

# KNOMAD

Global Knowledge Partnership on Migration and Development



**Thematic Working Group on Environmental Change and Migration**

**Briefing on Virtual Discussion of Preliminary Results  
for the Symposium on Environmentally-Driven Migration:  
Improving the Evidence Base for Effective Policy Making**

Washington, D.C., June 15<sup>th</sup>, 2020

The Thematic Working Group on Migration (TWG) and Environmental Change, on behalf of the Global Knowledge Partnership on Migration and Development (KNOMAD), has commissioned twelve working papers and research briefs on data gaps and opportunities, innovative data use and analytic tools, and ways to advance the research agenda and move towards concrete policy development in this area.

On June 15<sup>th</sup>, 2020, KNOMAD brought the authors together in a virtual workshop to discuss the topics, scope and preliminary findings of this research initiative. Susan F. Martin, Chair of the TWG, opened the meeting and invited authors to present their results. The meeting was co-chaired with Kanta Kumari Rigaud.

### **Presentations in Block 1**

The first block of presentations started with an “*An Agenda for Climate Change and Migration Research*”, research presented by Benjamin Schraven (Deutsches Institut für Entwicklungspolitik (DIE) / German Development Institute), Robert Oakes (United Nations University Institute for Environment and Human Security) and colleagues<sup>1</sup>. The authors centered their agenda on three research gaps: a) differentiation (data collection), b) integration (data and method exploitation), and c) generalization (research conceptualization). They pointed to indicative research questions as well as to main barriers and opportunities for progress, which revolve around a) capacity, b) collaboration, and c) context-specific complexity. Among other things, commentators asked about the overlaps of the presented issues, how this agenda would translate into practical changes in research approaches, and which geographical gaps persisted. They suggested that case study findings from well-researched areas and topics—such as those on communities with rural agrarian ecosystem-based livelihoods—could be transferable to settings with less data availability.

Next, Roman Hoffmann (Potsdam Institute for Climate Impact Research (PIK)), Wittgenstein Centre for Demography and Global Human Capital (IIASA, VID/ÖAW, University of Vienna), Barbora Sedova (PIK, Mercator Research Institute on Global Commons and Climate Change), and Kira Vinke (PIK) presented their work on “*Improving the Evidence Base on Environmental Migration: Methodological Insights from Two Meta-Analyses*”. They examine how different methodological approaches (data collection, measurement, data aggregation, analysis and estimation) can influence findings of quantitative empirical studies on climate-migration relationships. They draw on two recent meta-analyses for which they collected extensive meta-data from a total of 150 studies. Participants suggested to consider possible linkages between internal and international migration and to leverage the findings from the variety of studies by pooling relationship estimates. They asked whether different data, such as panel versus cross-sectional data, and different models rendered different results; asked the authors to scrutinize

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<sup>1</sup> Robert Oakes, Kees Van der Geest, Benjamin Schraven, Stephen Adaawen, Mariya Aleksandrova, Sonja Ayeb-Karlsson, Benjamin Etzold, Juliane Groth, Kathleen Hermanns, Laureline Krichewsky, Silvana Lakeman, Raphael Nawrotzki, Christina Rademacher-Schulz, Clemens Romankiewicz, Diogo Serragio, Alexander de Sherbinin, Harald Sterly, Lisa Thalheimer, Charlotte Wiederkehr and David Williams.

the climate variables employed; and inquired whether results differed between studies employing survey and administrative data.

Susan F. Martin and Lisa Singh (Georgetown University) explained ongoing work on *“Forecasting different forms of environmental mobility using big data”*. Their project identified relevant factors, examined traditional and open source data, and then determined indirect indicators, so they could eventually construct and validate a dynamic model of forced migration. Big data sources include the Expandable Open Source (EOS 1.0) Database with media articles and internet sources; Twitter data; and geospatial data. For each driver of migration, they examine event, buzz, and perception variables and their relationships. Remarks from the participants centered on how local contexts, perceptions, and future outlooks were accounted for; how mobile phone data was used; how tweets could provide information on spatial movement; how noise in the data could be addressed; and how findings would be linked to policymaking and planning.

Elizabeth Fussel (Brown University), Jack DeWaard (University of Minnesota Duluth), and Katherine J. Curtis (University of Wisconsin–Madison) elaborated on their team’s work on *“Measuring climate and environmental displacement and migration using a migration systems approach”*. They focus on anticipatory environmental migration, for which research and data are still scarce. They hypothesize that as climate change increases the strength and frequency of environmental hazards, people migrate away from and avoid moving into places experiencing hazards. To examine these hypotheses, they investigate marginal changes in migration system over extended periods of time, using multiple granular data sources. Participants asked about spatial predictors of population shifts in the model; if the approach incorporated changes in destination areas and people’s risk perception; and how anticipatory reactive migration would be defined when clear tipping points were lacking.

## **Presentations in Block 2**

Ingrid Dallmann (World Bank), Katrin Millock (Paris School of Economics), and Stefanija Veljanoska (Université Catholique de Louvain) started the second block of the meeting by explaining *“Four challenges in measuring the effect of climate shocks on migration”*. They emphasize challenges related to a) data on indirect effect of climate change on migration, b) data on the varying influence of climatic events, c) the various forms of people’s movement and related policy and data collection needs; and d) the challenge to link data on both internal and international patterns and their possible ties. Participants asked about opportunities and challenges related to survey versus administrative data; the insights gained from longitudinal data, such as from the Mexican Migration Project; how temporary could be distinguished from permanent movement in survey data; and which solutions would be suggested to overcome the presented challenges.

The next presentation by Alessandro Nicoletti, Lorenzo Guadagno, and Susanne Melde (International Organization for Migration, IOM) discussed IOM’s approach to *“Human mobility in the context of environmental and climate change: Improve current data collection tools to deliver targeted aid and address key theoretical issues”*. Their contribution examines potentials

for improving data collection on environmental drivers of migration in emergency contexts related to the Migration, Environment and Climate Change Evidence for Policy (MECLEP) project, IOM's Displacement Tracking Matrix (DTM), and its newly established Transhumance Tracking Tool. Questions by participants included whether the authors would also consider experiences from research that has used DTM data; how IOM has engaged with emerging humanitarian data exchange initiatives and related efforts to assess data quality; how DTM data could provide insights beyond humanitarian contexts (namely for disaster risk reduction (DRR), climate change adaptation, and development efforts); how DTM data could help to identify areas where local adaptation measures fail; how a better understanding of migration drivers could benefit humanitarian assistance and development cooperation programs; and how biases in non-representative, retrospective surveys were addressed.

Pablo Cortés Ferrández and Ivana Hajzmanova discussed efforts by the Internal Displacement Monitoring Center (IDMC) for "*Monitoring and participatory methodology of drought-induced displacement in Ethiopia*". Drawing on data from the Somali region, they explore triggers, drivers, and impacts of pastoral displacement to support solutions. Participatory research and data mapping for monitoring has led to a common analytical framework for this form of displacement. IDMC validates related hypotheses, collects empirical data, and eventually, uses the data to forecast displacement. Participants asked about the conceptualization and empirical assessment of local carrying capacities; potentials of reforestation efforts for livelihood restoration; the integration of stepwise decision-making and stepwise movement processes in the models; and about decision-making processes in pastoralist communities before displacement events.

Planned relocation is a special form of movement in the context of environmental change that remains under researched. Sanjula Weerasinghe (Kaldor Centre for International Refugee Law, Institute for the Study of International Migration (ISIM)) and Erica Bower (Stanford University, Kaldor Centre for International Refugee Law) explained their work to improve the evidence base in a presentation on "*Mapping of Planned Relocation in the Context of Disasters and the Adverse Effects of Climate Change to Support Policy Making*". Out of a sample of almost 100 relocations, they compare characteristics of six pilot cases related to coastal or riverine floods to provide insights for policy, practice, and research. Researchers identified both descriptive characteristics of the relocations (such as distance to original site) as well as relocation design characteristics (such as participatory mechanisms). The authors presented preliminary implications, including on the effects of proximity of new sites; on the need to consider the cohesiveness of relocated communities; on protracted relocations; on the different actors initiating relocation; and the frequent absence of relocation policies. Participants asked about the case selection criteria; the risks and benefits pertaining to relocations in the immediate surroundings, including secondary relocation due to recurrent hazard exposure; the type of data communities can use to inform their relocation decisions; insights gained on preferred participation mechanisms livelihood support; possible return movements; involved political challenges; the use of pre-departure trainings; and possible barriers relating to crossing administrative boundaries or outside communal lands.

### **Presentations in Block 3**

The final block of presentations started with Sarah Rosengaertner's (Independent Consultant), Alex de Sherbinin (Center for International Earth Science Information Network (CIESIN)), and Robert Stojanov (Mendel University) discussion of *"Data Needs for Development Cooperation to Address Climate Migration"*. The authors examine the climate-migration nexus and data needs for policy for both prevention (adaptation in situ, DRR, resilience-building) and response (relocation and resettlement, legal pathways, protection). They stressed the need to improve understanding of geographic 'hot spots' that concentrate risks, vulnerability 'hot spots', and places of destination. To inform decision-making and advocacy as well as to improve policy coherence and integrated responses, the type of data and the type of users are important to consider. Participants discussed the possible tension between development cooperation that, if successful, increases peoples' capabilities, including those needed to migrate, and the frequently posited policy goal of keeping people in place. They also asked about the inclusion of involuntary immobility in the authors' work, including that related to structural inequalities and power imbalances.

Next, Lorenzo Guadagno (International Organization for Migration IOM) and Michelle Yonetani (independent consultant) discussed *"Displacement risk": unpacking a problematic concept to strengthen policies and practices"*. They showed that displacement risk has become a core element of today's discussions and frameworks on Disaster Risk Reduction (DRR). Although it could help to direct attention to prevention and preparedness, and raise awareness on displaced populations, the use of "displacement risk" as "risk of having to leave your home" was questioned. The authors argue that displacement is not always a "risk," however, as it may be essential for survival. In this sense, the current use does not add value for DRR planning, policy or practice. The authors argued in favor of conceptualizing "displacement risk" instead as the "risk of remaining displaced" (obstacles to durable solutions, prolonged/protracted displacement) and as "displacement-specific risk" (such as exposure to hazards), and pointed to associated data needs. Participants asked about the specific circumstances under which displacement can have positive side effects in the face of adversity and how to weigh such possible effects with the always present severe risks of displacement. Finally, a discussion revolved around the notion of displacement risk in complex emergencies when conflicts and disasters overlap or interact.

Roberto Ariel Abeldaño Zuñiga (Universidad de la Sierra Sur) and Javiera Fanta Garrido (Instituto de Investigaciones Gino Germani (UBA-CONICET)) examined *"Gaps in the measurement of internal displacement and environmental change in Latin America and the Caribbean"*. Their work identifies data sources for monitoring climate related disasters and internal population displacement in LAC; characterizes the strengths and weaknesses of existing data sources; and analyzes gaps. Participants noted the need for data harmonization; the need to analyze different ways in which displacement can "end", beyond return and local integration; and the need for criteria to assess the quality of the data.

Finally, Romola Adeola (Centre for Human Rights, University of Pretoria), Tamara Wood (Kaldor Centre for International Refugee Law, UNSW), and Edwin Abuya (University of Nairobi) presented their work for *"Developing a research and policy agenda for addressing disaster and climate change displacement in Africa"*. The authors identify current law and policy initiatives at the international, regional and sub-regional levels. They assess existing knowledge and

literature, identify existing knowledge and evidence gaps, and explore cross-cutting themes, issues and opportunities for cooperation. The authors pointed to gaps at diverse levels of governance, on the engagement of local communities, and on the scale of displacement. Preliminary findings also showed the potentials of available frameworks, including free movement agreements and regionalized refugee or IDP protection tools. Participants asked about the type of data available on the use of relevant frameworks, such as the AU Refugee Convention, and lessons to be learned across regions regarding the treatment of climate displaced persons.

### **Common themes and opportunities for collaboration**

- 1) Improving data collection and analysis across all three forms of human mobility— migration, displacement and planned relocation—and immobility, as well as intersections between and among these forms of movements;
- 2) Proposing greater innovation in the types of data collected as well as the methodologies used in analyzing movements;
- 3) Employing research methodologies that encompass spatial-temporal differentiation in mobility as well as the practical issues arising in each context;
- 4) Reconceptualizing migration, displacement and relocation as adaptation strategies in certain cases, not just as failures in adaptation; at the same time, emphasizing that mitigation of greenhouse gas emissions and resilience building can help reduce the need for people to move;
- 5) Furthering theories, as various papers begin with similar theoretical frameworks for understanding environment-migration linkages, which help identify the type of data needed for analyzing these movements.
- 6) Teasing out the policy dimensions of lessons learned on the initiation of movement in the context of environmental changes, and related needs of people in places of origin and destination;
- 7) Raising the agency of affected people in research, decision-making and policymaking, for example through participatory research methods and adequate participation mechanisms in planned relocation.

### **Closure and next steps**

The meeting was closed by Dilip Ratha, Head of KNOMAD, and Susan F. Martin, the Chair of the TWG. Authors were invited to submit their full drafts by July 31<sup>st</sup> to prepare for the symposium likely to be held virtually in September. Authors will have until end of October to address comments and suggestions from reviewers in their revised drafts. The drafts will then go to external peer review. The final briefs and papers are to be delivered by December 23<sup>rd</sup>, addressing combined comments and suggestions. Publications will be made available online via the KNOMAD website. Together with the authors, the team is also exploring possibilities for external publication in an academic journal or edited volume.

A summary of the meeting is available on the KNOMAD website:

<https://www.knomad.org/event/virtual-workshop-environmentally-driven-migration-improving-evidence-base-effective-policy>

## Agenda

Time (EDT)	Session	Presentation by
09:00-09:15	Introduction	Head of KNOMAD, Chairs
09:15-10:15	<b>Block 1</b>	
	<i>An Agenda for Climate Change and Migration Research</i>	Oakes, Van der Geest, Schraven, et al.
	<i>Improving the Evidence Base on Environmental Migration: Methodological Insights from Two Meta-Analyses</i>	Hoffmann, Sedova, Vinke
	<i>Forecasting different forms of environmental mobility using big data</i>	Martin, Singh
	<i>Measuring climate and environmental displacement and migration using a migration systems approach</i>	Fussell, DeWaard, Curtis
10:15-10:30	<b>Break</b>	
10:30-11:30	<b>Block 2</b>	
	<i>Four challenges in measuring the effect of climate shocks on migration</i>	Dallmann, Millock, Veljanoska
	<i>Human mobility in the context of environmental and climate change: Improve current data collection tools to deliver targeted aid and address key theoretical issues</i>	Guadagno, Melde, Nicoletti
	<i>Monitoring and participatory methodology of drought-induced displacement in Ethiopia</i>	Cortés Ferrández, Hajzmanova
	<i>Mapping of Planned Relocation in the Context of Disasters and the Adverse Effects of Climate Change to Support Policy Making</i>	Weerasinghe, Bower
11:30-11:45	<b>Break</b>	
11:45-12:45	<b>Block 3</b>	
	<i>Data Needs for Develop Cooperation to Address Climate Migration</i>	de Sherbinin, Rosengaertner, Stojanov
	<i>“Displacement risk”: unpacking a problematic concept to strengthen policies and practices</i>	Guadagno, Yonetani
	<i>Gaps in the measurement of internal displacement and environmental change in Latin America and the Caribbean</i>	Abeldaño Zuñiga, Fanta Garrido
	<i>Developing a research and policy agenda for addressing disaster and climate change displacement in Africa</i>	Wood, Abuya, Adeol
12:45-13:00	<b>Closure</b>	KNOMAD Chairs

### Accepted contributions, lead and co-authors

Title of contribution	Authors' names and affiliations	Email addresses	Type of contribution
<b>“Displacement risk”: unpacking a problematic concept to strengthen policies and practices</b>	<ul style="list-style-type: none"> <li>• Lorenzo Guadagno (International Organization for Migration IOM)</li> <li>• Michelle Yonetani (Independent consultant)</li> </ul>	<p><a href="mailto:lguadagno@iom.int">lguadagno@iom.int</a></p> <p><a href="mailto:michelleyonetani@gmail.com">michelleyonetani@gmail.com</a></p>	Brief
<b>An Agenda for Climate Change and Migration Research</b>	<ul style="list-style-type: none"> <li>• Robert Oakes (United Nations University Institute for Environment and Human Security, UNU-EHS)</li> <li>• Kees Van der Geest (UNU-EHS)</li> <li>• Benjamin Schraven (Deutsches Institut für Entwicklungspolitik (DIE) / German Development Institute), et al.<sup>2</sup></li> </ul>	<a href="mailto:Benjamin.Schraven@die-gdi.de">Benjamin.Schraven@die-gdi.de</a>	Brief
<b>Data Needs for Develop Cooperation to Address Climate Migration</b>	<ul style="list-style-type: none"> <li>• Alex de Sherbinin (Center for International Earth Science Information Network (CIESIN))</li> <li>• Sarah Rosengaertner (Independent consultant)</li> <li>• Robert Stojanov (Mendel University, Brno, Czech Republic)</li> </ul>	<p><a href="mailto:adesherbinin@ciesin.columbia.edu">adesherbinin@ciesin.columbia.edu</a></p> <p><a href="mailto:sarahrosengaertner@gmail.com">sarahrosengaertner@gmail.com</a></p> <p><a href="mailto:stojanov@centrum.cz">stojanov@centrum.cz</a></p>	Paper
<b>Developing a research and policy agenda for addressing disaster and climate change displacement in Africa</b>	<ul style="list-style-type: none"> <li>• Tamara Wood (Kaldor Centre for International Refugee Law, UNSW)</li> <li>• Edwin Abuya (University of Nairobi)</li> <li>• Romola Adeola (Centre for Human Rights, University of Pretoria)</li> </ul>	<p><a href="mailto:tamara.wood@utas.edu.au">tamara.wood@utas.edu.au</a></p> <p><a href="mailto:j.mcadam@unsw.edu.au">j.mcadam@unsw.edu.au</a></p> <p><a href="mailto:romola.adeola@up.ac.za">romola.adeola@up.ac.za</a></p> <p><a href="mailto:edwina@uonbi.ac.ke">edwina@uonbi.ac.ke</a></p>	Brief
<b>Forecasting different forms of environmental mobility using big data.</b>	<ul style="list-style-type: none"> <li>• Susan F. Martin (Georgetown University)</li> <li>• Lisa Singh (Georgetown University)</li> </ul>	<p><a href="mailto:martinsf@georgetown.edu">martinsf@georgetown.edu</a></p> <p><a href="mailto:lisa.singh@georgetown.edu">lisa.singh@georgetown.edu</a></p>	Paper

<sup>2</sup> Robert Oakes, Kees Van der Geest, Benjamin Schraven, Stephen Adaawen, Mariya Aleksandrova, Sonja Ayeb-Karlsson, Benjamin Etzold, Juliane Groth, Kathleen Hermanns, Laureline Krichewsky, Silvana Lakeman, Raphael Nawrotzki, Christina Rademacher-Schulz, Clemens Romankiewicz, Diogo Serragio, Alexander de Sherbinin, Harald Sterly, Lisa Thalheimer, Charlotte Wiederkehr and David Williams.



<b>Four challenges in measuring the effect of climate shocks on migration</b>	<ul style="list-style-type: none"> <li>• Ingrid Dallmann (World Bank)</li> <li>• Katrin Millock (Paris School of Economics)</li> <li>• Stefanija Veljanoska (Université Catholique de Louvain)</li> </ul>	<a href="mailto:ingriddallmann@gmail.com">ingriddallmann@gmail.com</a>  kmillock@gmail.com veljanoska.stefanija@gmail.com	Brief
<b>Gaps in the measurement of internal displacement and environmental change in Latin America and the Caribbean</b>	<ul style="list-style-type: none"> <li>• Roberto Ariel Abeldaño Zuñiga (Universidad de la Sierra Sur, Mexico)</li> <li>• Javiera Fanta Garrido (Instituto de Investigaciones Gino Germani (UBA-CONICET), Argentina)</li> </ul>	<a href="mailto:ariabeldanho@gmail.com">ariabeldanho@gmail.com</a>  javiera.fanta@gmail.com	Brief
<b>Human mobility in the context of environmental and climate change: Improve current data collection tools to deliver targeted aid and address key theoretical issues</b>	<ul style="list-style-type: none"> <li>• Alessandro Nicoletti (International Organization for Migration IOM)</li> <li>• Lorenzo Guadagno (IOM)</li> <li>• Susanne Melde (IOM)</li> </ul>	<a href="mailto:alnicoletti@iom.int">alnicoletti@iom.int</a>  SMelde@iom.int lguadagno@iom.int	Brief
<b>Improving the Evidence Base on Environmental Migration: Methodological Insights from Two Meta-Analyses</b>	<ul style="list-style-type: none"> <li>• Roman Hoffmann (Potsdam Institute for Climate Impact Research (PIK), Germany, Wittgenstein Centre for Demography and Global Human Capital (IIASA, VID/ÖAW, University of Vienna), Austria)</li> <li>• Barbora Sedova (PIK, Mercator Research Institute on Global Commons and Climate Change, Berlin, Germany)</li> <li>• Kira Vinke (PIK)</li> </ul>	<a href="mailto:roman.hoffmann@pik-potsdam.de">roman.hoffmann@pik-potsdam.de</a>  Sedova@mcc-berlin.net Kira.Vinke@pik-potsdam.de	Paper
<b>Mapping of Planned Relocation in the Context of Disasters and the Adverse Effects of Climate Change to Support Policy Making</b>	<ul style="list-style-type: none"> <li>• Sanjula Weerasinghe (Kaldor Centre for International Refugee Law, Institute for the Study of International Migration (ISIM) at Georgetown University)</li> <li>• Erica Bower (Stanford University, Kaldor Centre for International Refugee Law)</li> </ul>	<a href="mailto:ssw33@georgetown.edu">ssw33@georgetown.edu</a>  erb2157@gmail.com	KNOMAD standard paper

<b>Measuring climate and environmental displacement and migration using a migration systems approach</b>	<ul style="list-style-type: none"> <li>• Elizabeth Fussell (Brown University)</li> <li>• Jack DeWaard (University of Minnesota Duluth)</li> <li>• Katherine J. Curtis (University of Wisconsin–Madison)</li> </ul>	<a href="mailto:elizabeth_fussell@brown.edu">elizabeth_fussell@brown.edu</a>  <a href="mailto:jdewaard@umn.edu">jdewaard@umn.edu</a> <a href="mailto:kcurtis@ssc.wisc.edu">kcurtis@ssc.wisc.edu</a>	Brief
<b>Monitoring and participatory methodology of drought-induced displacement in Ethiopia</b>	<ul style="list-style-type: none"> <li>• Pablo Cortés Ferrández (Internal Displacement Monitoring Center IDMC)</li> <li>• Ivana Hajzmanova (IDMC)</li> </ul>	<a href="mailto:pablo.ferrandez@idmc.ch">pablo.ferrandez@idmc.ch</a>  <a href="mailto:ivana.hajzmanova@idmc.ch">ivana.hajzmanova@idmc.ch</a>	Paper

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