Climate change and peacebuilding: sub-themes of an emerging research agenda

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Climate change is rapidly altering the global security landscape; its security implications are highly diverse and pose a host of complex challenges.[1] Climate change is also shifting the dynamics of peacebuilding.[2] In many conflict-affected and post-conflict societies the effects of climate change place additional stress on livelihoods and create harmful outcomes which exacerbate existing vulnerabilities in food, water and energy security. This often takes place in settings where public sector institutions are failing to answer the population's needs, even before they have been compounded by the impacts of climate change. Consequently, climate change can also contribute to exacerbating grievances. In this regard, the effects of climate change influence the ability to sustain, reinforce and build peace.

Peacebuilding research must take this into consideration.[3] At the same time, making climate adaptation initiatives conflict-sensitive and peace-positive can have peace dividends, and making peacebuilding more climate-/environment-sensitive can lead to more synergies and co-benefits that can enhance the effects and sustainability of climate adaptation and related initiatives. Much of the existing research on climate-related security risks, however, has focused predominantly on the limited question of whether or how climate change causes conflict.[4] This limited focus has meant that scholars frequently overlook the double burden of states and societies caught between climate change and ongoing conflict.[5]

[1] Vally Koubi, 'Climate change and conflict', *Annual Review of Political Science*, vol. 22, 2019, pp. 343–60, https://doi.org/10.1146/annurev-polisci-050317-070830.

[2] Daniel Abrahams, 'Conflict in abundance and peacebuilding in scarcity: challenges and opportunities in addressing climate change and conflict', *World Development*, vol. 132, 2020, pp. 1–11, https://doi.org/10.1016/j.worlddev.2020.104998; Florian Krampe, *Climate change, peacebuilding and sustaining peace* (Stockholm: Stockholm International Peace Research Institute, 2019), https://www.sipri.org/publications/2019/sipri-policy-briefs/climate-change-peacebuilding-and-sustaining-peace. (Unless otherwise noted at point of citation, all URLs cited in this article were accessible on 19 Jan. 2024.)

[3] Krampe, *Climate change, peacebuilding and sustaining peace*; Richard Matthew, 'Integrating climate change into peacebuilding', *Climatic Change* 123: 1, 2013, pp. 83–93, https://doi.org/10.1007/s10584-013-0894-1; Paul F. Diehl, 'Mainstreaming climate change adaptation into peace missions', in Shirley V. Scott and Charlotte Ku, eds, *Climate change and the UN Security Council* (Cheltenham: Edward Elgar Publishing, 2018), pp. 131–46.

[4] Nina von Uexkull and Halvard Buhaug, 'Security implications of climate change: a decade of scientific progress', *Journal of Peace Research* 58: 1, 2021, pp. 3–17, https://doi.org/10.1177/0022343320984210; Tobias Ide et al., 'The future of environmental peace and conflict research', *Environmental Politics* 32: 6, 2023, pp. 1077–103, https://doi.org/10.1080/09644016.2022.2156174.

[5] Ashley Moran et al., *The intersection of global fragility and climate risks* (Washington DC: USAID, 2018).

Currently, very few studies look at three critical and related research areas—the impacts of climate change on peacebuilding efforts; the impact of climate change on the prospects for building and sustaining peace in conflict-affected states; and how peacebuilding and climate adaptation actions can be mutually beneficial and compounding.[6]

In contrast, peacebuilding practitioners have begun responding to the security implications of climate change, as they see first-hand how it affects communities' relations with each other and how it undermines the mandate of peacebuilding missions.[7] The gap in attention from research is a concern, because 1) there is a strong overlap between the locations of conflict, fragility and climate change;[8] and 2) as the few existing studies indicate, the double burden of violent conflict and climate change is already making peacebuilding more complicated.[9] Part of the problem is that the interaction between climate change and peacebuilding is a topic that stretches over multiple academic disciplines. To that end, we draw from co-authors' expertise in research on climate security, environmental peacebuilding and peacebuilding to offer a critical perspective on what we know and what we do not yet know about the connection between climate change and peacebuilding. Building on identified gaps and tensions in the current academic debate on peacebuilding, we bring four core sub-themes into the conversation in a new research agenda on climate change and peacebuilding: 1) climate change and peacebuilding discourse and norm development; 2) climate change and effectiveness of peace operations; 3) climate change and local peacebuilding; and 4) climate change and hybrid peacebuilding. Within each theme we use existing knowledge from the discipline of environmental peacebuilding. We have chosen these themes as they are areas within the peacebuilding literature that have evolved as key research streams over the past decade. For each sub-theme, we outline key findings and highlight where future research is needed in an area that is growing rapidly in importance. In taking the basic principle that peacebuilding cannot be considered to comprehensively address peace without taking into account the effects of climate change, we see this agenda as critical to the study of peacebuilding.

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[6] Karolina Eklöw and Florian Krampe, *Climate-related security risks and peacebuilding in Somalia* (Stockholm: Stockholm International Peace Research Institute, 2019), https://www.sipri.org/publications/2019/sipri-policy-papers/climate-related-security-risks-and-peacebuilding-somalia; Farah Hegazi, Florian Krampe and Elizabeth Smith, *Climate-related security risks and peacebuilding in Mali* (Stockholm: Stockholm International Peace Research Institute, 2021), https://www.sipri.org/publications/2021/sipri-policy-papers/climate-related-security-risks-and-peacebuilding-mali; Matthew, 'Integrating climate change into peacebuilding'; Jon Barnett, 'Global environmental change I: climate resilient peace?', *Progress in Human Geography* 43: 5, 2019, pp. 927–36, https://doi.org/10.1177/0309132518798077.

[7] Erica Gaston et al., *Climate security and peacebuilding: thematic review* (New York: United Nations University Centre for Policy Research, 2023), https://unu.edu/cpr/project/thematic-review-climate-security-and-peacebuilding.

[8] Moran et al., *The intersection of global fragility and climate risks*; Florian Krampe, 'Why United Nations peace operations cannot ignore climate change', SIPRI, 22 Feb. 2021, https://www.sipri.org/commentary/topical-backgrounder/2021/why-united-nations-peace-operations-cannot-ignore-climate-change; Matthew, 'Integrating climate change into peacebuilding'.

[9] Eklöw and Krampe, *Climate-related security risks and peacebuilding in Somalia*; Cesare M. Scartozzi, 'Climate-sensitive programming in international security: an analysis of UN peacekeeping operations and special political missions', *International Peacekeeping* 29: 3, 2022, pp. 488–521, https://doi.org/10.1080/13533312.2022.2084387.

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Climate change and peacebuilding

The article starts with a sketch of the emerging field, looking at peacebuilding, environmental peacebuilding, and climate change and security. Through sketching the field, the article highlights major gaps in existing research: this analysis is then used to build our four themes to push the research agenda forward. The article concludes with implications for future research.

A field sketch

In this section we briefly review the literature on peacebuilding, climate security and environmental peacebuilding. We review the current state of knowledge and identify key research trends. Our review suggests that in peacebuilding scholarship, considerations of the double burden of climate and conflict are often absent, while in climate security scholarship, considerations of peacebuilding are similarly absent. Despite its potential to bring these research areas together, environmental peacebuilding has not yet effectively done so.

Peacebuilding

Peacebuilding is defined in early literature as the pursuit of peace by addressing the root causes of conflict and incorporating local capacities.[10] It is a comprehensive concept covering various processes, approaches and stages of conflict resolution.[11] The surge in civil wars in the aftermath of the Cold War and international security concerns over the consequences of 'state failure' or 'state collapse' justified liberal interventionism. The question of how to build and sustain peace in conflict-affected and post-conflict societies led to some propositions being rooted in the Kantian argument that liberal polities and economies have a pacifying effect because of democratic representation and transnational interdependence.[12] The United Nations acknowledged the link between strong democratic institutions and stable peace and security in the 1992 *Agenda for peace*,[13] and this position has been reiterated in subsequent reports by the UN Secretary-General. As such, from the 1990s the mandates of the UN peacekeeping operations that were deployed often included conducting elections, strengthening the rule of law and promoting economic growth, among other tasks. With respect to the environment, peacebuilders focused almost exclusively on securitizing valuable natural resources thought to contribute to violent conflict.[14] Liberal peacebuilding, guided by the assumption that liberal democratic institutions and market-oriented policies can

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[10] Johan Galtung, 'Three approaches to peace: peacekeeping, peacemaking and peacebuilding', in Johan Galtung, *Peace, war and defence: essays in peace research* (Copenhagen: Christian Ejlders, 1976), pp. 282–304.

[11] John Paul Lederach, *Sustainable reconciliation in divided societies* (Washington DC: United States Institute of Peace Press, 1997).

[12] Michael W. Doyle, 'Three pillars of the liberal peace', *The American Political Science Review* 99: 3, 2005, pp. 463–6, https://doi.org/10.1017/S0003055405051798; Roland Paris, *At war's end: building peace after civil conflict* (Cambridge, UK: Cambridge University Press, 2004).

[13] Boutros Boutros-Ghali, 'An agenda for peace: preventive diplomacy, peacemaking and peace-keeping', *International Relations* 11: 3, 1992, pp. 201–18, https://doi.org/10.1177/004711789201100302.

[14] Philippe Le Billon, 'The political ecology of war: natural resources and armed conflicts', *Political Geography* 20: 5, 2001, pp. 561–84, https://doi.org/10.1016/S0962-6298(01)00015-4.

sustain peace and development in conflict-affected societies, has been a defining feature of UN peace interventions since then.[15]

However, incidents of conflict relapse and reversals to authoritarianism in some countries that have hosted UN peacekeeping operations raised doubts about the effectiveness and legitimacy of liberal peacebuilding. Even the UN has admitted that it is not in the best position to lead the process for sustaining peace, but can only assist or facilitate national stakeholders.[16] Peace and conflict scholars have contributed to this critical discourse on peacebuilding, with some even character-izing the failure of the UN to sustain peace as an ideological decline of liberal peace-building.[17] Arguments against liberal peacebuilding can be summarized as either critical or problem-solving. The critical view emphasizes the western roots of liberal peace and questions its compatibility with local contexts.[18] Meanwhile, the problem-solving critique does not necessarily reject the liberal peace assumptions; rather, it scrutinizes the implementation of peace in conflict-affected societies.[19] These critiques have led to several 'turns' in peacebuilding research, prominently paved by the local and hybrid approaches to building peace. The 'local turn'— or the move to understand both peace and conflict within the context of the influence local actors have on it, as well as on local voices and local lived experi-ences—has been the most significant development in the study of peacebuilding over the past decade.[20] It calls for bottom-up peacebuilding approaches that are situated in and informed by societal and cultural contexts at the subnational level in contrast to the top-down implementation of internationally led interventions.[21] Since local realities and aspirations may differ from those of international actors, relevant actors may interact through accommodation, cooperation, compromise or resistance, resulting in hybrid peace.[22] The local turn includes many strands, such as: local perceptions of peace; the arts, including graffiti; bottom-up peace-building; everyday peace and conflict; the urban; the economy; culture and many others.[23] While the environment has been highlighted as a critical topic for local

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[15] Oliver P. Richmond and Jason Franks, *Liberal peace transitions between statebuilding and peacebuilding* (Edinburgh: Edinburgh University Press, 2009).

[16] United Nations, *The challenge of sustaining peace: report of the advisory group of experts for the 2015 review of the United Nations peacebuilding architecture* (New York: United Nations, 2015).

[17] Neil Cooper, Mandy Turner and Michael Pugh, 'The end of history and the last liberal peacebuilder: a reply to Roland Paris', *Review of International Studies* 37: 4, 2011, pp. 1995–2007, https://doi.org/10.1017/S0260210511000143.

[18] Nicolas Lemay-Hébert, 'Critical debates on liberal peacebuilding', *Civil Wars* 15: 2, 2013, pp. 242–52, https://doi.org/10.1080/13698249.2013.817856.

[19] Lemay-Hébert, 'Critical debates on liberal peacebuilding'.

[20] Hanna Leonardsson and Gustav Rudd, 'The "local turn" in peacebuilding: a literature review of effective and emancipatory local peacebuilding', *Third World Quarterly* 36: 5 , 2015, pp. 825–39, https://doi.org/10.1080/01436597.2015.1029905; Roger Mac Ginty and Oliver P. Richmond, 'The local turn in peace building: a critical agenda for peace', *Third World Quarterly* 34: 5, 2013, pp. 763–83, https://doi.org/10.1080/01436597.2013.800750; Thania Paffenholz, 'Unpacking the local turn in peacebuilding: a critical assessment towards an agenda for future research', *Third World Quarterly* 36: 5, 2015, pp. 857–74, https://doi.org/10.1080/01436597.2015.1029908.

[21] Isabell Schierenbeck, 'Beyond the local turn divide: lessons learnt, relearnt and unlearnt', *Third World Quarterly* 36: 5, 2015, pp. 1023–32, https://doi.org/10.1080/01436597.2015.1043991.

[22] Roger Mac Ginty, 'Hybrid peace: the interaction between top-down and bottom-up peace', *Security Dialogue* 41: 4, 2010, pp. 391–412, https://doi.org/10.1177/0967010610374312.

[23] On local perceptions of peace, see Pamina Firchow and Roger Mac Ginty, 'Measuring peace: comparabil-ity, commensurability, and complementarity using bottom-up indicators', *International Studies Review* 19: 1, 2017, pp. 6–27, https://doi.org/10.1093/isr/vix001; Pamina Firchow, *Reclaiming everyday peace: local voices in*

engagement,[24] climate change is distinctly missing within the broader local peace literature, even though it has very local consequences.

However, peacebuilding actors across the spectrum, and local and international NGOs, are increasingly facing climate-related security risks in the field.[25] For example, the vast majority (circa 80 per cent) of the personnel deployed to UN peace operations are deployed in countries likely to be disproportionately affected by climate change; thus, peacebuilding cannot ignore the impacts of such change.[26]

Climate security

Understanding of climate-related security risks has progressed substantially in recent years.[27] Although there remains considerable neglect of research in certain regions,[28] and climate change is hardly the only risk factor that leads to conflict or its aggravation,[29] a large body of qualitative and quantitative studies from different disciplines shows that increased vulnerability as a result of climate change can increase the risk of violence as it interacts with specific social, political and economic contexts.[30] Among other drivers, this scholarship indicates that climate

measurement and evaluation after war (Cambridge, UK: Cambridge University Press, 2018); on art/graffiti, see Birte Vogel et al., 'Reading socio-political and spatial dynamics through graffiti in conflict-affected societies', *Third World Quarterly* 41: 12, 2020, pp. 2148–68, https://doi.org/10.1080/01436597.2020.1810009; on bottom up peacebuilding, see Roger Mac Ginty, 'Everyday peace: bottom-up and local agency in conflict-affected societies', *Security Dialogue* 45: 6, 2014, pp. 548–64, https://doi.org/10.1177/0967010614550899; Timothy Donais and Amy C. Knorr, 'Peacebuilding from below vs. the liberal peace: the case of Haiti', *Canadian Journal of Development Studies/Revue canadienne d'études du développement* 34: 1, 2013, pp. 54–69, https://doi.org/10.1080/02255189.2013.761130; on everyday peace and conflict, see Dylan O'Driscoll, 'Everyday peace and conflict: (un) privileged interactions in Kirkuk, Iraq', *Third World Quarterly* 42: 10, 2021, pp. 2227–46, https://doi.org/10.1080/01436597.2021.1925104; Roger Mac Ginty, *Everyday peace: how so-called ordinary people can disrupt violent conflict* (Oxford: Oxford University Press, 2021); on the urban, see Kristin Ljungkvist and Anna Jarstad, 'Revisiting the local turn in peacebuilding—through the emerging urban approach', *Third World Quarterly* 42: 10, 2021, pp. 2209–26, https://doi.org/10.1080/01436597.2021.1929148; on the economy, see Birte Vogel, 'The economic local turn in peace and conflict studies: economic peacebuilding interventions and the everyday', *New Political Economy* 27: 6, 2022, pp. 989–1001, https://doi.org/10.1080/13563467.2022.2045925; and on culture, see Amal Bourhrous and Dylan O'Driscoll, 'Everyday peace in the Ninewa Plains, Iraq: culture, rituals, and community interactions', *Cooperation and Conflict* 58: 4, 2023, pp. 542–60, https://doi.org/10.1177/00108367231177797.

[24] McKenzie F. Johnson, 'Local engagement in environmental peacebuilding: protected area development as a pathway to peace in Afghanistan', *Development in Practice* 32: 6, 2022, pp. 755–67, https://doi.org/10.1080/09614524.2021.1937538; Hanna Leonardsson et al., 'Achieving peaceful climate change adaptation through transformative governance', *World Development*, vol. 147, 2021, 105656, https://doi.org/10.1016/j.worlddev.2021.105656.

[25] Abrahams, 'Conflict in abundance and peacebuilding in scarcity'; Mackenzie Burnett and Katharine J. Mach, 'A "precariously unprepared" Pentagon? Climate security beliefs and decision-making in the U.S. military', *Global Environmental Change*, vol. 70, 2021, 102345, https://doi.org/10.1016/j.gloenvcha.2021.102345; Ken Conca, *An unfinished foundation: the United Nations and global environmental governance* (Oxford: Oxford University Press, 2015); Lisa M. Dellmuth, Maria-Therese Gustafsson, Niklas Bremberg and Malin Mobjörk, 'Intergovernmental organizations and climate security: advancing the research agenda', *WIREs Climate Change* 9: 1, 2018, e496, https://doi.org/10.1002/wcc.496; Scott and Ku, *Climate change and the UN Security Council*.

[26] Krampe, 'Why United Nations peace operations cannot ignore climate change'.

[27] von Uexkull and Buhaug, 'Security implications of climate change'.

[28] Courtland Adams, Tobias Ide, Jon Barnett and Adrien Detges, 'Sampling bias in climate–conflict research', *Nature Climate Change* 8: 3, 2018, pp. 200–203, https://doi.org/10.1038/s41558-018-0068-2.

[29] Katharine J. Mach et al., 'Climate as a risk factor for armed conflict', *Nature* 571: 7764, 2019, pp. 193–7, https://doi.org/10.1038/s41586-019-1300-6.

[30] Alexander De Juan, 'Long-term environmental change and geographical patterns of violence in Darfur, 2003–2005', *Political Geography*, vol. 45, 2015, pp. 22–33, https://doi.org/10.1016/j.polgeo.2014.09.001; Michael Brzoska and Christiane Fröhlich, 'Climate change, migration and violent conflict: vulnerabilities, pathways and adaptation strategies', *Migration and Development* 5: 2, 2016, pp. 190–210, https://doi.org/10.1080/2163232

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change undermines human livelihoods and security by increasing a population's vulnerabilities, grievances and political tensions through an array of indirect—at times non-linear—pathways, thereby increasing human insecurity and the risk of violent conflict, beyond armed conflict.[31] Climate change will contribute to human insecurity in a number of areas, including water security, food security, migration and geopolitical stability—not least through the necessary transition to clean energy.[32]

Well-functioning and adaptive institutions can, however, reduce the likelihood of climate-related conflict and improve human security.[33] Marwa Daoudy contends that government policy can ameliorate or exacerbate insecurities related to climate change.[34] Moreover, our ability to equitably address insecurity both internally and internationally—for instance, through technological innovation and deployment—is critical to mitigate such insecurity.[35] The importance of the state in combating the risks posed by climate change is also reflected in the adoption by several states of climate-related security risks in their Nationally Determined Contributions to the Paris Agreement and in their National Adaptation Plans, which determine a country's adaptation planning for the coming years.[36]

Environmental peacebuilding

The field of environmental peacebuilding emerged to counter the idea that natural resources and the environment primarily or mostly contribute to *violent*

4.2015.1022973; Halvard Buhaug, 'Climate–conflict research: some reflections on the way forward', *WIREs Climate Change* 6: 3, 2015, pp. 269–75, https://doi.org/10.1002/wcc.336; Daniel Abrahams and Edward R. Carr, 'Understanding the connections between climate change and conflict: contributions from geography and political ecology', *Current Climate Change Reports* 3: 4, 2017, pp. 233–42, https://doi.org/10.1007/s40641-017-0080-z; Kendra Sakaguchi, Anil Varughese and Graeme Auld, 'Climate wars? A systematic review of empirical analyses on the links between climate change and violent conflict', *International Studies Review* 19: 4, 2017, pp. 622–45, https://doi.org/10.1093/isr/vix022; Jürgen Scheffran, 'Climate extremes and conflict dynamics', in Jana Sillmann, Sebastian Sippel and Simone Russo, eds, *Climate extremes and their implications for impact and risk assessment* (Amsterdam: Elsevier, 2020), pp. 293–315.

31 Mach et al., 'Climate as a risk factor for armed conflict'; Sakaguchi, Varughese and Auld, 'Climate wars?'; Sebastian van Baalen and Malin Mobjörk, 'Climate change and violent conflict in East Africa: integrating qualitative and quantitative research to probe the mechanisms', *International Studies Review* 20: 4, 2018, pp. 547–75, https://doi.org/10.1093/isr/vix043; Koubi, 'Climate change and conflict'; von Uexkull and Buhaug, 'Security implications of climate change'; Vally Koubi, Quynh Nguyen, Gabriele Spilker and Tobias Böhmelt, 'Environmental migrants and social-movement participation', *Journal of Peace Research* 58: 1, 2021, pp. 18–32, https://doi.org/10.1177/0022343320972153.

32 Jennifer Piscopo and Peter Siavelis, 'Chile's constitutional chaos', *Journal of Democracy* 34: 1, 2023, pp. 141–55, https://doi.org/10.1353/jod.2023.0009; Marwa Daoudy, Jeannie Sowers and Erika Weinthal, 'What is climate security? Framing risks around water, food, and migration in the Middle East and North Africa', *WIREs Water* 9: 3, 2022, e1582, https://doi.org/10.1002/wat2.1582; Ingrid Boas et al., 'Climate migration myths', *Nature Climate Change* 9: 12, 2019, pp. 901–903, https://doi.org/10.1038/s41558-019-0633-3.

33 Jürgen Scheffran et al., 'Conclusions and outlook: research results and research needs', in Jürgen Scheffran et al., eds, *Climate change, human security and violent conflict: challenges for societal stability* (Berlin: Springer, 2012), pp. 797–818.

34 Marwa Daoudy, 'Rethinking the climate–conflict nexus: a human–environmental–climate security approach', *Global Environmental Politics* 21: 3, 2021, pp. 4–25, https://doi.org/10.1162/glep_a_00609.

35 Jan Selby, Gabrielle Daoust and Clemens Hoffmann, *Divided environments: an international political ecology of climate change, water and security* (Cambridge, UK: Cambridge University Press, 2022).

36 Maria Jernnäs and Björn-Ola Linnér, 'A discursive cartography of Nationally Determined Contributions to the Paris Climate Agreement', *Global Environmental Change*, vol. 55, 2019, pp. 73–83, https://doi.org/10.1016/j.gloenvcha.2019.01.006.

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conflict. Instead, scholars argued that environmental cooperation could contribute to peacebuilding along a continuum of negative to positive peace.[37] In a recent review, Tobias Ide and colleagues defined environmental peacebuilding as comprising 'the multiple approaches and pathways by which the management of environmental issues is integrated in and can support conflict prevention, mitigation, resolution and recovery'.[38] Other reviews have attempted to refine environmental peacebuilding theory by identifying the mechanism linking environment to peace both in interstate and intrastate contexts.[39] Of the mechanisms identified, environmental peacebuilders have prioritized five as particularly important for peacebuilding: fostering livelihood security; building institutions with a focus on equity and inclusion; developing shared interests; enhancing resource sustainability; and building resource-related knowledge.[40]

While environmental peacebuilding scholarship is well positioned to examine climate change in its relation to peace and conflict, the field has been relatively slow to engage with topics involving the way in which climate change affects peacebuilding. Early work by Richard Matthew argued both that climate change was critical to consider in peacebuilding and that climate change adaptation and mitigation have been historically excluded from peacebuilding activities.[41] Matthew's research suggested three broad opportunities to integrate climate change into peacebuilding: 1) identifying climate-sensitive sectors in conflict-affected contexts via cross-scale planning; 2) engaging in climate-sensitive general capacity-building (e.g. creating adaptation tools or best practices); and 3) building adaptation/mitigation capacity by fostering bilateral, regional or global cooperation between conflict actors or states.[42] Matthew emphasized, in line with the evolving nature of peacebuilding theory, a need to ensure that climate change adaptation in peacebuilding contexts is 'responsive to the needs, values, experiences, knowledge, and assets of the communities that will be affected by it'.[43] Randall Amster, on the other hand, posited that the global nature of climate change serves to create a mutual struggle among nations that can itself unify states to act against a common threat.[44] From this perspective, countries likely

[37] Ken Conca and Geoffrey D. Dabelko, *Environmental peacemaking* (Washington DC: Woodrow Wilson Center Press and Johns Hopkins University Press, 2002).

[38] Tobias Ide et al., 'The past and future(s) of environmental peacebuilding', *International Affairs* 97: 1, 2021, pp. 1–16, https://doi.org/10.1093/ia/iiaa177.

[39] Anaïs Dresse, Itay Fischhendler, Jonas Østergaard Nielsen and Dimitrios Zikos, 'Environmental peacebuilding: towards a theoretical framework', *Cooperation and Conflict* 54: 1, 2019, pp. 99–119, https://doi.org/10.1177/0010836718808331; Tobias Ide, 'The impact of environmental cooperation on peacemaking: definitions, mechanisms, and empirical evidence', *International Studies Review* 21: 3, 2019, pp. 327–46, https://doi.org/10.1093/isr/viy014; McKenzie F. Johnson, Luz A. Rodríguez and Manuela Quijano Hoyos, 'Intrastate environmental peacebuilding: a review of the literature', *World Development*, vol. 137, 2021, 105150, https://doi.org/10.1016/j.worlddev.2020.105150.

[40] Johnson, Rodríguez and Quijano Hoyos, 'Intrastate environmental peacebuilding: a review of the literature'.

[41] Matthew, 'Integrating climate change into peacebuilding'; Richard A. Matthew, 'Climate change adaptation and peacebuilding', in Ashok Swain and Joakim Öjendal, eds, *Routledge handbook of environmental conflict and peacebuilding* (Abingdon and New York: Routledge, 2018), pp. 108–120.

[42] Matthew, 'Integrating climate change into peacebuilding'.

[43] Matthew, 'Climate change adaptation and peacebuilding', p. 16.

[44] Randall Amster, 'Environment, climate change, and peace', in Swain and Öjendal, *Routledge handbook of environmental conflict and peacebuilding*, pp. 73–82.

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to experience similar climate-related impacts are more likely to come together in search of common solutions.

Jon Barnett emphasized that institution-building is critical for making states more resilient to the potential for climate-related conflict. In particular, the presence of strong social institutions can reduce environmental vulnerability and enhance ecological resilience, thereby creating and sustaining peaceful societies that are resilient to disruptions from climate change.[45] Building on these insights, Hanna Leonardsson et al. propose a framework for *transformative climate adaptation governance*, which they argue can foster more peaceful societies 'through the identification of socially just sustainable governance across scales that is inclusive, needs-based and adaptive to local agencies'.[46] In line with local and hybrid peacebuilding, such an approach advocates for prioritizing local needs and capacities, especially as they come into contact with global expert knowledge and technology.

Despite recognizing a 'scarcity' of climate change and environmental peacebuilding research, Daniel Abrahams argues that filling in the gap will be challenging. Citing recent work in Uganda, for instance, he argues that the complex scalar and temporal aspects of how climate change affects local landscapes make it difficult for actors located across different scales to identify and agree on how to prioritize and address such effects. This has hindered the integration of climate–conflict priorities into peacebuilding programming.[47] Nevertheless, this research suggests that reframing climate discourse to encompass 'a wider spatial and discursive conceptualization' that highlights opportunities for cooperation and peace can, in part, address some of these challenges.[48] Our approach, centred on discourse/ norm development, the effectiveness of peace operations, local peacebuilding and hybrid peacebuilding, seeks to help fill this gap.

Climate change and peacebuilding—a major gap in research

While some early work that is emerging in environmental peacebuilding has begun looking explicitly at the intersection of climate change and peacebuilding, much more is needed. In this section, we identify four overarching gaps in the literature. First, more research is required on how to effectively integrate climate change into peacebuilding work. Although studies highlight the concentration of peacebuilding in countries and regions vulnerable to climate change impacts, existing peacebuilding activities often neglect climate change adaptation and mitigation projects. Efforts to integrate climate change into peacebuilding should focus on socio-economic recovery, politics and governance, security and rule of law, and human rights.[49] Furthermore, Héctor Morales-Muñoz and colleagues advocate

[45] Barnett, 'Global environmental change I'; see also McKenzie F. Johnson, Tobias Ide and Jesann Gonzalez Cruz, 'Conceptualizing resilience within environmental peacebuilding', *Current Opinion in Environmental Sustainability*, vol. 65, 2023, 101362, https://doi.org/10.1016/j.cosust.2023.101362.

[46] Leonardsson et al., 'Achieving peaceful climate change adaptation through transformative governance', p. 5.

[47] Abrahams, 'Conflict in abundance and peacebuilding in scarcity'.

[48] Abrahams, 'Conflict in abundance and peacebuilding in scarcity'.

[49] Matthew, 'Integrating climate change into peacebuilding'.

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for the coordination of climate action and peacebuilding.[50] They highlight the importance of integrating efforts and programmes at different scales, including climate and conflict risk assessments, land and water resource management, ecosystem restoration, nature-based adaptation, sustainable agriculture, natural resources governance and market development. Such coordinated actions generate co-benefits, such as increased social cohesion and livelihood creation. Paul Diehl examines the potential of mainstreaming climate change concerns into peace operations.[51] Early warning systems and preventive deployments can adapt peacekeeping strategies to proactively address climate change impacts. Post-conflict peacebuilding strategies that incorporate climate change concerns can promote sustainable programmes and mitigate environmental degradation. These strategies represent important steps in integrating climate change into peace operations, although further exploration is required.

Second, and relatedly, few studies have applied an empirical lens to the impact of climate change on peacebuilding efforts. Karolina Eklöw and Florian Krampe analyse the United Nations Assistance Mission in Somalia (UNSOM) and highlight the adverse effects of climate change on livelihoods, migration and vulnerability, hindering peacebuilding and governance efforts.[52] Farah Hegazi, Florian Krampe and Elizabeth Smith examine the United Nations Multidimensional Integrated Stabilization Mission in Mali (MINUSMA) and emphasize the impact of climate change on natural-resource-based livelihoods, human security, grievances and marginalization.[53] These scholars emphasize that the effects of climate change pose challenges for peacebuilding because they exacerbate insecurity. They also find that peacebuilding actors face challenges in addressing the consequences of climate change on peacebuilding for various reasons, such as the need to prioritize their activities according to their mandate and budget, a lack of capacity, and poor coordination between peacebuilding and development actors. On the other hand, the research also emphasizes that policy responses to climate-related security risks create opportunities for sustaining peace, since, for example, they can provide legitimacy for a government or offer people alternative livelihood sources, both of which are important for building as well as sustaining peace.

Third, we require a broader conceptualization of the relationship between climate change, conflict and peace, beyond notions that it acts as a driver of conflict or threat multiplier. Even when the security implications of climate change are considered in development programming, the perspective that actors take is one of climate change increasing the risk of conflict, rather than climate change being an opportunity for peacebuilding, or how addressing climate change can affect peacebuilding. Not only does this gap have research implications, because we do not know how climate change is already affecting peacebuilding at the present

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[50] Héctor Morales-Muñoz et al., 'Co-benefits through coordination of climate action and peacebuilding: a system dynamics model', *Journal of Peacebuilding & Development* 17: 3, 2022, pp. 304–23, https://doi.org/10.1177/15423166221132149.

[51] Diehl, 'Mainstreaming climate change adaptation into peace missions'.

[52] Eklöw and Krampe, *Climate-related security risks and peacebuilding in Somalia*.

[53] Hegazi, Krampe and Smith, *Climate-related security risks and peacebuilding in Mali*.

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time, but it also has policy and practical implications, because it limits the ways in which the effects of climate change can be addressed.

Finally, research on how to manage the effects of climate change shows that adaptation can have unintended negative consequences that can backfire, create additional conflict and undermine peacebuilding. For instance, in underdeveloped, fragile contexts such as Afghanistan, the local-level side effects of climate adaptation and mitigation projects might result in different development outcomes and put into question the potential for supporting efforts to build sustainable peace. The unanticipated effects of increased water scarcity because of poor water management of a new hydropower dam in Afghanistan's Herat province increased grievances among local communities and made the likelihood of communal violence greater.[54] Such outcomes undermined peacebuilding efforts in the country. In Myanmar, large-scale hydropower and agricultural expansion projects have been relabelled as climate adaptation and mitigation interventions to allow the government to continue with its development plans and to rationalize dispossessing communities of their livelihoods. Such an approach has led to increasing tension over land in conflict-affected regions in Myanmar, potentially undermining broader peacebuilding efforts.[55] Given the clearer understanding of the intertwined nature of climate change, security and development—especially in fragile and conflict-affected regions—a rethinking of how to transfer this knowledge to policy solutions is necessary for the formulation of climate-resilient peacebuilding plans and programmes.

The few existing studies highlighted above note that there is a key research gap in empirical studies that specifically examine the impacts of climate change with respect to peacebuilding. To address this gap, we suggest four research areas that will provide necessary empirical insights that link to research on both peacebuilding and climate change.

Four themes to push research agendas forward

In this section, we outline four sub-themes which must form part of a research agenda that bridges climate change and peacebuilding. In each case, the research should examine the outcomes of climate change, both in general, and as a security issue, with respect to:

1) The discourse around peacebuilding—and the associated development of norms around peacebuilding;

2) The effectiveness of formal peacebuilding efforts, specifically in terms of the operational resilience of international peacekeeping operations and special polit-

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[54] Florian Krampe, Elizabeth S. Smith and Mohammad Daud Hamidi, 'Security implications of climate development in conflict-affected states: implications of local-level effects of rural hydropower development on farmers in Herat', *Political Geography*, vol. 90, 2021, 102454, https://doi.org/10.1016/j.polgeo.2021.102454.
[55] Saturnino M. Borras, Jennifer C. Franco and Zau Nam, 'Climate change and land: insights from Myanmar', *World Development*, vol. 129, 2020, 104864, https://doi.org/10.1016/j.worlddev.2019.104864.

ical missions, and the impact that climate issues have on mandate fulfilment for these missions;

3) Local and everyday peace, and what peace means at the local level;

4) Hybrid peace outcomes, as peacebuilding interventions bring about tensions between norms and practice that produce more divergent outcomes than intended.

We do not claim that these sub-themes are exclusive or sufficient. The ways in which climate change variously affects humanitarian interventions, the Responsibility to Protect and disaster diplomacy are notable topics that deserve attention but that fall outside the narrower scope of this article. The chosen sub-themes align with four of the major themes in the academic peacebuilding literature (norms, effectiveness, local/everyday peace and hybridity). In addition, based on the different disciplines from which the authors come (peace and conflict research, climate security, environmental peacebuilding and environmental governance), these themes are the most relevant in providing a comprehensive examination of the field and offering ideas for future research. Below, we sketch out a brief overview of each sub-theme and give suggestions for core research questions and approaches within each.

Climate change, peacebuilding discourse and international norm development

Climate change and its implications for peacebuilding have become increasingly significant topics within international discourse and norm development.[56] The expansion of the peace and security agenda within the UN has gone beyond the traditional focus on liberal peacebuilding and now includes transitional justice, reconciliation, human development, poverty alleviation and the inclusion of groups such as women, youth and marginalized communities.[57] Additionally, there is growing recognition of the interconnection between natural resources, the environment and peacebuilding.[58] While several studies have started to explore climate change and security within the UN Security Council (UNSC),[59] the discourse surrounding climate change and peacebuilding in the UNSC remains underexplored. A closer examination of UNSC resolutions mandating UN peace operations and their evolution over time can shed light on the development of discourse, agency and norms related to climate, peace and security.[60] This is impor-

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[56] Matt McDonald, *Ecological security: climate change and the construction of security* (Cambridge, UK: Cambridge University Press, 2021); Lucile Maertens, 'Climatizing the UN Security Council', *International Politics*, vol. 58, 2021, pp. 640–60, https://doi.org/10.1057/s41311-021-00281-9.

[57] United Nations, *Our Common Agenda Policy Brief 9: A new agenda for peace* (New York: United Nations Political and Peacebuilding Affairs, 2023), https://www.un.org/sites/un2.un.org/files/our-common-agenda-policy-brief-new-agenda-for-peace-en.pdf.

[58] Conca and Dabelko, *Environmental peacemaking*; Ide et al., 'The past and future(s) of environmental peacebuilding'.

[59] Scott and Ku, *Climate change and the UN Security Council*; Maertens, 'Climatizing the UN Security Council'.

[60] Anne Funnemark, Asha Ali and Elisabeth Lio Rosvold, *Climate security language in UN peace operation's mandates* (Oslo: Norwegian Institute of International Affairs, 2022), https://www.nupi.no/en/publications/cristin-pub/climate-security-language-in-un-peace-operation-s-mandates.

tant to understand, because such discourses and norms have practical implications for whether and how the repercussions of climate change on peacebuilding are addressed by major peacebuilding actors. The UNSC is one of the most important global actors in the maintenance of international peace and security.[61] The UNSC's understanding of climate-related security risks, therefore, affects the type of international response, or lack thereof, to the peace and security consequences of climate change.

Furthermore, analysing and understanding the discourse, norms and understandings of UNSC member states themselves is important because the member states constitute the Security Council, so their priorities and conceptions will affect whether and how the issue is addressed within the UNSC.[62] They all take different approaches to climate-related security risks. This is reflected in how the UNSC as an institution understands the concept and the discourse surrounding such risks. And, since the composition of the UNSC changes each year, when five new non-permanent members are elected, understanding how the discourse changes because of this turnover could inform reflection about how to create continuity as membership changes, and could generate insight into potential entry-points for building the UNSC's understanding of climate change, peace and security.

In addition to within the UNSC, the link between climate change and security has gained increasing attention within the wider UN peacebuilding architecture. Yet, there is a lack of specific research on the peacebuilding architecture. Given the varying mandates of different entities, exploring the diffusion of climate-related security risks as norms within, for example, the UN's Peacebuilding Commission, Peacebuilding Fund and Peacebuilding Support Office can provide valuable insights into how each of these incorporates climate-related security risks into its discourse and policies. Analysing how the discourse has evolved over time would provide valuable insights into the normative diffusion of climate change and security within the UN system, and, in particular, whether norm cascades are discernible. This analysis could be further linked to broader discussions on the emergence of resilience thinking in the context of climate change and peacebuilding. Understanding how resilience concepts are integrated into the discourse can contribute to a more comprehensive understanding of the evolving norms and their implications.

Research on the discourse and international norm development surrounding climate change and peacebuilding thus offers valuable insights that can be synergistic with existing peacebuilding literature[63] and with the field of global environmental governance, which focuses on international institutions, norms and mechanisms addressing environmental issues. This interdisciplinary link facilitates the exploration of how actors, norms and structures interact within global environmental governance and peacebuilding contexts, and is crucial for understanding the challenges and opportunities associated with integrating climate change and

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[61] Judith Nora Hardt et al., *Climate security in the Anthropocene: exploring the approaches of United Nations Security Council member-states* (Cham, Switzerland: Springer, 2023).
[62] Hardt et al., *Climate security in the Anthropocene*.
[63] Barnett, 'Global environmental change I'.

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peacebuilding into existing governance structures. It is evident that transnational or global norms do not automatically align with national and local ones, leading to tensions and differences. The same is true in peacebuilding (see the subsection below on 'Hybrid peacebuilding'). Analysing the discourse on climate change and peacebuilding is necessary to explore the tensions and potential hybrid outcomes arising from clashes between local and international norms. This understanding is crucial for effective peacebuilding efforts in the context of climate change, as it enables the promotion of coherence between different scales of normative frameworks. The resulting need to hybridize, combine, or indigenize norms is essential to navigate and address these challenges effectively.

Climate change and effectiveness of peace operations

Peace operations undertaken by the UN, or regional organizations like the African Union (AU) and European Union, represent a formal or institutionalized intervention undertaken by an international organization on behalf of a collection of states to influence a particular conflict situation in a state or region. Peace operations in this context include multidimensional military, police and civilian operations that are mandated to use force, such as peacekeeping or peace enforcement operations, as well as special political missions that do not have a coercive mandate.[64] Research on the effectiveness of peace operations in the face of climate change is essential for these peace operations. Climate change requires action on multiple levels, including the state level, but statebuilding has not been very successful for peacebuilders. It is thus important to understand how we address the need to 'build' the state to meet the challenge of climate change without undermining the state's legitimacy in society and without adversely affecting local ownership.

In the context of the effectiveness of peace operations, there are three core areas where further research could be undertaken: 1) the impact climate change has on the peace operations' mandates, and their work; 2) the need to develop adequate responses on the part of peace operations in these contexts; and 3) understanding of the negative impacts peace operations have on the environment and of how they might be mitigated, as well as how this mitigation can exacerbate conflicts and tensions.

Climate-related extreme weather events can also affect the ability of peace operations to carry out their mandated tasks. For example, flooding has on occasion prevented peacekeepers from reaching communities in need of protection when the vehicles they had available were unable to cross flooded roads. However, where peacekeepers had amphibious vehicles, or the engineering capability to build or fix bridges, they have been able to continue their operations and to assist others, such as humanitarian agencies, to reach communities in need. It is thus important that those who plan peacekeeping missions, at headquarters and in the field, and those who prepare, equip and provide troops for peace operations, consider the extent

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[64] Cedric De Coning and Mateja Peter, *United Nations peace operations in a changing global order* (Cham, Switzerland: Palgrave Macmillan, 2019).

to which a particular region is exposed to climate change, and the demands this is likely to place on peacekeeping personnel in terms of equipment and preparedness.

Peace operations also need to adapt to climate change by incorporating its effects into their understanding of the conflicts they are mandated to prevent and manage. Research into the factors that influence the effectiveness of peace operations when they set out to attempt to influence those conflicts, including how they can identify the stakeholders they engage with, how climate change may affect their own ability to carry out their mandated tasks (especially critical, life-saving tasks like protecting civilians and supporting humanitarian assistance), as well as how they can engage in peacebuilding amid increased migration as a result of climate change, will thus be of practical relevance for institutions like the UN, AU, EU and the Organization for Security and Co-operation in Europe (OSCE) as well as for governments of countries that contribute personnel to peace operations. Peace operations do engage with climate-related security risks to different extents and at different levels (individual, unit, operational and so on). More empirical research is needed to understand what they do and why, as well as what factors limit or support responses. Additionally, it is important to understand the level of interaction/cooperation between the leadership and the mission team on the effects of climate change.

Peace operations themselves may also have negative effects on the host country environment. For instance, in Mali MINUSMA has faced criticism for its adverse environmental impact, exacerbating existing grievances against the mission. The extraction of groundwater without regulation has led to the depletion of local water resources, affecting the local population's access to water and increasing food prices. This environmental issue has resulted in protests and a loss of trust in MINUSMA among the local community.[65] In such contexts, however, it may be possible to find ways of mitigating missions' environmental impacts. For example, power purchase agreements (PPAs) provide a positive counterpoint. This model, exemplified by initiatives such as the development of a hybrid solar power plant in Baidoa, Somalia, and the installation of a solar hub in the Malakal Protection of Civilians site for internally displaced persons in South Sudan, demonstrates how UN peace operations can address climate security challenges while minimizing negative environmental impacts. By partnering with private sector developers of renewable energy, the PPAs allow the UN to support renewable energy projects without incurring upfront financing costs, thus reducing the strain on local resources and fostering sustainable energy access. This approach can also contribute to building trust and support for peacekeeping missions by actively addressing environmental concerns and promoting the well-being of local communities.[66] As climate change will alter the availability and quality of natural resources in geographic space, thus undermining a foundational building block for environmental peacebuilding—the building of a shared identity around

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[65] Hegazi, Krampe and Smith, *Climate-related security risks and peacebuilding in Mali.*
[66] See UN Support Office in Somalia, 'Baidoa set to boost renewable energy production', 26 Oct. 2020, https://unsos.unmissions.org/baidoa-set-boost-renewable-energy-production.

resource management—it is important to understand how to tailor peace opera-
tions to uncertain space and scale.

Climate change and local and hybrid peacebuilding

The promotion of western democracy and a capitalist economy, embedded in
liberal peacebuilding efforts, has been criticized for failing to sustain peace in
conflict-affected societies. Rapid democratization and unregulated marketization
can renew or incite new sources of conflict in attempts to (re)build a conflict-
affected society in the image of a western liberal state. Top-down and inter-
nationally led peacebuilding that is insensitive to local contexts can exacerbate
the underlying structures that led to violence and conflict in the first place.[67] In
opposition to the liberal peace agenda, two interconnected research strands have
developed, namely local peace and hybrid peace.

Local peacebuilding   Although the effects of climate change are global, they
are more likely to influence conflict at the local, rather than national or interna-
tional levels. Competition for resources (such as water), land issues due to climate-
related forced migration and livelihood challenges, for example, are all more likely
to play out at the local level.[68] It is therefore imperative to understand whether
and how the effects of climate change have changed what peace means at the local
level, and how to situate these effects within peacebuilding. Taking into consid-
eration that there is not always a direct link between national capacities and the
local level it is also important to understand local conflict-mitigating mechanisms
and methods of adaptation, and local dialogue/mediation initiatives to leverage
existing practices (and in turn ensure local ownership) to help prevent the conse-
quences of climate change from leading to conflict or worsening existing conflict
dynamics.

Mirroring the hubris of top-down and western-centric design of international
peacebuilding, some aspects of environmental peacebuilding also tend to be too
technocratic and prescriptive in carrying out positivist approaches to knowledge
production and implementing the liberal assumptions of peace.[69] In fact, when
risks are left unmanaged, environmental peacebuilding could have unintended
consequences, such as depoliticizing conflicts, displacement, discrimination,
conflict escalation and even environmental degradation.[70] Some of the observa-
tions and recommendations in environmental peacebuilding scholarship fall short
of engaging with local agencies and integrating local perspectives. As a result,
these externally driven technocratic solutions are detached from the political insti-
tutions, social structures, culture and traditions, and economic realities of conflict-
affected societies. They sometimes fail to recognize that intractable conflicts have

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[67] Annika Björkdahl and Stefanie Kappler, *Peacebuilding and spatial transformation: peace, space and place* (Abingdon:
Routledge, 2017); Mac Ginty and Richmond, 'The local turn in peace building'.
[68] Koubi, 'Climate change and conflict'.
[69] Ide et al., 'The future of environmental peace and conflict research'.
[70] Tobias Ide, 'The dark side of environmental peacebuilding', *World Development*, vol. 127, 2020, 104777, https://
doi.org/10.1016/j.worlddev.2019.104777.

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created path dependencies that lead to environmental stressors and deter structural changes. These conditions also limit ordinary people's options for peace and environmental sustainability. Fortunately, more recent studies on the climate–conflict nexus highlight the complex network of actors and interests, especially at the local level.[71]

It has also been recognized recently that bottom-up approaches to environmental peacebuilding could transform our understanding of the complex and indirect relationship between climate and conflict.[72] The *local turn in peacebuilding* and its focus on local context, agency and inclusion is well placed to address the above criticisms and provide guidance,[73] but can in itself also be enriched by research efforts on climate change and peacebuilding. Yet, as already highlighted, despite growing in conceptual terms over the past decade, the local turn largely ignores the effects of climate change. This is a considerable gap in the local turn, as—beyond its local impact—climate change impacts are growing considerably, heavily affecting the most vulnerable, and are predominant in conflict-affected countries and localities.[74] It is thus important that research within the local turn considers how pre-existing local drivers of peace can be developed and supported to prevent the consequences of climate change from leading to, or exacerbating, conflict, and how policy-makers and practitioners can ensure that peacebuilding initiatives that consider the impacts of climate change are truly local, rather than being internationally formulated programmes involving local actors.

At the same time, climate impacts need to be incorporated into existing peacebuilding initiatives. However, to do this it is necessary to examine how to prioritize limiting the effects of climate change when local communities are facing multiple shocks. For international peacebuilders, the local community often consists in those actors to whom they have the best access, rather than those who would be the best to drive peace.[75] This poses the dual question of who is the local community, in the peacebuilding/climate impacts sense, and how international actors can best engage with them. In the climate security field, research around this question has been ambiguous. While stressing local agency,[76] key policy frameworks frame environmental peacebuilding in ways that reinforce power inequalities and favour international ownership rather than local agency.[77] Nonetheless, to be sustainable in its practice, peacebuilding needs to move beyond the local and gain support on multiple levels, and the scale of focus needs to be understood in terms of what is necessary to build peace and limit climate impacts.[78]

[71] Krampe, Smith and Hamidi, 'Security implications of climate development in conflict-affected states'.

[72] Ide et al., 'The past and future(s) of environmental peacebuilding'.

[73] Leonardsson and Rudd, 'The "local turn" in peacebuilding'; Mac Ginty and Richmond, 'The local turn in peace building'; Paffenholz, 'Unpacking the local turn in peacebuilding'.

[74] von Uexkull and Buhaug, 'Security implications of climate change'.

[75] Mac Ginty and Richmond, 'The local turn in peace building'.

[76] Ide et al., 'The past and future(s) of environmental peacebuilding'.

[77] Florian Krampe, 'Ownership and inequalities: exploring UNEP's Environmental Cooperation for Peacebuilding Program', *Sustainability Science* 16: 4, 2021, pp. 1159–72, https://doi.org/10.1007/s11625-021-00926-x.

[78] Shahar Hameiri and Lee Jones, 'Beyond hybridity to the politics of scale: international intervention and "local" politics', *Development and Change* 48: 1, 2017, pp. 54–77, https://doi.org/10.1111/dech.12287.

Finally, both conflict and the effects of climate change exacerbate existing inequalities, with the most vulnerable being the most affected. Yet, the most marginalized are often left behind in peacebuilding and peace processes—hence, the 'leave no one behind' principle is central to the UN 2030 Agenda for Sustainable Development. Peacebuilding research which takes the effects of climate change into consideration needs to understand who bears the burdens of climate-related challenges in communities. In addition, taking account of the gendered impacts of climate change,[79] it needs to consider how the gendered roles of different actors affect their perceptions and actions related to existing conflict, and, finally, how the active and valued participation of these marginalized actors can be ensured.

Hybrid peacebuilding　　　Despite attempts by external actors to export liberal peace, local actors have the agency to contextualize, negotiate, resist or even reject international norms, practices and institutions, resulting in a hybrid form of peace.[80] Hybrid peace is the outcome of accommodation, cooperation or compromise between international and local agents, networks and structures of peacebuilding.[81] Breaking away from a binary understanding of the international/ global and the local, hybrid peace represents the 'juxtaposition between international norms and interests and local forms of agency and identity'.[82] Climate change is likely to reconfigure the norms and power relations that influence the conditions for peace or conflict. It will bring about tensions between the global and local norms and practices on peacebuilding and climate action. It is therefore crucial to understand how the impacts of, and proposed solutions to, climate change can potentially bring about peace or conflict from these international/ global and local encounters in peacebuilding. The scholarship on hybrid peace can help inform future research and policy directions in recognizing and integrating local agency into global solutions to climate change and conflict.

In addition to the call in the previous subsection for research on climate change and peacebuilding to engage with local agencies and integrate local perspectives, future research and policy directions must be cognizant of existing power asymmetries that undermine the relevance and effectiveness of peacebuilding and climate action. A lack of such awareness could result in new or reinforced power asymmetries, feeding a vicious cycle of conflicts and risks. Hence, it is crucial to ensure that climate change mitigation and adaptation practices are relevant and considerate of local norms and power dynamics.

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[79] Richard S. J. Tol, Thomas E. Downing, Onno J. Kuik and Joel B. Smith, 'Distributional aspects of climate change impacts', *Global Environmental Change* 14: 3, 2004, pp. 259–72, https://doi.org/10.1016/j.gloenv-cha.2004.04.007; Rebecca Pearse, 'Gender and climate change', *WIREs Climate Change* 8: 2, 2017, e451, https:// doi.org/10.1002/wcc.451.

[80] Annika Björkdahl and Kristine Höglund, 'Precarious peacebuilding: friction in global–local encounters', *Peacebuilding* 1: 3, 2013, pp. 289–99, https://doi.org/10.1080/21647259.2013.813170; Volker Boege, Anne Brown, Kevin Clements and Anna Nolan, 'Building peace and political community in hybrid political orders', *International Peacekeeping* 16: 5, 2009, pp. 599–615, https://doi.org/10.1080/13533310903303248.

[81] Mac Ginty, 'Hybrid peace'.

[82] Oliver P. Richmond, 'The dilemmas of a hybrid peace: negative or positive?', *Cooperation and Conflict* 50: 1, 2015, pp. 50–68, https://doi.org/doi:10.1177/0010836714537053.

Contrary to the programmatic design of peacebuilding, hybrid peacebuilding focuses on the processes of peace formation; it is adaptive to uncertainty and reflexive to the most vulnerable to conflict and climate change.[83] The concept of hybridity is a reminder to constantly reconsider and reassess the myriad actors and factors involved in these processes. Peacebuilding is a complex and non-linear process. In addition, it is driven by dynamic interactions and evolving systems.[84] In the context of climate change, peacebuilding efforts must recognize and escape these path dependencies by breaking down institutional silos and programmatic objectives. This could be done by welcoming non-western norms and methodologies that could enhance or radically change existing practices on building peace and mitigating the effects of climate change. Many local and indigenous norms and practices on peacemaking and reconciliation have been delegitimized by externally driven peacebuilding processes.[85] Similarly, ecologically aligned ontologies and environmentally sustainable practices found in many Indigenous communities are either tokenized or romanticized, instead of empowered, in much of the global discussion on climate action.[86] How do we incorporate local knowledge and norms on peace and nature into efforts that combine peacebuilding and climate action? This is a question that technocrats alone cannot answer without meaningful and respectful interaction with consenting local, Indigenous and marginalized groups/communities.

Hybrid peace is not just an amalgamation of agencies and norms, but also a plot in the long and overlapping histories of peace and conflict. Climate change is one of the global transformations confirming the entanglement of natural and human history.[87] Hence, researchers, policy-makers and practitioners need to accommodate the legacies of colonialism, racism and other forms of oppression in societies that have experienced or are experiencing widespread conflict and are also highly exposed to climate change risks. For instance, colonial expansion 'prompted unsustainable means of resource extraction and disrupted indigenous ways of living in nature',[88] stunting institutional and financial capacities for resilience and adaptation amid uncertainties and disruptions. Climate change mitigation and adaptation must not replicate these historical injustices and reproduce oppressive structures that often fan violent conflicts and reproduce inequalities. It is, therefore, imperative to revisit *and* challenge, if needed, dominant frameworks underpinning our understanding of peace, conflict, and the causes and conse-

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[83] Cedric de Coning, 'Adaptive peacebuilding', *International Affairs* 94: 2, 2018, pp. 301–17, https://doi.org/10.1093/ia/iix251.

[84] Roger Mac Ginty and Gurchathen Sanghera, 'Hybridity in peacebuilding and development: an introduction', *Journal of Peacebuilding & Development* 7: 2, 2012, pp. 3–8, https://doi.org/10.1080/15423166.2012.742800.

[85] Elisa Randazzo, 'The local, the "indigenous" and the limits of rethinking peacebuilding', *Journal of Intervention and Statebuilding* 15: 2, 2021, pp. 141–60, https://doi.org/10.1080/17502977.2021.1882755.

[86] Szilvia Csevár, 'Voices in the background: environmental degradation and climate change as driving forces of violence against indigenous women', *Global Studies Quarterly* 1: 3, 2021, https://doi.org/10.1093/isagsq/ksab018.

[87] Dipesh Chakrabarty, 'The climate of history: four theses', *Critical Inquiry* 35: 2, 2009, pp. 197–222, https://doi.org/10.1086/596640.

[88] Dahlia Simangan, 'Disrupting the universality of the Anthropocene with perspectives from the Asia Pacific', in David Chandler, Franziska Müller and Delf Rothe, eds, *International Relations in the Anthropocene: new agendas, new agencies and new approaches* (Cham, Switzerland: Palgrave Macmillan, 2021), pp. 271–90.

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quences of climate change.[89] Further interdisciplinary research on the impact of proposed global solutions on local norms and practices will be fundamental to a climate-sensitive peacebuilding approach and conflict-sensitive climate action.

Climate change adaptation efforts have the potential to affect conflict dynamics in both positive and negative ways. It is crucial to examine how climate adaptation interventions can be designed and implemented in a conflict-sensitive manner, with local knowledge being central. Research should explore how climate adaptation measures can be integrated into peacebuilding frameworks to mitigate conflict risks and promote sustainable and resilient peace. This includes examining the potential trade-offs and synergies between climate adaptation and peacebuilding objectives, as well as identifying strategies to address potential conflicts that may arise during the implementation of adaptation initiatives. Furthermore, understanding the differential impacts of climate adaptation on various social groups and vulnerable populations, such as marginalized communities or internally displaced persons, is essential to ensure that adaptation measures do not exacerbate existing inequalities or contribute to new sources of conflict. By adopting a conflict-sensitive approach to climate adaptation, policy-makers and practitioners can enhance the effectiveness and sustainability of adaptation efforts while promoting peace and social justice.

Implications for future research and policy-making

The impacts of climate change are deeply affecting both peace and conflict. Peacebuilding can no longer exist without taking into consideration the effects of climate change. Peacebuilding practice shows signs that this has already been taking place. But research is lagging. This is not an agenda for research on climate impacts and peacebuilding, but rather a research agenda for which aspects should be included in peacebuilding research more broadly. Climate change affects the most vulnerable and the most marginalized the hardest, exacerbating inequalities and increasing grievances. In turn, this not only makes building peace more difficult, but changes the dynamics of how a society sustains, reinforces or builds peace. As a result, both peacebuilding research and policy-making must adapt quickly to ensure that they are indeed working towards sustainable peace.

We have outlined sub-themes that should be taken into consideration in both research and policy-making. At the same time, we have highlighted why taking climate impacts into consideration is important for peace operations' effectiveness, peace operations' responses, international peacebuilding efforts, local peacebuilding efforts and broader international responses in conflict-affected societies, and posed several key research questions. Our hope in doing so is to encourage future research that brings climate impacts and peacebuilding together and increases our knowledge of what it means to build and sustain peace in this rapidly changing world.

[89] Ayesha Siddiqi, 'The missing subject: enabling a postcolonial future for climate conflict research', *Geography Compass* 16: 5, 2022, https://doi.org/10.1111/gec3.12622.

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Acknowledging the existing research gaps within the four research sub-themes, we propose seven principles that must form part of the approach for an emerging research agenda on climate change impacts and peacebuilding:

1) Increase interdisciplinary engagement between climate change research, development research, peace and conflict research, and environmental peacebuilding;

2) Engage with local actors and organizations and integrate local perspectives, while furthering understandings of the capacity of the state and international actors to address power asymmetries that undermine peacebuilding effectiveness;

3) Prioritize indigenous knowledge, as it includes unique knowledge systems and practices that can help shape adaptive responses to climate-driven environmental change at the local level and beyond. At the same time, form greater understandings of how climate change is affecting the adaptive capacity of Indigenous knowledge systems;

4) Design more iterative adaptive peacebuilding interventions that can respond to the cross-sectional impacts and challenges—and opportunities—that climate change poses for peacebuilding;

5) Further our understanding of the potential for transforming the governance of peace and security, in light of climate change considerations.

6) Build understandings of where mitigating the effects of climate change fits into the priorities of local communities facing multiple challenges, and how it can be prioritized with a multifaceted approach; and

7) Build an understanding of the negative impacts of peacebuilding activities on the environment.