industrial society in the last century, caused many environmental and social consequences. If on the one hand development enabled the improvement of the standard of humanity, easier working conditions and the quality of life, on the other hand it created a consumer society which is and still is based on the exploitation of fellow human beings, resources, the environment and nature.

Throughout the ages of development, the growing population has faced various challenges. Environmental, social, energetic, which shaped environmental and social relations. The renaissance, however, was definitely marked by the period of the fossil era and the industrial revolution, which enabled humanity to make a developmental leap at various levels of life. This positive economic and social development, however, caused significant negative consequences for the environment. As a neglected segment.of environmental content and the unbridled exploitation of natural resources and a society that relied only on two elements, energy and economy, conditions have arisen in the environment and society, which are manifested in the rise of global temperature, degradation of the environment and, in some places, due to the lack of resources, which in some places already affect the existence of individuals.

The improvement of living conditions resulted in population growth and thus an increase in the demand for various goods, which the consumer-oriented society only intensified. Even the illiberal economic and social paradigm, which insists on ever--increasing growth and profits, has only deepened the friction in the environment and nature. Excessive use of resources and raw materials, especially in the developed countries of the North, have become the cause of many environmental and social inequalities and injustices.

Environmental injustices, however, have resulted in negative impacts on the environment and, consequently, on society, which are already significantly affecting the existence of living beings on the planet.

Despite the fact that negative consequences of past non-ecological practices have occurred in the environment, which are the cause of human migration and numerous and growing social and environmental ecological conflicts, the global trend is still directed towards the growth of energy use and their unbridled consumption. As a result of the use of fossil fuels and inadequate technological systems in industry, in the production of electricity and individual use, the trend of increasing energy consumption will intensify until 2040. Only the use of coal is expected to stabilize, while the use of oil and other energy sources is expected to continue to grow (Researchgate, 2021).

Due to the ever-increasing impacts of anthropogenic human action in space, and above all the growing imperial way of life of the developed world, which is based on unbridled consumerism and the accumulation of goods at the expense of others, the growing environmental problems have led to the search for a concept that would lead to a more environmentally and more socially acceptable contents.

This is how many environmental discourses have emerged, which are either deficient in their efforts and orientations for a more ecologically oriented society, or still do not contain environmental content and follow neoliberal consumerism. The example of sustainable development, which is referred to by almost all economic and political subjects, is an example of an unfinished or incompletely defined discourse, which has brought many conflicts and ambiguities into the political, economic and environmental spheres as to what sustainable development means in its concept.

The dilemma between neoliberal economists and environmentalists and ecologists, where the first development is interpreted as the continuation of growth and thus the continuation of pressures on the environment, resources and people on a limited planet, while the environmental and ecological profession interprets it the complete opposite. Environmentalists and ecologists interpret sustainable development as development that is limited within the self-renewing and self-purifying abilities of the

environment and nature. The result of a vague understanding of the definition of sustainable development is the ongoing conflict between capital and the environment, which, despite the many visible and felt negative consequences on the environment, nature and people, is still deepening. In the energy sector, which in the rest of the article I analyze in the segment of hydroelectric power plants through a constructive critical analysis, this division in the interpretation of the concept stands out. Above all, the criticism of the article refers to the concept of green energy, which appears in energy and sustainability terminology as a paradigm of future social development. However, the concept itself, like the concept of sustainable development, offers more concerns than solutions.

The questioning of what green energy is at all is the basis of this article, as some of the measures and requirements imposed on us by EU policy already fundamentally represent a dirtier and more wasteful energy-environmental problem for the environment, nature and people than until now energy and resource extraction procedures. If we focus only on electric mobility and the production of hydropower, these are the most typical examples, which in practice in individual segments of water production and dam construction represent not only long-term harmful examples of unsustainable policies for the environment, but also the permanent destruction of living habitats or, in the case of hydroelectric power plants, pressure on drinking water resources. But about that a little later.

Energy, consumption and political dependence

at the beginning, it was mentioned that development, in addition to positive effects, on a limited planet, with negative consequences such as resource degradation, environmental burdens and the like, is a significantly influential situation in the environment and space that we face today on Earth. The so-called imperial way of life, instead of steady development, which could have enabled even previously neglected countries and regions to survive decen-

tly, led to deepening conflicts between the North and the South and between the developed and the underdeveloped. Despite the fact that the negative consequences of development warn us that this way of development leads us to ever greater conflicts between man and nature, and of course between people themselves, today the solutions are only found in the allocation of dirty and controversial technologies to less developed areas of underdeveloped countries. Instead of helping the developed, NIMBY concepts are imposed on these countries, where in the developed north, in the context of environmental justice, this only increases, while in the south and in the underdeveloped, injustice only increases.

The consumption of resources is also enormous in the countries of the developed north. The example of the USA shows that, on average, they consume as much energy as all EU countries, even though some countries of the European Community, such as Germany or France, consume enormous amounts of energy compared to other smaller members.

The problem in this context is a more difficult economy, which still pursues the concept of linear growth rather than social interests. Instead of more environmentally acceptable technologies and less consumption, neoliberal economic practices, viewed globally, are still oriented towards more and ever new products and services that require enormous amounts of energy.

The problem that most prominently emerged in the last two decades in relation to the supply and supply of energy products is that most industrially developed countries do not have their own resources to cover their energy needs.

Most developed countries face a shortage of energy sources and dependence on external providers due to the consumer society and its needs.

The Covid-19 crisis and the conflict in Ukraine have shown that countries are underinvesting in their own energy potential and are heavily dependent on sources from abroad. The dispersion of resources and unpreparedness for various crisis scenarios showed that most EU countries are still sensitive to problems over which they have no direct influence. This economic and energy depen-

dence, as we have already seen in the cases related to Ukraine, leads to a pronounced political dependence, which also affects the supply and price of energy products. Different fossil energy prices depend on support for aggression. Western countries that did not support the aggression had higher energy prices, such as Serbia.

The price also depends on the resellers, who take advantage of the resulting energy crisis for their own enrichment.

Countries therefore provide themselves with resources through imports, which again represents the problem of political (in) dependence, which arose in connection with the supply of energy products and prices in the Russo-Ukrainian conflict. In the period of the last few months (conflict in Ukraine), more and more countries are looking at sources from elsewhere or at the alternative represented by some sources of renewable energy.

The energy crisis from Russia has caused more and more countries to turn again to the reuse of coal and thus to the continuation of the loads.

The state of dependence on foreign resources also in the European Community has caused more and more countries to focus on finding their own energy potentials and thus on greater self-sufficiency, so-called green energy production is not as green as the producers ensure and propagate.

The transition to own energy is not without consequences for nature and the environment.

The transition to renewable energy sources raises many questions about the ecology and sustainability of such development, but at the same time it requires a mental leap both on a personal and social level.

Despite the fact that the transition to RES and self-sufficiency represents a positive shift towards a greater environmental and social future, it also requires changes in human habits.

Changes are needed above all in developed and consumer--oriented societies, which, according to most indicators, are the main culprits for the increase in global social and ecological conflicts. The transition to RES does not only require the use of cleaner and more environmentally acceptable sources and changes

in technologies, but must be based on solidarity at the global level with those who cannot provide these measures.

The transition to a more ecological and green energy future is very challenging for some individuals and countries due to financial malnutrition. Poverty and inequality prevent steady development even in developed countries. Therefore, the introduction of these measures in developing countries promotes the moral and ethical responsibility of developed countries to subsidize the poor, if not otherwise, at least due to the fact that developed countries built their development on the exploitation of colonies and underdeveloped countries.

Energy poverty

The problem of energy poverty refers to countries, environments and individuals who, due to financial incapacity, cannot ensure their own investments in energy renovation systems. If we want to solve global environmental and ecological problems, it is therefore necessary to switch to RES, but with some essential points, so that in practice no additional burdens are caused in the environment and space.

Long-term energy policies must be based on the dispersion of resources, which, even in unpredictable political conditions, enable a sufficient supply of energy to consumers.

Despite the fact that the EU already adopted measures in the post-covid crisis, which should enable countries to cope with crisis situations more easily and which should follow greater energy self-sufficiency, when some measures are introduced into the environment, concerns arise about their environmental and ecological orientation .

The very definition of RES comes from the renewable domain, meaning that resources can be renewed regardless of their use. However, this definition is rather loose, as it does not contain limitations through the concept of sustainability, which is based on the balance of economic, energy, and above all, environmental contents that have been neglected in the past. OVE also does not define exactly what renewable resources are and what they are, or rather it does not deal with the question of how we got this so-cal-

led green energy. The negative side of so-called green projects, or green paradigms in certain segments such as green-electric mobility or water energy production, offer several concerns. First, electric mobility due to the production of metals for batteries, where, on the one hand, the technological problem of lithium production and the energy needed for the lithium saltworks appears, and on the other hand, the social effect of the exploitation of workers, mostly children, in the extraction of cobalt in the Congo. Therefore, when analyzing the environmental impacts, the initial phase of obtaining metals for batteries can be characterized as environmentally controversial and more burdensome than the production of classic aggregates. In addition to environmental issues, the introduction of e-mobility is also caused by the social segment in several forms. The already mentioned problem of the exploitation of child labor and the lack of use of protective means in the extraction of metals can also be attributed to the loss of jobs in the transition from the classic production of ageragts (diesel and gasoline) to electric drive. According to ADAC, less necessary parts for electric cars will lead to the loss of around 600,000 jobs directly in Germany alone, as a distinctly automotive industry, while in industries related to this activity the number of lost jobs in the metal industry is even higher. .. Fewer mechanical components in electric cars will thus be directly responsible for the social crisis, which, similar to the implementation of e-mobility, manifested itself during the transition from the fossil-coal era to other, so-called alternative sources. (Although the states at least took adequate care of the miners when the coal mining industry was closed, the same cannot be said for the other supporting activities, which dried up with the decline of mining. The workers in these activities remained permanently unemployed (Žnidarič, Lukšič, 2022)).

Although the EU boldly wrote in its social decarbonization program that we will all have to switch to electric cars by 2035, it forgot about various aspects that limit such an implementation. The most important is the economic aspect. The price of electric cars, the safety and range of the cars (in terms of power and capacity of the batteries), at the same time as the network of

e-chargers is not yet widespread enough, does not give hope that complete e-mobility will really happen by that date.

If we look at the price of e-cars alone, they vary between 20,000 euros and upwards, depending on the model. Citizens facing economic and social problems will not be able to afford such an expense. Even the countries in the EU are not all equally economically developed, which is why the question arises if the EU has not overstepped its bounds in this regard. The latest information from Brussels shows that there are also concerns about the final date of the transition.

Another problem and concern is the energy for charging e-cars. Today, most of the energy for charging stations is still produced in the classic way and with the help of fossil sources, which is not green energy in the context of sustainability. Even the production of energy from hydroelectric power plants, which should be placed in the renewable energy sector, as we will see below, offers several concerns, since the effects of dams on the environment are negative. But about that a little later.

The safety of e-cars, due to self-ignition and technological systems, still does not represent one hundred percent protection of passengers. That is why we can see in the media that cars caught fire, and in some cases, in addition to the material costs, the passengers in the cars were also injured (some cases even with a fatal outcome).

Energy networks are also insufficiently powerful for the transition to e-mobility, and the charging time determines the usefulness of e-cars more than other cars, as the network of charging stations is also still deficient.

Considering the many negative consequences of green technologies, according to environmentalists and ecologists, green projects are only a cover for the continued exploitation of resources and nature, or the enforcement of capitalism with a green face, which is nothing more than the continuation of the neoliberal, consumerist and profit-oriented growth paradigm (Plut, 2014; Kirn, 2012, 2022). If we take e-mobility as an example, this is certainly true in the initial phase of metal production and battery construction for electric cars (Senegačnik, Žnidarič, Vuk, 2020).

Other technologies and procedures, especially interventions in the environment, if we are talking about the production of energy from hydroelectric power plants, are also environmentally harmful, and at the same time represent a distinctly negative impact on the environment and the existing fauna and flora.

Hydropower plants and the environment

although HPPs are supposed to represent one of the pillars of renewable energy production, this is not the case in reality. We are ecologists of the opinion that energy from renewable sources theoretically represents green energy produced by water resources, but just like e-mobility, in both cases due to the consequences at the beginning of the tap, viewed as a whole, the production is extremely harmful to the environment, nature and people.

In order to obtain hydropower at all, interventions in the environment are necessary, but they are far from a sustainable policy, which should represent a balance with environmental content. Damming the river itself and placing a dam in the natural course of the river represents an intervention that has major negative consequences for the environment, the river itself and all living things that live in the pristine river. It is even more important that many underground sources of drinking water are fed from rivers, which can significantly change the quality and quality of drinking water if they are dammed. Due to the increasing scarcity of water, even globally, the construction of dams in the context of drinking water is extremely harmful.

Even the silt that is deposited and formed under or in front of the dam contains substances that significantly deteriorate the quality of the water. Due to the limited self-purification abilities of the river, which is significantly changed due to damming, and the temperatures, toxic, non-degradable substances accumulate in the mud and sediments in it.

Regardless of the physical limitations of the river, which change both the biological and chemical structure, temperature and flow rate, it is important that dams also change the flora and fauna.

Indigenous animal species are driven out, and non-indigenous species settle in rivers and dams, which significantly change not only the appearance of such rivers, but also their impact on humans.

Hpp construction and (un) sustainability

Despite the fact that the natural potential of water is financially immeasurable, at least from the point of view of its intrinsic value for human existence, at the same time we are witnessing the growing consequences of human negative environmental practices. economic and political structures still tend to continue non-ecological and non-environmental practices.

Under the guise of exploiting renewable resources and green energy, in a sustainable sense, there are also today in Slovenia tendencies to build the last flow areas of the Sava River with hydroelectric power plants.

Regardless of the fact that the Zasavska region (if we exclude the municipality of Litija, which joined the region only on 1/1/2015), due to the specific mining energy activity and inadequate or no environmental restructuring and problem solving, is already facing environmental and social social problems, the potential construction of as many as three dams on the middle Sava would cause irreversible consequences for people, nature and the environment.

If sustainable development is supposed to follow the balance of economic, social, and above all environmental indicators, the continuation of pressures in the environment, which are dams, represent a departure from sustainability.

Types of obstacles

According to FIP (2024), dams are artificially established obstacles, the work of human hands, which have restricted free-flowing rivers with dams, barriers and locks, to ensure water supply, obtain energy, enable easier navigation or increase flood control (the example of the Netherlands). In the case of Nozozemska and its specific conditions, due to the depression and the higher ocean

level, protection against floods withstands the thesis of increa-
sed anti-flood safety, but elsewhere, according to Toman (2022),
this does not withstand serious consideration, since according to
him, floods are solved in the contributing area of the river, in the
upstream part of the streams, not in the lower ones and even less
by building dams or by building HPPs. The example of floods years
ago in Slovenia, when deliberate releases of water in Austria on the
Drava river flooded a large part of the Drava field, is a practical
example that dams and HPPs are not built for these cases. I perso-
nally think that artificial, unnatural interventions in rivers actually
only helped to produce problems and not to reduce them.

There are many different types of obstacles on rivers. Dams
are one of the common and well-known types. The rest are dams,
locks, culverts, crossings and ramps.

dam: a structure that blocks or restricts the flow of water and
raises the water level to form a reservoir

small weir: a structure that regulates flow and water level, but
often allows water to flow freely over the top

sluice: a movable structure whose purpose is to control the flow
and level of water

culvert: a structure that allows water to flow under an obstacle

ford: A structure that creates a shallow place with good footing
where a river or stream can be crossed by wading on foot or
by vehicle

ramp: A ramp or bed sill designed to stabilize the channel bed
and reduce erosion; recognizable by its stepped shape.

Source: AMBER (2020).

Such unnatural barriers reduce the ecological connectivity of the
watercourse, hinder the flow of water, nutrients and sediments,
reduce the self-cleaning of rivers, and for living beings, they rep-
resent an obstacle to their movement. Large dams completely
change the character of water bodies, turning rivers and transi-
tional waters into reservoirs with prevailing lake conditions.

Pressure drivers

There are several sources of point pressures that are generated from different drivers. They can be divided into energy, agricultural, industrial, environmental and human social segments and urban development.

- production of energy from water - larger or smaller dams use the energy of moving water to produce energy
- irrigation systems in agriculture - in areas where there is a lack of water resources, basins are created for irrigation systems
- smaller dams and canals - they regulate the flow of water as well as its retention
- industrial needs - some industrial facilities have water reservoirs built in the immediate vicinity, which are used for e.g. cooling systems
- flood protection (most typical Netherlands)
- availability of water for human needs (drinking water, basic needs)
- recreational activities such as fishing can significantly change the quality of water surfaces through secondary impacts (non-native species of fish and other creatures, non-indigenous species and algae)

According to the EEA (2018), barriers represent the most common pressure on surface water. If European countries are removing them due to economic inefficiency in terms of reconstruction and restoration, and their demolition is supposed to reconnect 25,000 km of river sections (Baecher et al., 1980; Whitelaw et al., 2002), in Slovenia, despite the high density of barriers on rivers, there are tendencies to increase (Pengal et al., 2022). Among the most threatened areas where energy companies want to build new HPPs is the Balkans. According to RiverWatch (2022), the construction of as many as 3,281 facilities is planned in the Balkans, 108 of them are under construction, and 1,726 of them are in the operational phase. Many of these facilities are to

be built in protected and environmentally sensitive Natura 2000 areas, or in other environmentally protected areas.

Planned facilities and facilities under construction in the Balkan countries;

- Slovenia: 370 buildings planned and 1 under construction
- Croatia: 149 facilities planned and 1 under construction
- Bosnia and Herzegovina: 374 facilities planned and 35 under construction
- Serbia: 803 facilities planned and 20 under construction
- Kosovo: 89 facilities planned and 10 under construction
- Montenegro: 93 buildings planned and two under construction
- North Macedonia: 180 facilities planned and 12 under construction

Source: RiverWatch (2022)

Pengal et al. (2022) identified 61,781 barrier records in the Danube and Adriatic basins. 51,859 in the Danube basin (Dp) and 9,922 in the Adriatic basin. Considering the length of Slovenia's river network (44,580.80 km), we have 1.39 barriers per river kilometer in Slovenia. The barrier density for Dp is 1.37 and for Jp is 1.47. In both cases, the numbers are high compared to other areas in the EU.

Table 1. Country (no./km) Estimated number of barriers

Country	Density of barriers (no./km)	Estimated number of barriers
Austria	0,51	8.607
Switzerland	8,11	171.693
France	0,35	63.932
Slovenia	0,13	1.321
Italy	0,49	65.756
Serbia	0,59	14.901

Table 1: Density and assessment of barriers for selected European countries (Belleti et al. 2020 in Pengal et al., 2022).

Because, according to WWF(2020), the destruction of aquatic environments is three times faster than the destruction of terrestrial ecosystems and since 1980, interference with freshwater ecosystems has caused an 84% decline in the populations of freshwater vertebrates (mammals, birds, amphibians and fish), we are environmentalists and an environmentally oriented profession against the construction of power plants, which would significantly restrict the last parts of free-flowing rivers, and especially the central part of the Sava River, which offers shelter to many indigenous animal species. The unnatural intervention that the construction of HPPs on the middle Sava would represent would at the same time significantly change the living habitats along the river, reduce the water quality and affect the drinking water reservoirs along the river, which supply the inhabitants of the towns located along the river. According to the EEA (2018), unnatural barriers are also the cause of pressures on surface waters, affecting 40% of water bodies. Hydromorphological pressures were found to be among the main reasons for not achieving good ecological status in other river basin management plans (RBMPs), as they are important pressures for 34% of European surface water bodies in 29 countries (EU-28 and Norway) (EEA,2021).

Interventions during the construction of buildings in the environment would be environmentally critical. The buildings themselves, and especially the dams, would visually and spatially significantly change the environmental picture of the landscape, which is now still surrounded by nature. Last but not least, the negative consequences of interventions on the river are most noticeable at already existing facilities, especially in the lower part of the Sava River (HE, Sevnica, HE Brežice and others).

The fundamental problems of dams on rivers and their consequences in the environment According to Toman (2022), the fundamental problems of barriers on rivers are;

- the damming of rivers firstly affects the longitudinal connectivity of the system, interrupts the connections of the lower and upper streams, as a result it greatly changes the

living communities in flowing waters, which significantly affect the quality of water sources for drinking water supply

- the consequences of changes in the course of the river affect the reduction of the river's self-cleansing capacity. In fast-flowing, turbulent rivers, the self-purification of the river can reach up to 30%, which means that the river can "digest" up to 30% more load (mainly organic) than it naturally enters the river. On the example of the Sava River, the self-cleaning capacity was evaluated 30 years ago and actually reached somewhere around 20% (Toman, 2020).

- due to a change in the flow, there is a secondary load, which is the result of the deposition of dangerous substances in front of the barrier, the passage of toxicants into the food chain (via algae, aquatic invertebrates all the way to fish). Due to changes in the main food pathways in the dammed part, eutrophication occurs, which is latent (hidden) in flowing waters. In the case of the Sava, this is already evident in the reservoirs of the lower Sava, not to mention the reservoirs on the Drava, since we still do not have tertiary treatment included. The removal of nutrients (N and P) is also negligible.

- barriers change productivity, i.e. one of the most important processes in flowing waters from the point of view of living communities and habitats. As a result, the riverbeds in the lower part deepen (an example can be the Mura due to accumulations on the Austrian side!), which further changes the communities and, consequently, the self-cleaning ability.

- it is also important to point out falsehoods regarding flood safety. HPPs are not built for flood protection, but at the beginning of the tap.

- last but not least, any accumulation represents a change in metabolic processes. In a silty accumulation, a large part of the sediments are organic substances, because the conditions are often anoxic, as methanogenesis occurs, the product of which is the greenhouse gas methane,

which is 10 times more environmentally influential than carbon dioxide from the point of view of greenhouse gas production. (Toman, 2022).

Toman (2022) is critical of human impacts on water resources and ecosystems as he says;

"We always like to talk about warming, but on the other hand, we uncritically and ignorantly change water environments and talk about sustainability. We only permanently destroy the river with HPP, a disabled river, otherwise it can still live, but its life is not worth it".

Various experts have been dealing with the many negative impacts of barriers for a long time (Liermann et al., 2012), but they entered the wider public discourse only in the last decade. The consequences of placing barriers on different watercourses are similar and can be generalized to some extent, but river ecosystems are unique and complex, so the consequences of interfering with them are also complex and specific. In other words, each individual barrier has its own consequences. Rosenberg et al (2000) summarized the cumulative impacts of barriers as follows:

- establishment of new reservoirs within the water cycle of the basin (Petts, 1984);
- changes in natural water and sediment flows and seasonal patterns of river flows (Varosmarty and Sahagian, 2000);
- changes in ecosystem processes: nutrient cycling and primary production (Pringle, 1997; Rosenberg et al., 1997), biogeochemistry of downstream and coastal areas (Ittekkot et al., 2000);
- fragmentation of riverine habitats (Dynesius and Nilsson, 1994) and associated/dependent organisms (Dudgeon, 2000; Pringle et al., 2000);
- Deterioration and loss of flood plains and riparian areas downstream of barriers (Nilsson and Berggren, 2000);
- deterioration and loss of river deltas and estuaries (Rosenberg et al., 1997) and lowering of sea level (Chao, 1995);

- deterioration of the state of irrigated terrestrial ecosystems and related surface waters (McCully, 1996);
- problems with drainage, eutrophication, pollution and contamination (Zalewski, 2000, 2002);
- contamination of food chains with methylated mercury due to altered microbial activity in flooded areas (Kelley et al., 1997);
- cyanotoxic contamination of reservoirs, river water and trophic levels (Zalewski, 2000);
- genetic isolation as a result of habitat fragmentation (Pringle, 1997; Neraas and Spruell, 2001);
- impacts on biodiversity (Master et al., 1998);
- destruction of fish habitats and populations, and consequent decline in fishing (Petts, 1984);

Considering the negative impacts of HPP construction on the environment and living and non-living nature, the construction of HPP and the consequences of building interventions on the environment and space are unsustainable policies that have nothing to do with sustainable concepts. Deception by capital about the so-called green hydropower is the fruit of a materialistic and economically profitable view, which, considering all the listed negative consequences of intervention in space, has only one sign, i.e. the continuation of burdening and exploitation of nature and the environment. From an environmental point of view, the sustainable growth of energy consumption and thus energy production is unsustainable and does not lead to a reduction of the burden on the environment, but on the contrary, to its greater degradation (Kirn, 2020, Žnidarič, 2023).

Solutions related to barriers on rivers and streams

The construction of HPPs on free-flowing rivers is definitely not a solution for the energy policies of individual countries. Smaller interventions in the environment are represented by other alternative sources, such as solar power plants, heating systems, geothermal

energy, wood and wood biomass. Of course, at the same time, it must be emphasized that all the best technical standards, or BAT, must be taken into account when implementing RES systems.

Another measure is reduced consumption. The Western, so-called developed world is extremely wasteful when it comes to the underdeveloped. For example, the United States has consumed more fossil fuels and minerals in the past 50 years than all other countries combined. Instead of people talking about reduced individual consumption, the consumption trend continues. According to Kajfež Bogataj (2020), Slovenians, for example, should reduce their consumption by half, considering the impact on the environment and the carbon footprint, if they wanted to cover consumption with their own potential. Now most of the countries of the developed north are heating and spending at the expense of other less developed countries. At the same time, the developed forget that they are to the greatest extent also to blame for increasingly intense and frequent weather phenomena.

In the case of HPP, there are solutions, especially since many in Europe have already realized that the mere construction of dams, their maintenance and the consequences on the environment cause more negative consequences than if these dams were not there. Despite environmentally and energetically better alternatives such as HPPs, due to the influence of capital on decision-making, the pressure on decision-makers is great.

The third and last but not least, very important measure is that when deciding on the measures, the profession and the interested public face each other and include them in the decision-making process of whether such prospects even fit into the environment or not. Although it has been the practice until now that Civil Initiatives were treated as inhibitors of development, their importance is becoming more and more important, as well as the protection of the environment, despite the fact that this struggle is often seen as a David and Goliath struggle. On the one hand, capital and non-environmental policies and action from positions of power and exploitation, and on the other, environmentalists on the side of nature and society and with the power of enthusiasm.

Conclusion

if at the beginning of the article we still wondered whether water energy is still green considering all the visible and invisible consequences on the environment, nature and society, the reader will come to his own conclusion through the article. Ecologists and environmentalists are of the opinion that the consequences of dams are extremely harmful for everyone. From the point of view of the protection of drinking water sources, however, they can represent an existential and survival problem, which is why we firmly reject them.

In accordance with the Biotic Strategy, Slovenia committed itself to the restoration of free-flowing rivers. Restoring the original situation is almost impossible due to past interventions. The situation will be able to change for the better only in decades, when nature will recover. Therefore, in terms of the negative consequences, any new approach is not only questionable, but harmful. The task of us and future generations is to draw attention to the problems and to look for ways and measures that will reduce the burden on the environment. By building hydroelectric power plants, we will only increase the load. If we want to survive on a limited planet, we will have to change our attitude towards nature and the environment, and definitely reduce our consumption habits, otherwise we will fall into even greater conflicts between people and nature.

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Part IV:
URBAN/THE CITY

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The New Forms of Living: Challenges and Opportunities for an Eco-social Transformation

Abstract: I propose a literature-based reflection on new forms of living in the context of ecological transition. The policies that are supposed to guide the ecological transition in the European Union, grounded in principles of economic growth and competitiveness, prove to be at odds with the possibility of achieving a just transition. I examine new forms of living, such as collaborative living and energy communities, as social innovations that redefine the public-private relationships, holding potential for an eco-social transformation. However, the premises and outcomes of these experiments are varied and incoherent, with some projects perpetuating unsustainability and existing inequalities. A crucial element that emerges as foundational for the possibility of an eco-social transformation is the rethinking of the very concept of "living".

Keywords: just transition, eco-social transformation, new forms of living, policies, public-private

....

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Introduction

The escalating environmental crisis and growing inequalities within and among nations have unequivocally demonstrated that the production models and lifestyles inherent to capitalist systems are incapable of ensuring adequate living conditions for large segments of the human population, both now and in the future. For at least fifty years the need for a transition to ensure the sustainability of human existence on the planet has been the subject of public debate. During this period, numerous international treaties have been promulgated to promote what is called an "ecological transition" of humanity. Among the latest, the most important is the Agenda 2030, which sets out the strategy of the United Nations member states to achieve by 2030 «a better future for all people, including the millions who have been denied the chance to lead decent, dignified and rewarding lives and to achieve their full human potential. We can be the first generation to succeed in ending poverty; just as we may be the last to have a chance of saving the planet» (ONU, 2015, p. 12).

The 2030 Agenda is a global policy that is supposed to put sustainability and justice at the center, but it is a narrative that does not match with reality. In fact, this policy is not producing the desired results in either area. To explore the possibility of a just transition, in this contribution I will focus on a key issue in the contemporary debate, namely the new forms of living. If the transition in fact requires, even according to the European Commission, a change in lifestyles, the "home" dimension is certainly a central factor, as it is «a life-organizing infrastructure» (Lopes *et al.*, 2018, p. 48).

The concept of "living" is multidimensional and can be approached in many ways. The perspective of this contribution is within the framework of political ecology from a sociological standpoint. By bringing into dialogue studies on social innovation, sociotechnical transitions, and alternatives to capitalism, I will address the connections between housing and energy. In scholarly discourse, this correlation is seldom explored. However, it is deeply significant given the intricate interdependence of the «polycrisis» (Morin and

Kern, 1999, p.73) contemporary societies are facing. To comprehensively understand the evolution and potential solutions of these crises, it is essential to address their interconnections.

Green transition policies consider the intertwining of these areas only in relation to building efficiency. They ignore that people's practices do not change overnight and that a technical intervention may not yield the desired results. It can even make things worse, as happens with the «rebound effect» (Magnani, 2018, p. 28; Magnani and Scotti, 2024, p. 149).[2] Moreover, they ignore that dwellings, in addition to being inhabited, are located within a context, in territories, which are not all the same, but are «vital worlds» (TiLT, 2022, p. 7) each with its own socioeconomic, cultural, and ecological characteristics.

Addressing the issue of housing from a political ecology perspective highlight that a dwelling is not just a space bounded by walls (Ferri *et al.*, 2017). Instead, it is a node in a network of material and immaterial relationships that exist between the people who live in it and those who live around it, between the materials of which it is composed, the soil on which it stands, the energy that powers its systems and the ecosystem of which it is a part. Conceiving dwellings in strictly economic terms, only as goods that can be bought and resold, ignores all the factors that constitute "living".

In the first part of the paper, I will undertake a critical analysis of the principles and perspectives that underpin the ecological transition within the European Union (EU), focusing on the strategies proposed in relation to the interconnected crises of energy and housing. I highlight how the technical-managerial approach that informs such policies is unable to offer concrete solutions to these problems. In the second part, I will examine new forms of living from the perspective of social innovation, a widely used and debated concept, and their ability to respond to contemporary crises. I will scrutinize the extent to which these

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2   The concept of "rebound effect" refers to the increase in consumption, for example of a household, when a more efficient technology is introduced. The lowering of the price, in this case of the electricity bill, is not matched by equal or lower consumption, and this phenomenon tends to cancel out the benefits potentially produced by the increased efficiency of the technology.

forms may contribute to fostering a just ecological transition and eco-social transformation, particularly in terms of reshaping the dynamics between the public and private sectors.

The European Union's policies for a just ecological transition

One of the main instruments by which the EU adopts sustainable development goals is the *European Green Deal* (2019), defined as the new growth strategy. The action plan sets out the primary goals and means to practice a "green or ecological transition" with the aims to «transform the EU into a fair and prosperous society, with a modern, resource-efficient and competitive economy» (European Commission, 2019, p. 2). The aspects relevant to this contribution on which the *Green Deal* focuses are competitiveness and economic growth; energy efficiency in industries and buildings; and fighting energy poverty.

A central role is assigned to just transition, however, as Bouzarovski (2023, pp. 1003-4) points out, the «dominant policy debates on the topic have seen a profusion of techno-managerial framings of the process, underpinned by narrow cost-benefit analyses». The goal of ensuring a just transition "for all" is constantly counterbalanced by the need to maintain and possibly increase EU's competitiveness. Two purposes that are not compatible. In these policies, justice is conceived as something to be enforced, according to an «engineering and unilinear logic» (TiLT, 2022, p. 97), through a series of institutionally governed reforms. The *Green Deal* fails to adequately confront the complexity, not only ecological but also social and political, of the efforts needed for transition (Bouzarovski, 2023).

Energy efficiency to solve energy poverty

The tools to tackle energy poverty are mainly financial and focus on the renovation of public and private buildings. In line with the technical-managerial perspective highlighted above, restru-

cturing in large blocks is identified as an essential objective, to obtain better financing conditions and reduce the costs of the interventions. Buildings renovation is described as an intervention with a double positive effect: on the one hand it would contribute to the path towards sustainability, on the other it would allow the cost of bills to be reduced and to stimulate the economy and local welfare. On the contrary, there is a risk that these interventions will fail in both areas, as they are «bounded, framed, and removed from the socio-technical context in which they operate» (Bouzarovski, 2023, p. 1006).

It is not clear to which companies, large or small, local or international, the economic benefits of buildings renovation would go, as the commission does not set up mechanisms to ensure fair redistribution of the available funding. It fails to acknowledge the significant variations across diverse local contexts, encompassing factors such as infrastructure availability or deficiency, the diversity of corporate entities, and variations in social welfare policies. Furthermore, the necessity of large-scale renovation interventions requires careful consideration. Moreover, the smartgrid issue, central to policies, implies two scenarios: centralization in supergrids or decentralization in microgrids (Magnani, 2018). As Magnani remarks, the use of digital platforms to collect information on energy performance and consumption does not necessarily imply an increase in the sustainability of the systems involved. Energy efficiency is undoubtedly a goal to be pursued. However, framing it as the main means of achieving the transition to sustainability overlooks several other factors that contribute to contemporary crises. Among these factors is a socioeconomic system that incentivizes consumerism and individualizes needs and responsibilities.

These are just some of the questions that can be raised, and which reveal the limited approach of EU policies. The organizational and normative perspective on which they are based neglects the «heterogeneity and complexity of the social world» (Bouzarovski, 2023, p. 1006). Numerous studies instead highlight the characteristics of «non-linearity and unpredictability» (Magnani,

2018, p. 99) that the reconfiguration of energy practices presents. It is essential to problematize both the issue of supply and demand for energy. This is in fact «dynamic, social, cultural, political and historical» (Shove and Walker, 2014, p. 55): consumption is the result of practices, not of a purely rational choice. Furthermore, the demand for energy is shaped by the material means with which it is consumed, and these means contribute to the «ongoing reproduction of practice» (ibidem). Practices cannot be changed only by making energy-related technologies more efficient. This is true for housing practices as well: they are also shaped by socio-cultural, not just rational, motivations, and supply and demand are interrelated in this area as well (Bourdieu, 2005).

Disregarding the socio-economic context within which these interventions are implemented poses a considerable risk of constraining their efficacy, both in terms of poverty alleviation and the attainment of sustainability objectives. Furthermore, this approach, taking the current standards of energy practices as given and immutable, facilitates the reproduction of the social, economic, and environmental inequalities existing in the territories involved. Indeed, the context in which they are located is that of a «capitalist economy, the legacies of settler colonialism, as well as a racialised and patriarchal socio-cultural order» (Bouzarovski, 2023, p. 1006). Transition policies, therefore, are configured as «technological fixes» (Pessina and Alkhalini, 2023, p. 238) as they pursue the ideology of Ecological Modernization, which seeks progress through technological innovation, rationalization and individualization. Therefore, they enable the reproduction of current material configurations and practices, with the aspiration to fuel capitalism through renewable energy sources.

The many faces of innovation: technological, organizational, social

Innovation is a central topic in the transition debate, as it is a foundational concept of the eco-modernist approach that the *Green Deal* embraces regarding technology. Yet, there is now a widespread

recognition that technology alone cannot resolve contemporary crises, as their underlying causes are entrenched within our social, economic, and cultural systems (Magnani, 2018). Traditionally, scholars who studied the relationship between society and energy considered social innovation as produced by technological innovation. As seen in the previous paragraph, the demand for energy is certainly shaped by the means by which it is consumed. However, demand is also socially constructed, so a sociocultural transformation can help change it.

In fact, the EU places significant emphasis also on social innovation. It is one of the central concepts of contemporary sociological analysis (Moralli, 2019). This kind of innovation refers to the reconfiguration of the relations between the state, the market and the civil society to meet social needs. Scholars refer to it mainly in two ways: as an «essentially contested concept» (Ziegler, 2017, p. 2) because it causes endless arguments about the right way to use it, and as a «quasi-concept» (ivi, p. 8) because it is used as a rhetorical concept that lacks a determined core. The two perspectives highlight problematic aspects of social innovation that should not be underestimated; yet they also reduce its potential as a theoretical concept, a practice and a normative tool that can help to understand the current transformations (Moralli, 2019).[3]

Among the hundreds of definitions that have been proposed, some common elements can be identified. The purpose, the forms, the actors and a cultural horizon shared by the subjects who participate. Social innovation aims to resolve social problems not yet or only partially satisfied, by creating or changing services, projects, products or ways of acting, and it is promoted by collective organizations. About the actors, there is an open debate on whether they can also be individual, in this work, following Moralli (2019), collective organizations with social purposes are preferred.

In recent years, there is a growing debate about the potential of social innovation in contributing to energy transitions (Dóci *et al.*, 2015; Klein and Coffey, 2016; Avelino *et al.*, 2019; Moralli,

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[3]   For discussion and application of some declinations of the concept to concrete projects see, in the field of energy, Matschoss et al. 2022, in the field of housing, Caruso 2017.

2019; Matschoss, 2022). Scholars' opinions on the issue vary. One of the main reasons lies in the fact that the interaction between social and political realities, with their consequent impact on regulatory frameworks at various hierarchies, configures a context that affects all the dynamics of social innovation (Matschoss, 2022, p. 4). Therefore, regulatory frameworks that focus on technical-managerial aspects and do not consider local social and political contexts are likely to have extremely limited and, above all, unequal effects. A relevant example in this context is represented by community energies, also mentioned in the *Green Deal*, which constitute an innovative way of producing and consuming energy, actively involving local actors such as businesses, citizens, and public administrations. Such initiatives are expected to bring environmental, social, and economic benefits.

Community energies have been studied by engineers, economists, and lawyers for a long time, with an emphasis on the associated economic and environmental benefits. Only recently there is an increasing focus on the social aspects (Hoffman and High-Pippert, 2010). Several studies have shown that the benefits of such innovations are not distributed equally among various social groups and that vulnerable groups appear to be more excluded. In fact, the results of these studies note in most cases a homogeneity of sociodemographic characteristics among members, with the prevalence of participants who are «male, middle-aged, well-educated and with incomes that are generally above the population average» (Magnani and Scotti, 2024, p. 147). They also record a lack of participation from local communities outside the projects (Hanke and Guyet, 2023). In sum, a lack of energy justice in terms of procedure, distribution, and recognition is reported (Heldeweg and Saintier, 2020). Since the characters of social innovation summarized earlier include the purpose of solving social problems, in this case it is not social innovation, but technological and organizational innovation. The concept of organizational innovation is related to the fields of management, and it refers to the improvements of products or services for the market (Lévesque, 2013). So, it does not produce social improvement beyond the market as social innovation should do.

Another area to which ecological transition policies pay special attention is the renovation of social housing, which is also studied as a social innovation capable of interacting with social transformations and responding to contemporary crises (Gili, Ferrucci and Pece, 2017). In housing policy, the EU has no direct competence. If it adhered strictly to the constraints of subsidiarity and additionality to which it is subject, it could neither legislate nor directly finance housing-related policies. Instead, the EU adopts a less stringent interpretation of these principles, intervening in various spheres, albeit through indirect approaches. From an initial «unofficial policy» phase (De Luca, Governa and Lancione, 2009, p. 360) between the 1980s and 1990s, the so-called Lisbon Strategy in 2000 inaugurates a second phase from which the EU monitors and coordinates national policies where possible. From this point on, housing issues are correlated with poverty and thus considered something to act on to tackle it.

A central aspect of the Strategy was to integrate economic policies with social policies, based on two principles: competitiveness and cohesion. The relationship between these two principles introduces a problematic element into the housing policy landscape. The emphasis on promoting competitiveness, as already pointed out, carries the risk of intensifying phenomena of social exclusion, which contrasts with the goal of promoting social cohesion. In the EU documents, the relationship between the two principles is not critically examined, but rather is interpreted in «a complementary and synergistic key» (ibid., p. 363). This simplified perspective implies that social cohesion is considered a precondition and not a priority objective, subordinate to maintaining the competitiveness of the European economy. This imbalance is also evident in the disparity of emphasis given to the two principles.

Through this lens, one is thus able to understand the special attention given in the *Green Deal* to the renovation of social housing, the dedicated funding for which is primarily distributed to companies operating in the various sectors concerned. Their positive implications on fuel poverty and housing problems turn out to be only incidental, if one considers that competitiveness

fosters processes that reproduce inequality. In Italy, for example, there is extreme weakness in the social housing sector. Not because of a lack of policies, but, first, because of a general tendency definable as *laissez faire*, due to which the role of the public is reduced to creating opportunities for the free market. Economic development has the priority, as it is deemed capable of solving social problems. Second, because even when the state has adopted regulatory policies for redistributive purposes, there has been other kind of compensations, leading to a scenario of formal over-regulation and substantive under-regulation (Minelli, 2004). As a result, for decades, housing policies have failed to respond to the housing crisis that, in 2022, affected nearly 1.5 million households (Giunta and Leone, 2022).

The roots of the crises

In Europe, the energy transition is based on economic competition and technological progress. Underlying this perspective is the notion of the possibility and necessity of perpetual economic growth, which remains linked to resource consumption, albeit with a focus on improving efficiency in exploitation. EU policies allocate funding predominantly to established and competitive market players because companies in the energy and housing sectors have the knowledge and the skills to overcome other economic players and benefit from these policies (Pessina, 2023).

In general, the ecological transition in Europe assumes ecological modernization (Mol, 1997) as a policy agenda (Pellizzoni and Osti, 2008). This is translated into the techno-managerial approach that frames the problem of energy and housing as issues to be addressed by technological innovation in a free market context, in which the state must allow self-regulation of economic actors and act as a promoter of democratic participation. In the context of transition, the only role that is allowed to civil society is to integrate itself into institutional processes.

The ecological transition is a long-standing global project, but it is in the public eye and constantly demonstrated by the

updated data and reflections of scientists and scholars that it is not yielding the desired results. It is now widely believed that the main reason for the ineffectiveness of policies and their practical translations lies in not addressing the actual causes of the crises we are experiencing and producing. These causes can be summarized in the processes of individualization, commodification, privatization, exploitation of resources, and in the promotion of an idea of limitless freedom. Processes and ideas that produce harmful effects on societies, ecosystems, economies, and individuals. In summary, the deep cause of the crisis consists of the social, economic, and ecological system that is capitalism.

The idea carried on at different levels (global, European, national, local) that a just transition can be achieved while keeping the system intact, generating the so-called "green capitalism", is fallacious. The harmful effects that the capitalist system produces cannot be solved by manipulating only the "economic variables" that constitute it as it is not just an economic system. Economic structures and economic agents are social constructions, inseparable from the complex of social constructions constitutive of a social order (Bourdieu, 2005). Capitalism is primarily a social organization model. It is based on the mythology of growth and progress, according to which humanity, or at least a part of it, is destined to dominate the world and shape it at will.

Nor can capitalism be considered merely a socioeconomic system. In fact, it establishes a specific form of relationship between humanity and nature. In other words, it creates its own «ecological regime» (Moore, 2015, p.158). In fact, no mode of production is configured as a purely economic fact, as it is grafted and nurtured from specific social and ecological ecosystems. The integration of economic and social policies promoted by the European Union is only an explication of an integration that has always been there. Not only that, but they have also always been ecological (Huber, 2015), even before the emergence of the sustainability issue.

An ecological, political, and social transition is only possible by entering into the complex relationships between different so-

cial dynamics. So, the dominant approach to transition, ignoring the inherently socio-ecological character of the efforts needed (Bouzarovski, 2023), cannot be right. It does not consider, intentionally or unintentionally, the role of conflict (Pessina, 2023), that is, the power relations and inequalities that underlie social production and reproduction. Conflict cannot be resolved through planning. "Justice" is not something that can be applied as in its theoretical and practical embodiments, is constantly (re)elaborated and (re)negotiated in the interactions between social actors. Indeed, Cooper (2016, p. 66) notes, «concepts are not things but processes»: they are constituted in the movement between imagination and actualization. A «generalized environmental consensus» (TiLT, 2022, p. 20) can never be realized: risks, interests and impacts will remain differentiated. Although the scientific data are incontrovertible, the political conflict cannot be transcended.

Identifying the causes of a problem does not necessarily lead to its solution; however, it is a necessary first step to take to change perspective. Capitalism is a historically determined socioeconomic system, not an inevitable destiny for humanity. Therefore, the trend can be reversed, starting with an «intelligent rationalization of the means and a wise limitation of the objectives» (Sachs, 2023, p. 6). Perhaps planetary limits are not absolute limits to be managed, but are structural limits (TiLT, 2022) and overcoming them requires a gaze reconversion.

New forms of living

The new forms of living are proposed at an institutional level and interpreted by scholars as a form of social innovation which, on the one hand, can contribute to addressing the social, economic, and ecological crises that afflict the world and, on the other, can promote a just transition. What are they and, more importantly, are they capable of achieving these goals?

Social innovation as a redefinition of relations between public and private

Civil society is often regarded as the primary catalyst and benefactor of social innovation and, potentially, social transformation. However, it is not a homogenous and cohesive entity, any more than other social actors engaged in innovation processes. It is more appropriate to consider them as diverse groups comprising different roles, value orientations and expectations. From these considerations, it is evident that innovation is not a linear process, devoid of conflicts and negotiation.

The relationship between the public and private sectors is one of the central themes that animate the debate on social innovation. In the everyday debate, the meaning of the adjective "public" «has been annulled and reduced to that of "state"» (Ricoveri, 2013, p. 51) and the market has subsumed society, reducing the actors on the scene to state and market. In this way, we lose sight of civil society, one of the «three components of the "state-market-civil society" triangle» (Moralli, 2019, p. 42) and which can be identified as a heterogeneous and conflictual set of actors «who operate outside both the state and the capital valorization process, but who take specific positions with respect to both» (Swyngedow, 2009, p. 68).

The distinction between public and private, therefore, turns out to be ideological and political. The two dimensions intersect much more often than it seems. If we consider the operation of the state, on the one hand, it contributes to protecting the interests of citizens; on the other hand, it pursues private interests, through the tendency to impose policies corresponding to theirs (Bourdieu, 2005). The state therefore presents itself as «an ambiguous and internally contradictory institution» (Swyngedow, 2009, p. 68). An example of this in the European context concerns the inclusion of private actors in the social housing sector, through "public-private partnerships". The state's contribution to social housing expands to encompass and economically incentivize private actors to undertake a series of activities (Marchetti, 2018), leading to an increase in rents and, in some cases, a reduction in

the scope of housing policies (De Luca, Governa and Lancione, 2009). Recently, scholars are beginning to pay more attention to the opportunities offered by public-community partnerships for the democratisation of local economies and to avoid the lack of transparency and public benefits of public-private partnerships (Chavez and Steinfort, 2022; Valentin and Steinfort, 2023).

A phase that is still evolving today began in the mid-1970s and saw the state's tendency to support market mechanisms and privilege private interests. If in the 1980s the state mainly maintained a «role as a link between local policies, private capital, and the needs of citizens» (De Luca, Governa and Lancione, 2009, p. 354), current housing policies follow a neoliberal model (Caruso, 2017) also supported by the push for competition promoted by the European Union. The characteristics of this new phase are: «deregulation of the public sector, centrality of the private market and, specifically, of property, progressive withdrawal of the State» (De Luca, Governa and Lancione, 2009, p. 369). This is particularly pronounced in Mediterranean countries, and Italy stands out among them with the chronic ineffectiveness of housing policies in addressing the housing issue (Minelli, 2004).

Shifting the attention to the territories, it is evident that the binary logic between public and private possession of a space or a resource does not reflect the complex nature of the interactions, between material and immaterial elements, between humans and ecosystems, which take place internally or in relation to them. Places and resources concern everyone, the human community in general, and cannot be privatised, except "formally" and temporarily, through laws which in any case only establish their *legal* status. They are unable to concretely circumscribe them, they always maintain their permeable nature which exceeds the public-private distinction. An illustration of the concept is provided by the research conducted by Lopes *et al.* which recounts of how, amidst heat waves in Sydney, people found refreshment «transgressively commoning "privately" owned space» (2018, p. 50), in this case the shopping centers. It is difficult to establish a precise distinction between public and private, both at a theoretical and

practical level, because it would mean arbitrarily reducing the complexity of the relationships that exist between social actors.

New forms of living as laboratories of social innovation

New forms of living explore innovative methods of utilizing living spaces, infrastructure and managing energy resources, in response to multifaceted contemporary shifts encompassing social, economic, and cultural domains, including alterations in family dynamics, demographic aging, and welfare system restructuring. Additionally, they address present-day social, ecological, and economic challenges.

The European and national landscape is extremely fragmented: there are many different forms, both in terms of the name – cohousing, ecovillages, co-living, social housing, supportive or collaborative condominiums, to name a few – and in terms of the size of the area involved, the number of people involved, and the legal forms. The motivations that drive people to participate in these projects are mainly sharing and collaborating with people who share a similar vision of living, the personalization of living spaces, the desire for social inclusion of vulnerable groups, the economic benefits and attention to environmental sustainability.

The new forms of living are a privileged field of study for investigating the changes that are taking place in the relations between civil society, the state, and the market. On the one hand, they modify the relationships between state and civil society with the so-called "public-private partnerships". On the other, they change relationships between people, creating shared spaces and commons within traditionally private contexts such as homes, which become open, in part, to neighbours and the entire citizenry. The narrative around new forms of living uses terms such as "participation", "community", "sustainability", "democratization", and "empowerment". However, the various experiments develop along different, inconsistent trajectories. On the one hand, there are projects that uncritically assume the principles of the capitalist paradigm, and on the other hand, there are projects that propose an alternative to it.

The acritical social innovation

Projects that assume the premises of the capitalist paradigm include, on the one hand, social housing and cohousing projects organized and managed by public administrations, and, on the other hand, energy communities created in collaboration between public administrations, companies, and citizens. These projects certainly meet some social needs and the narrative surrounding them might seem to contrast with the capitalist paradigm. However, it is a narrative that is not matched by reality. These projects uncritically apply neoliberal policies that, as highlighted in the first part, have competitiveness and economic growth as their primary goal. Social cohesion and collaboration are means to other ends, which contradict them in theory and practice. These projects do not act on the root causes of the crises they are supposed to respond to and do not change, rather superficially redefine, the relationships among social actors and thus the power relations that structure society.

In the case of social housing, for example, several scholars point out how it is in a problematic relationship with urban regeneration: the uncritical assumption of an integrated approach and of the opportunities offered by local action (De Luca, Governa and Lancione, 2009), in both national and European policies, becomes a rhetoric that prevents the real needs of territories from being identified. Participation and collaboration are tools to rebuild social cohesion, "community" and "sustainability" as means to foster economic growth and competitiveness. This dynamic reduces, without resolving, social tensions, which is necessary for capitalist reproduction, and prevents the activation of an eco-social transformation.

Analyzing the literature on community energies, Pellizzoni (Osti and Pellizzoni, 2018, p. 28) points out that the majority of studies also assume a «"managerial" and "collaborative" perspective». This perspective is based on a symbiotic idea of social transformation, which would occur through strategies that solve the practical problems of dominant elites through recognized, thus accepted, forms of social empowerment. A transformation that leaves the political and economic framework unchanged.

These kinds of innovation projects generally turn out to be arbitrary. In fact, "participatory planning" is managed by a political and technical team that includes citizens in a rigid scheme, in which their participation is instrumental to the acceptance of previously defined proposals. The urban planner, as Sennett (2018, p. 28) wrote, must be «a partner of the city inhabitant [...] critical of the way people live and self-critical of what they build». Expanding beyond urban planning to include new forms of energy production and housing projects, it can be said that the role of experts, from a social and spatial justice perspective, should be twofold. On the one hand, they should provide their technical expertise on issues that may be too complex for a diverse group of people. On the other, they should leave room for people who inhabit and therefore, within limits, know territories best. Not only with the aim of getting projects accepted, but to co-create, with the aim of fostering people's self-determination, to bring their demands together as far as possible, and to build a plural and inclusive future.

A transformation driven by a technical-administrative perspective that relies on preconceived notions and admits only marginal participation proves to be a failure because it does not consider people's dispositions and practices. For example, as it happens it is uncritically assumed that housing proximity between groups with different socioeconomic characteristics corresponds to shared values, a sense of belonging to places, and practices of solidarity (Bronzini and Filandri, 2018). A community, as well as democratic participation, cannot be established by technical-administrative mechanisms (Hoffman and High-Pippert, 2005). Otherwise, they exist only at the formal level.

The social innovation of community practices

Traditional social movements have been changing in recent decades. From a predominantly social-critical perspective, they have shifted their focus to practicing innovative solutions that have an impact not only on the economy but on broader social welfare. Scholars and activists have developed various interpre-

tive frameworks to study these movements, the most popular of which are degrowth (D'Alisa, Demaria and Kallis, 2015), post--growth (Rosa and Henning, 2018), acceleration (Rosa, Lessenich and Dörre, 2015), *Sustainable Community Movement Organizations* (Forno and Graziano, 2014), commons and commoning (De Angelis, 2017), and real utopias (Wright, 2010). One formula for including them all that seems most appropriate for the purposes of this paper is "transformative innovation movements" (Avelino, Monticelli and Wittmayer, 2019), which stands at the intersection of three fields of research: social innovation, sustainability transitions and social movements.

They may be characterized as transformative due to their implicit or explicit intent to modify the dominant structures within a given social context. Regarding the issue of housing and energy, one can take as case studies a part of the cohousing movement (still fragmented, but growing), including housing occupations, and the community energy movement. According to this perspective, Avelino, Monticelli and Wittmayer identify five main mechanisms by which these movements contribute to transformative change: prefiguration, socio-material innovation across domains, translocal empowerment, diverse repertoire of actions, sharing collaboration across movements.

By prefigurative practices, scholars mean those practices that express in the realm of everyday life the political ends of actions. With these practices people align their means with their ends, unlike the capitalist logic that subordinates the former to the latter. The two transformative innovation movements considered here embody prefiguration by providing tangible examples of how domestic and community life, as well as the production and consumption of energy, can be approached differently.

They generate "socio-material innovations" as they integrate technological, ecological, political, cultural, and economic dimensions, engaging in far-reaching change. For example, housing occupations challenge not only the socioeconomic system that produces inefficient management of housing stock, but also political structures by promoting alternative models of managing

social distress. These movements weave ties beyond the local dimension, creating or participating in networks that allow them to recognize and feel themselves as part of a broader context. Possibly even receiving support from it, as in the case of the European federation for renewable energy cooperatives (REScoop).

In addition, these movements engage in other actions that exceed foreshadowing and are aimed at transformative change, such as «protesting, lobbying, training and campaigning» (ibid., p. 74). For example, people involved in housing occupations, become active in protesting for the right to housing including alongside the anti-eviction movement, and at the same time engage in dialogue with city institutions to influence their policies and to advocate practices of urban self-recovery and collective property management. In addition, they participate in movements that exceed the right to housing, such as workers' struggles for decent work, or environmentalist demonstrations against the climate crisis, recognizing the intersectionality of these struggles and the need to bring them into dialogue to activate an overall transformation of the dominant socioeconomic system.

Transformative innovation movements thus seem to be one of the possible paths for a radical eco-social transition that corrects the ontological and epistemological errors (TiLT, 2022; Monticelli, 2022) on which contemporary socioeconomic systems are based. These movements are «rehearsals of the future» (TiLT, 2022, p. 38), that is, utopias or prefigurations that allow a glimpse of one of the possible ways in which "living" can evolve and a taste of it in the present. In these laboratories of socio-material innovation, civil society has reorganized itself by generating «practiced and prefiguring heresies» (ibid., p. 41) that represent alternative ways of thinking, doing, and organizing communal living beyond the public-private dichotomy. Moreover, they aspire to transform the world by inserting themselves in the interstices and constituting themselves as «responsible intermediary bodies» that «practice utopias of living and consuming-producing in common» (ibid., p. 50). This interpretive perspective seems to be able to integrate the social, political, and ecological dimensions

of the new forms of living, to read them as laboratories of social innovation with the potential to bring about a bottom-up social transformation.

The potential of transformative innovation movements remains an open question. First, these experiences are often tied to the local context and thus present scalability problems (Magnani, 2018). In this regard, Monticelli points out that any radical transformation, by definition, is «"multidimensional", "intersectional" and "multi-scalar"» (Monticelli, 2019, p. 6). It requires a redefinition of relationships between different levels (personal, political, and practical). The diffusion patterns that follow prefigurative initiatives are «non-linear, rhizomatic, network-like and place-based» (ibid., p. 6).

Second, there are those who believe that they can be a means of depowering political conflict in an identity-driven direction and of reconstituting the social relations that capitalism has eroded but needs to overcome the current crisis and regain control (Osti and Pellizzoni, 2018). However, prefigurative initiatives do not only respond to people's immediate needs, but orient them toward social responsibility, politicizing them (TiLT, 2022). Moreover, "traditional" political conflict is not necessarily incompatible with these activities; they can complement and proceed together and perhaps even gain strength in this way. As Forno (ibid.) points out, however, plural action, acting on different spheres and scales, is necessary for the transformation of the current socioeconomic system; therefore, even the joint efforts of individual actions and movements are insufficient, but «institutional proactivity» is also needed (ibid., p. 78).

In the current circumstances, envisioning significant "old-fashioned" revolutionary transformations may seem challenging. However, a viable avenue for substantial change resides precisely in initiating a shift in individual lifestyles initially, while fostering continual dialogue with fellow community members regarding desired modes of existence. Engaging in such endeavours does not preclude participation in movements striving for broader social, political, and economic reform.

Rethinking living for an eco-social transformation

Taking a critical perspective, the concept of "living" to which I refer is based on a relational perspective, according to which one cannot live in isolation. What is generally called "dwelling", whether it is a building or not, is only a point, a junction in the much larger and more complex network of relationships that is the web of life (Moore, 2015). It is a «space of flow and encounter across porous boundaries [...] and that enact a commons that is continually in the making» (Lopes *et al.*, 2018, p. 48). The material flows that pass through it or stay there for a long time are intertwined with a larger network. To inhabit a place is inevitably to be embedded in a complex network of relationships.

In recent decades, however, especially in the global North, the concept of "dwelling" has been culturally and politically constructed as an enclosure, a private space separated from the outside (Ferri *et al.*, 2017). It has been surrounded by high fences, enclosed by large gates and window grates, stocked with an ever-increasing number of appliances that insulate it and virtually make it independent from the outside. With the advancement of digital technologies, it is also possible to receive every resource needed to survive at home. The house has been transformed into «an enclosed and private space with a strong boundary» (Lopes *et al.*, 2018).

The house is a junction at which some key dimensions of crises manifest themselves – housing deprivation, energy poverty, and environmental crisis – that need to be addressed from the perspective of trying to build a just transition. In fact, the house can be considered a «crucial structuring element of social inequalities» (Bronzini and Filandri, 2018, p. 378). The multitude of disparities evident in access to housing and energy warrants an exploration of the provisioning of these essential goods from the standpoint of social and spatial justice.

As the feminist movement has advocated, the boundaries between the public and private dimensions are not as clear-cut as people think: the personal is political. That is, the construction of new ways of living together and new practices in traditionally "private" contexts – such as the organization of spaces or the

consumption of energy in the domestic sphere – is a political action as well. An action, in fact, to be "political", does not necessarily have to be carried out in the public-institutional sphere. Power relations in society do not take place only in these spheres; they are present and structure every level. Members of civil society also participate in this structuring and thus can, within certain limits, act on it.

On the other hand, history teaches that precise planning for the future never achieves its goals: to initiate a transformation what matters is to identify an orientation, a direction. In place of precise planning, a «dense directionality» (TiLT, 2022, p. 107), based first on values and then concretized in projects, is more useful. Conceptualizing the entire project from the beginning, otherwise, is likely to confine people and reality into a rigid structure.

As I tried to show in the first part, the technical-managerial perspective of the EU ecological transition does not provide for a comprehensive intervention on the causes of the cross-cutting inequalities affecting housing and seems more focused on maintaining the status quo and control over territories. In this way it allows the reproduction of social and spatial inequalities that have been undergoing a process of polarization for decades throughout the EU and particularly in Italy. The lack of housing in good condition, affordability and housing stability are factors that are part of the multidimensional and complex phenomenon that is poverty (Tirado-Herrero, 2023). Its immediate result is a state of deprivation of essential goods and services, but at its root it is a socially determined unequal distribution of the same. In other words, it is produced by an unjust social order.

Conclusions

EU policies driving the ecological transition in recent years assume as a given the need and possibility of green growth. Such growth would occur through an ecological reform of industrial democracies, primarily through greater efficiency in the use of natural resources by science and technology (Mol, 1997). The vi-

sion of the future they promote implies a world in which the role of innovators and entrepreneurs in promoting sustainable development is central, ensuring that growth occurs in conjunction with environmental protection. The role of the state remains to promote democratic participation and enable self-regulation by economic actors. Social movements can contribute to the transition by collaborating with other social actors. In sum, the driver of reform would be technological and organizational innovation, within a free market framework. To pursue these goals, transition policies develop a technocratic and managerial approach.

The goal of reducing or even eliminating inequality, repeated in all international treaties and policies, remains a proclamation without tools to be implemented. The instruments prepared for civil society participation and collaboration in transition are conceived as means to other ends; therefore, they fail to yield tangible results in terms of democratization. Likewise, interventions to address lack of access to essential goods such as energy and housing, planned outside or above the socioecological contexts in which they should be implemented, fail to produce significant improvements in people's lives. Particularly in the disadvantaged segments of the population that would need it most. This is also the case with projects that assume an idea of social innovation as a situated solution to as-yet unmet needs and do not promote real social transformation, in fact contributing to the reproduction of a status quo that has proven for decades to be unable to concretely convey sustainability and social and spatial justice.

Addressing the issue of housing by overcoming the material and social isolation in which it is represented in the dominant culture, means recognizing the «permeable materiality» (Bouzarovski, 2022, p. 1008) that characterizes homes, the flows of energy that flow through them, and social knowledge and practices. Some experiments in the field of housing start from this perspective and can be interpreted as transformative innovation movements that promote an eco-social model that stands in the interstices of the capitalist system to transform it from within. These movements build everyday utopias (Cooper, 2016), pro-

moting a vision of a plural and just future through a collective management of territories and resources and the reweaving of community relations beyond the dichotomy between public and private.

While these movements embody the potential for social transformation, there remains doubt as to the actual possibilities of their spread to the whole of society and their relationship to the programmatic efforts opposed to them coming from above. This is a first issue that social research needs to investigate. Another area that needs to be explored through empirical research concerns an analysis of how experiences of this kind are carried out in Italy today. A limitation of my analysis, in fact, is that most of the literature on the topic of new forms of living, but especially the empirical research, concerns European countries that have different characteristics from the Italian context. In Italy these experiments have been spreading for only a few years, so there is still much to investigate.

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Citizens' Evaluation of Sufficiency Policies in the Field of Housing. The Role of Communication and Personal Affectedness. [4]

Abstract: Using citizen surveys conducted in Denmark, France, Germany, Italy and Latvia, this paper examines perceptions of two strict sufficiency-oriented policies, focusing on whether the perceptions vary with different framings of the policy objectives and explores the role of personal affectedness by the policy measures. For the framing the policy measures are presented to either aim at "punishing" or "overcoming" unsustainable housing choices. The impact of the framing is tested in general and, in addition, it is investigated whether the impact of the framing varies when respondents will potentially be affected by the policy measures. As a case study, the paper concentrates on sustainable housing and, more specifically, on limiting living space per person, including two policy measures, namely (1) a ban on the construction of new single-family homes that are standard-sized or larger and (2) a financial fee on

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above average living space. We find that both strict sufficiency-oriented policies are perceived rather negatively in all countries. The impact of the framing on policy evaluation seems limited and does not vary for personal affectedness, however in two countries (in Germany and Italy) the fee is evaluated more positively when the policy objective is framed as "overcoming" unsustainable housing choices. Variables that have been found to be statistically significantly associated with the evaluation of the ban and fee in at least two countries are familiarity with the measures, trust in national politicians, political orientation, and finding the provision of sufficient sustainable housing a problem.

Keywords: Sufficiency, policy perception, policy evaluation, framing

Introduction

The concept of sufficiency and sufficiency lifestyles is gaining increasing attention in the debate on the energy transition or, more broadly, the sustainability transition. The interest in the sufficiency concept has been triggered by a number of developments, including (i) the recognition that current technology--driven innovation pathways will not be able to deliver the required levels of decarbonisation as quickly as needed; (ii) a growing understanding that even with technological innovation, solving current sustainability challenges will require changes in lifestyles and daily practices; (iii) lessons from recent crises, such as the COVID-19 pandemic and the energy crises, that short-term lifestyle changes are possible, but also necessary, to cope with the impacts of these crises and (iv) issues of climate justice, including the responsibility of high CO_2 emitting countries to drastically reduce their negative impact on the world's climate. For instance, the average carbon footprint of EU citizens is well above the world's average (EEA, 2019). Sufficiency can be understood as creating the social, infrastructural, and regulatory conditions for changing individual and collective lifestyles in a way that reduces energy demand and greenhouse gas emissions to an extent that

they are within planetary boundaries, and simultaneously contributes to societal well-being (Tröger et al., 2022). In this vein, some studies (e.g. Bourgeois et al., 2023) have suggested that there is a list of demand-side changes that are likely to be effective in saving energy and reducing carbon emissions, while producing co-benefits such as improved health (Creutzig et al., 2021). However, the concept of sufficiency is also sometimes contested, being perceived as compromising comfort and living standards and potentially exacerbating inequality and increasing poverty for some. Even in countries with on average high living-standard and high CO_2 emissions, some groups are facing poverty and might be unable to meet basic needs. When discussing sufficiency and further, policies aiming at sufficiency, the potential impact for different societal groups has to be taking into account.

While scientific and policy debates are ongoing, this paper focuses on the citizen's perspective on sufficiency, starting from the assumption that sufficiency lifestyles, as lifestyles in general, are shaped and re-enacted by individual behaviour and socio-technical structures, and that collective lifestyle changes require policy measures to support them to adapt structures accordingly (Hirth et al., 2023). Fostering the structural changes needed for such adaptations is again a societal task that requires the support of society, so citizens are relevant in this context as consumers/ users who make lifestyle choices, but also as citizens who are decision-makers in a democratic society (Defila et al., 2018). In this paper, we focus on the citizens in this second role and thus their perceptions of sufficiency policies. We investigate the relevance of how sufficiency policy measures are communicated using linguistic frames (comparing two versions of framing of the objective of the policy measures). However, not all citizens live on large living space, and thus, they would have to change their behaviour to different degree in response to the policy measures investigated. Therefore, in addition we want to explore whether the effect of the framings is dependent on whether a person is affected by the policy measures.

Literature

In this section the concept of sufficiency is discussed, followed by a brief overview of citizens' perceptions of sufficiency and policy measures as well as the role of frames for policy perceptions. Subsequently, an introduction to the research case, namely housing, is given. Last, the research questions are presented.

Definitions of sufficiency

Sufficiency is understood differently in the debate. It has been characterised as a demand-side or behavioural approach as opposed to a supply-side approach to decarbonisation and energy system transformation or as a 'beyond technology' option (Creutzig et al., 2016; Sandberg, 2018). In this understanding it encompasses measures like turning down the thermostat to reduce the room temperature or switching off appliances completely when not in use to avoid standby consumption. Other authors describe it as a third strategy for achieving a more sustainable way of life, alongside consistency and efficiency (Fischer & Grieshammer, 2013). In such an understanding, sufficiency refers to a qualitative or quantitative change in the way services are provided or used, e.g. by changing mobility by avoiding trips or switching from driving to cycling as a more environmentally friendly mode of transport; other examples are cohousing or sharing practices. Efficiency, on the other hand, is about increasing output relative to input, for example by getting more people to use the same means of transport through carpooling or more efficient heating systems that use less fuel to keep rooms warm and comfortable. Finally, consistency refers to changes in technology that have a lower environmental impact while delivering the same outcome or service, such as the shift to electric mobility or heat pumps. Other authors see the sufficiency debate within the context of questions around degrowth and fundamental changes of the economic system, arguing for an emphasis on public welfare instead of accumulation (cf. literature review by Jungell-Michelsson & Heikkurinen, 2022). These examples point out that an analysis of

sufficiency could reach from small changes on the micro level to overturning societal structures. In this paper we take a mid-way approach and understand sufficiency as creating the social, infrastructural, and regulatory conditions for changing individual and collective lifestyles in a way that reduces energy demand and greenhouse gas emissions to an extent that they are within planetary boundaries, and simultaneously contributes to societal well-being (Tröger et al., 2022).

Perceptions of sustainability policies and sufficiency

Research has shown that sustainability policies such as climate policies gain support when they are perceived to be fair, effective and do not have negative personal effects (Dechezleprêtre et al., 2022). Other findings suggest that citizens are usually more sceptical towards more costly and more restrictive measures (Huber & Wicki, 2021). With regard to sufficiency, a recent study by Lage et al. (2023) points out that citizens, in contrast to policymakers and national governments, support regulatory measures aimed at sufficiency lifestyles. These results were obtained in citizens' conferences, where citizens were exposed to climate issues in depth before making evaluations, so the results may be specific to a context in which citizens are more knowledgeable.

The role of framing for policy perceptions

By employing framing in experiments, researchers can understand how different framings influence attitudes, opinions and policy evaluations. This knowledge helps policymakers optimise communication strategies, emphasising benefits and aligning with societal values. Framing experiments offer a systematic approach to grasp how language and presentation shape public perceptions of policies in diverse contexts. It has been shown that even relatively simple changes in the wording of policy framing can affect perceptions, for example in the case of transport policy (Oltra et al., 2023) or housing policy (Schnepf et al., 2023).

Case study: sufficiency in the housing sector

This paper builds on the existing body of knowledge and examines sufficiency policies in the housing sector as a case study. The housing sector significantly contributes to global greenhouse gas emissions. According to the International Energy Agency (IEA), the buildings sector, which includes the energy used for construction, heating, cooling, lighting, and operating equipment, accounts for one-third of global energy consumption and emissions.[5] Therefore, decarbonizing the housing sector is crucial for climate change mitigation. Despite numerous measures implemented to achieve this goal, emissions in the housing sector have remained relatively constant in recent years.[6]

The emissions and energy use in the housing sector encompass a wide range of activities and functions. Housing is essential for providing shelter from climatic conditions, facilitating social and cultural life, and enabling economic activities. The challenge lies in balancing the need for housing with the imperative to decarbonize. One promising approach is to examine the amount of living space required for these activities without compromising their quality.

The amount of living space per person is a critical factor in this context. In many European countries, living space per person has increased over the past decades. Generally, increased living space leads to higher energy consumption and carbon emissions due to the greater need for heating, cooling, and construction resources (Lorek & Spangenberg, 2019). Thus, reducing the living space per person emerges as a sufficiency measure that can enhance the sustainability of housing (Ellsworth-Krebs, 2020).

Research questions and research case

Taking together the lines of thinking outlined above, this paper empirically studies the perceptions of citizens across Europe (in Denmark, France, Germany, Italy and Latvia) on sufficiency po-

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[5]   https://www.iea.org/energy-system/buildings (18/05/24)

[6]   https://building-stock-observatory.energy.ec.europa.eu/factsheets/ (18/05/24)

licies in the housing sector, more specifically policies addressing the reduction of living space per person. The following two stricter policy measures are investigated: (1) a ban on the construction of single-family homes that are standard size or larger and (2) a financial fee on above average living space. Linguistic frames are applied to understand whether different communication about the aim of the policies has the potential to influence policy perception. In addition, we want to focus on personal affectedness by a policy measure. Negative personal impacts for the individuals themselves has been found to be associated with lower support for climate policies (Dechezleprêtre et al., 2022). However, the idea behind stricter sufficiency policies is that they have an impact on individuals who consume more resources and emit more CO2, and induce them to change their behaviour. Because of their binding nature, stricter policies such as bans and mandatory fees can be very effective in mitigating climate change. Stricter policies could therefore be an important step towards more sustainable lifestyles. In addition, from a normative social justice perspective, individuals who contribute more to overconsumption (who are often more wealthy and have profited from economic advances connected to an increase of CO2eq emissions) should be the ones to change their behaviour and reduce personal emissions. Hence, personal affectedness by the policy measure will be taken into account.

Adding to the current knowledge, the proposed paper examines

1. perceptions of sufficiency-oriented policies in the housing sector

2. whether the evaluation of policy measures varies with different framings of the policy objectives and

3. if the framing has different effects for individuals who will be affected by the policy measures

Methods

The data the paper draws on was collected as part of the project FULFILL - Fundamental decarbonisation through sufficiency by lifestyle changes[7]. The aim of the EU-funded research project is to explore the contribution of lifestyle changes and citizen engagement in decarbonising Europe and fulfilling the goals of the Paris Agreement.

A quantitative approach is used for the purpose of the present study, using citizen surveys. The FULFILL project conducted extensive micro-level online surveys in five EU Member States as part of its workplan with a total sample of n = 3642 respondents (786 in Denmark, 784 in France, 763 in Germany, 774 in Italy and 535 in Latvia).

Design of the survey

The survey was part of the second wave of the project. The first survey wave was designed to look at the current carbon footprint and well-being of European citizens in order to determine the prevalence of sufficiency lifestyles in contemporary societies. This survey was conducted in 2022. The second survey which took place in 2023 was divided into several subsamples focusing on either the perception of policies in two areas, namely housing and food, or the prevalence of sufficiency lifestyles. For the purposes of this paper, the data from the housing survey will be analysed. All surveys were conducted online using a standardised questionnaire developed by the project team.

Approximately 750 to 800 respondents in Denmark, France, Germany and Italy and approximately 550 respondents in Latvia were recruited via a professional market research institute (Norstat) for the housing study. The online survey was conducted using EFS Tivian software and data collection took place between May and August 2023. Quota sampling was used to ensure representativeness in terms of gender, age, income and region

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[7] https://fulfill-sufficiency.eu/

in each country. The quotas corresponded to the distribution of the quota characteristics of the target country. Apart from small deviations in terms of regions in Germany and age groups in Denmark, the targets were met and samples are thus largely representative for the adult population.

The questionnaire was structured as follows (Figure 1): It first examined perceptions of two exemplary sufficiency policies in the housing sector (1) a ban on the construction of new single-family homes of standard size or larger, and (2) an annual financial fee for homes with above-average living space. These policy measures were chosen as they have been discussed in the context of sufficiency policies in the housing sector in Europe and because they are assumed to be effective. Studying these perceptions was embedded in an experimental design applying linguistic framing. In addition, a series of post-experiment questions explored, for instance, affectedness and perceptions of the respondents' own situation. Further questions e.g. on socio-demographics completed the questionnaire.

At the start of the survey, respondents answered questions designed to fill the quota. By monitoring the sample composition based on these questions, the samples were kept representative. Therefore, these questions were presented by the market research institute recruiting the participants. Next the participants saw a short introductory text that gave them an overview of the study content, some information on data protection and related issues and asked them to provide valid answers. Then the questionnaire continued with the direct presentation of one of the two policies under investigation. The experimental part consisted of a framing experiment, i.e. the introduction to the two policies was varied in such a way that the aim of the policies was either explained as 'overcoming' unsustainable choices, as 'punishing' them, or no explanation of the specific aim was included (loosely following the approach by (Schnepf et al., 2023)). Participants were randomly assigned to one of the three conditions.

After reading the information about the policy, participants answered questions about their perceptions of the policy. Before

that participants were asked whether they had heard of the policy before the survey, to measure familiarity. This was followed by a series of evaluation questions, all designed as five-point Likert scale questions. First, to obtain information on perceived justice or fairness, respondents were asked how much they agreed with the statement that the policy measure is fair from a societal perspective, on a scale ranging from (1) strongly disagree to (5) strongly agree. Second, to measure perceived affectedness, respondents were asked to indicate whether they think they would be affected by the policy measure personally positively or negatively on a scale ranging from (1) very negatively to (5) very positively. Third, overall policy acceptability was measured by asking respondents whether they supported or opposed this policy measure, with the scale ranging from strongly opposed to strongly supported.

The second policy measure, i.e. the ban or the fee, was then presented in the same way and with the same framing as the first, and the same questions were asked again now for this measure. Thus, all participants evaluated both policies, but the order was randomised. The framing was kept constant for each participant. At the end of the policy questions, participants were asked a question to check whether or not they correctly recall the framing condition from the experiment (manipulation check).

The policy part was followed by a series of questions about the current living situation, energy consumption, satisfaction with the situation, additional demographics such as household composition, etc. To operationalize personal affectedness regarding the ban, respondents were asked for their preferred type of housing (e.g. living in a single-family home) and regarding the fee respondents were asked for their current living space.

Some data cleaning procedures were carried out to ensure data quality. This included excluding participants who were identified as speeders (participation time less than 30% of the mean response time), who did not answer two questions included as an attention check correctly, etc.
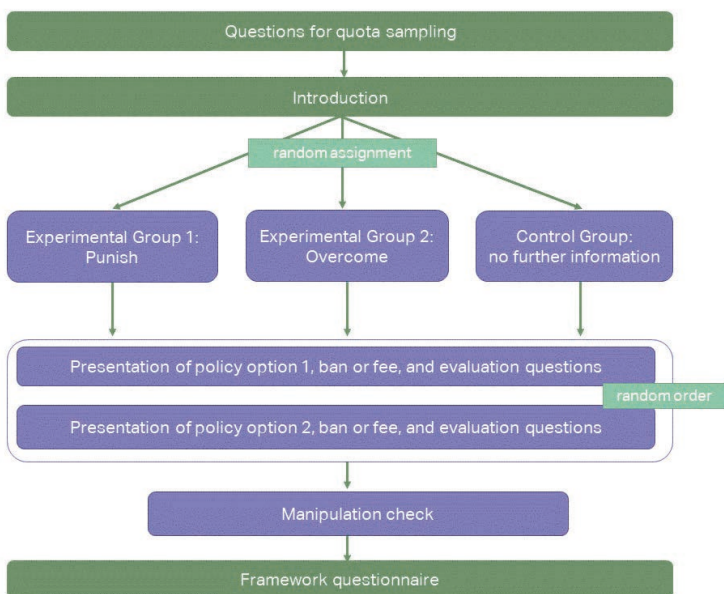
Figure 1 Overview on the questionnaire design

Analytical approach

The questionnaire data was analysed using descriptive statistics, statistical tests for difference such as analysis of variance (ANOVA) and multivariate linear regression models (OLS) including interaction terms. For the analysis of the framing including ANOVA and regression models, a reduced sample size was used (353 respondents in Denmark, 272 in France, 328 in Germany, 297 in Italy and 196 in Latvia), as only respondents from the two framing conditions were analysed who were able to recall the framing (manipulation check).

Hierarchical linear regression analyses (OLS) were conducted for each country separately. As dependent variable we used and index formed across the different evaluation items for the policies[8]. Thus, the dependent variable can be considered to have a metric scale[9]. We applied a hierarchical approach: in a first

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[8] For more information on the variables used, see Table 4 in the Appendix.

[9] For both hard policy measures and all countries, the assumptions for running a linear OLS regression were met.

step of the regression, only the control variables were added to the model, including: (a) socio-demographic variables (e.g. income, employment situation, education), (b) variables related to the relationship with the political system, such as trust in national politicians and whether they feel that people like them have a say in what the government does, (c) variables that have been found to be generally related to pro-environmental behaviour, such political orientation and environmental identity (d) added by problem awareness and familiarity with the political measure. In the next step of the hierarchical regression, the variable for the experimental condition (framing) and a measure for personal affectedness were added. For the ban personal affectedness was operationalized as preferring to live in a single-family home and for the fee whether respondents live in homes with above average living space per person. In the final step of the hierarchical models the interaction term of the framing group and personal affectedness was included. The dependent variable and covariates used in the analysis are described in Table 4 in the Appendix.

Results

In the following, the results will be discussed. First, perceptions of the sufficiency policies for all respondents will be presented. Second, we will assess using ANOVAs whether the framing regarding the aim of the policy measures has an effect on the evaluation of the policy measures. Third, we will present results of multivariate linear regression models to a) examine the effect of the framing on policy evaluations when we control for various variables and b) whether the effect of the framing is dependent on personal affectedness (interaction). In addition, findings regarding other relevant predictors of policy evaluation besides the framing and interaction will be reported.

Perceptions of sufficiency policies

On the basis of the survey, perceptions can be reported on the two sufficiency measures for the housing sector: (1) the ban on
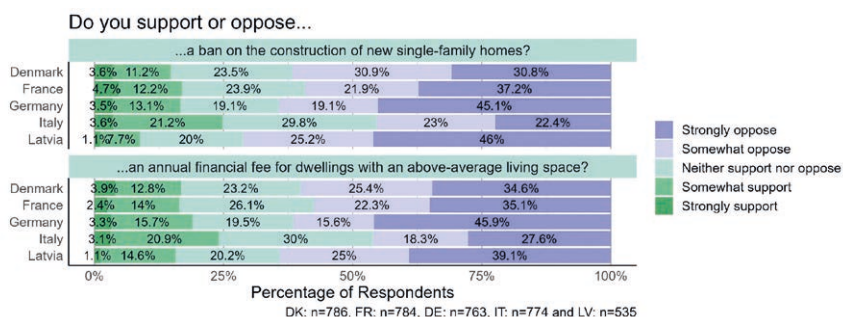
Figure 2 Acceptability of investigated policy measures

the construction of new single-family houses of standard size or larger, and (2) the annual financial fee for dwellings with above--average living space.

Figure 2 shows the frequencies of responses for acceptability. In general, the ban on the construction of new single-family homes (standard size or larger) and the fee for above-average dwellings are rated similarly in all five countries: In all countries except Italy and for both policy measures, more than 50% of respondents indicated that they strongly or somewhat oppose the proposed policy measures. The highest proportion of respondents opposed (including somewhat and strongly opposed) to both policies is found in Latvia (over 60%). In Italy, the proportion of somewhat or strongly opposed respondents is slightly lower than in the other countries, at around 45% for each of the policies. In most countries (Denmark, France and Germany) the proportion of respondents somewhat or strongly in favour of each
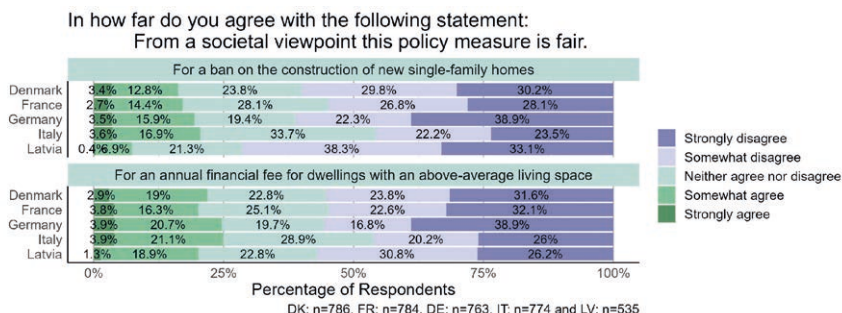

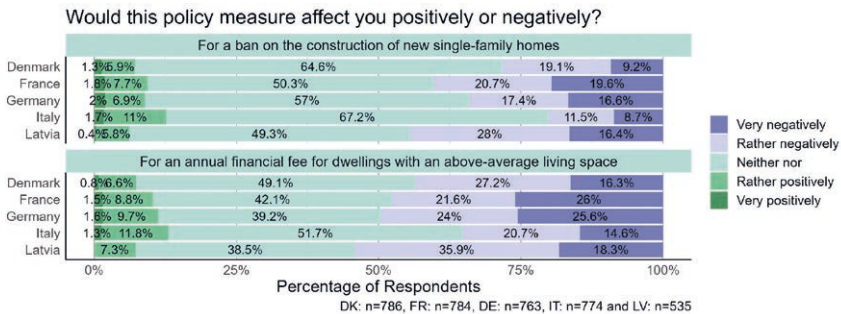**Figure 3** Perceived fairness of investigated policy measures

Figure 4 Perceived affectedness of investigated policy measures

policy measure is between 15% and 20%. In Latvia, the proportion of respondents supporting the ban is lower than in the other countries, while in Italy the proportion of support is higher for both policies (around 25%).

Following Dechezleprêtre et al. (2022) perceived fairness (Figure 3) and impact on the respondents (perceived affectedness, Figure 4) were also examined in addition to acceptability. The overall pattern is similar to the responses to the acceptability question: In all countries except Italy, more than 50% of respondents somewhat or strongly disagree with the statement that the policy measures are fair, while the ban is perceived as slightly less fair than the fee. Latvia has the highest proportion of respondents who somewhat or strongly disagree with both measures, while Germany has the highest proportion of respondents who strongly disagree. Fewer respondents in Italy disagree than in the other countries for both policies. However, even in Italy, the proportion of respondents who perceive both policies as unfair is high at around 45%.

Figure 1Figure 4 **Fehler! Verweisquelle konnte nicht gefunden werden.** shows the distribution of frequencies of the responses in percent for the question whether the policy measure would affect the respondents positively or negatively. In comparison to the evaluation questions presented before, for the perceived affectedness, a large share of respondents indicated the middle category, meaning that they think they will neither be affected negatively nor positively by the measures (ranging from
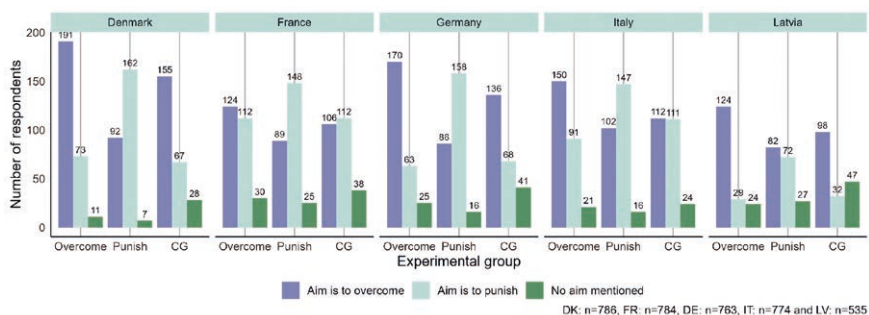
Figure 5 Responses to manipulation check

39% to 67%). Across countries, this share of respondents stating neither nor is larger for the ban than for the fee. For the fee, more respondents think that they will be rather or strongly negatively affected. Overall, the share of respondents stating that they will be positively affected is smaller than the share of respondents indicating to be negatively affected (between 6% and 13% for each hard policy measure). Again, especially negative evaluations regarding the perceived affectedness can be found in Latvia and less negative evaluations in Italy for both measures.

Due to the high similarity of the results between the evaluation questions, we carried out checks to analyse the internal consistency (Cronbach's alpha), which was >.9 for all countries. This points out that people were highly consistent in their rating of the various aspects. Therefore, the different questions were combined into one measure of evaluation for further analysis.

Changes in perception based on different framings: Results of ANOVAs

In order to test whether the framings had an effect on the evaluation of the policy measures, the mean value of the evaluation of the policy measures were compared between the experimental groups.

In a preparatory step, we checked whether the respondents selected the correct answer in the manipulation check. For the manipulation check, respondents were asked for the aim of the policy measures presented to them. The respondents could se-

lect one of the following response options 1) "to overcome un-sustainable housing choices" 2) "to punish unsustainable housing choices" and 3) "no aim was mentioned".

Figure 5 shows one bar graph per country showing the distri-bution of responses to the manipulation check, differentiated by experimental group (experimental group 1: Overcome, experimental group 2: Punish and control group (CG)). In the overcoming condi-tion, the majority of respondents in each country chose the correct answer in the manipulation check, namely that the aim of the policy is to overcome unsustainable housing choices (purple bar). In the punish group, most respondents in all countries except Latvia chose the correct answer ("the aim of the policy is to punish unsustainable housing choices", see light blue bar). In the control condition, the correct answer would have been that no aim was mentioned, but in none of the countries this is the most common answer.

The manipulation check showed that most respondents in the two experimental conditions chose the correct answer, but in the control condition most respondents did not. We therefore decided to include in the following analysis only those respon-dents who correctly identified the experimental condition. As these were few in the control group, this meant that we focused on the two experimental groups (353 respondents in Denmark, 272 in France, 328 in Germany, 297 in Italy and 196 in Latvia).

Table 1 Comparison of means for the evaluation both policy measures, subsample[10]

	Ban			Fee			
	Mean: overcome	Mean: punish	Results ANOVA	Mean: overcome	Mean: punish	Results ANOVA	n
Denmark	2.66	2.33	***(p< 0.01)	2.52	2.28	***(p< 0.01)	353
France	2.71	2.28	***(p< 0.01)	2.57	2.18	***(p< 0.01)	272
Germany	2.56	2.23	***(p< 0.01)	2.61	2.19	***(p< 0.01)	328
Italy	2.88	2.66	*(p < 0.10)	2.83	2.54	**(p< 0.05)[10]	297
Latvia	2.39	2.20	n.s. (p>0.1)	2.44	2.24	n.s. (p>0.1)	196

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[10]   As the variances have been found to not be homogenous, we calculated a Welch ANOVA
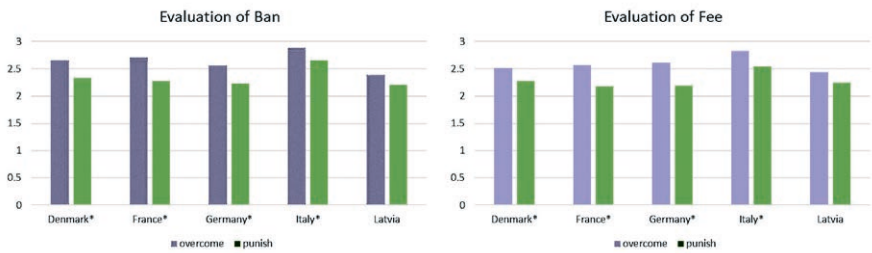
Figure 6 Evaluation of the investigated policy measures by framing, subsample

Effects of the framing are investigated by means of analysis of variance (Table 1 and Figure 6). We find significant differences in line with the framing except for Latvia. As the Latvian sample is smaller, this is possibly due to lack of statistical power as the patterns are similar. However, in Latvia the average change in ratings is also lowest.

Predictors of the evaluation of the policy measures: Results of the linear regressions

In a next step multivariate models (linear regressions) were calculated to (1) further investigate the potential effect of the framing on the evaluation of the policy measures when control variables are included and (2) to test whether the framing had a different effect for respondents that would be more affected by the policy measure. Only respondents from the two experimental conditions were included who were able to correctly recall the framing.

In the following the results for the linear regressions (OLS) are presented (for the final models, containing the control variables, the predictors and the interaction term). In all countries, except for Latvia the models were statistically significant and the variance explained by the model increased compared to a model with only control variables. Results for Latvia are not presented as the model fit is too poor which might be related to the smaller sample size in Latvia. First, findings for the ban for all countries are discussed, followed by the presentation of the results for the fee.

Results for the ban

Table 2 shows the results for the linear regressions (OLS) for all countries (except for Latvia)[11]. In the multivariate models, containing various control variables, no relationship between the framing and evaluation of the ban could be identified. In addition, no statistically significant effects are found for the interaction term included to examine whether the effect of the framing on the evaluation of the ban is dependent on affectedness (here operationalized as preferring to live in a single-family home in the future). Affectedness alone was also not found to be statistically significant. Variables that are statically significantly correlated to evaluation of the ban, ceteris paribus, in at least two countries are: having higher trust in national politicians (for Denmark and Germany), political orientation (support of national policies (-) in Italy, support of social policies (+) in France and Denmark, support of liberal policies (-) in Germany, support of environmental policies (+) in Denmark), finding the provision of sufficient sustainable housing a problem in Denmark and France and familiarity with the ban in Germany and Italy.

Table 2 Results of the linear regression for the evaluation of the ban

	Dependent variable:			
	Evaluation Ban			
	Denmark	France	Germany	Italy
Income per person (in 1T€)	-0.004	-0.006	-0.007	-0.006
	(0.002)	(0.005)	(0.004)	(0.006)
Working	0.019	0.034	0.027	0.108
	(0.103)	(0.149)	(0.145)	(0.142)
Higher education	-0.010	0.075	-0.148	-0.178
	(0.120)	(0.150)	(0.150)	(0.132)
Female (vs. male)	-0.063	0.116	0.051	0.143
	(0.097)	(0.136)	(0.124)	(0.139)
Age	0.0001	-0.004	-0.001	-0.001
	(0.003)	(0.005)	(0.005)	(0.005)

. . . .

[11] Sample sizes are reduced due to missing values in control variables, such as city. The final sample sizes can be found in the regression tables.

City (vs. rural)	0.080	-0.168	0.108	-0.053
	(0.093)	(0.146)	(0.134)	(0.136)
Trust national politicians	0.121**	-0.009	0.227**	0.056
	(0.044)	(0.081)	(0.074)	(0.079)
Say in what government does	0.062	0.114	0.101	0.091
	(0.042)	(0.071)	(0.066)	(0.081)
Support national policies	0.024	-0.051	0.080	-0.201*
	(0.050)	(0.091)	(0.063)	(0.081)
Support social policies	0.054	0.193*	-0.081	0.206*
	(0.056)	(0.089)	(0.073)	(0.098)
Support liberal policies	-0.053	-0.139	-0.124*	-0.073
	(0.054)	(0.088)	(0.061)	(0.077)
Support environmental policies	0.165*	0.029	0.109	0.058
	(0.071)	(0.096)	(0.081)	(0.115)
Support conservative policies	0.025	0.084	-0.016	0.061
	(0.060)	(0.073)	(0.065)	(0.067)
Environmental identity	0.021	-0.087	0.041	0.201*
	(0.056)	(0.086)	(0.077)	(0.100)
Problem awareness sustainable housing	0.338***	0.154*	0.098	-0.014
	(0.055)	(0.073)	(0.056)	(0.067)
Heard of ban	0.228	0.027	0.445**	0.604**
	(0.122)	(0.185)	(0.138)	(0.223)
Framing: Overcome (vs. punish)	0.125	0.370	0.115	0.034
	(0.126)	(0.219)	(0.234)	(0.203)
Preference single-family home	-0.124	-0.089	-0.351	-0.371
	(0.135)	(0.199)	(0.183)	(0.190)
Interaction: Framing: Punish (vs. overcome)*Preference single-family home	0.089	-0.349	0.239	0.289
	(0.179)	(0.272)	(0.276)	(0.269)
Constant	0.329	1.705**	1.560**	2.458***
	(0.422)	(0.522)	(0.558)	(0.646)
Observations	249	190	227	202
Adjusted R2	0.426	0.126	0.227	0.181
Note: Standard errors in parenthesis.	*p <0.05 **p<0.01 ***p<0.001			

Results for the fee

Table 3 presents the results of the linear regression (OLS) regarding the evaluation of the fee on above average living space[12]. In the multivariate model including control variables, the framing has a statistically significant effect in Germany (p <0.05) and Italy (p <0.05), ceteris paribus. For both countries, respondents who were able to recall the framing, evaluated the policy measure more favourably when they were presented with the aim of the policy measure being to overcome unstainable housing choices instead of punishing these choices. The tested interaction effect between the framing condition and being more affected (operationalized as having above average living space) is not statistically significant in either country nor is affectedness alone. Variables that are statistically significantly correlated, ceteris paribus, to a more positive evaluation of the fee in at least two countries are: higher trust in national politicians in Denmark and Germany, feeling like having a say in what the government does in Denmark and Italy, political orientation (support of national polices (+) in Denmark, support of environmental policies (+) in Germany), finding the provision of sufficient sustainable housing a problem in Denmark, France and Germany and having heard of the fee before (+) in all four countries.

Table 3 Results of the linear regression for the evaluation of the fee

	Dependent variable:			
	Evaluation Fee			
	Denmark	France	Germany	Italy
Income per person (in 1T€)	-0.003	-0.009	-0.003	0.0005
	(0.003)	(0.006)	(0.004)	(0.006)
Working	0.023	-0.116	-0.068	-0.007
	(0.109)	(0.157)	(0.139)	(0.152)
Higher education	0.157	0.087	-0.273	-0.230
	(0.128)	(0.158)	(0.147)	(0.139)
Female (vs. male)	0.001	0.128	-0.001	0.187
	(0.102)	(0.146)	(0.120)	(0.144)

....

[12] Sample sizes are reduced due to missing values in control variables, such as "city". The final sample sizes can be found in the regression table.

Age	0.002	0.002	-0.006	-0.001
	(0.004)	(0.005)	(0.004)	(0.005)
City (vs. rural)	0.171	-0.024	0.053	-0.134
	(0.097)	(0.150)	(0.131)	(0.141)
Trust national politicians	0.127**	0.095	0.179*	0.011
	(0.047)	(0.086)	(0.071)	(0.082)
Say in what government does	0.105*	-0.008	0.108	0.173*
	(0.045)	(0.077)	(0.065)	(0.085)
Support national policies	0.173**	-0.139	-0.044	-0.157
	(0.054)	(0.097)	(0.062)	(0.085)
Support social policies	-0.026	0.172	-0.008	0.183
	(0.060)	(0.094)	(0.071)	(0.102)
Support liberal policies	-0.043	-0.084	-0.043	-0.107
	(0.058)	(0.094)	(0.059)	(0.081)
Support environmental policies	0.087	0.045	0.237**	0.052
	(0.076)	(0.102)	(0.080)	(0.121)
Support conservative policies	-0.065	0.052	-0.030	-0.009
	(0.063)	(0.077)	(0.063)	(0.071)
Environmental identity	0.040	-0.006	-0.016	0.064
	(0.060)	(0.090)	(0.075)	(0.106)
Problem awareness sustainable housing	0.379***	0.207**	0.137*	0.039
	(0.058)	(0.078)	(0.055)	(0.069)
Heard of fee	0.344*	0.554*	0.633***	0.441*
	(0.150)	(0.277)	(0.164)	(0.223)
Framing: Overcome (vs. punish)	0.115	0.277	0.357*	0.375*
	(0.122)	(0.180)	(0.152)	(0.177)
Above-average living space	-0.083	0.101	-0.364	-0.125
	(0.152)	(0.196)	(0.186)	(0.208)
Interaction: Framing: Punish (vs. overcome)*Above-average living space	-0.121	-0.301	0.120	-0.240
	(0.195)	(0.279)	(0.241)	(0.285)
Constant	0.038	1.280*	1.167*	2.253***
	(0.434)	(0.542)	(0.521)	(0.646)
Observations	249	190	227	201
Adjusted R2	0.385	0.158	0.353	0.154
Note: Standard errors in parenthesis.	*p <0.05 **p<0.01 ***p<0.001			

When comparing the results for the ban on the construction of new single-family homes and the fee on above average living space, the results have similarities. For instance, for the evaluation of both political measures, trust in national politicians, political orientation, finding the provision of sufficient sustainable housing a problem and familiarity with the measure are statistically significant predictors for policy evaluation in at least two countries, ceteris paribus. For the framing, correlations for only two countries for the fee have been found and the interaction term is not statistically significant in either of the four countries for both measures.

Discussion and conclusion

This paper is positioned within the current debate on sufficiency as an approach to decarbonising Europe within the energy transition. The sufficiency approach is linked to a wider debate on changing the economic system that is deemed unsustainable, but also more simply as a means to achieve climate goals by reducing demand for energy services. This paper locates sufficiency at the lifestyle level as an interplay between individual choices and societal structures. For our empirical study, we take sustainable housing as an example and examine citizens' responses to two policies aimed at reducing per capita living space.

Summary of results

We find that the proportions of respondents who disapprove (45-75%) of both policies are higher than the proportions who approve (9-25%) - while the overall pattern is similar, there are differences between countries. As the evaluation of policy measures is associated in the literature with the perceived fairness and their impact on individuals (or their households), we also report findings on perceived fairness and perceived affectedness. The pattern for fairness is similar to that for acceptability (disapprove/ approve), with the ban being perceived as slightly less fair than the fee. The pattern is slightly different for perceived

affectedness: a larger share indicated that they will be affected neither positively nor negatively (39% - 67%) and more respondents expect to be negatively affected by the fee.

We also tried two different types of embedding the policy instruments by framing them as either to overcome or punish unsustainable choices. Drawing from the results of the analyses of variance conducted, when people recall the framing, i.e. have paid attention to it, this is likely to influence their ratings. However, when examining the effect of the framing in multivariate models (linear regressions) including various control variables, we find this effect of the framing only for the evaluation of the fee in Germany and Italy. For these two cases respondents who are able to recall the framing evaluate the fee on above average living space more positively when the aim of the policy measures is communicated as "overcoming" unsustainable housing choices compared to "punishing" them. Given that only one word was changed for the framing and that several relevant control variables are included, it is interesting that at least in two cases the framing had an effect. Hence, how we communicate about policy measures (e.g. framing the aim more positively or negatively) can potentially have an effect on the evaluation.

Further, we examined whether the effect of the framing is dependent on personal affectedness by the policy measures. Our results suggest that (1) the relationship between the framing and the evaluation of the ban does not differ for individuals who prefer to live in a single-family home and those who do not and (2) that the relationship between the framing and the evaluation of the fee does not differ for individuals who have above average living space and those who do not. In addition, personal affectedness has no direct relationship with the evaluation of the policy measures. These findings can be connected to arguments of responsibility and justice: The potential affectedness (living in a single-family home or having above average living space) is connected to choosing a lifestyle that is, in general, related to higher CO_2 emissions. From a social justice standpoint, it can be argued that the responsibility for reduction of emissions lies within the group

of people accountable for most of the emissions. While some individuals contribute to overconsumption, for instance by living on above average living space, other groups in society might not have enough means to cover their basic needs. Hence, following this argumentation, especially the group responsible for most of the CO_2 emissions should be targeted by sufficiency policies. As citizens' evaluation of policies can have an influence on policymaking (Kyselá et al., 2019), it is important to further understand whether affected individuals evaluate measures more negatively and whether their evaluation can be influenced by framing. We do not find that the preference to live in a single-family home (for the ban) or living on above average living space (for the fee) are related to policy evaluation. Hence, based on our findings these groups of citizens do not oppose these measures more than others[13]. Our findings are contrary to other studies that find a relationship of personal affectedness (e.g. the impact of the policy measure on the respondents' household is related to evaluation of climate change policies (Dechezleprêtre et al., 2022)). Potentially, this could be explained by the measurement of affectedness: while other studies often use perceived affectedness (by asking respondents to rate their affectedness on a scale[14]), for the regression models we operationalized affectedness by using data on current or future living decisions which could objectively be affected by the policy measures (e.g. whether respondents live in above average living space). Further, we do not find that the framing was more or less effective for potentially affected respondents. Therefore, for some cases (for the fee in Germany and Italy) communicating that the aim of the measure is to "overcome" unsustainable housing choices instead of "punishing" these choices can have a positive impact on policy evaluation – and this effect is not dependent on whether respondents are potentially affected by the measures.

....

[13] Evaluations and acceptance of policies are not stable, but can change over time. Hence, public resistance especially by groups more affected could still occur, e.g. if policy measures are more prominent in public discourse.

[14] In this study, we understood respondents' answer to the question "Would this policy measure affect you positively or negatively?" as a form of evaluation of the policy and thus included it in the index operationalizing policy evaluation.

Even though the results of the framing were insignificant in most cases, our findings from the control variables in the models suggest that communication about policy measures could be important. We find that familiarity with the policy measures was positively correlated to policy evaluation in Germany and Italy for the ban and in all countries for the fee.

Overall, we find similar results for the ban and the fee when it comes to all research questions (perceptions of the policy measures, the effect of framing and the interaction between framing and being affected). This also holds true for the statistically significant relationships we find in the regression models for at least two countries: besides familiarity with the measures, trust in national politicians, political orientation, and finding the provision of sufficient sustainable housing a problem are related to the evaluation of both policies (for at least two countries).

In conclusion, our findings suggest that current European societies are still sceptical about a radical shift towards sufficiency with strong political action (compare the overall negative evaluations of the two policy measures investigated), but that communication about the measures could in some cases be a tool to gain more public support for strict sufficiency policies (compare (1) the effect of framing for all countries except Latvia found in the ANOVAs and for Germany and Italy for the fee in the regression models and (2) the relevance of familiarity with the measures). However, the impact of mere linguistic framing should not be overestimated. The two policy measures examined, namely the ban on the construction of new single-family homes and the fee on above average living space, are two stricter measures designed to induce a change in the behaviour of individuals who have, or plan to have, larger living spaces. As larger living space is associated with overconsumption and higher CO_2 emissions, targeting these individuals can be considered to be just. At this stage and using the operationalization we chose for affectedness, the personally affected individuals do not seem to be particularly opposed to the policy measures and the framing does not seem to be less effective for them.

Funding

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Appendix

The following table presents the covariates that were used in the regression models.

Table 4 Overview of dependent variable and covariates

	Variable	Description or question asked to respondents	Coding
	Dependent variable		
Evaluation of the policy	*(a) Evaluation of the ban and (b) Evaluation of the fee*	Based on the following items measuring the evaluation of the (a) ban or (b) fee an index was created by adding up all values for the seven evaluation items and dividing them by the sum of the items. All items were measured on a five-point Likert scale ranging from 1: Strongly oppose/ Very negatively/ Strongly disagree to 5: Strongly support/ Very positively/ Strongly agree (1) Do you support or oppose this policy measure? (2) Would this policy measure affect you positively or negatively? (3) In how far do you agree with the following statement: "From a societal viewpoint this policy measure is fair"? Do you think the policy is effective in regard to the following aspects: The policy is effective in … (4) … reducing the CO_2- footprint. The CO_2 footprint indicates how many CO_2 emissions are emitted by a specific lifestyle and the associated activities. (5) … reducing housing shortages. (6) … ensuring housing is more affordable. (7) … improving well-being for the society.	Index ranging from 1 (negative overall evaluation) to 5 (positive overall evaluation)

[2]   That is, a value of 1 to the household head, of 0.5 to each additional adult member and of 0.3 to each child (cf. https://www.oecd.org/els/soc/OECD-Note-EquivalenceScales.pdf).

Covariates			
Sociodemographic characteristics	*Income per person (in 1T€)*	Net annual income of respondents household divided by household size using OECD weights[2]	In 1000€
	Working	*Which of the following categories describes your cur-rent situation best?*	1: Full-time employed/ Part-time employed/ Self-employed 0: In training/ education/ House wife / house husband/ Looking for work / currently unemployed/ retired/ Other/ Prefer not to answer
	Higher education	*What is the highest level of education that you have completed?*	1: Vocational/ technical training or education or Academic degree (Bachelor and Master degree or PhD) 0: No school completed/ Primary education/ Secondary education (college, high school, middle school)
	Female (vs. male)		1: Female 0: Male
	Age		Metric, between 1 and 92
	City (vs. rural)	Degree of urbanisation of the region the respondent lives in[3]	1: Cities 0: Towns and suburban/ rural
Attitudes towards political system	*Trust national politicians*	*In how far do you trust the following groups and institutions in [country of respondent]? National politicians (members of parliament, ministers etc.)*	1: fully distrust 2: tend not to trust 3: undecided 4: tend to trust 5: fully trust
	Say in what government does	*From your point of view: In general, to what extent does the political system in [country of respondent] give people like you a say in what the government does?*	1: not at all 2: a little 3: a moderate amount 4: a large amount 5: an extreme amount

[3] The urbanization is determined using the postcode, postcode to NUTS tables (https://gisco-services.ec.europa.eu/tercet/flat-files) and urbanisation data from Eurostat (https://gisco-services.ec.europa.eu/tercet/Various/PC_DGURBA_2018.zip).

Political orientation	Support national policies	*I identify with nationally oriented policies.*	1: Strongly disagree 2: Disagree 3: Neither disagree nor agree 4: Agree 5: Strongly agree
	Support social policies	*I identify with socially oriented policies.*	1: Strongly disagree 2: Disagree 3: Neither disagree nor agree 4: Agree 5: Strongly agree
	Support conservative policies	*I identify with conservative oriented policies.*	1: Strongly disagree 2: Disagree 3: Neither disagree nor agree 4: Agree 5: Strongly agree
	Support liberal policies	*I identify with liberally oriented policies.*	1: Strongly disagree 2: Disagree 3: Neither disagree nor agree 4: Agree 5: Strongly agree
	Support environmental policies	*I identify with environmentally oriented policies.*	1: Strongly disagree 2: Disagree 3: Neither disagree nor agree 4: Agree 5: Strongly agree
Environmental identity		An index was created based on the following two items. Respondents were asked to indicate in how far they agree with the statements on a five-point Likert scale ranging from 1: Strongly disagree to 5: Strongly agree. For the index the sum of the two items was divided by 2 and subsequently the index was z-standardised. *I think of myself as an environmentally-friendly consumer.* *I think of myself as someone who is very concerned with environmental issues*	Index ranging from -3.03 to 1.80

Problem aware-ness sustaiable housing	*Problem awareness sustainable housing*	*In how far do you think that the provision of sufficient sustainable housing is a serious problem?*	1: no serious problem at all 2: rather not a serious problem 3: undecided 4: rather a serious problem 5: a very serious problem
Familiarity with the policy measures	*Heard of ban/ fee*	*Have you heard about this policy measure before this survey?*	1: yes, but I didn't really know what it is / yes, and I know what it is] 0: No, I have never heard of it
Framing experiment	*Framing: Overcome (vs. punish)*	Overcome condition: *The aim of this policy is to overcome unsustainable housing choices.* Punish condition: *The aim of this policy is to punish unsustainable housing choices.*	1: the respondent saw the overcome condition 0: the respondents saw the punish condition
Personal affectedness by the policy measure	*Preference single-family home*	*Regardless of whether you currently live in that type or not: What type of housing do you like most?*	1: A detached house (free-standing with 1-2 dwellings) 0: A terraced house (1-2 dwellings as double house, row house, or other)/ A multi-family house (3-12 dwellings)/ An apartment block (13 or more dwellings)/ Other
	Living space	Based on the answers of the following question a dummy variable was created. First, the household size was divided by the number of household members. In a next step, the means of the living space per country were calculated to obtain the average living space in our sample for each country. *What size is the living space of your dwelling in 2022 in m²? Please, estimate if you are not sure.*	1: Having above average living space per person 0: Having an average or smaller living space.

To achieve just green transition for different socially positioned communities, to enable people to make decisions about the conditions of their own lives, namely to make communication and decision-making processes more democratic and not to leave important decisions in the hands of the few, the green transition debates need to be broadened and shifted from techno-managerial solutions and the established public-private partnerships to community practices that go beyond statist frameworks and private interests.

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