Decarbonization is indispensable to tackling climate change.1 To this end, numerous pathways are under discussion with the aim of achieving the goal of ‘net zero emissions’ by 2050 and keep planetary warming well below 2°C.2 International politics and International Relations (IR) have accordingly focused on the different dynamics of how state and non-state actors have cooperated and ought to cooperate in order to define and reach climate targets. Based on the principle of common but differentiated responsibility, climate justice has become a key reference in global climate governance negotiations under the umbrella of the UN Framework Convention on Climate Change (UNFCCC) in recent years.3 Yet, as climate change constitutes a ‘perfect moral storm’,4 causing an ‘unusual convergence of independently harmful factors’,5 in which the causes, human agency and institutional capacity to react remain fundamentally contested, we believe it is vital to engage with the contested meaning-in-use of climate justice and diverse ways of knowing in addressing the issue.6 In contrast to ideal theoretical understandings of climate...
justice, approaching the meaning-in-use acknowledges not only the inherently contested nature of climate-related norms, but also that their meanings ‘evolve through interaction in context’. This requires an understanding of the different contexts of global climate governance in which exclusionary practices unfold, such as over-reliance on academic and institutional knowledge and the reproduction of existing orders of knowledge. Scholars have highlighted the relationship between climate policies and practices of distorting, marginalizing or disregarding the ways of knowing and experiences of those most affected by climate change. Thus, our contribution addresses the broader question of this special issue by focusing on the coloniality of knowledge at the nexus of academic knowledge production and policy formation, and proposing a decolonial approach that takes account of diverse ways of knowing about climate justice. Focusing on the meaning of climate justice is particularly revealing for three main reasons. First, the literature on climate justice and global climate governance still offers no more than a mere snapshot of important contexts to be considered, such as the development of ways of participating in existing climate regimes. This is of central significance, as climate change is a ‘collective action problem’, in which disregarded actors continue to depend on the efforts of major greenhouse gas emitters and states as dominant actors to coordinate measures for decarbonization. We share the central concern about equity in decision-making for people who have been historically the least responsible for climate change and yet continue to bear the biggest burden of the consequences. Hence, it is central for tackling climate change to ask who has access to negotiations and how participation is organized. Questions of justice become most visible in struggles over the distribution of resources and burden-sharing as well as in contention about who can participate in the creation of the rules of engagement in climate governance. We argue that in order to analyse climate justice, more light has to be shed on the normative, epistemological and ontological assumptions guiding the ways in which decision-making processes predominantly unfold in international politics. We argue that focusing on the dominant notions of climate justice, whose principles are often based on ideal theories in which the Westphalian state constitutes the central actor, tends to reproduce colonial structures, neglecting

7 Antje Wiener, ‘Contested meanings of norms: a research framework’, Comparative European Politics 5: 1, 2007, p. 6. On ‘meaning-in-use’, see also Jutta Welde and Diana Saco, ‘Making state action possible: the United States and the discursive construction of “the Cuban problem”, 1960–1994’, Millennium 25: 2, 1996, pp. 361–95; Jennifer Milliken, ‘The study of discourse in International Relations: a critique of research and methods’, European Journal of International Relations 5: 2, 1999, pp. 225–54; Antje Wiener, ‘Enacting meaning-in-use: qualitative research on norms and international relations’, Review of International Studies 35: 1, 2009, pp. 175–93.
8 Brunnée and Toope, Legitimacy and legality in international law, pp. 126–7.
9 Jason Rudall, ‘The obligation to cooperate in the fight against climate change’, International Community Law Review 23: 2–3, 2021, pp. 184–96.
10 Helga Hafldadottir and Anthony F. Lang, ‘Responsibility and climate change: reframing norms, practices, and community’, in Antje Vetterlein and Hannes Hansen-Magnusson, eds, The rise of responsibility in world politics (Cambridge: Cambridge University Press, 2020), pp. 145–64; Carole-Anne Sénit and Frank Biermann, ‘In whose name are you speaking? The marginalization of the poor in global civil society’, Global Policy (OnlineFirst, doi: 10.1111/1758-5899.12997), 2021, pp. 1–11.
11 Robert Falkner, ‘The Paris Agreement and the new logic of international climate politics’, International Affairs 92: 5, 2016, pp. 1107–25. On the idea of negotiations outside the UNFCCC, see Robert Falkner, Naghmeh Nasirirousi and Gunilla Retsch, ‘Climate clubs: politically feasible and desirable?’, Climate Policy (OnlineFirst, doi:10.1080/14693062.2021.1967717), 2021, pp. 1–8.
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the lived experiences of people already affected by climate change. In this regard, Aníbal Quijano has highlighted that ‘the modes of knowing, of producing knowledge, of producing perspectives, images and systems of images’ constitute a crucial site of contention and a key dimension of coloniality. In light of current struggles in global climate governance, this underlines the necessity to analyse whose knowledge, concepts and ways of knowing are recognized. Although climate justice is a ubiquitous term in global climate governance today, its emergence is the result of efforts by Indigenous People, Black People, People of Colour, and environmental movements, who have been central in identifying climate change as a global issue and calling for a just distribution of burdens to mitigate and adapt to the consequences.

Second, affected people, Rights-Holders and policy-makers rely significantly on the production, preservation and transmission of knowledge to identify the impacts and causes of climate change, and potential solutions. However, inherited colonial mindsets and (neo-)colonial practices still prevail in the academic interdisciplinary field of climate research, and in global climate governance design and decision-making. This leads, on the one hand, to the replication of the coloniality of research practices in academia and in the ways of disseminating research to policy-makers, states and non-state actors; and, on the other hand, to knowledge hierarchies shaping the consultation processes in global climate governance, the discourses on climate change and the choice of climate policies, often neglecting the diverse ways of knowing of those most affected by climate change. These dynamics alone constitute an injustice in a changing climate. The example of the Intergovernmental Panel on Climate Change illustrates well the interface between knowledge and policy-making; here there are contestations around the need for

12 Aníbal Quijano, ‘Coloniality and modernity/rationality’, Cultural Studies 21: 2–3, 2007, p. 169.
13 Douglas Nakashima, Igor Krupnik and Jennifer T. Rubis, eds, Indigenous knowledge for climate change assessment and adaptation (Cambridge and Paris: Cambridge University Press and UNESCO, 2018); Christopher Rootes and Eugene Nullman, ‘The impacts of environmental movements’, in Donatella Della Porta and Mario Diani, eds, The Oxford handbook of social movements (Oxford: Oxford University Press, 2015); Robert D. Bullard, Confronting environmental racism: voices from the grassroots (Boston, MA: South End Press, 1993).
14 The term ‘affected people’ designates those who consider themselves affected and/or concerned by climate change and issues relating to it (e.g. (neo-)colonization, social injustice, climate justice, energy justice, climate governance). Our fieldwork taught us that the Inuit Circumpolar Council, for instance, disapproves of the terminology ‘stakeholders’ and ‘local communities’, and prefers to see Inuits referred to as ‘Rights-Holders’, ‘Indigenous Rights-Holders’ and ‘Knowledge-Holders’: see Eilís Quinn, ‘Inuit org says term “local communities” undermines Indigenous rights on international stage’, Eye on the Arctic, 27 Oct. 2020, https://www.rcinet.ca/eye-on-the-arctic/2020/10/27/inuit-org-says-term-local-communities-undermines-Indigenous-rights-on-international-stage/. In the case of non-Indigenous People of the Arctic (who do not qualify under the UN Declaration on the Rights of Indigenous People), a range of expressions are used and debated. For a discussion of the terms, see Quinn, ‘Inuit org’. As well as referring to the term ‘Rights-Holders’, we decided to insert the term ‘affected people’ to refer to people who are affected by climate change in a diverse range of ways. This too is a contested expression, because it might be understood through the lens of ‘vulnerability’, whereas many people affected by climate change are strongly resilient. For a discussion of the term, see also Wiener, Contestation and constitution of norms, p. 9.
15 Dominique M. David-Chavez and Michael C. Gavin, ‘A global assessment of Indigenous community engagement in climate research’, Environmental Research Letters 13: 12, 2018, pp. 1–17.
16 Emilie Zentner, Maik Kecinski, Angeline Letourneau and Debra Davidson, ‘Ignoring Indigenous Peoples: climate change, oil development, and Indigenous rights clash in the Arctic National Wildlife Refuge’, Climatic Change 155: 4, 2019, pp. 533–44.
17 Candice Howarth, David Viner, Suraje Dessai, Christopher Rapley and Aled Jones, ‘Enhancing the contribution and role of practitioner knowledge in the Intergovernmental Panel on Climate Change (IPCC) Working
diverse ways of knowing to inform, co-design and co-produce science,\(^\text{18}\) concerning not solely adaptation, but interdisciplinary matters such as technical issues of climate change observation.\(^\text{19}\) Hence, knowledge and knowledge production constitute a particular driver in climate governance, interconnecting dynamics of climate governance, policy and academic knowledge production in various ways.

Thus, third, we argue that a decolonial approach to climate governance is of central importance if IR scholars and climate policy-makers are to achieve and implement the normative changes required to work towards just climate futures. A central process to achieve this is deep decarbonization,\(^\text{20}\) a term that ‘describes the transition to net-zero carbon emissions, which entails very low carbon intensity in all sectors of the economy and a reduction in energy demand and demand for carbon-intensive consumer goods’.\(^\text{21}\) Yet, as this ‘implies … radical social transformation’,\(^\text{22}\) research on global climate governance must account for how knowledge and knowledge production shape the norms, practices and policies that constitute this process. Indeed, ‘decolonization is not a metaphor’,\(^\text{23}\) and requires critical engagement with the processes and patterns of knowledge production.\(^\text{24}\) Researchers from the Arctic and the Mediterranean have indeed long called for meaningful co-production of knowledge. In conservation biology, Victoria Qutuuq Buschman stresses that ‘the degree of Indigenous participation is nearly always determined by the management authority based on national laws, policies, and agency histories—Indigenous Peoples are rarely invited to specify the terms of engagement in management and conservation efforts’.\(^\text{25}\) This article investigates how to develop a decolonial approach to researching the meaning-in-use of climate justice in the Arctic and the Mediterranean. Instead of starting with\(^ a priori \) definitions of climate justice, this article draws on eight explorative qualitative semi-structured interviews conducted in 2019 with Rights-Holders, activists, scholars and practitioners.\(^\text{26}\) Furthermore, it proposes a practice-based research framework grounded in accidental ethnography\(^\text{27}\) and observation notes from three confer-

\(^\text{18}\) Kripa Jagannathan, James C. Arnott, Carina Wyborn, Nicole Klenk, Katharine J. Mach, Richard H. Moss, K. Dana Stjostrom, ‘Great expectations? Reconciling the aspiration, outcome, and possibility of co-production’, \textit{Current Opinion in Environmental Sustainability} 42: 1, 2020, pp. 22–9; Nicole Latulippe and Nicole Klenk, ‘Making room and moving over: knowledge co-production, Indigenous knowledge sovereignty and the politics of global environmental change decision-making’, \textit{Current Opinion in Environmental Sustainability} 42: 1, 2020, pp. 7–14.

\(^\text{19}\) Thomas Hickmann, ‘Science–policy interaction in international environmental politics: an analysis of the ozone regime and the climate regime’, \textit{Environmental Economics and Policy Studies} 16: 1, 2013, pp. 21–44.

\(^\text{20}\) Chris Bataille, Henri Waisman, Michel Colombier, Laura Segafredo and Jim Williams, ‘The Deep Decarbonization Pathways Project (DDPP): insights and emerging issues’, \textit{Climate Policy} 16: sup. 1, 2016, pp. S1–S6.

\(^\text{21}\) Detlef Stammer, Anita Engels, Jochem Marotzke, Eduardo Gresse, Christopher Hedemann and Jan Petzold, \textit{eds}, \textit{Hamburg climate futures outlook: assessing the plausibility of deep decarbonization by 2050} (Hamburg: Cluster of Excellence Climate, Climatic Change, and Society, 2021), p. 25.

\(^\text{22}\) Stammer et al., \textit{Hamburg climate futures outlook}, p. 25.

\(^\text{23}\) Eve Tuck and K. Wayne Yang, ‘Decolonization is not a metaphor’, \textit{Decolonization: Indigeneity, Education and Society} 1: 1, 2012, pp. 1–40.

\(^\text{24}\) Linda Tuhiwai Smith, \textit{Decolonizing methodologies: research and Indigenous peoples} (London and New York: Zed, 1999), p. xii.

\(^\text{25}\) Victoria Buschman, \textit{Arctic Wetlands and Indigenous Peoples Study (AWIPS): an assessment of Indigenous engagement in wetland protected areas} (Akureyri: Conservation of Arctic Flora and Fauna, 2019), p. 21.

\(^\text{26}\) We thank all interviewees, who wish to remain anonymous, for their time and contributions.

\(^\text{27}\) The term “accidental” refers to the unplanned way […] moments [during fieldwork] arise. With procedure-
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ences that brought together Rights-Holders, practitioners, policy-makers, NGOs and researchers around issues related to climate governance relevant to the Arctic and the Mediterranean.

The globalized setting of (interdisciplinary) climate research as the usual framework influences the design of research grants, proposals, projects and topics. It externalizes the view and understanding of areas, and draws its workforce (researchers) from outside the locations where the research takes place. Against that background, this article elaborates on self-reflection by two researchers from outside the Arctic and the Mediterranean, whose research task is to work within both regions, as part of a research project already designed prior to their employment. The operationalization of research as a global enterprise creates issues on different scales of governance. In the Mediterranean basin, it emphasizes the gaps between the ‘colonizing epistemologies’ of European researchers and those of local researchers. In the Arctic, there are hurdles to Knowledge-Holders gaining access to the technology and financial means necessary to support their own research projects, relevant to their local needs. When they rely on partnerships with global researchers, those are too often still imbalanced, which reinforces (neo-)colonial biases in the research process.

In this context, we learn from what we describe as sensitive regions by diving into sites where the meaning-in-use of climate justice is contested. We use the term sensitive regions as in both contexts of the Arctic and the Mediterranean people are affected by a faster ‘warming … than the global average’, there are conflicts of interest around reserves of non-explored fossil fuels, and significant differences are apparent in the impacts of rapid climate driven methods, such as interviews, the researcher plans ahead whom she will talk to, what questions she will ask, and what prompts she will use. With accidental ethnography, moments of insight arise by happenstance or chance. The researcher cannot control their content or timing; she can only learn to observe and record her observations in more systematic fashion. […] The importance of such observations lies not in what they tell us about the particular, but what they suggest about the larger political and social world in which they (and the researcher) are embedded’: Lee Ann Fujii, ‘Five stories of accidental ethnography: turning unplanned moments in the field into data’, Qualitative Research 15: 4, 2014, pp. 526–7.

28 Naja Dyrendom Graugaard, ‘Arctic auto-ethnography: unsettling colonial research relations’, in Anne Merrill Hansen and Carina Ren, eds, Collaborative research methods in the Arctic: experiences from Greenland (Abingdon: Routledge, 2020), p. 48.

29 Anaheed Al-Hardan, ‘Decolonizing research on Palestinians: towards critical epistemologies and research practices’, Qualitative Inquiry 20: 1, 2014, pp. 61–71.

30 Ulunnguaq Markussen, ‘Towards an Arctic awakening: neocolonialism, sustainable development, emancipatory research, collective action, and Arctic regional policymaking’, in Kiriş Latola and Hannele Savela, eds, The interconnected Arctic: UArctic Congress 2016 (Cham: Springer Polar Sciences, 2017); Allison Agsten, Reforming the Arctic narrative (Cambridge, MA: Belfer Center for Science and International Affairs, Harvard Kennedy School, 2021).

31 Johanna Yletyinen, ‘Arctic climate resilience’, Nature Climate Change, vol. 9, 2019, p. 805; Jürgen Bader, ‘The origin of regional Arctic warming’, Nature, vol. 509, 2014, pp. 167–8; Piero Lionello and Luca Scarascia, ‘The relation between climate change in the Mediterranean region and global warming’, Regional Environmental Change 18: 5, 2018, p. 1485; Philippe Drobinski, Nicolas da Silva, Sophie Bastin, Sylvain Mailler, Caroline Muller, Bodo Ahrens, Ole B. Christensen and Piero Lionello, ‘How warmer and drier will the Mediterranean region be at the end of the twenty-first century?’, Regional Environmental Change 20: 3, 2020, pp. 1–12.

32 Cécile Pelaudeix, ‘Governance of offshore hydrocarbon activities in the Arctic and energy policies: a comparative approach between Norway, Canada and Greenland/Denmark’, in Cécile Pelaudeix and Ellen Margrethe Basse, eds, Governance of Arctic offshore oil and gas (Abingdon and New York: Routledge, 2017); Solbet Karbuz, ‘Geoeconomic importance of east Mediterranean gas resources’, in André B. Dorsman, Volkan Ş. Ediger and Mehmet Bahar Kahan, eds, Energy economy, finance and geostrategy (Cham: Springer, 2018), pp. 238–9.
change compared to other places. While comparative perspectives on both regions exist, few climate change-related qualitative empirical studies have considered the two areas together. Our analysis also differs by contributing to the climate governance and climate justice literature. Both sensitive regions reveal four main dimensions of global climate governance which deserve more scholarly attention: first, we shift the focus towards climate, energy and environmental policies which are rooted in a non-western environment; second, these resource-rich regions are highly affected by climate change, which turns the problem into a matter of political survival; third, contesting climate norms sheds light on distinct rules of engagement that are part of the respective local normative/political opportunity structure; and fourth, following the rationale of contestation theory these contestations are effective beyond local sites and may generate shifts in the global normative structures of meaning-in-use. This, however, depends on the access of actors to different scales of global climate governance. To this end, this article underlines the necessity to engage critically with sensitive regions in global climate governance, avoiding regional exceptionalism.

It is vital to highlight that diverse ways of knowing is not a concept that creates artificial binaries and clear-cut demarcations of multiple epistemologies. It calls for researchers to acknowledge diverse knowledge systems and ways of knowing and experiencing climate change in specific contexts, and to act reciprocally in projects co-producing ways of knowing. Thus a practice-based approach is not only a moral prerequisite, but also a precondition for the analysis and understanding of the normative changes required to move towards decarbonization on the different scales of global governance. Following critical norms research in IR, we believe that the constitution, contestation and implementation of norms hinge largely on the practices of a multiplicity of societal agents. In the context of climate change, postcolonial scholarship reminds us that these entry points are already shaped through colonial trajectories and imperial practices of environmental depletion.

33 Sonia I. Seneviratne, Joeri Rogelj, Roland Séférian, Richard Wartemberger, Myles R. Allen, Michelle Cain, Richard J. Millar, Kristie L. Ebi, Ove Høegh-Guldberg, Anthony J. Payne, Carl-Friedrich Schleussner, Petra Taschler and Rachel F. Warren, ‘The many possible climates from the Paris Agreement’s aim of 1.5°C warming’, Nature, vol. 558, 2018, pp. 41–9; IPCC, IPCC special report on the ocean and cryosphere in a changing climate, 2019, https://www.ipcc.ch/srocc/; Arctic Monitoring and Assessment Programme, Arctic climate change update 2021: key trends and impacts—summary for policymakers (Tromsø, 2021).
34 K. Stephen, ‘Comparing the Arctic and the Mediterranean’, High North News, 2018.
35 Silvia Gómez Mestres and Marianne L. Lien, ‘Recovering food commons in postindustrial Europe: cooperation networks in organic food provisioning in Catalonia and Norway’, Journal of Agricultural and Environmental Ethics, vol. 30, 2017, pp. 625–43; Philip E. Steinberg, ‘Mediterranean metaphors: travel, translation and oceanic imaginaries in the “new Mediterranean” of the Arctic Ocean, the Gulf of Mexico and the Caribbean’, in Jon Anderson and Kimberley Peters, eds, Water worlds: human geographies of the ocean (London: Routledge, 2017), pp. 33–4.
36 Terry V. Callaghan, Olga Kulikova, Lidia Rakhmanova, Elmer Topp-Jorgensen, Niklas Labba, Lars-Anders Kuhmanen, Sergey Kirpotin, Olga Shaduyko, Henry Burgess, Arja Rautio, Ruth S. Hindshaw, Leonid L. Golubyatnikov, Gareth J. Marshall, Andrey Lobanov, Andrei Soromotin, Alexander Sokolov, Natalia Sokolova, Praskovia Filant and Margareta Johansson, ‘Improving dialogue among researchers, local and Indigenous peoples and decision-makers to address issues of climate change in the North’, Ambio 49: 6, 2020, p. 1173.
37 Wiener, Contestation and constitution of norms.
38 On Barak, Powering empire: how coal made the Middle East and sparked global carbonization (Oakland, CA: University of California Press, 2020).
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We argue that to address the ‘big picture’ of climate change, research needs to zoom in on specific sites of contestation. To outline in detail our research framework, informed by these briefly outlined premises, this article will proceed as follows. First, we will discuss how diverse ways of knowing are related to global climate governance, norm contestation and climate justice. Second, we outline our decolonial practice-based research framework, which addresses the coloniality of knowledge production in research co-production. Third, we discuss how our approach can inform not only the co-production of research in climate governance, but also current debates on climate justice.

Global climate governance, diverse ways of knowing and climate justice

In this section we focus on recent developments in global climate governance, highlighting why taking account of diverse ways of knowing is a crucial move in developing a decolonial approach. The literature on global climate governance structures has identified a diversity of contexts, dynamics and practices of climate governance within and beyond the UNFCCC framework. The Paris Agreement, reached at the 21st Conference of the Parties to the UNFCCC (COP-21) in 2015, constituted a change in climate governance. It established a ‘bottom-up’ approach to governance in which ‘developed and developing countries are invited to submit mitigation actions (“Intended Nationally Determined Contributions”, INDCs) that are to strengthen over time’. It seemed to have introduced a major shift with regard to governance structures that had been dominant for decades. More importantly, it created hope of moving towards more just mechanisms. Optimism about bottom-up dynamics thrived with changes in the climate regime aiming ‘to bring cities and sub-national governments, businesses, and other nonstate actors into its very core’. The 2019 ‘transition COP’ in Madrid indicated not only that the currently dominant climate global governance structures are able to achieve only poor results, but also that they fail to address ‘structural injustices … including water scarcity due to resource privatization and climate change, environmental impacts of extractivism, and the failure to protect indigenous people’s rights and the safety of environmental activists’. Existing climate regimes have tried to address the question of justice and agency over recent decades by including more actors representing different forms of knowledge. Visible examples are the growing numbers of state and non-state actors involved in the

39 Miriam Prys-Hansen, ‘Differentiation as affirmative action: transforming or reinforcing structural inequality at the UNFCCC?’, Global Society 34: 3, 2020, pp. 353–69.
40 Stefan C. Aykut, ‘Taking a wider view on climate governance: moving beyond the “iceberg”, the “elephant”, and the “forest”’, Wiley Interdisciplinary Reviews: Climate Change 7: 3, 2016, p. 324.
41 Falkner, ‘The Paris Agreement and the new logic of international climate politics’, p. 1107.
42 Julia Dehn, ‘Carbon colonialism or climate justice? Interrogating the international climate regime from a TWAIL perspective’, Windsor Yearbook of Access to Justice 33: 3, 2016, pp. 129–61.
43 Thomas Hale, ‘“All hands on deck”: the Paris Agreement and nonstate climate action’, Global Environmental Politics 16: 3, 2016, p. 13.
44 Stefan C. Aykut, Emilie d’Amico, Jan Klenke and Felix Schenuit, The accountant, the admonisher and the animator: global climate governance in transition—report from the COP25 climate summit in Madrid, Center for Sustainable Society Research working paper no. 1 (Hamburg, Feb. 2020), pp. 1–2.
COP.45 One might therefore assume that justice is achieved through the inclusion of a continuously broadening set of actors in climate governance negotiations. However, Shawoo and Thornton decry the use of the Local Communities and Indigenous Peoples’ Platform (LCIPP) as a façade to disguise a non-existent or distorted approach to including diverse ways of knowing at the UNFCCC.46 In its official statement ‘Cultural Rights and Climate Change’, the Inuit Circumpolar Council (ICC) highlights these patterns of inner exclusion:

A significant and ongoing challenge to our full and effective participation in climate policy and action is the consistent grouping of Indigenous Peoples and ‘local communities’, whose definition remains unclear, within UN Agencies and numerous other international bodies. For example, this grouping occurs under the UNFCCC with the Local Communities and Indigenous Peoples Platform (LCIPP) and under the CBD [Convention on Biodiversity] who recognizes ‘Indigenous Peoples and Local Communities’ (IPLCs). This grouping perpetuates a false equivalency between Indigenous Peoples and ‘local communities’ and threatens the distinct individual and collective human rights of Indigenous Peoples.47

In a context of almost simultaneous politicization and depoliticization of knowledge in UNFCCC processes,48 knowledge and ways of knowing seem to emerge as a site of contestation,49 in which communities, activists, NGOs and scholars all try to get their voices across in policy-making. The much-debated notion of ‘best available science’, cited four times in the Paris Agreement,50 is a point of discord. Not only does it suggest ‘policy-led’ science instead of ‘science-led’ climate governance,51 it also furthers inequalities and imbalances in the promotion of some forms and ways of knowing over others. The advertised uniform standardization of knowledge into a universal transferable expertise called ‘best available science’ disregards the very political nature of the context in which ways of knowing emerge.52 Although climate justice is by now a concept and term used and evoked in various settings around the globe, the dominant interpretations of its meaning-in-use have developed in the western academy.53
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Against this background, colonial practices are highlighted by the contestations of the ‘climate justice’ concept. Results from eight interviews and a study of published material by activists show that climate justice is a polemical concept. Its definition is precise and consistent, when understood through the lens of racial justice, self-determination and equity, but seems unfamiliar or shows various meanings based on personal beliefs otherwise. Societal agency is involved in a contentious politics of knowledge in promoting ‘equity’, ‘fairness’, ‘sustainability’, ‘self-determination’, ‘justice’ and other norms. For many affected people, especially in sensitive regions, the lack of recognition confirmed that climate governance neither lives up to the officially stated expectations, nor addresses their concerns and ways of knowing and living. While dominant diplomacy-oriented discourses regard the Paris Agreement in 2015 as a success of cooperation, many affected people consider COP-21 a ‘tragedy’, as it reproduced existing orders. This, prima facie, is ‘merely’ a problem of structural inequalities, and access to and power at the negotiation table. However, it is indicative of a profound problem in global climate governance, which upholds the Eurocentric imagination of a human–nature dichotomy. In the words of the late postcolonial scholar L. H. M. Ling, it is as if ‘Multiple Worlds neither existed or mattered’, for diverse ways of knowing are either ignored or dismissed. With this in mind, many scholars have called for serious account to be taken of diverse ways of knowing, and different understandings of nature and human–nature relations, in order to question dominant notions of environmental governance. Ignoring the diverse ways of knowing means shutting ourselves off from the global state of knowledge on climate change. In sum, we identify three key colonial practices of knowledge production in global climate governance, which in turn create and perpetuate climate injustices: (1) coloniality of knowledge hierarchies with the climatization of issue areas; (2) colonization of time in policy-making through the dominant concepts of climate history(ies) and climate future(s); and (3) coloniality of solutions in adaptation, mitigation and technical fixes in the liberal order.

Coloniality of knowledge hierarchies: climatization of issue areas

The multiplicity of epistemologies and ontologies about nature, climate, temporality and space exist in diverse ways of knowing. The concepts of climate change and climate justice are thereby conceived of in different ways, and different discursive practices on nature, energy and climate can clash and/or converge. In the global climate debate, we are witnessing a globalization of the climate problem through the inclusion of new issues and actors [and] a climatization of the world

54 Patrick Bond, ‘Who wins from “climate apartheid”?: African climate justice narratives about the Paris COP1’, New Politics 15: 4, 2016, pp. 83–90.
55 L. H. M. Ling, The Dao of world politics: towards a post-Westphalian, worldist international relations (Abingdon: Routledge, 2014), p. 1.
56 Cristina Yumie Aoki Inoue and Paula Franco Moreira, ‘Many worlds, many nature(s), one planet: Indigenous knowledge in the Anthropocene’, Revista Brasileira de Política Internacional 59: 2, 2016, p. 6.
57 Nakashima et al., eds, Indigenous knowledge for climate change assessment and adaptation.

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Colonization of time: climate history(ies) and climate future(s)

Understandings of what constitutes the present and the future are inherent in discourses about climate justice, conceived of in different terms depending on local and cultural contexts. Linear discourses about climate change create a temporality which allows a determination of what is currently ‘at stake’ and what subsequently ought to be done to achieve a ‘better future’. Decolonial scholars have already emphasized regarding debates about the Anthropocene and climate change that accounting for different histories and presents is crucial to counter the universalizing ‘idea of a (single) future catastrophe and its underlying assumption that “we are all in this together” conceal[ing] social antagonisms in the present’. The teleology of climate discourses in global climate governance constitutes another site of contestation as the multiplicity of affected people may envision diverse climate future(s).

Colonality of solutions: adaptation, mitigation and technical fixes in the liberal order

More contestations unfold in the discourse about solutions and strategies to address climate change. For instance, the notion of growth is still predominant in climate policies (Paris Agreement, article 10(5)), international climate change law and climate governance discourses, while decolonial thinkers view it as incompatible with a changing climate context. Patricia Perkins has highlighted the ‘tendency of centralized colonial economies to keep growing, at the expense of “nature”, Indigenous land sovereignty and marginalized people’. In the liberal order, state-centred politics is an obstacle to decolonizing processes. It contributes to states monopolizing and controlling which type(s) of ‘expertise’ is/are deemed ‘appropriate’ or not in climate governance, for instance. Accordingly, in the following section we outline a practice-based research framework for empirical work on climate justice in sensitive regions based on decolonial ethics that accounts for diverse ways of knowing.

58 Stefan C. Aykut, Jean Foyer and Edouard Morena, eds, Globalizing the climate: COP21 and the climatisation of global debates (London: Routledge, 2017), p. 5 (emphasis in original).
59 Delf Rothe, ‘Governing the end times? Planet politics and the secular eschatology of the Anthropocene’, Millennium: Journal of International Studies 48: 2, 2019, p. 146. See also Heather Davis and Zoe Todd, ‘On the importance of a date, or, decolonizing the Anthropocene’, ACME: An International Journal for Critical Geographies 16: 4, 2017, pp. 761–80; Ruba Salih and Olaf Corry, ‘Displacing the Anthropocene: colonisation, extinction and the unruliness of nature in Palestine’, Environment and Planning E: Nature and Space, OnlineFirst, doi: 10.1177/2514848620982834, pp. 1–20.
60 Patricia E. Perkins, ‘Climate justice, commons, and degrowth’, Ecological Economics, vol. 160, 2019, p. 183; Dina Gilio-Whitaker, As long as grass grows: the indigenous fight for environmental justice, from colonization to standing rock (Boston: Beacon, 2019), p. 120; Sheila Watt-Cloutier and Bill McKibben, The right to be cold: one woman’s fight to protect the Arctic and save the planet from climate change (Minneapolis: University of Minnesota Press, 2015).
61 Tim Forsyth, ‘Who shapes the politics of expertise? Co-production and authoritative knowledge in Thailand’s political forests’, Antipode 52: 4, 2019, pp. 1039–59.
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Decolonizing by co-producing (mutually beneficial) action research?

Meaningful co-production of knowledge has been an ongoing topic of discussion, in the Arctic especially as far as climate change is concerned, and in the context of new energy projects in the southern Mediterranean region. In the Arctic, Indigenous Researchers and Knowledge-Holders have gathered guidance (including through online resources and publications) on how to co-produce knowledge based on their cultural principles, research protocols, research ethics, codes of conduct, and best practices which must be followed. This includes, for instance, the ARCUS resources compilation Conducting research with northern communities, the Saami Council’s Co-creating research projects and the ICC Ethical and equitable engagement report. Although many climate researchers have now understood the necessity of putting this approach in place (with successful examples such as ‘Ikaagvik Sikuqun (Ice Bridges) in Kotzebue, north-west Alaska’), the literature points out that research partnerships are still often one-way in their design, and the question is: why? We answer by looking at the three colonial practices of knowledge production outlined in the previous section through a review of context-specific literature from the Arctic and the Mediterranean and observation notes written at three conferences in a context of accidental ethnography, which in turn...

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62 Carlo Nikoosh, Arctic observing: Indigenous Peoples’ history, perspectives, and approaches for partnership (Fairbanks: Center for Arctic Policy Studies, 2020); C. Pedersen, M. Otokkiak, I. Koonoo, J. Milton, E. Maktar, A. Anaviliuskas, M. Milton, G. Porter, A. Scott, C. Newman, C. Porter, T. Aaluk, B. Tiriirianaq, A. Pedersen, M. Riffi, E. Solomon and S. Elverum, ’SCIQ: an invitation and recommendations to combine science and Inuit Qajujiangaatajuqangit for meaningful engagement of Inuit communities in research’, Arctic Science 6: 3, 2020, pp. 326–39. 63 Interagency Arctic Research Policy Committee, Principles for conducting research in the Arctic (Washington DC: National Science Foundation, 2018). 64 Assembly of Alaska Native Educators, Guidelines for respecting cultural knowledge (Anchorage: Alaska Native Knowledge Network, 2000); Vibherta Thambhatname and Elizabeth Anne Kimella, ’Decolonizing methodologies in qualitative research: creating spaces for transformative praxis’, International Journal of Qualitative Methods, vol. 20, 2021, p. 5. 65 Arctic Research Consortium of the United States, Conducting research with northern communities: documented practices and resources for productive, respectful relationships between researchers and community members, 2021, https://www.arcus.org/resources/northern-communities; Piera Heaika Muotka, Co-creating research projects: some personal experiences from Saami Council and Arctic researchers, Saami Council, 2020, https://www.saamicouncil.net/news-archive/co-creating-research-projects-some-personal-experiences-from-saami-council-and-arctic-researchers; Inuit Circumpolar Council, Ethical and equitable engagement synthesis report: a collection of Inuit rules, guidelines, protocols, and values for the engagement of Inuit communities and Indigenous knowledge from across Inuit Nunavut, 2021, https://secureservercdn.net/45.40.145.201/hh3.0e7.myftpupload.com/wp-content/uploads/ICC-EEE-Synthesis-report-WEB.pdf. 66 Carolina Behe and Raychelle Daniel, ’Indigenous knowledge and the coproduction of knowledge process: creating a holistic understanding of Arctic change’, Bulletin of the American Meteorological Society 99: 8, 2018, pp. 160–61. 67 Buschman, Arctic Wetlands and Indigenous Peoples Study. 68 Kripa Jagannathan, James C. Arnott, Carina Wyborn, Nicole Klenk, Katharine J. Mach, Richard H. Moss and K. Dana Sjostrom, ’Great expectations? Reconciling the aspiration, outcome, and possibility of co-production’, Current Opinion in Environmental Sustainability, vol. 42, pp. 22–29; Noor Johnson, Tristan Pearce, Kaatlin Breton-Honeyman, Denis Ndeloh Etiendem and Lisa Loseto, ’Knowledge co-production and co-management of Arctic wildlife’, Arctic Science 6: 3, 2020, pp. 124–6. 69 We would like to sincerely thank and acknowledge the Inuit, Inupiaq and Sámi conference speakers for the wisdom they shared in the sessions of the Arctic Circle Assembly 2019, which was pivotal for us in the self-reflection process to develop this article. We listened and wrote observation notes at the Arctic Circle Assembly (Oct. 2019, Reykjavik), the conference ‘Climate change and energy transition on the Mediterranean’ (Nov. 2019, Paris) and the conference ‘Natural resources and geopolitics in the MENA’ (Oct. 2019, Florence). See Fujii, ’Five stories of accidental ethnography: turning unplanned moments in the field into data’; Joseph Levitan, Davin Carr-Chellman and Alison Carri-Chellman, ’Accidental ethnography: a method...

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inform nine steps to co-produce mutually beneficial research in a context of action research partnership (see figure 1).  

Climate justice is understood and conceptualized differently across cultures and ways of knowing, or may not be used at all. The *coloniality of knowledge* shapes the order of diverse ways of knowing and creates not only a moral challenge, but also the concern that ‘methodologies and conceptual frameworks used in Arctic research are still unable to effectively inform regional governance on the social impacts of climate change’. At the same time, ‘there is a pressing need for a climate justice research agenda to understand the social impacts of climate change in the Arctic’. Co-producing knowledge is complex and often understood differently by western researchers (who often idealize the notion and try to assimilate Indigenous knowledge and traditional knowledge in western science) and Knowledge-Holders. In the Mediterranean, this includes valuing different ways of knowledge production about climate and environmental issues as well as accounting for the political and societal contexts in which actors tackle climate change. For example, in the southern Mediterranean region political instabilities, shifting priorities of donors and humanitarian emergencies are seen by climate activists as key obstacles to tackling climate change. The challenge for scholarship on climate governance in developing a decolonial approach to climate justice is that our language, concepts and methodology are already entangled in a ‘complex web of imperial relationships’. This discursive web spans the policy–knowledge production nexus as national governments draw on concepts of sustainable development, environmental discourses or new metaphors of modernity, such as greening the economy. Climate activists, for example in the Mediterranean region, have repeatedly pointed out that existing concepts which seem to provide solutions to climate change in fact reproduce and legitimize existing inequalities.

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70 H. Bradbury, S. Waddell, K. O’Brien, M. Apgar, B. Teehankee and I. Fazey, ‘A call to action research for transformations: the times demand it’, *Action Research* 17: 1, 2019.
71 Sennan D. Mattar, Michael Mikulewicz and Darren McCauley, ‘Climate justice in the Arctic: a critical and interdisciplinary climate research agenda’, in L. Heininen, H. Exner-Pirot and J. Barnes, eds, *Arctic Yearbook* 2020 (Akureyri: Arctic Portal, 2020), p. 265.
72 Mattar et al., ‘Climate justice in the Arctic’, p. 265.
73 T. V. Callaghan, O. Kulikova, L. Rakhmanova, E. Topp-Jorgensen, N. Labba, L. A. Kuhmanen, S. Kirpotin, O. Shaduiyko, H. Burgess, A. Rautio, R. S. Hindshaw, L. L. Golubyatnikov, G. J. Marshall, A. Lobanov, A. Soromotin, A. Sokolov, N. Sokolova, P. Filant and M. Johansson, ‘Improving dialogue among researchers, local and Indigenous Peoples and decision-makers to address issues of climate change in the North’, *Ambio* 49: 6, 2020, p. 1173; Helen C. Wheeler, Finn Danielsen, Maryann Fidel, Vera Hausner, Tim Horstkotte, Noor Johnson, Olivia Lee, Nibedita Mukherjee, Amy Amos, Heather Ashithorn, Øystein Ballari, Carolina Behe, Kaitlin Breton-Honeyman, Gunn-Britt Retter, Victoria Buschman, Pávárák Jakobsen, Frank Johnson, Bjørne Lyberth, Jennifer A. Parrott, Mikhail Pogodaev, Rodion Sulyandziga, Nikita Vronski and Meredith Root-Bernstein, ‘The need for transformative changes in the use of Indigenous Knowledge along with science for environmental decision-making in the Arctic’, *People and Nature* 2: 3, 2020, pp. 544–56; Katherine Jean Wilson, T. Bell, A. Arreak, B. Koonoo, D. Angnatsiak and G. J. Ljubetic, ‘Changing the role of non-Indigenous research partners in practice to support Inuit self-determination in research’, *Arctic Science* 6: 3, 2020, pp. 127–53.
74 James Tully, *Public philosophy in a new key*, vol. 2: *Imperialism and civic freedom* (Cambridge: Cambridge University Press, 2008), p. 130.
75 Interviews with environmental activists from the southern Mediterranean.
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In their groundbreaking work, Glaser and Strauss noted that ‘an effective strategy is, at first, literally to ignore the literature of theory and fact of the area under study, in order to assure that the emergence of categories will not be contaminated by concepts more suited to different areas’. 76 The warning about ‘contamination’ in the process of theorizing bears some resemblance to the postcolonial and feminist scholarship in IR, 77 emphasizing that choosing from existing methodologies, produced by and within contexts of dominant academic knowledge production, undermines possibilities and opportunities to decolonize research. 78 Tucker argues with regard to global governance and traditional knowledge that decolonial IR research needs to attend and respond to instantiations of coloniality in concrete sites and fields of political activity, rather than approaching coloniality as a uniform, unitary system of oppression and domination ... decolonial IR research should start from local constructions of racialized, colonial power and knowledge relations. 79

In the case of climate justice, these local sites can include activism by civil society actors excluded from more formal settings of global climate governance. For instance, our findings show that various civil society actors have highlighted the negative effects of new energy projects on their health and agricultural land in the southern Mediterranean. ‘Renewable energy’ or ‘clean energy’ projects, often developed in cooperation with large companies or with EU-funded programmes, produce governance structures including authoritarian national governments in which a multiplicity of affected societal agents are excluded from considerations of how social transformations through renewable energies ought to develop.

From listening to young Inupiat speakers at the Arctic Circle Assembly 2019, it was clear that decolonizing research is not about making research ‘on’ or ‘with’ people. Instead, Knowledge-Holders expect to do the work themselves as decision-makers and researchers. 80 As Ulunnguaq Markussen underlines, research designed and produced by Arctic Peoples for Arctic Peoples is the priority. 81 In a co-produc-

76 Barney G. Glaser and Anselm L. Strauss, The discovery of grounded theory: strategies for qualitative research (New York: Aldine de Gruyter, 1967), p. 37.
77 See, among many others, Geeta Chowdhry and Sheila Nair, Power, postcolonialism, and International Relations: reading race, gender, and class (Abingdon: Routledge, 2002); L. H. M. Ling, Postcolonial International Relations: conquest and desire between Asia and the West (Basingstoke: Palgrave Macmillan, 2002); Naeem Inayatullah and David L. Blaney, International Relations and the problem of difference (New York: Routledge, 2004); Branwen Gruffydd Jones, Decolonizing International Relations (Lanham, MD: Rowman & Littlefield, 2006); Sanjay Seth, Postcolonial theory and International Relations: a critical introduction (Abingdon and New York: Routledge, 2013);
Robbie Shilliam, Decolonizing politics: an introduction (Cambridge: Polity, 2021).
78 Brendan R. Barnes, ‘Decolonising research methodologies: opportunity and caution’, South African Journal of Psychology 48: 3, 2018, pp. 379–87; Sabelo Ndlovu-Gatsheni, ‘Decolonising research methodology must include undoing its dirty history’, The Conversation, 19 Aug. 2020; Brooke A. Ackerly, Elisabeth Jay Friedman, Krishna Menon and Marysia Zalewski, ‘Research ethics and epistemic oppression’, International Feminist Journal of Politics 22: 3, 2020, p. 310.
79 Karen Tucker, ‘Unraveling coloniality in International Relations: knowledge, relationality, and strategies for engagement’, International Political Sociology 12: 3, 2018, p. 225.
80 Dalee Sambo Dorough, ‘Indigenous Peoples’ rights to self-determination and other rights related to access to justice: the normative framework’, in W. Littlechild and E. Statamopoulo, eds, Indigenous Peoples’ access to justice, including truth and reconciliation processes (New York: Columbia University Institute for the Study of Human Rights, 2014).
81 Markussen, ‘Towards an Arctic awakening’.

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tion setting, the conference speakers suggest that the role of global researchers would shift to research facilitation, such as providing a research platform and the technology (step 7 in figure 1). However, Johan Heaika Stenebardni Eira Heahttá (Sámi speaker) stresses that in many cases global researchers get paid, whereas Knowledge-Holders, who contribute, facilitate the research and carry out the main data collection, do not. He underlines the imperative of having sustainable research projects, which implies continuous financial and logistic support, and sustained dissemination. The notion of ‘giving back’ (which can occur in diverse ways) within non-exploitative formats is at the core of this discussion.

The person who initiates the research and manages the funding allocation and access to the equipment is in a position of power and has the capacity to determine the time-line and the fulfilment of ethical goals. Co-production projects initiated and led by Indigenous Rights-Holders show more satisfactory processes, as the work is tailored from the start towards local research needs. Just as in global climate governance where major emitters set the time-frame for climate mitigation efforts, researchers from outside the region tend to dominate the time-frames of projects that they initiate, thus also shaping the dynamics of knowledge production. This is a central issue: the Saami Council emphasizes that ‘the key to successful results when co-creating research projects is allocating enough time in the first phase of the process’.

Esau Sinnok (Shishmaref, Alaska) and young Iñupiat speakers agree that researchers disregard the research needs of Knowledge-Holders and apply their preconceived research questions on the ground. In their view, this creates two types of issues. First, the same people are asked the same questions repeatedly, which contributes to a strong fatigue in communities often already managing mental health issues, especially within the young generation. Second, when a researcher dismisses local research needs, the speakers report that the research is of no worth for the people involved. This element is exacerbated when climate

**82** Wheeler et al., ‘The need for transformative changes in the use of Indigenous knowledge along with science for environmental decision-making in the Arctic’.

**83** We acknowledge and thank Esau Sinnok (Shishmaref, Alaska) and Johan Heaika Stenebardni Eira Heahttá for their contributions in sharing their expertise on research ethics, which was pivotal to the process of thinking more critically and writing this research design. They were kind enough to take some of their precious time to talk to us and give advice at the Arctic Circle Assembly 2019.

**84** Jessica Field and Ali Johar, ‘Perspectives on “giving back”: a conversation between researcher and refugee’, in Roger Mac Ginty, Roddy Brett and Birte Vogel, eds, *The companion to peace and conflict fieldwork* (Cham: Palgrave Macmillan, 2021), pp. 475–7; Attila Paksi and Ilona Kivinen, ‘Reflections on power relations and reciprocity in the field while conducting research with Indigenous Peoples’, and Hanna Guttorm, Lea Kantonen, Britt Kramvig and Aili Pyhälä, ‘Decolonized research-storying: bringing Indigenous ontologies and care into the practices of research writing’, both in Pirjo Kristiina Virtanen, Pigga Keskitalo and Torjer Olsen, eds, *Indigenous research methodologies in Sámi and global contexts* (Leiden: Brill, 2021), pp. 201–28, 113–43.

**85** Nancy G. Maynard, Anders Oskal, Johan M. Turi, Svein D. Mathiesen, Inger Marie G. Eira, Boris Yurchak, Vladimir Etylin and Jennifer Gebelein, ‘Impacts of Arctic climate and land use changes on reindeer pastoralism: Indigenous knowledge and remote sensing’, in G. Gutman and A. Reissell, eds, *Eurasian Arctic land cover and land use in a changing climate* (Dordrecht: Springer, 2010).

**86** Megan Sheremata, ‘Listening to relational values in the era of rapid environmental change in the Inuit Nunangat’, *Current Opinion in Environmental Sustainability*, vol. 35, 2018, pp. 75–81; Arctic Eider Society, *Community-driven research network*, 2021, https://arcticeider.com/community-driven-research-network/.

**87** Muotka, *Co-creating research projects*.

**88** Maynard et al., ‘Impacts of Arctic climate and land use changes’; Markussen, ‘Towards an Arctic awakening’. 138
researchers do not include Knowledge-Holders in the research design at all. Such behaviour is rooted in (neo-)colonial and green colonialist research practices. Many Inuit have been historically exploited for their knowledge of sea-ice routes in Alaska, without gaining anything from it.  

To decolonize research practices, critical researchers have worked with methods of self-reflexivity and positionality. Yet Carol Lynne D’Arcangelis has warned that self-reflexivity may also reproduce ‘the [White settler] fantasy of transcending colonialism’ when researching in another region. Hence this decolonial approach underlines the importance of combining self-reflexivity with reciprocity (steps 3, 6 and 9 in figure 1). Against that backdrop, one can ask whether global researchers (albeit with good intentions) give priority to their decolonial agendas over local research needs. As such, reviewing Knowledge-Holders’ research agendas (e.g. the Sámi Arctic Strategy and the National Inuit Strategy on Research) before contacting them to identify their research needs is an essential milestone (steps 3 and 4, figure 1).

With that in mind, this article suggests nine steps to co-produce mutually beneficial research (figure 1) and commends these to the attention of global researchers who stumble on the preliminary steps (steps 1–6). Our understanding is that co-production of knowledge starts with ‘the topic selection based on community needs that creates the basis for giving back and reciprocity’. It continues with the identification of research questions and objectives, respect for culturally appropriate methodological and ethical approaches, shared processes of observation and analysis, and research dissemination based on Knowledge-Holders’ expectations of sustainable relationships. All steps of the research design are to be decided by the Knowledge-Holders on their own terms (respecting rights of self-determination) with respect to their Free, Prior and Informed Consent for Indigenous People based on the UN Declaration of the Rights of Indigenous People and the guidelines under the Convention on Biological Diversity. The steps outlined

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89 Inuit Tapiriit Kanatami, Nilliajut 2: Inuit perspectives on the Northwest passage, shipping, and marine issues (Ottawa, 2017), p. 14.
90 Brooke Ackerly and Jacqui True, ‘Reflexivity in practice: power and ethics in feminist research on International Relations’, International Studies Review, vol. 10, 2008, pp. 693–707.
91 Carol Lynne D’Arcangelis, ‘Revelations of a white settler woman scholar-activist: the fraught promise of self-reflexivity’, Cultural Studies—Critical Methodologies 18: 5, 2017, pp. 339–53 at p. 340.
92 Naja Dyrendom Graugaard, ‘Arctic auto-ethnography: unsettling colonial research relations’, in Hansen and Ren, eds, Collaborative research methods in the Arctic, p. 48.
93 Saami Council, The Sámi Arctic strategy. Sámi Árkatal Áigumušat. Samisk Strategi for Arktiske saker. Securing enduring influence for the Sámi people in the Arctic through partnerships, education, and advocacy (Kárášjohka/Karasjok: Saami Council, 2019); Inuit Tapiriit Kanatami, National Inuit strategy on research (Ottawa, 2018).
94 Paksi and Kivinen, ‘Reflections on power relations and reciprocity in the field’.
95 Paksi and Kivinen, ‘Reflections on power relations and reciprocity in the field’, p. 202; Anne Merrild Hansen and Carina Ren, ‘Co-creating knowledge for and with the Arctic: future avenues’, in Hansen and Ren, eds, Collaborative research methods in the Arctic, p. 151.
96 Behe and Daniel, ‘Indigenous knowledge and the coproduction of knowledge process’, p. 161; IARPC, Principles for conducting research in the Arctic.
97 Sámediggi, Procedure for seeking consent for research projects dealing with Sámi cultural heritage and traditional knowledge, 2020, https://www.samediggi.fi/procedure-for-seeking-consent-for-research-projects/?lang=en; UN General Assembly, UN Declaration on the Rights of Indigenous Peoples, resolution adopted 20 Oct. 2007, A/RES/61/295; Secretariat of the Convention on Biological Diversity, Akué: Ken voluntary guidelines for the conduct of cultural, environmental and social impact assessment regarding developments proposed to take place on, or which are
in figure 1 are conceptual and are not a substitute for the cultural protocols and codes of conduct communicated by Knowledge-Holders.

**Figure 1: Nine steps to co-produce mutually beneficial research**

1. Reviewing local cultural protocols for research, decolonial approaches, research ethics and methods
2. Accessing context-specific events on co-production of knowledge
3. Targeting research needs
4. Contacting Knowledge-Holders and asking about their research needs, research questions and research objectives
5. Can my research contribute? YES from Knowledge-Holders: Go to Step 6 NO from Knowledge-Holders: Back to Step 4
6. What and how can I give back to the Knowledge-Holders?
7. Co-designing research project from topic, ethics fieldwork to output
8. Reviewing and updating research approach in the field according to the expectations of Knowledge-Holders
9. Disseminating findings according to the interests of Knowledge-Holders

Centering Rights-Holders and affected peoples’ expectations of research at the forefront of attention and action is the starting-point for rethinking research without epistemic and ontological violence. Decolonizing is a complex venture, requiring great and continuous self-reflexivity, ‘epistemic disobedience’, reciprocity and concrete action. Against this background, our practice-based approach follows an abductive research logic. Since we are already ‘contaminated’, in the words of Glaser and Strauss, with certain conceptual and theoretical dispositions, we should neither ignore them nor pretend that we can dissolve the power structures connecting us and our subject of research. ‘Believing we might “become natives’”, as Maren Hofius highlights with reference to Geertz, ‘comes close to naïve empiricism and likely to impact on, sacred sites and on lands and waters traditionally occupied or used by Indigenous and local communities.

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98 Jessica O’Reilly, Cindy Isenhour, Pamela McElwee and Ben Orlove, ‘Climate change: expanding anthropo-
logical possibilities’, *Annual Review of Anthropology*, vol. 49, 2020, pp. 13–29.

99 Ndlovu-Gatsheni, ‘Decolonising research methodology’.

100 ‘Abductive analysis constitutes a qualitative data analysis approach aimed at theory construction. This approach rests on the cultivation of anomalous and surprising empirical findings against a background of multiple existing sociological theories and through systematic methodological analysis. As such, it requires a fundamental rethinking of core ideas associated with grounded theory, specifically the role of existing theories in qualitative data analysis and the relationship between methodology and theory generation’: Stefan Timmermans and Iddo Tavory, ‘Theory construction in qualitative research: from grounded theory to abductive analysis’, *Sociological Theory* 30: 3, 2012, p. 169.
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is only the reverse of scientific realism’s claim that science is able to objectively reflect social reality.’ 101 An abductive research logic demands that we reflect on the conceptual relations that we, as researchers, build in the process of theorizing. To this end, a double hermeneutics emphasizes that critical research must take seriously the agency of both research subjects and the researchers themselves in the production of meaning. 102 For we, as researchers, always observe and thereby interpret the already interpreted social reality of research subjects.

This practice approach to norm contestation seeks to uncover the production, emergence and contestation of norms, and their normative structure of meaning-in-use by affected people whose subject positions are often neglected in state-centric scholarship in IR and global climate governance. Acknowledging the multiplicity of actors and their differential access not only concerns their ability to enter the formal context of global climate governance, but also depends on ‘sensitizing reading’, 103 and listening to the multiplicity of meanings in context. Empirically, this allows us to uncover the meanings that are attached to climate justice by affected people, and indeed whether climate justice is a relevant norm in sensitive regions at all. ‘For the most part, this “strange multiplicity” is overlooked because it is recognized and categorized within inherited imperial languages.’ 104

Concluding remarks

It is no surprise that the concepts of environmental and climate justice include a growing range of political, economic and social issues highlighting problems beyond geophysical effects. In the framework of the UNFCCC debates among involved state representatives and civil society organizations, we have witnessed a discursive shift in which climate change has become increasingly conceptualized in terms of climate justice. 105 Hence, in the context of global climate governance, key organizations and regimes have adopted notions of climate justice to formulate climate policies and mediate among international actors. Given the implications for states, especially the main polluters, various interpretations of climate justice have emerged. 106 Although a diversity of types of climate injustice exist, 107 the main debates in global governance predominantly focus on the international system of states or the international scale. 108

101 Maren Hofius, ‘Towards a “theory of the gap”: addressing the relationship between practice and theory’, Global Constitutionalism 9: 1, 2020, p. 175.
102 Stefano Guzzini, ‘A reconstruction of constructivism in International Relations’, European Journal of International Relations 6: 2, 2000, pp. 147–82; Patrick Thaddeus Jackson, ‘Making sense of making sense: configurational analysis and the double hermeneutic’, in Dvora Yanow and Peregrine Schwartz-Shea, eds, Interpretation and methods: empirical research methods and the interpretive turn (London: M. E. Sharpe, 2006).
103 Wiener, Contestation and constitution of norms.
104 Tully, Public philosophy in a new key, vol. 2, p. 164.
105 Evan Gach, ‘Normative shifts in the global conception of climate change: the growth of climate justice’, Social Sciences 8: 1, 2019, pp. 1–18.
106 Cf. von Lucke, ‘Principled pragmatism in climate policy?’.
107 Bradley C. Parks and J. Timmons Roberts, ‘Climate change, social theory and justice’, Theory, Culture and Society 27: 2–3, 2010, pp. 114–66.
108 Sam Barrett, ‘Local level climate justice? Adaptation finance and vulnerability reduction’, Global Environmental Change 23: 6, 2013, pp. 1819–29.
In the existing literature on climate justice, therefore, the central concerns are to identify responsibilities and just modes for sharing the benefits and burdens in global climate governance. ¹⁰⁹ Scholarship on climate justice has highlighted that states and other actors, such as ‘individuals, firms, sub-state entities and international institutions’,¹¹⁰ are of key significance. Mitigation and adaptation are central concepts for climate justice scholars to think about and achieve justice in global climate governance.¹¹¹ Although these insights and debates are central in terms of decarbonization, we argue that research has to pay more attention to the assumptions, world-views and ways of knowing that predominantly inform and frame decisions related to climate change in global climate governance and discussions about climate justice.¹¹² For climate governance is conceptualized around future goals in respect of emission targets: this emphasizes the political tendency to turn climate change into an issue of the future rather than a problem of the present. Upholding this discourse disregards the people who have been and who currently are most affected by climate change, and thus perpetuates injustices. Policy formation and knowledge production must account for diverse notions of ‘climate justice’ based on affected people’s meanings in a rapidly changing climate, which are inherent in the practices and appeals to climate justice emerging in different places and contexts.¹¹³ For climate justice is subject to diverse interpretations, practices and meanings-in-use.

Dominant approaches in IR uphold the human–nature binary that shapes the Eurocentric notion of modernity and the liberal order narrative of progress.¹¹⁴ ‘The society and nature dichotomy has helped to structure not only the way we organize our political economic systems and institutions, but also the division of labour between social and natural sciences.’¹¹⁵ Thus climate policies seem to put their ‘hopes in technology, and increasingly also in geoengineering, to mitigate greenhouse gas emissions and capture carbon. In doing so,’ as On Barak succinctly outlines in his analysis of colonialism and global carbonization, ‘we are following the lessons the standard history of energy-as-progress teaches us, neglecting other maps of the historical trajectory that led us to where we are now.’¹¹⁶ The notion of ‘technical adjustments’ allows to respond to climate change without having to engage with dominant, often authoritarian, orders, ways of being and diverse

¹⁰⁹ Henry Shue, *Climate justice: vulnerability and protection* (Oxford: Oxford University Press, 2014), p. 11; Edward A. Page and Clare Heyward, ‘Compensating for climate change loss and damage’, *Political Studies* 65: 2, 2017, pp. 356–72; Lisa Reyes Mason and Jonathan Rigg, eds, *People and climate change: vulnerability, adaptation, and social justice* (Oxford: Oxford University Press, 2019); Alix Dietzel, *Global justice and climate governance: bridging theory and practice* (Edinburgh: Edinburgh University Press, 2019).

¹¹⁰ Dietzel, *Global justice and climate governance*, p. 19.

¹¹¹ Barry S. Levy and Jonathan A. Patz, ‘Climate change, human rights, and social justice’, *Annals of Global Health* 81: 3, 2015, pp. 310–22.

¹¹² Jason C. Young, ‘Environmental colonialism, digital indigeneity, and the politicization of resilience’, *Environment and Planning E: Nature and Space* 4: 2, 2020, pp. 230–51.

¹¹³ Chukwumerije Okereke, ‘Climate justice and the international regime’, *Wiley Interdisciplinary Reviews: Climate Change* 1: 3, 2010, pp. 462–74.

¹¹⁴ Karsten A. Schulz, ‘Decolonising the Anthropocene: the mytho-politics of human mastery’, in Marc Wooms and Sebastian Weier, eds, *Critical epistemologies of global politics* (Bristol: E-International Relations, 2017).

¹¹⁵ Inoue and Moreira, ‘Many worlds, many nature(s), one planet’, p. 6.

¹¹⁶ Barak, *Powering empire*, p. 226.
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ways of knowing,117 because it reproduces the assumption that solutions to climate change merely involve ‘market-oriented technical fixes’ within the existing neo-liberal order.118

Believing that research on climate justice needs to further ‘explore the “real” world of climate change politics’,119 we hold that scholars and policy-makers must critically reflect on the dominant ways of knowing that inform global climate governance and, more importantly, develop a research framework accounting for diverse ways of knowing.120 This is important for both analytical and normative reasons: it allows us to uncover and identify differences and gaps between dominant notions of climate justice and ‘hidden practices’ of climate justice which often do not have access to global climate governance.121 Co-producing studies on climate justice by taking into account diverse ways of knowing will provide substantial insights into understanding how global climate governance can change to reflect local practices and achieve climate targets.

117 Gökçe Günel, Spaceship in the desert: energy, climate change, and urban design in Abu Dhabi (Durham, NC: Duke University Press, 2019), p. 11.
118 Günel, Spaceship in the desert, p. 11; Dipesh Chakrabarty, ‘The politics of climate change is more than the politics of capitalism’, Theory, Culture and Society 34: 2–3, 2017, pp. 25–37. State actors draw substantially on this narrative in various climate governance constellations. Compare for example the debates about ‘just transition’ during the 2018 COP (Katowice Prys-Hansen, ‘Differentiation as affirmative action: transforming or reinforcing structural inequality at the UNFCCC?’, Global Society 34: 3, 2020, pp. 353–69), or in various cases of climate change litigation against states (Phillip Paiement, ‘Urgent agenda: how climate litigation builds transnational narratives’, Transnational Legal Theory 11: 1–2, 2020, pp. 121–43).
119 Dietzel, Global justice and climate governance.
120 Michael Schnegg, ‘The life of winds: knowing the Namibian weather from someplace and from noplace’, American Anthropologist 121: 4, 2019, pp. 830–44.
121 James Tully, Strange multiplicity: constitutionalism in an age of diversity (Cambridge: Cambridge University Press, 1995).