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Climate Change and Human Security: The International Governance Architecture, Policies and Instruments

Michael Mason

Other chapters in this volume set out the multiple threats posed by climate change to human security. Without restating these claims here, it is nevertheless useful to remind ourselves that a prominent theme concerns how human security framings recast the idea of climate change as a development-oriented rather than environmental challenge. According to this approach, the dangers of climate change reside less in the incidence and magnitude of (predicted) biophysical events than in their apprehension as threats to human well-being, particularly for the poor and disadvantaged. The human security lens invites us to view climate change in a people-centred way, admitting it as only one of a number of conditions of life which may in practice jeopardise opportunities for safe, dignified and inclusive human development. What can be readily acknowledged is that there are diverse trajectories of climate-related influence on human lives and livelihoods, though it is the severe stress on vulnerable peoples attributed to present and future climate change that has justified its 'human securitisation'.

This chapter examines the disparate architectures, policies and instruments drawn on in efforts to conjoin climate change and human security governance. The institutional starting-point is not promising: Held (2010, pp. 185-88) pinpoints the 'paradox' of global governance as the chronic mismatch between, on the one hand, the growing cross-border scope and intensity of collective problems - including transnational security and environmental risks - and, on the other, weak problem-solving capacities at international and regional levels. He ascribes the key shortcomings here to a multilateral order, still bearing the institutional imprint of a mid-twentieth century geopolitical settlement, not yet fit for purpose in our times. As noted below, neither climate change nor security are consensual domains for global governance. Both are dominated by state-centred decision-making which prioritises national interests over human well-being: the international security system features enduring schisms over conflict prevention and management, while there are also significant disagreements between states concerning the ambition of international action on climate change. Conjoined governance addressed to 'environmental security' or 'climate security' might be expected to compound the institutional indeterminacy here. However, there is also the possibility that such a convergence could instead offer the prospect of coordinated action integrating diverse policy communities (Barnett et al., 2010, pp. 9-10). This, at least, is acknowledged within the United Nations (UN) system, where, as we shall see, explicit governance connections have been made between human security and climate change.

The first half of the chapter reviews those limited global governance policies and instruments recruited to address the human security implications of climate change. This involves both a survey of the emergence of human security concerns within global climate governance - notably the UN Framework Convention on Climate Change (UNFCCC) - and the recognition by some security governance actors that climate-related harm represents a significant threat to the lives and livelihoods of many people. Reference is made to several governance initiatives to determine whether there is anything other than scattered institutional moves to enhance human security against major climate hazards. In the second half of the chapter, I switch to a normative analysis of whether a more integrated governance to this end is justified and, if so, what it might look like. There are systemic obstacles to the clustering of human security and climate change decision-making. Even if

operational concerns can be allayed, it would be rash to suggest more than general principles of institutional design which may be appropriate. I argue that, while the global climate regime holds epistemic and governance authority over the management of 'dangerous' climate change, the effective inclusion of climate concerns in human security decision-making is most likely to be achieved by consolidating the legal coherence and force of the latter - especially in relation to the development of human rights and humanitarian norms on the prevention of climate harm. Such a rights-based architecture would also afford human security governance at least some protection from, and critical engagement with, the power-oriented politics of the international security system.

GOVERNING CLIMATE CHANGE AND HUMAN SECURITY: REGIME INDETERMINACY

There is no fixed institutional site for international rule-making on climate change as a threat to human security. What I characterise in this section as 'regime indeterminacy' denotes the absence of an agreed institutional authority or forum for addressing climate change and human security in an integrated manner. As will be shown below, while human security is now acknowledged as a legitimate governance issue within the international climate regime, this has not yet led to any formal policy decision by the UNFCCC to protect or enhance human security in the context of climate change. Similarly, climate change is recognised as a serious threat to well-being within various global initiatives on human security, but its incorporation into these nascent governance mechanisms is ad hoc and uncertain.

Since its signing in 1992, the UNFCCC has served as the key instrument for global rule-making on climate change. Global climate governance is generally cooperative, but away from the UNFCCC, heterogeneous and fragmented - encompassing related treaties (e.g. Montreal Protocol), transnational municipal networks, subnational actors, bilateral or club agreements and corporate climate initiatives (Biermann et al., 2010; Keohane and Victor, 2011). The near-universal membership of the climate change convention reveals the shared agreement of states that action is necessary to prevent 'dangerous anthropogenic interference with the climate system' (UNFCCC, Article 2), although the history of the treaty regime attests to enduring differences between Parties over appropriate responsibilities and commitments. To achieve global climate stabilization at safe levels, the UNFCCC has focused on mitigation actions, notably cuts in greenhouse gas emissions. Binding commitments to reduce emissions had to await the 1997 Kyoto Protocol (in force since 2005), which placed differentiated obligations on industrialised countries who ratified the agreement (excluding of course the United States). Even the modest Kyoto targets for 2008-2012, well short of the emissions reductions deemed necessary by the Intergovernmental Panel of Climate Change (IPCC), were only partially met. By 2012, UNFCCC negotiations to secure a more comprehensive and deeper reductions had resulted in voluntary commitments from all major emitting countries but no new legally binding agreement. The tortuous progress of the UN climate treaty regime has led to increasing calls for a more decentralised system of global climate decision-making. Taking note of the myriad of climate governance initiatives outside the UNFCCC process, the argument is that a loosely coordinated, flexible approach will facilitate innovative, ambitious measures that, tailored to specific sectors or regions, can bypass barriers to global collective action (e.g. Falkner et al., 2011, Hoffmann, 2011; Victor, 2011).

It is not necessary here to engage with the debate on the appropriate architecture for global climate governance, except to note that the idea of human security barely registers in the competing blueprints for institutional renewal or reform. Both the UNFCCC and

Kyoto Protocol contain no references to human security, yet if it is conceded that dangerous climate change poses a potentially catastrophic threat to future conditions of human life, then its framing as a serious challenge to human security seems justifiable. For O'Brien et al. (2010, p. 13), this implies a shift of focus from human-induced environmental change to what these changes mean for vulnerable individuals and communities. Indeed, it is through the lens of climate vulnerability and adaptation that the human security concept is gaining currency within the UN climate regime. The UNFCCC requires Parties to take into account the needs of particularly vulnerable developing countries in managing the adverse effects of climate change, while the Kyoto Protocol provides a financial mechanism, the Adaptation Fund, to assist these countries in meeting the costs of climate change adaptation. Responsibility to support funding of adaptation in developing countries is also enshrined in the 2010 Cancun Agreements, including the allocation of substantial new monies through a Green Climate Fund. While these actions are expressed as state obligations and entitlements, UNFCCC assistance to developing countries has included vulnerability assessments centred on human well-being, gauging local coping strategies and adaptive capacity in the context of natural resource-dependent livelihoods (UNFCCC, 2007, pp. 15-16).

UNFCCC deliberations on climate vulnerability have been significantly shaped by the IPCC, especially the contribution of Working Group II (Impacts, Adaptation and Vulnerability) to successive assessment reports and IPCC-sponsored research on adaptation and vulnerability. IPCC framings of vulnerability to climate change have increasingly stressed the socioeconomic and political conditions that affect how individuals and communities cope with the impacts of climate-related change (Adger, 2006; Leary et al. 2008). A concern for the plight of particularly vulnerable populations has invited human security concepts and interpretations. Initially these centred on climate variability and change impacts on food production, recasting the notion of 'food security' as applying to households and individuals rather than national agricultural production (Boko et al., 2007, pp. 454-56). This concern with food security fed into UNFCCC decision-making on adaptation, most recently in the Work Programme on Loss and Damage (Subsidiary Body for Implementation, 2011, p. 47). Since 2010 the IPCC has explicitly embraced ideas of human security, which can be attributed at least in part to the agenda-setting activities of lobbying coalitions (e.g. the Climate Change, Environment and Migration Alliance) and epistemic communities (e.g. the Global Environmental Change and Human Security Project). By the time of the Fifth Assessment Report, IPCC Working Group II devoted a full chapter to human security as a necessary conceptual matrix for understanding the differential vulnerability and adaptive capacity of people exposed to climate change.

The invocation of human security in the forthcoming Fifth Assessment Report of the IPCC may be a necessary step in legitimating the concept for UNFCCC Parties, but as yet it has received no policy endorsement within the climate change treaty regime. Climate vulnerability and adaptation seem the most likely governance domains to receive such a move. In their review of UN funding schemes relevant to climate change adaptation, encompassing UNFCCC-managed or mandated funds, McGlynn and Vidaurre (2011) observe no references to human security in the terms of reference or guidelines in any of these financial instruments. Yet human security analysis has emerged in climate adaptation initiatives funded by the United Nations Development Programme (UNDP), which is assisting poorer countries in adaptation financing and policy-making. In its 2007/2008 Human Development Report, UNDP treated climate change as arguably the greatest challenge facing global poverty reduction and human development efforts (UNDP, 2007). Its emphasis on protecting poor and vulnerable households from climate shocks resonated with IPCC work on climate vulnerability, and the gravity of dangerous climate

change as an existential threat justified, for UNDP, a human-centred understanding of climate insecurity.

To be sure, the UNDP interest in climate change emerged from its own influential formulation of human security, broadly defined in the 1994 Human Development Report as 'freedom from fear and freedom from want' then specified as 'safety from such chronic acts as hunger, disease and repression and ...protection from sudden and hurtful disruptions in the patterns of daily life - whether in homes, jobs or communities' (UNDP, 1994, p. 23). While this human security concept was articulated by a UN body with a human development mandate, the global governance domain addressed, even challenged, by its construction was the international security system. The timing was opportune for its re-definition of security away from state-centred threats and military conflicts: a post-war Cold War had opened up discursive space for recognizing multiple, inter-related threats to human well-being. For its proponents (e.g. Commission on Human Security, 2003; Gasper 2010), the idea of human security exposes the dysfunctionality of global security decision-making, tied to national military capacities and technologies: the person-centred understanding of human security implies instead a universal or cosmopolitan coverage indifferent to state borders. For its critics, by contrast, the concept mistakenly retains 'security' as a desired end goal, which not surprisingly has resulted in its co-option by wielders of political and economic power (e.g. Neocleous, 2008; Turner et al., 2011).

The human security concept has acquired significant currency since the mid-1990s. Not surprisingly, it has appeared in a range of National Human Development Reports sponsored by UNDP, particularly those covering volatile, conflict-prone countries - including Afghanistan, East Timor, Iraq and Sierra Leone (Jolly and Basu Ray, 2007; UNDP, 2008). Environmental degradation constitutes a separate category of threat to human security in UNDP's 1994 Human Development Report, and features in, for example, the national reports for East Timor and Sierra Leone. UNDP embraces a broad concept of human security, which corresponds to its usage in the UN system and an influential formulation by the Japanese government. However, narrower definitions, which are less amenable to environmental threats, have also attracted policy support. For example, the Canadian and Norwegian governments interpret human security as pertaining only to personal physical security and civil rights (Tadjbakhsh and Chenoy, 1997, pp. 9-38; Gasper, 2010).

Minimal definitions of human security can *exclude* climate change damage from their purview on account, it is claimed, of the lack of intentionality in climate-induced harm to persons (Gasper, 2010, p. 27). There has also been resistance by several UN Security Council members - notably China and Russia - to the inclusion of climate change as relevant to the Council's primary responsibility for maintaining international peace and security (a proposal raised by the UK during its April 2007 presidency of the Security Council). Nevertheless, climate change is now recognised across the UN system as posing major challenges both to human and national security. A report issued by the Secretary-General in 2009 presented climate change as a threat multiplier, exacerbating existing sources of conflict and security (UN Secretary-General, 2009). This statement reflected the preference of many Member States to focus on the security of individuals and communities, and also for a strengthening of efforts to mainstream climate change within the UN (e.g. UN Chief Executives Board for Coordination, 2008). A subsequent report by the Secretary-General on human security repeated the claim that climate change, and its interactions with other insecurities, represents a serious threat to human lives and livelihoods (UN Secretary-General, 2010, p. 12).

That the human security concept has some policy traction in the UN system reflects the recommendations of a global Commission on Human Security, including its broad definition of human security as the protection of fundamental freedoms (Commission on Human Security, 2003). One commission proposal led to the creation of an Advisory Board on Human Security to advise the UN Secretary-General on the promotion and dissemination of the human security concept. Beyond UNDP, human security projects have been undertaken by a wide range of UN agencies, including the Office of the UN High Commissioner for Refugees, the Food and Agriculture Organization (FAO), the World Health Organization and the UN Development Fund for Women (UN Secretary-General 2010, pp. 2-3). The main dedicated instrument for advancing human security goals is the UN Trust Fund for Human Security established in 1999 and managed, since 2004, by a Human Security Unit in the Office for the Coordination of Humanitarian Affairs (OCHA). However, a review of the Trust Fund issued in 2010 by a UN internal audit body noted limited buy-in on the part of Member States, with a heavy dependence on financial support from the Japanese government. It also expressed concern that there had been no comprehensive evaluation of the Fund's activities in terms of human security outcomes, despite financial commitments by 2009 of \$355 million (Office of Internal Oversight Services, 2010, pp. 3-5). The Human Security Unit at OCHA is ambitiously tasked with integrating UN human security activities across all UN activities: obstacles to this integration, according to senior UN staff, are thrown up by divergent financial systems and mandates, as well as a lack of understanding of the concept by UN Country Teams (Advisory Board on Human Security, 2011).

Given this challenging institutional context, it is noteworthy that OCHA is making modest progress across the UN system in highlighting climate change as a human security issue. Recent (2011-) multi-agency projects approved by the UN Trust for Human Security include an FAO-led project to strengthen rural livelihoods severely affected by climate change-induced drought in Lesotho and a UNICEF-led project to enhance community resilience and coping with climate change and natural disasters in Vanuatu (Human Security Unit, 2011, pp. 7-8). More generally, climate change is a thematic priority for OCHA and, since December 2008, the agency has led an advocacy campaign to raise awareness of the humanitarian implications of climate change. As set out in a 2009 speech by the UN Under-Secretary General for Humanitarian Affairs and Emergency Relief Coordinator, climate change threatens to overwhelm a global humanitarian system designed to respond to trigger events (e.g. natural disasters, conflicts) rather than chronic humanitarian needs arising from 'slow onset' climate-induced harm. Addressing effectively the latter requires, it is claimed, new models of prevention, preparedness and response (OCHA 2009, pp. 9-11).

Ironically, by representing climate change as an autonomous driver of humanitarian impacts, OCHA has neglected the particular trajectories of climate-related harm experienced by civilians in (post)conflict environments - affected communities for whom it has an express mandate to assist. Populations facing or recovering from conflict are especially vulnerable to climate variability and extremes because of impaired coping options and low adaptive capacity (Barnett, 2006; Mason et al., 2011). Scholarly work on the relationships between determinants of climate change, human security and conflict (e.g. Barnett and Adger 2007; Mason et al. 2012) has raised questions about the responsibilities and capabilities of institutional actors - including states, international organisations and donors - which have yet to be addressed by UN agencies facing climate vulnerability in war-related environments. There are actors and modalities in the UN system which could in principle accommodate a human security understanding of climate

(and other environmental) hazards in (post)conflict areas; for example, the post-conflict needs assessments undertaken by the UN Environment Programme and an emerging concern with environmental stresses in the UN Peacebuilding Commission (Swain and Krampe, 2011, pp. 207-208). As yet, though, there is little institutional movement in this direction.

It can be concluded, therefore, that despite the embrace of human security by international organisations addressing climate change and human development/humanitarian needs, there remains no settled global governance space for enhancing human security against climate change. That the main impetus for promoting this goal has come from UN bodies suggests that the multi-agency funding being facilitated by OCHA's Human Security Unit is the most appropriate instrument for conjoining climate change and human security activities - at least within the UN bureaucracy. The 'mainstreaming' of human security in UN activities is a politically delicate project, deferential to the sovereignty sensitivity of those Member States anxious that the concept could be used to justify interventionist actions (e.g. under the responsibility to protect norm). The Report on Human Security of the Secretary-General asserts that, on the basis of its mandate to address security, development and human rights, human security is central to the work of the UN (UN Secretary-General, 2010, p. 17); yet at the same time, human security is not presented as a strategic priority under the Secretary-General's Five-Year Action Agenda launched in January 2012. This is in contrast to the 'generational imperative' of climate change (UN Secretary-General, 2012). Similarly, the wave of collaborative governance with non-state actors fostered since 1998 by the UN Fund for International Partnerships has generated far more funding for environmental (including climate change) projects than those relating to peace, security and human rights; in other words, human security-oriented activities are also perceived as contentious by many private partners (Andonova, 2010, p. 45).

The ambivalence over human security in UN governance practice, combined with the uncertain location of human security in the UN climate change convention, invites a normative analysis of what institutional (re)design may be needed to advance more effectively the protection of core human values in the context of harmful climate change. This is the focus for the second half of this chapter.

INTEGRATING HUMAN SECURITY NORMS IN THE GLOBAL GOVERNANCE OF CLIMATE HARM

Understanding climate change as an issue of human security represents an explicitly normative approach which, according to its proponents, rejects the dominant 'environmental' narrative of climate change. By reifying the environment as an independent, naturalised category, governance responses under this mainstream perspective are viewed as favouring techno-managerial fixes which preclude questions about the moral responsibility and political-economic interests of those who profit most from high-carbon development paths. A human security framing is, in contrast, seen as opening space for critical reflection on, and policy engagement with, the structural drivers of climate vulnerability as they interact with other threats to human well-being (Adger, 2010; O'Brien et al., 2011, pp. 11-14). The normative intent is both to reveal how climate harm is implicated in the creation of particular insecurities faced by vulnerable people and how their fundamental freedoms can be protected or even enhanced.

From such a normative perspective, the identification of (potential) harm is pivotal to the justification and governance application of human security ideas. As Mike Hulme (2010,

pp. 191-196) argues, the ultimate objective of the UN climate change convention, as articulated by Article 2, is usually abbreviated as the avoidance of 'dangerous climate change'; yet such a notion of danger defies easy quantification, exposing the limits of scientific risk analysis. Interpretations of danger, he claims, are always context-specific and value-laden, because the experience of insecurity only becomes meaningful for individuals or groups in particular situations. This experiential realm of harm perception is a necessary element for the construction of human security. The additional challenge of defining climate danger is that it constitutes an 'un-situated risk', with distant, intangible sources and diffuse, indirect causes (Hulme, 2009, p. 196). Viewing UNFCCC Article 2 through the lens of human security would therefore seem to render even more intractable the global governance efforts to manage climate risk, as the current and projected trajectories of specific harm are too uncertain and imprecise to register in terms of human security.

However the tendency to portray dangerous climate change as a governance problem *sui generis* overlooks the international legal architecture in which the UNFCCC is embedded, which offers, if not blueprints for collective action, then at least principles to steer institutional coordination. Of cardinal relevance to the Article 2 objective to avoid dangerous anthropogenic interference with the climate system is the *harm prevention principle* recalled in the preamble of the climate change convention:

States have, in accordance with the Charter of the United Nations and the principles of international law, the sovereign right to exploit their resources pursuant to their environmental and developmental policies, and the responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other States or of areas beyond the limits of national jurisdiction.

This paragraph repeats Principle 2 of the 1992 Rio Declaration on Environment and Development, which itself is a slightly amended version of Principle 21 of the 1972 Stockholm Declaration on the Human Environment. Both UN declarative principles codify what is widely acknowledged as a general environmental obligation in international law. The principle is endorsed, beyond the UNFCCC, in a range of multilateral environmental agreements, including treaties addressing air and marine pollution, biodiversity conservation, radioactive contamination and desertification. All these legal regimes share as their governance problem the prevention and/or mitigation of inadvertent environmental harm, usually as a result of behaviour by state or non-state actors otherwise deemed permissible. The issue is that the accumulation of harm for vulnerable entities has, for a given governance authority, approached or crossed a threshold of unacceptable injury.

Again, the core harm prevention obligation within the climate change convention is accorded determinacy by its resonance with a background set of normative expectations in international environmental law. A common corollary of the harm prevention principle is the legal requirement of due diligence, such that states take all necessary measures as may reasonably be expected in all circumstances (Okowa, 2000, p. 81). Due diligence allows a consideration of problem-specific and other contextual factors in the application of harm prevention rules, tailoring obligations with reference, for example, to historical responsibility, state capability and the likelihood or seriousness of danger. The UNFCCC famously differentiates responsibilities for tackling climate change and its adverse effects in relation to the greater culpability and mitigation capacity of developed country Parties, as well as the special needs and circumstances of developing country Parties. These 'common but differentiated responsibilities and respective capabilities' are underpinned by an explicit appeal to 'equity' (Article 3(i)). Harm prevention obligations in the climate change treaty system are also qualified by the adoption of a precautionary principle - that

Parties should take 'precautionary measures to anticipate, prevent or minimize the causes of climate change and mitigate its effects' (Article 3(iii)). As expressed in Principle 15 of the Rio Declaration and other multilateral environmental treaties, the intent is to prevent a lack of full scientific certainty serving as a justification for postponing cost-effective measures designed to prevent serious or irreversible damage as a consequence, in this case, of climate change. This principle is not immune for criticism (e.g. Sunstein, 2005), but nevertheless is regarded by UNFCCC Parties as a legitimate expression of due diligence in negotiations over commitments to avoid dangerous climate change.

The notion of human security invites a reconceptualisation of climate harm prevention from the perspective of human safety, well-being and freedom. Neil Adger provides useful pointers on applying human security to climate change impacts, highlighting, for example, how 'freedom from want' could encompass increased resource scarcity caused by declining water availability or land productivity, and 'freedom from fear' could include risks to health or place of residence as a consequence of climate-induced damage (2010, p. 281). The assessment of climate harm according to human security would, in any given context, need to identify both major climate risks and also preventive mechanisms for risk avoidance or reduction, while at the same time situating these stresses in relation to other sources of human insecurity. Uniting the specification and prioritisation of threats is a concern with the vulnerabilities of affected individuals and communities, including their capacity to adapt to threats in a way that builds resilience (Adger, 2010).

If, following Adger, we take as a key criterion of human security the protection of the most vulnerable people, its institutional application in the UN climate change regime is currently constrained by the state-centred formulation of responsibilities and entitlements. As already noted, there are express commitments to address the needs of particularly vulnerable countries, justified by the principle of differentiated treatment; but the measures adopted in practice have not effectively captured unequal vulnerabilities within national populations. For example, under the Clean Development Mechanism (CDM) - one of the flexibility mechanisms of the Kyoto Protocol - there is a problem, first, with the outcomes of disbursements to developing country Parties under the Adaptation Fund (mainly financed by a 2% levy on Certified Emissions Reductions under the CDM). Level of vulnerability to climate change is an important criterion for Adaptation Fund support of adaptation projects and programmes in developing countries. Yet McGlynn and Vidaurre (2011) have highlighted the relatively modest financing available in relation to the climate adaptation needs of target countries and the long-term sustainability of a fund tied to the uncertain future of the Kyoto Protocol. Second, in relation to the CDM projects themselves, there is no international supervision of the extent to which these address the conditions of the most vulnerable: authority on technological and project choices is delegated to host countries, who often have recourse to other policy considerations, such as trade and investment interests. Moreover, the prominent role of private sector actors in CDM projects, and carbon markets more generally, has skewed climate financing away from particularly vulnerable groups (Cullet, 2010, pp. 191-192).

Any expectation that the protection of those people most vulnerable to climate change harm would find normative support from the commitment to equity in Article 3 of the UNFCCC is also frustrated by the consistent expression of this moral principle in terms of inter-state relations. To be sure, in this article there is an explicit recognition of inter-generational equity - that the climate system should be protected for the benefit of both present and future generations of humankind. And human security would seem a relevant framework for identifying scenarios that pose catastrophic costs to future generations. Yet the weighting given to the welfare of future generations is typically interpreted through the

lens of national interests. The present costs of abatement actions presumed to benefit future generations usually appear in UNFCCC negotiations in terms of disputed burden-sharing between developed and developing countries. Similarly, UNFCCC decision-making on inter-generational equity addresses the costs (and benefits) of mitigation and adaptation actions as received by Parties to the climate change convention and Kyoto Protocol. There are of course differences over what equity means on practice, including its moral kinship to ideas of fairness and justice (see Soltau, 2009), but not over the understanding that it applies above all to an interdependent community of sovereign states.

While public international law is by definition state-centric, there are multilateral instruments which demonstrate that it is indeed possible to prioritise harm protection for vulnerable individuals and groups. Andrew Linklater (2011, pp. 36-41) identifies a growing cluster of 'cosmopolitan harm conventions' designed to protect people from avoidable harm regardless of their national citizenship status. With roots in international agreements covering the welfare of non-combatants during war, a cosmopolitan regard for protecting the vital interests of vulnerable people is now embedded in conventions covering, for example, genocide, apartheid, torture and terrorist bombings. Their preoccupation with safeguarding the bodily integrity and dignity of human beings in situations of extreme danger falls within the moral compass of human security. Recognising that the damage caused by climate change is, like other instances of transnational environmental harm, distinct from direct forms of violence, its potential for serious injury to people can still justify a cosmopolitan construction of harm prevention (Linklater, 2011, p. 39; Mason, 2005, pp. 69-75). I follow this logic to argue that, given the very limited inroad of human security thinking in the UN climate change regime, there is currently more institutional scope for addressing the human security effects of climate change by applying rules of conduct developed in the fields of (i) human rights governance and (ii) global humanitarian governance.

(i) Human rights governance

The relationship between climate change and human rights has already been examined at the UN by the Office of the High Commissioner for Human Rights (OHCHR), which was charged in March 2008 by the UN Human Rights Council with undertaking an analytical study of the issue. In its report, OHCHR cautions that climate change effects may not necessarily violate human rights, but that human rights obligations still provide important protection to individuals whose rights are negatively affected by climate change or responses to it. These rights impacts are potentially wide-ranging, though those human rights most directly threatened are judged to include rights to life, food, water, health, housing and self-determination (OHCHR, 2009, pp. 8-15). Importantly, OHCHR recognises that the effects of climate change will be felt most acutely by vulnerable individuals and groups, noting that states are already legally bound to address such vulnerabilities in accordance with rights instruments promoting equality and non-discrimination (OHCHR, 2009, p. 15). The report stresses existing governmental duties under international human rights law, which encompass national obligations to realise substantive and procedural rights, as well as international obligations to cooperate in the promotion and protection of human rights. These recommendations have not been ignored: the UN Human Rights Council has cited the report in encouraging its expert groups ('special mandate-holders') to address climate change within their domains of responsibility, and human rights bodies now have justification to consider climate change effects within their monitoring remit (Knox, 2009, p. 477). Insofar as respect for human rights serves as a benchmark for human security, such institutional moves are a necessary step in protecting vulnerable people from various trajectories of serious harm as a direct or indirect consequence of

climate change. Of course, they also rely on high levels of human rights protection across the international community, which remains an ambitious expectation. Human rights governance features standards and instruments for ensuring that those breaching human rights are held to account, including the availability of remedies and redress for victims. This is arguably the most difficult area for institutionalising the protection of vulnerable individuals and groups from climate-induced injury, in part because of difficulties attributing harm to particular state or private actors. As an application of territorial responsibility, the UNFCCC apportions accountability obligations to governments, but the treaty regime does not provide direct remedies to those people disproportionately affected by climate harm. In this respect, the climate change convention is no different from other multilateral environmental agreements which avoid prescribing state liability for actual environmental damage, reflecting the preference of the international community for private liability systems (Mason, 2005, pp. 116-119). Opportunities are gradually opening up for affected individuals and groups to pursue transnational civil litigation against particular state or corporate actors for climate harm. Vulnerable communities are often reliant on assistance from external actors to bring such actions, which creates an inevitable selectivity in victims represented. Similarly, a reliance on diverse domestic systems of liability also limits the exercise of private law remedies to particular legal jurisdictions, with the US currently serving as a key testbed for such 'climate justice' actions (Grossman, 2009; Abate, 2010). While an imperfect instrument for providing direct remedies to parties facing serious climate harm, tort-based climate litigation does highlight an accountability deficit in global climate governance.

(ii) Global humanitarian governance

Human rights protections are an important element of international assistance dealing with the humanitarian consequences of climate-related emergencies. However, humanitarian rules comprise a distinctive set of governance policies and instruments, which are designed to limit the harm caused by disasters and armed conflict. As such, they prescribe assistance for those experiencing particular patterns of human insecurity. Alongside the climate change work of OCHA mentioned above, there have been efforts to promote global coordination of humanitarian assistance on climate harm through the work of a task force on climate change, migration and displacement reporting to an Inter-agency Standing Committee of UN and non-UN humanitarian agencies. The focus of the task force on climate-induced migration and displacement reveals a high-level humanitarian concern about developing coherent, workable rules to meet the challenge of substantial numbers of people expected to be displaced or even made stateless by climate change. Significantly, the UN High Commissioner for Refugees (UNHCR) has criticised use of the term 'climate refugees' to describe such people, fearing that it 'could potentially undermine the international legal regime for the protection of refugees whose rights and obligations are quite clearly defined and understood' (UNHCR, 2009, p. 9). For the same reason, it has opposed amending the Convention Relating to the Status of Refugees 1951 to include such displaced persons. Nevertheless, there is growing support for a new legal instrument to provide dedicated protection to those suffering involuntary movements due to climate-related changes (e.g. Docherty and Giannini, 2009; McAdam, 2011). No such assistance is set out in the UN climate change treaties, so the most likely domain for developing relevant measures is global humanitarian governance.

Concerned as it is with regulating the conduct of armed conflict, international humanitarian law is a distinct and essential subset of this governance field. Its broad aim to protect individuals and groups from the effects of war finds resonance with those applications of the human security concept to (post)conflict areas, as noted above for UNDP Human Development Reports. The legal and policy authority of international humanitarian law is of

course far greater than that of human security, but the latter still has value in situations of armed conflict by highlighting in a holistic way the compounded stresses (war-related and otherwise) faced by vulnerable individuals and groups. This is how a human security perspective could identify the direct and indirect relations between conditions of warfare and climate vulnerability. Existing humanitarian law includes provisions prohibiting extreme and disproportionate damage to the environment by combatants, but is imprecise regarding the specific protection and assistance available to civilians whose vulnerability to climate harm may be exacerbated by military actors (e.g. severe restrictions in livelihood options and personal insecurity). The emerging subdiscipline of 'warfare ecology' has opened up areas of enquiry looking at the combined biophysical and human effects arising from war-related conditions (Machlis et al., 2011). Should this research delineate how hostile military forces are accentuating the vulnerability of populations to serious climate harm, there will be evidence for arguing that such actions may breach the general duty on combatants to protect civilian populations. At the moment, climate change tends to be represented as an external variable shaping the long-term environmental conditions for people in post-conflict environments (UNEP, 2009, p. 11). A recognition, instead, that combatants can intensify the short-term vulnerability of civilians to climate (and other environmental) stresses would bring climate-related harm more squarely within the scope of international humanitarian rule-making and enforcement.

For global governance concerned with human rights and humanitarian assistance, there are existing rules of conduct which, in principle, cover certain expressions or experiences of climate harm. This has been acknowledged by lead UN agencies on human rights and humanitarian affairs, even if there are also uncertainties about the appropriate governance instruments to assist those facing a high risk or incidence of climate-related damage affecting their vital freedoms. A fundamental challenge here is a structural mismatch between the UN climate change regime and the rights-based global regimes directed at the protection of vulnerable human beings. Humphreys captures neatly the systemic differences between the two governance domains:

One [climate change] is a regime of flexibility, compromise, soft principles and differential treatment; the other [human rights] of judiciaries, policing, formal equality and universal truths. Faced with injustice, one regime tends to negotiation, the other to prosecution (2010, pp. 316-317).

The search within human rights and humanitarian governance for remedies available to people seriously threatened by climate harm reflects a major accountability deficit in the UNFCCC architecture. It is not surprising, therefore, that human security has received support as a mediating or bridging concept between these disconnected areas of governance - one that highlights the predicament of those most vulnerable to 'dangerous' climate change.

At the same time, there are also potential pitfalls with such a move. Including climate change threats within the purview of human security risks institutional overstretch in what is still a nascent, uncertain domain of governance. The expansive take on harm prevention provided by human security has unsettled critics of this approach on account of its apparent open-endedness (see Jolly and Basu Ray, 2007, pp. 465-466; Gasper, 2010, p. 40): according policy attention to diffuse climate change effects is unlikely to allay such concerns. In operational terms, much will depend, therefore, on ascertaining climate risks or harm with enough precision to factor them in when prioritising serious threats to human well-being. Here the epistemic authority of the IPCC is likely to be crucial in validating the type of climate information deemed credible enough to feature in substantive assessments of human security, which would also need to incorporate the bottom-up, experiential

accounts of affected groups. Such assessments may enable the identification of prima facie breaches of human rights or humanitarian rules caused by climate-related harm largely attributable to the actions or omissions of responsible parties. Reaching this (appropriately) high threshold of proof should trigger further investigation by relevant monitoring and enforcement bodies within global human rights and humanitarian governance. Of course, human security goals are also served by preventative policy actions - for example climate adaptation planning to increase the resilience of the most vulnerable (Adger and Nelson, 2010). However, mechanisms providing rights-based accountability for individuals and groups facing serious climate harm are still rudimentary, warranting greater political attention and policy development.

CONCLUSION

The idea of human security now has significant currency in a range of global policy discourses and has received high-level endorsement within the UN system. It is also recognised as relevant to the global governance of climate change, most notably in recent deliberations by the IPCC and, implicitly, in UNFCCC commitments to prioritise the needs of those judged to be most vulnerable to climate-related harm. As noted in this chapter, though, there has been no formal declaration on human security by the UNFCCC, so the principal international architecture for regulating climate change does not (yet) feature dedicated measures for advancing human security as a regime goal. Climate change as a threat to human security has instead emerged as a key concern within the human development reporting process overseen by UNDP - the agency credited with popularising the concept - while the UN has given its lead humanitarian office the strategic responsibility for managing climate change projects supported by a human security trust fund. Despite statements by the UN Secretary General that climate-induced harm is a major source of human insecurity, there remains no settled governance authority for enhancing human security against 'dangerous' climate change - a situation I labelled 'regime indeterminacy'.

In the second half of the chapter I argued that greater governance coherence for this area finds normative support from cosmopolitan notions of harm prevention, which universally accord moral priority to the protection of people from unnecessary injury. Cosmopolitan harm conventions represent the institutionalisation of this perspective: they resonate with ideas of human security, but hold greater political and legal force. Interpreting climate threats along cosmopolitan lines therefore allows an integration with pre-existing rules of conduct relating to the prevention and mitigation of harm for vulnerable individuals and groups. At the moment, the clearest expression of such rules is found in international regimes concerned with human rights and humanitarian protection. I noted above that these regimes feature instruments that could address particular instances of climate-related harm. While their coverage is necessarily selective, and may not capture all the possible human security effects of climate change, the added value of these regimes to global climate governance is both a recognition of serious climate-related threats infringing on vital human interests and also adjudicatory mechanisms offering rights-based means of accountability. The climate harm prevention value of these governance regimes is, ironically, more likely to be effective by remaining separate from the UNFCCC until such time that its member states commit to compatible human security goals.

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