The G20 and Building Global Governance for "Climate Refugees"

R. Andreas Kraemer

Key Points

→ The global governance of displaced and trapped populations, forced migration and refugees is not prepared for the numbers likely to manifest under climate change.

→ The Group of Twenty (G20) has a responsibility to prepare, push for reform and initiate annual reviews to enhance humanitarian responses to aid climate mobility.

→ International policy and law build on the false assumption that displaced people and refugees can return to their place of origin when conditions improve, conflicts subside or homes are rebuilt. This cannot hold for many of those affected by climate change.

→ Governance reform is needed to strengthen rights and obligations of peoples and governments in countries of origin, transit and destination, recognizing the special circumstances and needs of "climate refugees" or migrants.

Challenge

The G20 leaders should recognize that forced displacement due to climate change will increase — both within states and across borders. Climate-induced migration is a broad phenomenon that defies existing definitions. Climate-induced disasters may cause sudden flight; desertification, sea-level rise, ocean acidification and more frequent flooding may erode livelihoods slowly; and conflicts aggravated by environmental change also produce "climate refugees"[1] or migrants.

Some of the displacement will be protracted and may become permanent. There will be people who are unable to return, but also unable to move on, becoming "trapped populations" (Findlay 2011). In some cases, planned relocation or resettlement may be the only strategy to save lives. An effective response requires specific policies and international cooperation to assist, protect and provide durable solutions for those displaced by climate change; manage climate risks for those remaining; and support opportunities for voluntary migrants adapting to climate change (Wilkinson, Kirbyshire et al. 2016).

Currently, most cases of population displacement triggered by extreme weather events are of limited duration and involve people moving only short distances within national

---

1   The term "climate refugee" is controversial, because it does not capture the diversity of situations those strongly affected by climate change can find themselves in, and because of the specific legal meaning of "refugee."

About the Author

R. Andreas Kraemer is a senior fellow at CIGI and the Institute for Advanced Sustainability Studies (IASS) Potsdam, founder of the Ecologic Institute and initiator of the Canadian-German Energy Think Tank Group. He researches the role of think tanks in global policy coordination, with a focus on energy, climate and sustainability.

Contributing authors, commentators and supporters: Shingirirai Savious Mutanga, Africa Institute, South Africa; Nedson Pophiwa, Africa Institute, South Africa; Shiloh Fetzek, Center for Climate and Security, United States; Katriona McGlade, Ecologic Institute, Germany; Benjamin Schraven, German Development Institute; Cristina Cattaneo, Fondazione Eni Enrico Mattei, Italy; Rajat Kathuria, Indian Council for Research on International Economic Relations; Aarsi Sagar, Indian Council for Research on International Economic Relations; Patrick Toussaint, Institute for Advanced Sustainability Studies (IASS Potsdam), Germany; Syed Munir Khasru, Institute for Policy, Advocacy, and Governance, Bangladesh; Lloyd Axworthy, International Institute for Sustainable Development, Canada; Scott Vaughan, International Institute for Sustainable Development, Canada; Emily Wilkinson, Overseas Development Institute, United Kingdom; Romy Chevallier, South African Institute for International Affairs.

borders; however, this pattern is beginning to shift as the global temperature increase results in irreversible environmental changes, making more areas uninhabitable. Several billion people around the world live in areas that are expected to be severely affected by climate change. The impacts of climate change are both ubiquitous and synchronous, and can thus overwhelm seemingly stable and resilient communities and even exacerbate conditions that increase the likelihood of state failure, conflict and, therefore, flight (Peters and Vivekananda 2014).

Absent future policy interventions to prepare for these risks, the estimates of the number of migrants that might result from climate change are daunting. To date, firm and reliable estimates of potential numbers are not available (Gemenne 2011), despite the best efforts of the International Displacement Monitoring Centre (IDMC) (Lennard 2015; 2016). The United Nations International Organization for Migration (IOM) forecasts a range of 25 million to 1 billion environmental migrants for the year 2050.[2] Lower estimates are generally based on narrow definitions of environmental migrants. Numbers are more likely to rise than to fall.

Migration — as opposed to flight — is one form of adaptation to the longer-term effects of climate change, and will grow as climate change accelerates and its impacts become more severe and widespread. The G20 needs to prepare global institutions and mechanisms to cope with increasing flows and waves of climate-induced migration triggered by sea-level rise, desertification and loss of ecosystem services, including water supply and food production in ever-larger areas. Decisions to move are complex and not limited to climate-change impacts. Drivers are often economic, while others will be caused more directly by conflict and instability, where the stresses resulting from climate change contribute to the destabilization of societies and governments, aggravate pre-existing conflicts or induce new ones.

The current legal, institutional and financial arrangements and mechanisms for international policy coordination do not provide a sufficient infrastructure for managing the expected increase in climate-induced migration and flight. There is currently no single institution that could take responsibility. Reforms are needed to facilitate new approaches and better coordination in humanitarian assistance; improve development

---

2   See www.iom.int/complex-nexus#estimates.

cooperation and capacity building; outline the rights and obligations of countries of origin, transit, and destination of the migrants (whatever their legal status); and develop new mechanisms for integrating migrants into the recipient societies.

Following the commitments made in 2016 in Hangzhou, the G20 should establish a process of continuous communication, policy coordination and reflection on climate-induced forced displacement, and review progress at its annual summits. The German G20 presidency should ensure that the issue is firmly established in G20 work streams, and establish effective follow-up and preparation for future presidencies. Germany should help the subsequent G20 presidencies of Argentina and India to continue and institutionalize relevant work streams.

Proposal

Looking at the world today, we can see strong signals of what the future may bring: unprecedented climate risks and natural resource stress, continuing refugee crises, and responses from governments ranging from welcoming with open arms to watching as the most vulnerable perish. Long-simmering and emerging conflicts will not be solved overnight. Stresses on water and food, and the inability of governments to provide these basic resources for their citizens, are not going to go away. The growing and multi-faceted push and pull drivers of migration are not going away either. These challenges we can foresee. But with foresight comes a "responsibility to prepare," and to do so in a manner that is consistent with our values. (Werrell and Femia 2017)

The G20 Needs to Act — There Is No Other Organization

Given that there is no international mechanism or institution taking on this role, the responsibility to prepare the world for larger numbers of people in protracted or permanent displacement resulting from environmental change falls to the G20. Recently, the New York Declaration for Refugees and Migrants adopted by the United Nations General Assembly (2016) highlighted the importance of climate change, environmental factors and natural disasters as drivers of migration and flight in its first paragraph, but then failed to provide specifics. This lack of specificity reveals limitations in dealing with the large and growing number of climate-induced migrants and refugees. The declaration has no legal force, yet it will shape expectations on the future evolution of the international governance of migration and refugees (Ribble et al. 2016). Despite the attention they receive in various policy communities and the press, climate migrants remain a "blind spot" in international governance.

International climate diplomacy has also taken up the issue. Building on decisions adopted, for instance, in 2010 in Cancun and 2012 in Doha (Martin et al. 2015), the Paris Agreement, reached at the twenty-first session of the Conference of the Parties to the United Nations Framework Convention on Climate Change (UNFCCC), addresses "displacement related to the adverse impacts of climate change" in its section on loss and damage (UNFCCC 2015, para. 49-50). It calls for the creation of a task force to complement and build upon the work of existing bodies and experts with the aim of developing recommendations, and to report on progress thereon in its annual report (Toussaint 2016).

The UNFCCC decisions are based on the understanding of the impacts of climate change and the need for policy responses documented in the reports provided by the Intergovernmental Panel on Climate Change (IPCC). In its Fifth Assessment Report (AR5), the IPCC concluded: "Climate change over the 21st century is projected to increase displacement of people" (IPCC quoted in Martin et al. 2015). The IPCC's review of the evidence showed that "extreme weather events provide the most direct pathway from climate change to migration" (ibid.). In the longer term, "sea level rise, coastal erosion, and loss of agricultural productivity... will have a significant impact on migration flows" (ibid.). The AR5 also highlighted the need for more comprehensive evidence, collected across multiple locations and over long periods, to build and test theories about relationships between climate change and livelihoods, culture, migration and conflict (Adger and Puhlin 2014, 766–71).

Difficulty Defining the Challenge Highlights Lack of Preparation

Over the past few years, the term climate refugees has become an accepted (short-hand) political term to describe an urgent and growing challenge — on August 31, 2015, then US Secretary of State John Kerry used it in a speech in Anchorage, AK (Kerry 2015), and on September 9, 2015, European Commission President Jean-Claude Juncker used it in his state of the union address (Juncker 2015).

The term remains controversial among experts. Some do not want the label "refugee" — with its link to persecution and specific meaning in international policy and law and rights for the individuals — to be attached to a group with very diverse reasons to migrate and dynamics of migration (Toussaint 2016). Some prefer to classify those affected under the category "forced displacement" or use more narrowly descriptive terms such as "climate-induced migration," "forced migration" or "forced displacement due to climate change." The use of such terms shifts the focus away from the people and their need to migrate or flee, and toward the larger phenomenon where migrants are a commodity (Gemenne 2015).

Others want a broader term to include people in protracted (or de facto permanent) displacement, who may be trapped by their plight and unable to either return or move on as migrants, or face involuntary, but planned, relocation or resettlement. Historically, the term "environmental refugee" was used, avoiding the term "climate" in view of those who continue to deny climate change, especially in the United States (Kristof 2017). In China, the term "ecological migrants" is used (Wong 2016).

Whatever their situation and legal status, and irrespective of existing definitions and their limitations, all these groups are victims of climate change and its effects and impacts, and need various assistance and protection policies that offer the same level of rights and opportunities for those displaced or forced to migrate, regardless of their location, and based on need rather than (legal) status (IOM 2014; Zetter 2011, 2015). The response requires much greater capacities than are currently available, and much better coordination.

Understanding the Linkages

The linkages between global warming and rising carbon dioxide levels, changes in ecosystems and weather patterns, and their impact on livelihoods and human security are now understood well enough to guide political action, including in the G20 countries (Morrissey 2009; Laczko and Aghazarm 2009; Warner 2010; Black et al. 2011; The Government Office for Science 2011a, 2011b; Warner et al. 2013; IOM 2014; Wilkinson, Schipper et al. 2016; Behnassi and McGlade 2017). Typologies are being developed, such as these observable mechanisms linking climate change to voluntary migration and involuntary displacement: longer-term drying trends; rising sea levels; glacier melt (and changed river flow); increased frequency and magnitude of weather-related natural hazards; and competition over scarce natural resources (Martin et al. 2015).

Migration is a traditional form of adaptation to environmental change, usually in a regional dynamic resulting in internal displacement and some international migration to neighbouring states (Fatorić 2014; Cattaneo 2015; Cattaneo and Peri 2016), with Africa being one area of focus (Whiting 2016). As climate change is a global phenomenon, its impact and instances of climate-induced migration can be observed in many different locations (Milan et al. 2016).

Conflict — induced or aggravated by climate change — is another dimension. Climate change and other aspects of global change are driving involuntary migration, both directly by forcing people to leave their homes or abandon their fields, and indirectly by aggravating existing tensions and conflicts (Newland, 2011; Afifi et al. 2015; Hillmann et al. 2015; Werrell and Femia 2015, 2016; Werrell, Femia and Sternberg 2015; Null and Herzer Risi 2016; Schleussner et al. 2016).

Recently, another, altogether worrying development has been observed: the displacement of people may be caused wilfully in the conduct of war, leading to waves of migrants or refugees that may destabilize other regions. The phenomenon seems to be "weaponizing" migration — as it was termed in the press — in a new form of "hybrid warfare" (Roell 2016). The result may be a new form of migration that neither "economic migrant" nor "refugee" captures adequately. This new form of involuntary migration is about survival from the forces of nature as well as from conflict. International rules and domestic

legislation pertaining to migrants, refugees or asylum seekers are not adequate for dealing with a phenomenon that may become much more prevalent as global climate change accelerates.

International Norms Are Inadequate for the Challenge

One of the fundamental weaknesses of the current international regime for displaced people, migrants and refugees is the assumption that migrants can and will return to where they came from once the conflict has subsided or the recovery phase after a natural catastrophe has been completed. The rights and obligations of migrants and refugees, and of the countries of origin, transit countries and host countries are all formulated based on that assumption. (There are no "destination countries.") In the case of climate-induced involuntary migration, where environments have deteriorated and become uninhabitable, the assumption is patently untenable: migrants will never be able to go back to where they came from. They cannot be considered refugees in the traditional sense of the word; new words — such as "survival migrants" — may be needed, as well as new legal concepts and rules in a future international governance regime for displaced people, migrants and refugees.

Angela Williams (2008), Jane McAdam (2010; 2011; 2014), and the various contributors to Marion Couldrey and Maurice Herson (2015), among others, highlight the lack of suitable international regulation for the protection of persons displaced, involuntarily relocated, trapped, in migration or in flight as a result of climate change. Remedies are proposed in the form of regional instruments (Arboleda 1991), voluntary guidelines and initiatives (such as the Nansen Initiative leading to the establishment of the Platform for Disaster Displacement), a global compact on migration (Wilkinson et al. 2016), legal instruments such as those proposed by Michel Prieur et al. (2008) or Phillip Warren (2016), the reinterpretation of human rights instruments (IOM 2014), and through grassroots-level action such as Displacement Solutions (Toussaint 2016).

"Climate mobility" (or migration in all its forms and definitions) should, therefore, become a recurring item on the agenda, and the G20 should establish a process and review progress to ensure that it acts on the responsibility it recognized at the 2016 Hangzhou G20 Summit (G20 Leaders 2016, para. 44).

Recommendation

Building on the G20's earlier commitment expressed in the communiqué following the Hangzhou summit in 2016, the G20 summit in Hamburg in 2017 should:

→ Call on the IOM, the IDMC, the United Nations Environment Programme (UNEP), the Executive Committee of the Warsaw International Mechanism for Loss and Damage, and the Platform for Disaster Displacement to submit (joint) annual reports to the G20 on the dynamics of global environmental change and the temporary, protracted or permanent displacement of people. The governments of the G20 countries should commit the necessary resources, and establish clear responsibilities for climate migrants and other permanently displaced people in their governments as a precondition for improved international coordination, including planned relocations and resettlements.

→ Call on all relevant international organizations for improved coordination of (short- and medium-term) humanitarian assistance following catastrophic events, anticipating that these will occur with higher frequency and greater severity. The G20 should push not only for better preparedness and more investment in response capabilities, but also improved coordination in capacity building.

→ Scale up — through bilateral cooperation and international organizations, as well as in their own countries — coordination of medium-to-long-term efforts to help climate migrants to make new homes and integrate in the communities of their locality, region or country of destination. This should include the documentation and dissemination for transnational policy learning of good and best practice in policies and programs to strengthen the capacity of destination countries, regions and societies to receive and integrate rising numbers of climate migrants. This should include interventions aimed at countering anti-immigrant sentiment, highlighting the positive economic, cultural and other contributions migrants can make, and developing positive sentiments and a welcoming culture (Saunders 2010) as a foundation for effective policies for

the integration of rising numbers of displaced people and various kinds of migrants.

→ Call on all relevant international organizations and government departments to prepare for a greater number of climate migrants, and initiate reform of international governance of forced displacement, involuntary migration and refugees. This should include updating the definitions of migrants and refugees to ensure that their rights and obligations, and the obligations of countries of origin, transit and destination, reflect the coming realities and provide a helpful framework. The limitations of existing definitions and (legal) distinctions must not be allowed to stand in the way of effective, coordinated action.

Migration and refugees are issues of heightened domestic policy concern in many countries, but need to be addressed in relation to neighbouring regions. As the impacts of climate change and the emergence of more climate migrants are both ubiquitous and synchronous, they require internationally coordinated responses. Through its G20 presidency in 2017, Germany can provide international leadership where it is needed (Axworthy 2016).

Implementation Overview

Following the 2017 G20 summit, the IOM, the IDMC, the UNEP, the Executive Committee of the Warsaw International Mechanism for Loss and Damage, and the Platform for Disaster Displacement improve coordination in their work and submit (joint) annual reports to the G20 on the dynamics of global environmental change and the temporary, protracted or permanent displacement and migration of people that it causes. The G20 countries establish clear responsibilities for climate migrants and refugees, as well as other permanently displaced people (unable to return to their place of origin), within their governments and engage to improve international coordination. "Climate mobility" becomes a permanent item on the G20 agenda.

Author's Note

This policy brief was originally published as a T20 Insight Brief, in connection with the 2017 G20 stakeholder consultation process organized by the German presidency. The original brief, which appeared under the title "Building Global Governance for 'Climate Refugees,'" may be accessed on the G20 Insights website at www.g20-insights.org/policy_briefs/building-global-governance-climate-refugees/.

Appendix

Existing Agreements

The 2016 Hangzhou summit G20 Leaders' Communiqué (para. 44) states their commitment to address forced displacement and migration: www.g20.utoronto.ca/2016/160905-communique.html.

Existing Policies and Monitoring

There is a paucity of policies to address climate mobility in its various manifestations and only limited monitoring. The most relevant international organizations and processes are the:

→ Executive Committee of the Warsaw International Mechanism for Loss and Damage

→ IOM

→ IDMC

→ Platform for Disaster Displacement

→ Sendai Framework for Disaster Risk Reduction (of the United Nations International Strategy for Disaster Reduction)

→ UNEP

Resources

→ The Platform on Disaster Displacement (as follow-up to The Nansen Initiative) maintains a collection of relevant documents: http://disasterdisplacement.org/resources/.

→ The Migration Policy Institute website has a section dedicated to climate change: www.migrationpolicy.org/topics/climate-change.

→ The *Forced Migration Review* published a special issue, "Disasters and Displacement in a Changing Climate" (Couldrey and Herson 2015): www.fmreview.org/climatechange-disasters.html.

→ For its conference on climate-induced migration, held on November 22-23, 2016, the Fundazione Eni Enrico Mattei (FEEM) built a bibliography: www.climatemigration.feem.it/publications.html.

Works Cited

Adger, W. Neil and Juan M. Puhlin. 2014. "Human security." In *Climate Change 2014: Impacts, Adaptation, and Vulnerability. Part A: Global and Sectoral Aspects. Working Group II Contribution to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change*, edited by Christopher B. Field, Vincente R. Barros, David Jon Dokken, Katharine J. Mach and Michael D. Mastrandrea, 755–91. Cambridge, UK, and New York, NY: Cambridge University Press.

Afifi, Tamer, Andrea Milan, Benjamin Etzold, Benjamin Schraven, Christina Rademacher-Schulz, Alexander Reif, Kees van der Geest and Koko Warner. 2015. "Human mobility in response to rainfall variability: opportunities for migration as a successful adaptation strategy in eight case studies." *Migration and Development* 5 (2): 254–74. doi: http://dx.doi.org/10.1080/21632324.2015.1022974.

Arboleda, Eduardo. 1991. "Refugee Definition in Africa and Latin America: The Lessons of Pragmatism." *International Journal of Refugee Law* 3 (2): 185–207. doi: https://doi.org/10.1093/ijrl/3.2.185.

Axworthy, Lloyd. 2016. "Merkel's absence felt at UN talks on refugees. *Winnipeg Free Press,* September 27. www.winnipegfreepress.com/opinion/analysis/merkels-absence-felt-at-un-talks-on-refugees-394907951.html.

Behnassi, Mohamed and Katriona McGlade, eds. 2017. *Environmental Change and Human Security in Africa and the Middle East*. Berlin, Germany: Springer.

Black, Richard, W. Neil Adger, Nigel W. Arnell, Stefan Dercon, Andrew Geddes and David Thomas. 2011. "The effect of environmental change on human migration." *Global Environmental Change* 21 (Supplement 1): 3–11. doi: http://dx.doi.org/10.1016/j.gloenvcha.2011.10.001.

Cattaneo, Cristina. 2015. "How does climate change affect migration?" www.weforum.org/agenda/2015/11/how-does-climate-change-affect-migration/.

Cattaneo, Cristina and Giovanni Peri. 2016. "The migration response to increasing temperatures." *Journal of Development Economics* 122: 127–46.

Couldrey, Marion and Maurice Herson, eds. 2015. "Disasters and Displacement in a Changing Climate." Special issue, *Forced Migration Review* 49. Oxford, UK: Refugee Studies Centre, University of Oxford.

Fatorić, Sandra. 2014. "Migration as a Climate Adaptation Strategy in Developed Nations." Briefer No. 24. Washington, DC: Center for Climate and Security.

Findlay, Allan M. 2011. "Migrant destinations in an era of environmental change." *Global Environmental Change* 21 (Supplement 1): 50–58. doi: http://dx.doi.org/10.1016/j.gloenvcha.2011.09.004.

G20 Leaders. 2016. "G20 Leaders' Communiqué: Hangzhou Summit." September 5. www.g20.utoronto.ca/2016/160905-communique.html.

Gemenne, François. 2011. "Why the numbers don't add up: A review of estimates and predictions of people displaced by environmental changes." *Global Environmental Change* 21 (Supplement 1): 41–49. doi: http://dx.doi.org/10.1016/j.gloenvcha.2011.09.005.

———. 2015. "One good reason to speak of 'climate refugees.'" *Forced Migration Review* (49): 70-71.

Hillmann, Felicitas, Marie Pahl, Birte Rafflenbeul and Harald Sterly, eds. 2015. *Environmental Change, Adaptation and Migration: Bringing in the Region*. London, UK: Palgrave Macmillan.

IOM. 2014. *IOM Outlook on Migration, Environment and Climate Change*. Geneva, Switzerland: IOM.

Juncker, Jean-Claude. 2015. "State of the Union 2015: Time for Honesty, Unity and Solidarity." Strasbourg, France, September 9. https://ec.europa.eu/priorities/state-union-2015_en.

Kerry, John. 2015. "Remarks at the Global Leadership in the Arctic: Cooperation, Innovation, Engagement, and Resilience (GLACIER) Conference Opening Plenary." Anchorage, AK, August 31. https://2009-2017.state.gov/secretary/remarks/2015/08/246489.htm.

Kristof, Nicholas. 2017. "As Donald Trump Denies Climate Change, These Kids Die of It." *The New York Times*, January 6. www.nytimes.com/2017/01/06/opinion/sunday/as-donald-trump-denies-climate-change-these-kids-die-of-it.html.

Laczko, Frank and Christine Aghazarm, eds. 2009. *Migration, Environment and Climate Change: Assessing the Evidence*. Geneva, Switzerland: IOM.

Lennard, Jeremy, ed. 2015. *Global Estimates 2015: People displaced by disasters*. Geneva, Switzerland: Norwegian Refugee Council and IDMC.

———. 2016. *Global Report on Internal Displacement (GRID 2016)*. Geneva, Switzerland: Norwegian Refugee Council and IDMC.

Martin, Susan, Kanta Kumari Rigeaud, Koko Warner and Hanspeter Wyss. 2015. "Human Mobility Should Be High on the Agenda in Paris." *People Move* (blog). http://blogs.worldbank.org/peoplemove/human-mobility-should-be-high-agenda-paris.

McAdam, Jane, ed. 2010. *Climate Change and Displacement. Multidisciplinary Perspectives*. Oxford, UK, and Portland, OR: Hart.

———. 2011. *Climate Change Displacement and International Law: Complementary Protection Standards*. Geneva, Switzerland: United Nations High Commissioner for Refugees.

———. 2014. "Creating New Norms on Climate Change, Natural Disasters and Displacement: International Developments 2010–2013." *Refuge* 29 (2): 11–26.

Milan, Andrea, Benjamin Schraven, Koko Warner and Noemi Cascone, eds. 2016. *Migration, Risk Management and Climate Change: Evidence and Policy Responses.* Berlin, Germany: Springer.

Morrissey, James. 2009. "Environmental change and forced migration: a state of the art review." Oxford, UK: Refugee Studies Centre, University of Oxford.

Newland, Kathleen. 2011. *Climate Change and Migration Dynamics*. Washington, DC: Migration Policy Institute.

Null, Schuyler and Lauren Herzer Risi. 2016. "Navigating Complexity: Climate, Migration, and Conflict in a Changing World." Washington, DC: USAID and Woodrow Wilson International Center for Scholars.

Peters, Katie and Janani Vivekananda. 2014. *Topic Guide: Conflict, Climate and Environment*. London, UK: Evidence on Demand.

Prieur, Michel, Jean-Pierre Marguénaud, Gérard Monédiaire, Julien Bétaille, Bernard Drobenko, Jean-Jacques Gouguet, Jean-Marc Lavieille, Séverine Nadaud, Damien Roets, Frédéric Bouin, Florence Burgat, Christel Cournil, Van Dinh, José Juste, Yves Lador, Pierre Mazzega and Agnès Michelot. 2008. "Draft Convention on the International Status of Environmentally-Displaced Persons." *Revue Européenne de Droit de l'Environnement* 12 (4): 395–406.

Ribble, Betsy, Juliette Keeley, Keith McCammon, and Michael Ignatieff. 2016. "The refugee and migration crisis: Proposals for action, U.N. Summit 2016." September 12. www.brookings.edu/research/the-refugee-and-migration-crisis-proposals-for-action-u-n-summit-2016/.

Roell, Peter. 2016. "Migration – A New Form of 'Hybrid Warfare'? ISPSW Strategy Series: Focus on Defense and International Security. Issue No. 422. www.ispsw.com/wp-content/uploads/2016/05/422_Roell_RINSA.pdf.

Saunders, Doug. 2010. *Arrival City: The Final Migration and Our Next World*. Toronto, ON: Knopf Canada.

Schleussner, Carl-Friedrich, Jonathan F. Donges, Reik V. Donner and Hans Joachim Schellnhuber. 2016. "Armed-conflict risk enhanced by climate-related disasters in ethnically fractionalized countries." *Proceedings of the National Academy of Sciences of the United States of America* 113 (33): 9216–21. doi:10.1073/pnas.1601611113.

The Government Office for Science. 2011a. *Foresight: Migration and Global Environmental Change. Final Project Report.* London, UK: The Government Office for Science.

———. 2011b. *Foresight: Migration and Global Environmental Change. Final Project Report: Executive Summary*. London, UK: The Government Office for Science.

Toussaint, Patrick. 2016. "Climate Migration post-Paris." IASS Postdam blog. http://blog.iass-potsdam.de/2016/03/climate-migration-post-paris/.

UNFCCC. 2015. "Decision 1/CP.21 – Adoption of the Paris Agreement." http://unfccc.int/resource/docs/2015/cop21/eng/10a01.pdf.

United Nations General Assembly. 2016. New York Declaration for Refugees and Migrants. A/RES/71/1, September 19. www.unhcr.org/57e39d987.

Warner, Koko. 2010. "Global environmental change and migration: Governance challenges." *Global Environmental Change* 20 (3): 402–13. doi: http://dx.doi.org/10.1016/j.gloenvcha.2009.12.001.

Warner, Koko, Tamer Afifi, Walter Kälin, Scott Leckie, Beth Ferris, Susan F. Martin and David Wrathall. 2013. *Changing Climate, Moving People: Framing Migration, Displacement and Planned Relocation*. Bonn, Germany: United Nations University.

Warren, Phillip. 2016. "Evaluating the 'Climate Change Displacement Coordination Facility': How the UNFCCC Can Address Forced Migration after Paris COP21." *Columbia Law Review* 116 (8): 2103–44.

Werrell, Caitlin E. and Francesco Femia. 2015. "Fragile States: The Nexus of Climate Change, State Fragility and Migration." *Angle Journal*, November 24. https://anglejournal.com/article/2015-11-fragile-states-the-nexus-of-climate-change-state-fragility-and-migration/.

———. 2016. "Climate Change, the Erosion of State Sovereignty, and World Order." *The Brown Journal of World Affairs* 12 (2): 221–35.

———. 2017. "A Short Note on Migration and Security in a Changing Climate." https://climateandsecurity.org/2017/01/29/a-short-note-on-migration-and-security-in-a-changing-climate/.

Werrell, Caitlin E, Francesco Femia and Troy Sternberg. 2015. "Did We See It Coming? State Fragility, Climate Vulnerability, and the Uprisings in Syria and Egypt." *SAIS Review* 35 (1): 29–45.

Whiting, Alex. 2016. "Africa at highest risk of major economic blow from future climate threats: global index." Reuters, December 18. www.reuters.com/article/us-agriculture-climatechange-idUSKBN14802K.

Wilkinson, Emily, Amy Kirbyshire, Leigh Mayhew, Pandora Batra and Andrea Milan. 2016. "Climate-induced migration and displacement: closing the policy gap." London, UK: Overseas Development Institute.

Wilkinson, Emily, Lisa Schipper, Catherine Simonet and Zaneta Kubik. 2016. "Climate change, migration and the 2030 Agenda for Sustainable Development." London, UK: Overseas Development Institute.

Williams, Angela. 2008. "Turning the Tide: Recognizing Climate Change Refugees in International Law." *Law & Policy* 30 (4): 502–29.

Wong, Edward. 2016. "Resettling China's 'Ecological Migrants.'" *The New York Times*, October 25. www.nytimes.com/interactive/2016/10/25/world/asia/china-climate-change-resettlement.html.

Zetter, Roger. 2011. *Protecting Environmentally Displaced People. Developing the Capacity of Legal and Normative Frameworks*. Oxford, UK: Refugee Studies Centre, University of Oxford.

———. 2015. *Protection in Crisis: Forced Migration and Protection in a Global Era*. Washington, DC: Migration Policy Institute.

About the Global Economy Program

Addressing limitations in the ways nations tackle shared economic challenges, the Global Economy Program at CIGI strives to inform and guide policy debates through world-leading research and sustained stakeholder engagement.

With experts from academia, national agencies, international institutions and the private sector, the Global Economy Program supports research in the following areas: management of severe sovereign debt crises; central banking and international financial regulation; China's role in the global economy; governance and policies of the Bretton Woods institutions; the Group of Twenty; global, plurilateral and regional trade agreements; and financing sustainable development. Each year, the Global Economy Program hosts, co-hosts and participates in many events worldwide, working with trusted international partners, which allows the program to disseminate policy recommendations to an international audience of policy makers.

Through its research, collaboration and publications, the Global Economy Program informs decision makers, fosters dialogue and debate on policy-relevant ideas and strengthens multilateral responses to the most pressing international governance issues.

About CIGI

We are the Centre for International Governance Innovation: an independent, non-partisan think tank with an objective and uniquely global perspective. Our research, opinions and public voice make a difference in today's world by bringing clarity and innovative thinking to global policy making. By working across disciplines and in partnership with the best peers and experts, we are the benchmark for influential research and trusted analysis.

Our research programs focus on governance of the global economy, global security and politics, and international law in collaboration with a range of strategic partners and support from the Government of Canada, the Government of Ontario, as well as founder Jim Balsillie.

À propos du CIGI

Au Centre pour l'innovation dans la gouvernance internationale (CIGI), nous formons un groupe de réflexion indépendant et non partisan qui formule des points de vue objectifs dont la portée est notamment mondiale. Nos recherches, nos avis et l'opinion publique ont des effets réels sur le monde d'aujourd'hui en apportant autant de la clarté qu'une réflexion novatrice dans l'élaboration des politiques à l'échelle internationale. En raison des travaux accomplis en collaboration et en partenariat avec des pairs et des spécialistes interdisciplinaires des plus compétents, nous sommes devenus une référence grâce à l'influence de nos recherches et à la fiabilité de nos analyses.

Nos programmes de recherche ont trait à la gouvernance dans les domaines suivants : l'économie mondiale, la sécurité et les politiques mondiales, et le droit international, et nous les exécutons avec la collaboration de nombreux partenaires stratégiques et le soutien des gouvernements du Canada et de l'Ontario ainsi que du fondateur du CIGI, Jim Balsillie.

Centre for International Governance Innovation

67 Erb Street West
Waterloo, ON, Canada N2L 6C2
www.cigionline.org