International Conference and Networking Event on Climate and Environmental Change and Human Mobility

28 June 2019

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1 Introduction

The "International Conference and Networking Event on Climate and Environmental Change and Human Mobility" took place on 28 June 2019 in Bonn. It was hosted by the Global Programme of the **GIZ** "Sustainable Management of Human Mobility in the Context of Climate Change"; commissioned by the German Federal Ministry for Economic Cooperation and Development (**BMZ**); and the research project "Environmental degradation, climate change and migration: Global review of research and forecasts", financed by the German Federal Ministry for the Environment (**BMU**) and the German Environment Agency (**UBA**), and implemented by **adelphi** and the International Organization for Migration (**IOM**).

The conference brought together more than 90 participants, including **representatives of governments, international organisations, universities, research institutions and NGOs, as well as practitioners working in the field of climate change and human mobility**. In particular, it offered the opportunity to discuss with delegates from the Caribbean, the Pacific and the Philippines, who were in Germany for a week-long networking visit as part of the GIZ global programme.

Financed by:

Federal Ministry for Economic Cooperation and Development

Federal Ministry for the Environment, Nature Conservation and Nuclear Safety

The conference programme aimed to **identify and address knowledge gaps** related to climate-induced human mobility, to **establish networks** between the delegates from the three regions and national as well as international experts, and to provide the basis for future **mutual learning** processes. It featured panel discussions, breakout working groups, a photography exhibition, and a "marketplace of ideas".

2 Key takeaways

- **Concerted, global action is urgently required to protect the environment and the climate.** Preserving the natural world and functioning ecosystems increases the chances that people will be able to lead dignified lives in-situ and reduces environmental drivers of conflict.

- **The climate is changing now and impacting migration:** Slow and sudden-onset climate change impacts are already disrupting life in many regions around the world. These impacts are both directly displacing people, and influencing decisions to migrate.

- **Responses must transgress silos and borders:** No policy community or country can build resilience to climate change impacts alone. For example, in order to address human mobility in a changing climate, migration, climate change adaptation and DRR/DRM communities and policymakers have to work together. Strengthening links and mutual learning is essential.

- **Understanding the local context is key:** Climate change impacts vary in each location and context, as do their interplay with human mobility and other factors. National and sub-national risk assessments provide a clearer picture and help develop more targeted responses.

- **Invest in preparedness:** There is huge scope for saving lives and reducing damage by investing in early warning systems and other preparedness mechanisms before disasters strike.

- **Increase capacities at local level:** National polices and strategies are important, but strong implementation relies on increasing capacities at local level.

- **Consult with affected communities:** Taking an inclusive, human rights-based approach and consulting with people from communities in high-risk areas, vulnerable or marginalized groups, and receiving communities to understand their particular needs and concerns can significantly improve the outcomes of relevant projects and programmes.

- **Innovate on finance:** Increasing preparedness and resilience is cheaper than responding to crises, but nonetheless costly. Financial support mechanisms need to be developed at all levels.

- **Strengthen regional cooperation:** Regional mechanisms to increase freedom of movement, ensure mutual aid in the event of disasters, and raise finance for climate change adaptation /DRM can play an important role in strengthening resilience.

- **Digital tools create both opportunities and challenges:** Data collected via new knowledge platforms, apps and mapping approaches are already providing a clearer picture of human

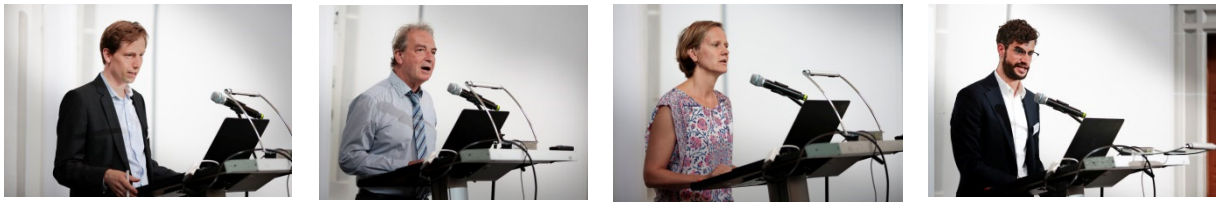
mobility in the context of climate change. However, it is important to respect sets of principles, such as the Principles for Digital Development, to ensure these tools have a positive impact overall.

3 Programme

3.1 Welcoming remarks

The conference opened with words of welcome from representatives of the two German federal ministries supporting the conference. Speaking on behalf of the **Federal Ministry for Economic Cooperation and Development (BMZ), Christoph von Stechow** highlighted the increasing relevance of displacement related to the adverse impacts of climate change within the UNFCCC negotiations. He said this development had been illustrated at least in part by the extension of the Task Force on Displacement's mandate under Warsaw International Mechanism for Loss and Damage (WIM). His remarks were followed by those of **Harald Neitzel** from the **German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU),** who noted that many of the climate change adaptation projects funded by the BMU's International Climate Initiative (IKI) were already improving conditions for migrants, home and destination communities, citing examples from Tanzania and Chad. However, he emphasised that more still needed to be done to systematically analyse the impact of IKI and other climate change adaptation projects on human mobility to maximise their benefits.

Two representatives of the three co-organisers of the conference then took the floor. **Dr Dorothea Rischewski**, head of the **GIZ Global Programme "Sustainable Management of Human Mobility in the Context of Climate Change"** spoke first. She explained the programme's goals to increase resources, capacity and knowledge transfer between the three partner regions of the Caribbean, the Pacific and the Philippines. She reflected on the valuable discussions she had enjoyed with delegates from the three partner regions over the preceding three days, and how the process of "mutual learning" could support the programme in bringing together knowledge based institutions, advising BMZ, and feeding experiences from the partner regions into German policy. **Lukas Rüttinger, adelphi**, then presented the aims of the project "**Environmental degradation, climate change and migration: Global review of research and forecasts**" being carried out by adelphi and IOM, on behalf of UBA and BMU. He outlined the scope of the three papers that will be finalised in autumn 2019 – a literature review, an impact analysis of the links between environmental change and migration, and a paper outlining political responses, particularly for policymakers in the field of climate change adaptation. A discussion paper providing an overview of the key findings from the three studies was also distributed to participants as they registered (*See Annex*).



From left to right: Christoph von Stechow, Federal Ministry for Economic Cooperation and Development (BMZ); Harald Neitzel from the German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU); Dr Dorothea Rischewski, GIZ Global Programme "Sustainable Management of Human Mobility in the Context of Climate Change", and Lukas Rüttinger, adelphi. *© photothek.de/ Ute Grabowsky.*

3.2 The impacts of climate change on human mobility

The next session began with four short presentations outlining the main impacts and risks of climate change on human mobility.

Dr Susanne Melde © *photothek.de/ Ute Grabowsky*

Dr Susanne Melde from the **Global Migration Data Analysis Centre of the International Organisation for Migration (IOM GMDAC**), the third co-organiser of the conference, began by giving a general overview on the state-of-the-art: i.e. what do we know about the impacts of climate change on migration? In this, she summarised the main findings of her team's review of the growing body of literature on climate change and human mobility, and their paper "Migration, environment and climate change: Impacts", outlining its main findings and knowledge relating to four key impact types: **sudden and slow-onset climate impacts, impacts on "trapped populations" and the links between climate change, migration and conflict** (*see Theses 1 to 6 of the Discussion Paper in the Annex*).

Danica Marie Supnet, © *photothek.de/ Ute Grabowsky*

Representatives from each of the partner regions – the Caribbean, the Pacific and the Philippines – then provided more information about the particular impacts that climate change is having on human mobility in their region. **Danica Marie Supnet, Institute for Climate and Sustainable Cities (ICSC), Philippines** explained how in 2013 **Typhoon Haiyan (Yolanda),** one of the most powerful tropical cyclones ever recorded, had been a wake-up call for the Philippines to expand and deepen its preparedness for extreme weather events in future, both by strengthening the implementation of policies at local level and by considering how climate change adaptation (CCA) could complement Disaster Risk Management (DRM) approaches. She explained that the Philippines was **already experiencing many slow-onset climate change impacts** and that a **Climate Disaster Risk And Vulnerability Assessment (CDRVA**) had shown how impacts varied across the huge archipelagic nation – from prolonged frosts in the northern regions to droughts in the south and significant sea-level rise in coastal communities. As to how these impacts are affecting human mobility, she noted that **the government still lacked hard data**, but anecdotal evidence had revealed importance findings – for example regarding the **increasing seasonality of rural livelihoods, increased rural to urban migration, and the important role women play** in household decisions to migrate. She called for stronger collaboration between climate scientists and policymakers to better understand the impacts climatic changes have in specific locations, as well as for this data to be communicated clearly so that it could be understood by all stakeholders, including the Philippines 1000-plus local government units (LGUs). Finally she stressed **the importance of increasing the evidence for climate-induced migration pathways, so as to be able to access climate finance to avert, minimise and address displacement.**

From left to right: Pepetua Latasi. Crispin d'Auvergne, Lukas Rüttinger © *photothek.de/ Ute Grabowsky*

Crispin d'Auvergne spoke next, representing the **Organisation of Eastern Caribbean States (OECS)**, an intergovernmental organisation ensuring free movement of people, goods and services between 12 Caribbean countries. He explained that while human mobility – both between islands and from outside the region – had always been a feature of Caribbean life, the focus on climate change was new. There had always been hurricanes in the region, and policymakers had generally responded via the more long-standing policy field of disaster risk reduction (DRR). Climate change was viewed as a problem for the future, rather than having impacts in the here and now. However, he said the devastating **2017 hurricane season had forced people in the region to recognise that climate change was already increasing the frequency and severity of extreme weather events**.

Taking the example of Hurricane Maria's impact on the island of Dominica in 2017, he **illustrated the scale of the threats and challenges that Caribbean islands face as storm intensities increase**. Just on Dominica, Hurricane Maria left over 60 people dead or missing, and an estimated USD 1.3 billion in the damages and losses (equivalent to 224% of Dominica's 2016 GDP (Relief Web 2018). Almost all buildings on the island were damaged or destroyed, transport infrastructure was ruined, fishing boats went missing, coconut trees and other crops were razed. Afterwards people had not even been able to withdraw money from banks and many had to be sheltered in emergency accommodation in schools, interrupting access to education on the island for several months.

Thanks to the **regional agreements** between OECS countries allowing displaced persons to move freely between islands without having to apply for fixed-term visas, many Dominicans sought at least **short-term shelter** elsewhere in the OECS, with a clear influx of people noticeable on neighbouring islands. However, he noted that the hurricane was also likely to have a longer-term influence on decisions to migrate in the region. With many recognising that nowhere on the island would ever truly be safe, many have begun planning to **permanently relocate** their entire family or at least their children out of the region.

Asking the question "where is God from?", he also sought to convey **how religious beliefs and past experiences can affect a country's response to climate change impacts**. He explained that in the Caribbean some islands that had not experienced hurricanes in a long time had believed themselves protected by God, and had therefore underinvested in preparedness and response infrastructure and services. This meant that when hurricanes did strike, more lives were lost and more people were displaced as important resilience mechanisms were not sufficiently developed.

From left to right: Dr Susanne Melde; Pepetua Latasi
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Pepetua Latasi, Climate Change Policy & Disaster Coordination Unit, Office of the Prime Minister, Tuvalu introduced herself as a member of the Task Force on Displacement and a negotiator on loss and damage at the UNFCCC negotiations. She echoed the words of the previous two speakers, stressing that the impacts of climate change were already more than evident in her home country of Tuvalu. As the low-lying Pacific atoll has no rivers or lakes, she said that **changing rainfall patterns and groundwater salinization due to sea-level rise were particularly concerning for both farmers and households, given that they have no other access to**

freshwater. She also explained how **King Tide flooding** now occurred throughout the year and **cyclones** were becoming more frequent. She noted that these impacts had made land rights a contentious issue and had already led **significant numbers of people to move to the country's capital**. This was in turn creating social problems and unrest.

Moving on to explain how her government was responding, she explained that they had begun to gather more data to better understand why and where people were moving, in order to create more targeted policies. The government of Tuvalu has also moved to put forward a draft **UN General Assembly resolution** to commence work to develop a legal regime to protect the basic rights of people displaced by climate change. Reflecting on the presentations of the previous two speakers, she noted that Tuvaluans looking to relocate had fewer options available to them – there was no high ground anywhere in Tuvalu to retreat to, and the Pacific still did not yet have the kind of free movement agreements in place that allowed people to easily relocate (as in the Caribbean). Migration/relocation had to be planned far longer in advance in order to make the necessary visa arrangements (e.g. with Fiji).

The subsequent Q&A session reflected on the presentations and included calls for action in several areas:

- Understanding **how different slow and sudden-onset climate-related risks converge**, both with each other and with other fragility risks. Strengthening cooperation between different policy communities (e.g. humanitarian sector, DRR and CCA) to develop the kind of **holistic responses** required to address these converging risks.
- **Greater preparedness**: There is enormous scope to invest more in preparedness to increase resilience before disasters strike, and to improve the response to them. This is necessary at all levels of government, including the local level.
- **Building capacity at local level**. Governments need to have a strong national agenda and strategy to support local governments in understanding the risks they face in their particular locality, and in developing and implementing climate action plans.
- Developing **regional organizations and institutions** (e.g. CARICOM and the Pacific Island Leaders Forum) to ensure mutual support for people displaced by climate change
- Building mechanisms to **encourage countries to receive people displaced by climate change**, for example within the strategic workstream on migration, displacement and human mobility within the UNFCCC.
- **Increasing financial support** for Small Island Developing States (SIDS) to engage in climate change adaptation measures. With the majority of the islands' infrastructure located in coastal areas, rebuilding and retrofitting buildings is likely to be extremely costly. Many governments are already struggling to provide basic services and infrastructure for their citizens. Vulnerable communities also need financial support to allow them to "migrate with dignity" (e.g. access education and training in other countries).
- **Planned relocation** should remain a last resort, but when it becomes necessary, it should involve the affected communities in the planning and decision-making phases. It is especially important to address the major challenge of protecting or providing livelihoods as people move (see "A Toolbox: Planning Relocations to Protect People from Disasters and Environmental Change").

3.3 Marketplace of ideas and photo exhibition

During the lunch break, participants were invited to walk around a "**marketplace of ideas**" to find out more information about initiatives addressing human mobility in the context of climate change. The following initiatives and organisations presented their work:

- TransRe: Building Resilience to Climate Change through Migration and Translocality – University of Bonn
- EPICC (East Africa Peru India Climate Capacities) – Potsdam Institute for Climate Impact Research (PIK)
- Guidelines for Conflict-Sensitive Adaptation to Climate Change – adelphi and UBA
- IOM and Migration, Environment and Climate Change (MECC)
- Organisation of East Caribbean States
- Pacific Island Forum Secretariat
    - Boe Declaration on Regional Security
    - Framework for Resilient Development in the Pacific (FRDP)
- Climate Change Commission of the Philippines
- Commission on Population and Development (POPCOM) of the Philippines

To view the posters, please see the Annex.

The lunch break was also an opportunity for participants to look at a **photography exhibition** offering an up-close view of the challenges that relocated communities face and how they are building resilience to them. The exhibition showed pictures from three communities that have relocated in Fiji: Vunidogoloa (Savusavu), Tukuraki (Ba) and Narikoso (Kadavu).

3.4 Working Groups

Working Group 1 – Climate Change Adaptation

This session aimed to explore how climate change adaptation policy could better respond to human mobility. During the introduction, Dennis Tänzler (adelphi) presented relevant core findings from the discussion paper produced by adelphi and IOM, as part of their research project on behalf of UBA/BMU (see Annex). The subsequent discussion then aimed to identify the key challenges, good practices, and policy options for integrating human mobility into climate change adaptation policy planning and implementation.

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Key challenges

- All regions experiencing **increasing climate change impacts** (see Section 3.2). In some cases, the only long-term adaptation measure may be to relocate to different island/country.

Gaps and the need for further integration

- **Displacement due to extreme weather events has generally been considered the "turf" of disaster risk management (DRM) agencies**. However, they are generally not equipped to comprehensively address human mobility in the context of climate change. Climate change adaptation (CCA) policies and finance have not sufficiently taken into account human mobility.
- Only 33 countries consider human mobility in their **NDCs** and there is still considerable scope to consider migration and displacement due to the adverse effects of climate change in **NAPs.**

Lacking information, capacities and financing

- In vulnerable countries, governments from national to local level **need clear scientific analysis** that shows which areas are particularly exposed to extreme weather events and other climate change impacts, and which areas are safe for relocating displaced persons.
- **Local governments across all regions lack the scientific baseline information, understanding and capacity to write and implement local climate action plans**, let alone the funds to develop them. Strengthening local climate action planning and capacity is essential, but also a mammoth task, especially in countries like that Philippines that have over 1,000 LGUs (Local government Units) or in countries that are struggling to meeting the more immediate basic needs with limited funds (some islands of the Caribbean).
- Preparing for and responding to human mobility in the context of climate change will place **additional financial burdens on already vulnerable developing countries**. As human mobility is

not considered in the selection and assessment criteria for international climate finance donors, it is difficult to access climate finance to support relevant measures (for example, to finance the planned relocation of vulnerable communities).

Policy options, good practices and lessons learned

Integration – Bring together CCA and DRR communities; use opportunity of NDC update

- There are major advantages to **integrating human mobility into CCA and in bringing together DRM and CCA communities**, policies and institutions to strengthen preparedness, responses and overall resilience to climate change impacts.
    - ***Good practice:*** *The Framework for Resilient Development in the Pacific (FRDP) and the Joint Action Plans for CCA and DRM developed by several Pacific nations.*
    - ***Good practice:*** *Mandate of the Caribbean Disaster Emergency Management Agency (CDEMA) extended from disaster response to comprehensive disaster management (CDM). However, further institutional integration of DRM and CCA may also be needed.*
- The preparation of the **next round of NDCs** is an excellent opportunity to integrate human mobility into national CCA policy, including NAPs.
    - ***Good practice:*** *Fiji has included planned relocation in its NAP and other countries in the Pacific are looking to do the same in the next round.*
- Governments need to go further in ensuring that CCA projects and programmes **systematically take into account the positive and negative effects of human mobility on adaptation measures** at all stages – from selection to planning, implementation and evaluation.
- In its next phase too, the **Task Force on Displacement** can play a role in bringing together different communities relevant for addressing displacement as a result of the adverse effects of climate change within the UNFCCC.

Planning, financing and analysis

- Conduct **vulnerability assessments** that would provide local governments with the baseline scientific information they need to formulate and implement local climate action plans
    - ***Policy option:*** *National land-use planning and zoning documents are a useful tool for communicating the results of vulnerability assessments, so that is clear to all government agencies which areas, communities and economic activities are particularly exposed.*
- **Increasing the capacity of frontline local governments** to assess and respond to the threats posed by climate change in their particular jurisdiction, including the provision of baseline scientific information, training and funding to develop of early warning systems, contingency and evacuation plans, is essential to strengthen resilience, ensure safe migration and displacement, and save lives.
    - ***Good practice:*** *The People's Survival Fund in the Philippines that provides support and funding to LGUs developing local climate action plans.*
- **Develop innovative financing mechanisms** at national, regional and international level to increase the financing and support to vulnerable countries at both national and sub-national level.
    - ***Good practice:*** *The Environment and Climate Adaptation Levy (ECAL) funding mechanism financed by charge on plastic bags and a tourist tax is partly being used to finance CCA measures and a Climate Change Relocation Trust Fund to raise finance to relocate low-lying coastal communities.*

- International climate finance donors can **revise their project selection and assessment criteria** to ensure that CCA projects and programmes systematically take into account human mobility.
    - ***Policy option:*** *Review funding criteria to ensure climate change adaptation measures' potential positive and negative effects of human mobility (and visa-versa) are taken into account (e.g. for International Climate Initiative (IKI) projects); ensure the human mobility is taken into account in the co-benefits analysis in Green Climate Fund proposals.*

Cooperation at regional level

- **Regional agreements** between island nations can increase the options available to people looking to relocate due to the adverse effects of climate change. (Planned relocation to be considered as a climate change adaptation measure.)
    - ***Good practice:*** *The freedom of movement agreements between the OECS countries allow people from islands affected disasters to relocate, work and study elsewhere.*
- Participants also highlighted the value of developing regional financing mechanisms, with some stressing that this could build on past experiences of setting up sound regional strategies.
    - ***Good practice:*** *Pacific Resilience Facility is an investment fund providing support to the public and private sector, and communities to recover after disasters.*

Working Group 2 – Disaster Risk Reduction and Management

This session aimed to explore how disaster risk reduction and management policies can better respond to human mobility in the context of climate change. During the introduction, Lukas Rüttinger (adelphi) presented relevant core findings from the discussion paper produced by adelphi and IOM, as part its research project on behalf of UBA/BMU (see Annex). The subsequent discussion then aimed to identify key challenges, good practices, and policy options for integrating human mobility into disaster risks reduction and management.

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Key challenges

Gaps and the need for integration

- There are still significant gaps between DRR/DRM and CCA. These start on the conceptual level with differing frameworks, definitions and approaches. This is often mirrored on the institutional level with lacking integration and coordination mechanisms between agencies and communities of practice, which frequently leads to misperceptions and a lack of understanding of each other's role and approaches. There are significant synergies and co-benefits to be drawn from closer cooperation between the two fields, but it remains an open question whether this can best be achieved by developing a common framework or a diverse set of frameworks and approaches.
- At the same time, there are gaps in terms of sector-specific DRR plans and between different government levels, in particular the national and the local level in terms of policy implementation. There are also gaps in the coordination and cooperation mechanisms connecting the national and the regional level, and challenges in terms of linking policies and their implementation with traditional knowledge and governance systems.
- In general, there is still a lack of awareness about the new risk landscape that climate change is creating. Targeted approaches are needed to address human mobility related to the adverse effects of climate change in specific contexts.

Lacking financing and capacities

- In general, there is a lack of financing and capacities in DRR, in particular in the face of the increasing frequency and intensity of extreme weather events. In particular, precautionary measures and more long-term DRR measures are not given enough attention vis-à-vis short-term response measures. This also often means that more money is spent on response than longer-term preparedness and resilience-building. Another issue is with climate change adaptation getting more attention, it might be harder to mobilise funds for DRR as a standalone topic.

Overlooked issues

- Land and tenure issues are an increasing challenge when it comes to the movements of people such as displacement and relocation. Another overlooked challenge is how best to support people that are already displaced and how they should be integrated into DRR plans and strategies.

Policy options, good practices and lessons learned

Integration – Bring together DRR and CCA

- There are increasing efforts **to bridge the gap between DRR and CCA** in order to better coordinate action across sectors and to create synergies. This includes interagency committees and technical working groups, joint strategies and planning and integrating DRR and CAA into one agency or ministry.
    - ***Good practice:*** *The Framework for Resilient Development in the Pacific (FRDP) and the Joint Action Plans for CCA and DRM developed by several Pacific nations.*
    - ***Good practice:*** *Dominica merged its climate change adaptation and DRR portfolios into one agency called the Climate Resilience Execution Agency (CREAD)*
- There is an increasing number of **projects that link DRR with CCA, ecosystem services, and livelihoods** by using integrated ecosystem-based approaches that show significant co-benefits and synergies.
    - ***Good practice****: Building community based rangeland rehabilitation for carbon sequestration and biodiversity (Bara, Sudan)*

Cooperation at regional level

- Fostering cooperation on the regional level can be a powerful lever to improve DRR. In particular in the Caribbean, states have shown a high willingness to support each other in times of disasters. Also, regional cooperation around disaster response has been improving. This has led to **new regional institutions mechanisms and initiatives** in the field of DRR.
    - ***Good practice****: There are efforts under way to build up a regional multi-hazard early warning system in the Caribbean as well as a regional infrastructure for disaster response for example by establishing a Disaster Relief Unit under CARICOM.*

Planning, financing and analysis

- There has been a real **paradigm shift with the Sendai Framework** for Disaster Risk Reduction pushing states to move from response to prevention and mitigation. Many states such as the Philippines have introduced robust policy frameworks. However, implementation on the local level often still needs to be improved.
- There is an increasing number of good practices on how to use **specific financing facilities and insurances** to improve the resilience of states and communities to disasters.
    - ***Policy option****: Integrating DRR as prerequisite across international climate funding mechanisms.*
- Multi-hazard and comprehensive **risks analysis and risks mapping** are a key element for successful DRR. It is important to ensure that migration and displacement are part of these assessments.
- Displacement needs to be integrated into local and national DRR and CCA strategies and plans.
    - ***Good practice****: The Norwegian Refugee Council and UNDRR have developed a tool to integrate displacement into local and national DRR plans called Words into Action Guide Disaster Displacement.*

- **Relocation as a last resort measure** is being increasingly implemented and seen as an important element of long-term DRR and CCA.
    - ***Good practice**: Supported by the German Ministry for Economic Cooperation and Development, Fiji has developed "Planned relocation guidelines. A framework to undertake climate change related relocation"*

Community-based approaches, vulnerable populations and traditional knowledge

- Making sure that DRR policies and plans are locally implemented is key. Important success factors in this regard are ensuring broad community participation, building upon traditional institutions and knowledge, and focusing on the most vulnerable.
    - ***Good practice**: Community-based DRR has shown to be a success model of mobilizing communities and improving their capacity to prepare for and respond to disasters.*
    - ***Good practice:** After a volcanic eruption in Vanuatu, the government chose not to follow standard evacuation guidelines but to identify host communities in neighbouring islands based on traditional tribal connections.*

Working Group 3 – Migration policy

This session aimed to explore how migration policies can help countries better respond to climate change-induced displacement and migration. Soumyadeep Banerjee (IOM) opened the session with a short input. The subsequent discussion, moderated by Andrea Milan (IOM/GMDAC), focused on key challenges related to climate change-induced displacement and migration from a migration policy perspective, as well as on good practices and policy options for integrating human mobility into climate change adaptation policy, planning and implementation.

© Andrea Milan, IOM

Key challenges

Gaps and the need for further integration of migration policy and other relevant policy areas

- Key challenges from a migration policy perspective include addressing large movements of migrants; managing internal migration; and ensuring the safety/security of migrants.
- These challenges are often exacerbated by the lack of climate proof building standards; land ownership-related problems (including cultural ties to land); and the fact that climate change-induced displacement and migration is very context-specific.

Lack of information, capacities and financing

- Participants stressed that the effectiveness of migration policies is often hindered by a lack of conceptual clarity – including agreed definitions – a lack of harmonized data and the need for a greater understanding of the complexity of migration decision in the context of environmental and climatic stressors.
- The complexity of the topic creates several problems - both in terms of the need for cross-sectorial coordination within governments and in terms of the financial resources and know-how needed to deal effectively with climate change-induced migration and displacement.

Policy options, good practices and lessons learned

Integration of migration policies and other relevant policy areas

- Memorandums of Understanding (MoUs) with schools can be used to address housing needs in the context of displacement due to environmental and climatic phenomena. For example, schools can be designed to also serve as evacuation centres in case of emergencies.

- Addressing displacement and migration in the context of specific environmental stressors can be a good way to navigate the complexity of the relationship between climate change, environmental change and migration.
    - ***Good practice:*** Several countries (including Peru, Bolivia, Argentina, Brazil) are already addressing the nexus between specific environmental stressors and human mobility
- Refugee law can be applicable to displaced persons in certain cases, and immigration procedures can be relaxed for migrants displaced by climatic and environmental stressors.
- The Global Compact for Safe, Orderly and Regular Migration (objectives 2 and 5) offers a number of relevant policy options.
- Climate change passports – an idea presented by the German Advisory Council on Global Change (WBGU) through a recent policy paper – could be offered to persons displaced in the context of climate change as an international instrument to ensure that people's dignity and rights are respected. It could be based on the model of the Nansen passport for stateless persons, which enabled hundreds of thousands of people to find refuge after the First World War.

Planning, financing and analysis

- Providing support to households and communities receiving remittances can contribute to sustainable development processes in migrants' countries of origin

Cooperation at regional level

- Broader regional policies and planning have a crucial role to play in ensuring predictable and sustainable responses to climate change induced migration and displacement
- Free movement protocols (regional arrangements) and humanitarian visas are concrete ways in which countries can manage migration in a systematic (rather than an ad-hoc) way
    - ***Policy option:*** *Regional agreements targeted towards climate change migration*
- Seasonal migration schemes can be beneficial for both countries of origin and destination
    - ***Good practice:*** *The Pacific Labour Mobility Scheme*

Working Group 4 – Digitalisation and information technology

This session aimed to explore the opportunities that digitalisation and new information technologies present for responding to human mobility in the context of climate change. Felix Ries (GIZ) began the session with an overview of the role of digitalisation in international development cooperation and the "digital principles" for sustainable digital projects. Participants were then introduced to knowledge platforms, apps and mapping approaches relevant to human mobility and climate change.

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The presentation was based on workshops held with project partners, and a study on digital opportunities in the Philippines, and Caribbean and Pacific regions prepared as part of the GIZ programme on sustainable management of human mobility in the context of climate change.

Key challenges

Equality and social issues

- A focus on digital solutions might deepen the divide between people with resources, IT-skills, and access to electricity, internet and global networks, and segments of the population who are not able to make use of digital solutions. This might be especially relevant in the context of "trapped populations".
- There might be a conflict of interests between government institutions interested in tracking migration and displacement movements, and the affected individuals, who might fear persecution. When applying digital solutions, it is important to put an emphasis on privacy issues and human security to safeguard the human rights of vulnerable mobile populations.

Access to and vulnerability of infrastructure

- Digital solutions rely heavily on infrastructure like electricity and mobile internet systems. Even in places where electrification and internet access rates are high, infrastructure may still be vulnerable to natural disasters. This is especially important to consider when digital tools are used to manage relief efforts in the aftermath of disasters

Effects on jobs and livelihoods

- Digitalisation can lead to job losses that might put additional stress on already vulnerable livelihoods. Digitalisation can therefore be an additional push factor for migration. With rapid developments of automated farming, this potentially affects large population groups vulnerable to climate change.

- New opportunities to engage in jobs made possible by digitalisation might be hindered by lack of skills, and a required shift of identity ("from fishermen to clickworker") and culture.

Policy options, good practices and lessons learned

Principles for the effective use of digital tools

- Introducing new technologies always poses risks – for example, they could have a negative impact in terms of a project's sustainability, human rights, efficiency or equality.
    - ***Good practice & policy option:*** The "Principles for Digital Development" provide good guidance for developing digital approaches to human mobility in the context of climate change, e.g. principles like "Re-use and improve" or "Design for sustainability" are likely to make digital projects more successful.
- Beyond the "Principles for Digital Development", further principles discussed at the workshop included:
    - Development of a digital "do no harm" approach
    - Digital tools should be introduced with "free, prior and informed consent"
    - There should always also be the option of accessing the services offered by a digital solution offline – to include people without internet access and to be able to be used if infrastructure is damaged or destroyed during a disaster.

Digital approaches in the context of human mobility and climate change

- Government institutions, UN organisations, NGOs and development agencies are already applying a wide range of digital tools, *including*:

Good practices:

- Portal on environmental migration by IOM
- Visualization of migration data by IOM
- Open source humanitarian mapping via crowdsourcing: Hot OSM
- Humanitarian data exchange platform HDX

New approaches for managing human mobility in the context of climate change

- Technological advancements in the analysis of big data make it possible to merge migration data with climate projections and disaster data to get a better overall picture on climate-change-induced human mobility patterns. However, the conceptual challenge (migration as a multi-causal phenomenon) remains, despite better data availability.
- Decisions on moving or staying also depend on the level of risk tolerance on individual and household level. Risk tolerance assessed by gamification approaches could potentially be used as a proxy.
- Digital approaches could also make the management of incoming populations more efficient, e.g. when planning required services for displaced people
- The "platform economy" might be able to substitute or complement livelihoods threatened by climate change. While the threats that climate change poses to ecosystems and the livelihoods that depend on them (e.g. agriculture, fisheries) are location-specific, many of the job opportunities made possible by digitalization are not tied to a particular place or geography. However, challenges regarding infrastructure, capacities and skills, as well as culture and identity remain.

3.5 Concluding remarks

To round off the event, **Dr Carmen Gottwald from the German Environment Agency (UBA)** reflected on the many insights she had gained from the day's discussion and remarked how important it was to listen to and learn from other countries and practitioners to find ways forward, stating "the greater the challenges, the greater the need to talk to each other". In her closing words, **Mariam Traore Chazalnoël from IOM's Migration, Environment and Climate Change Division** and a member of the Task Force on Displacement noted that many of the issues raised at the conference would be taken up in the Task Force's discussions on how to continue the work which began last year with the Task Force and the Global Compact for Migration and move towards implementation.

Finally, **Dr Dorothea Rischewski** and **Julian Tost** from GIZ's Global Programme on "Sustainable Management of Human Mobility in the Context of Climate Change" emphasized the value of the mutual learning that had taken place at the conference and in the days before, and reiterated the resolve at the GIZ to listen to affected people and be on the side of those driving action in the regions. Finally, they encouraged all participants to be bold, and to continue to transgress silos and borders to push for stronger action to address human mobility in the context of climate change.

From left to right: Dr Carmen Gottwald; Miriam Traore Chazalnoël; Dr Dorothea Rischewski and Julian Tost
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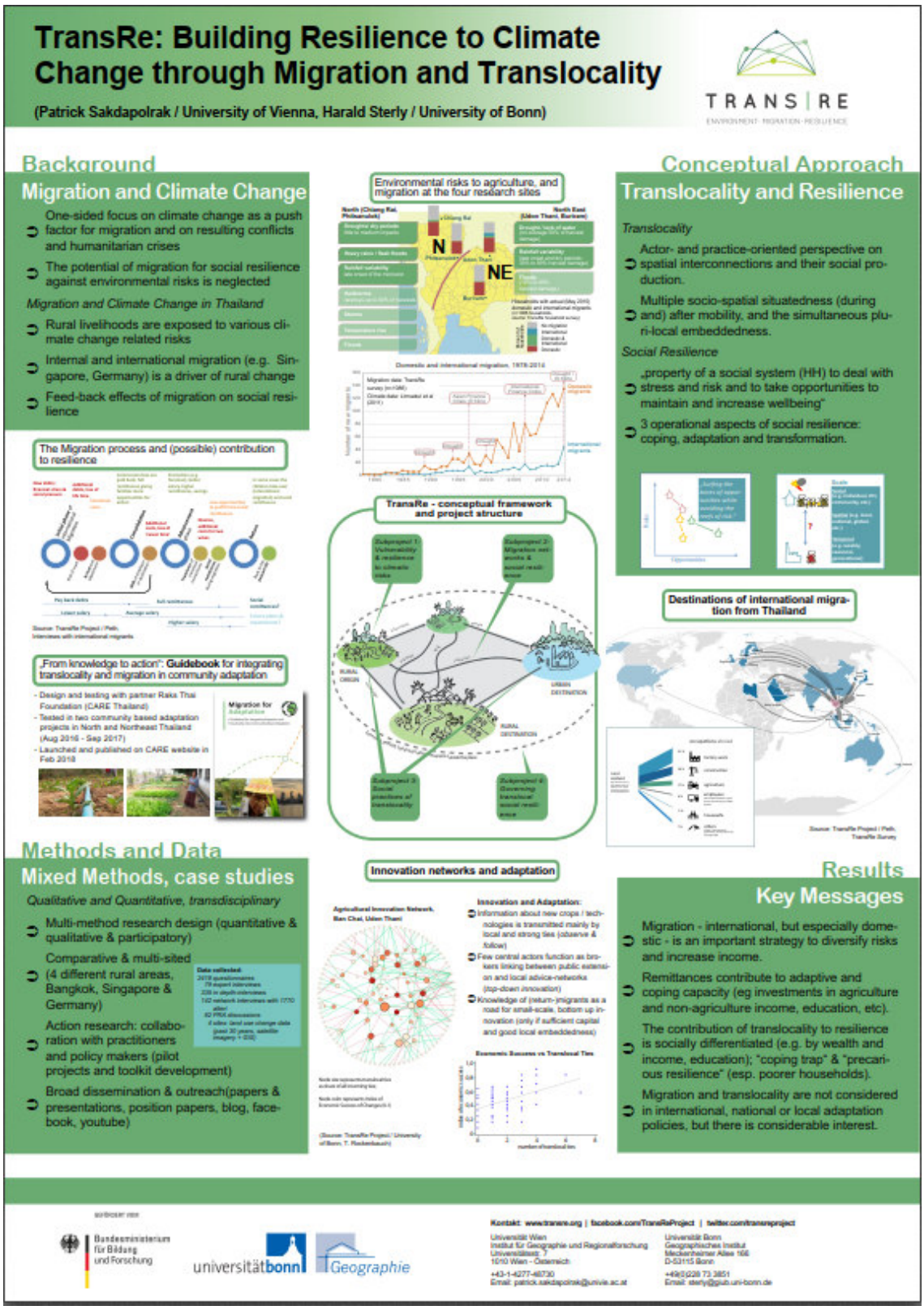
4 Annex (Posters)

Posters that were shown at the lunchtime marketplace of ideas:



Potsdam Institute for Climate Impact Research

International Conference and Networking Event on Climate and Environmental Change and Human Mobility
28 June 2019

The Organisation

At the Potsdam Institute for Climate Impact Research scientists from the natural and social sciences work together to generate interdisciplinary insights and to provide society with sound information for decision making. PIK research addresses crucial scientific questions in the fields of global change, climate impacts and sustainable development.

Projects/ Approaches/ Research

HMCCC (Human Mobility in the Context of Climate Change) Baseline Study

Researchers of the Potsdam Institute for Climate Impact Research supported the GIZ's HMCCC Project by conducting a baseline study on climate migration, displacement and relocation policies in the Caribbean and the Pacific region and in the Philippines. Together with researchers from the University of the South Pacific, University of the Philippines, Visayas and a researcher from Trinidad and Tobago, 75 expert interviews were conducted in 9 countries.

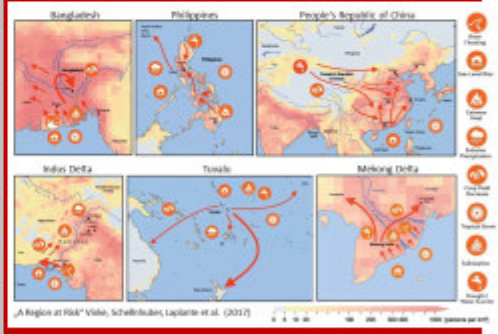
EPICC (East Africa Peru India Climate Capacities)

In the EPICC project, the effects of climate change on agriculture impacts migration dynamics in Peru, India and Tanzania are analyzed in order to support political decision-making processes and adaptation planning. Impacts on existing land-urban migration routes are recorded and adapted to municipal administrations and ministries interests in order to make useful this information for their policy purposes.

Extensive engagement with stakeholders in the respective countries facilitates the co-production of knowledge aimed at improving local capacity to respond to displacement related to natural hazards. In addition, the research is exploring ways to improve awareness on the nexus between displacement and climate change.

Other Activities

In the 2017 Asian Development Bank Report "A Region at Risk – The Human Dimensions of Climate Change in Asia and the Pacific" PIK and ADB jointly investigated in two chapters the current state of the literature on regional climate impacts, migration and human security.



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EPICC

PIK

Potsdam Institute for Climate Impact Research

International Climate Initiative (IKI)

Guidelines for Conflict-Sensitive Adaptation to Climate Change

Research identification number: FKZ 3715 41 105 0
Project implementation: adelphi
Duration: 2016-2019

CONTEXT

Climate change is one of the key challenges of the 21st century. With a growing world population, rising demand for food, water and energy and a dwindling natural resource base, **climate change will act as a "threat multiplier"**, aggravating resource scarcity and putting stress on ecological, social and economic systems. Mitigating climate change by reducing greenhouse gas emissions and adaptation to reduce the adverse impacts of climate change are challenges that mankind has to face both.

While the international community provides extensive support and guidance for adaptation frameworks in developing countries, there exists **no specific guidance for adaptation programming** in fragile and conflict-affected contexts.

There is robust evidence that most fragile and conflict-affected countries will be highly exposed to the impacts of climate change. Given limited resources and capacities in these contexts, it can be challenging for fragile and conflict-affected states to fully engage and implement adaptation activities and, thus, to effectively manage vulnerabilities. Against this backdrop, **a dedicated guide on conflict sensitive adaptation is needed.**

Photo credits: UNAMID/UN Photos [CC-NC-ND 2.0]

OBJECTIVE AND APPROACH

Addresses planners and project managers involved in designing and implementing an adaptation project in fragile or conflict-affected contexts. This includes donors, practitioners from central and local governments, non-governmental organisations and other implementing agencies as well as climate finance institutions.

Seeks to sensitise planners and project managers how their interventions could be or have been interacting with conflict in unintentional ways and to stimulate thinking how to prevent negative impacts on conflict dynamics. The guide also addresses planners and project managers in the broader development and peacebuilding community. Finally, it can inform debates on climate security at the international level such as the United Nations Security Council.

Outlines how to develop and implement an adaptation project in a conflict-sensitive way. It is structured along the "typical" phases of a climate change adaptation project cycle and comprises four modules. Each module provides step-by-step guidelines on how to integrate conflict sensitivity.

The Guide Comprises Three Major Parts

1. **Overarching conceptual framework:**
   It explains what is meant by 'conflict sensitivity' and illustrates the relevance of the notion for climate change adaptation processes.

2. **Detailed, practical step-by-step guidelines on how to integrate conflict sensitivity into the development and implementation of an adaptation project:**
   It is structured along a typical cycle for climate change adaptation projects and comprises four modules with key steps (guidelines) explained in the module.

3. **Supplementary information and tools to support implementation of the guidelines:**
   Sector-specific sample questions, indicator lists and resource lists. The Annex also contains documentation of 'good practice'-examples to further inspire the user.

Structure of the Guide:

From problem diagnosis to monitoring and evaluation

Module:	Key Steps and Tools For:
1	Problem Diagnosis and Needs Assessment
2	Planning and Designing
3	Implementation
4	Monitoring and Evaluation

German Environment Agency

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Pacific

International Conference and Networking Event on Climate and Environmental Change and Human Mobility
28 June 2019

The Council of Regional Organisations in the Pacific (CROP)

Pacific Islands Forum and Secretariat (PIFS)
The vision for the Pacific region is of peace, harmony, security, social inclusion, and prosperity, so that all Pacific people can lead free, healthy, and productive lives.

the Secretariat of the Pacific Community (SPC),
the Forum Fisheries Agency (FFA),
South Pacific Regional Environment Program (SPREP),
the Pacific Islands Development Program (PIDP),
the South Pacific Travel Organisation (SPTO),
the University of the South Pacific (USP),
the Pacific Aviation Safety Organisation, and
the Pacific Power Association.

Regional focus

1. The Pacific Islands Forum is comprised of the Leaders 18 Pacific Island Countries and is the political organisation of the Pacific Region.
2. We do this in partnership with Members, international partners and stakeholders within our region and outside, particularly in recognition of the trans-boundary nature of many of the challenges we face.
3. The Secretariat is focused on supporting our 18 Members to collectively address regional challenges and harness our strengths and opportunities, so that all Pacific people can lead free, healthy and productive lives.

Areas of regional cooperation

The Framework for Pacific Regionalism
The Framework for Pacific Regionalism identifies four principal and enduring objectives

1. • Sustainable development that combines economic social, and cultural development in ways that improve livelihoods and well-being and use the environment sustainably;
2. • Economic growth that is inclusive and equitable;
3. • Security that ensures stable and safe human, environmental and political conditions for all; and
4. • Strengthened governance, legal, financial, and administrative systems

Boe Declaration
Securitizing Climate Change and Building Resilience to the impacts of Climate Change and Natural Disasters in the Pacific

1. The 2018 Boe Declaration on Regional Security recognises that climate change remains the single greatest threat to the livelihoods, security and wellbeing of the peoples of the Pacific.
2. It emphasises that the Pacific is confronted with complex security challenges framed by an expanded concept of security (human security and humanitarian assistance, environmental and resource security, transnational crime and cybersecurity and cyber-enabled crimes).

Philippines

International Conference and Networking Event on Climate and Environmental Change and Human Mobility
28 June 2019

The Organisation

Government of the Philippines

- Commission on Population and Development (POPCOM)
- Climate Change Commission (CCC)
- Local Government Academy (LGA)
- Local government of Tanay, Rizal

Mission/Goals

'Ambisyon natin (Our Ambition)' 2040: Secure, healthy and resilient society.

HMCCC goal:
Actionable knowledge for sustainable management of internal migration due to climate change

Projects

1. POPCOM is training barangay (the smallest unit of governance) workers to monitor migration.
2. CCC is updating the National Climate Change Action Plan (NCCAP), to include human settlements under the 'Human Security' priority theme. Simultaneously, human settlements and migration are highlighted in local climate change action planning.
3. LGA is advocating disaster preparedness protocols for local governments, called "Operation L!sto (Operation Ready)".
4. The local government of Tanay, Rizal has maintained a Migration Information Centre, collecting demographic and health data and tracking in-migration to the municipality.

Lessons learned

1. Per POPCOM's rapid assessment of internal migration in 2014, over 60% of in-migration occur in Metro Manila and two adjacent regions.
2. Up-to-date, mapped population data can help assess exposure to climatic risks, which can inform local sectoral planning and disaster risk reduction.
3. Bottom-up approach and local policy-making go a long way to ensure quality data collection and maintenance.
4. A strategic policy framework and regime that explicitly addresses human mobility and climate change is extremely important.

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Philippines

International Conference and Networking Event on Climate and Environmental Change and Human Mobility
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Emerging good practices

Philippine Statistics Authority (PSA) and **University of the Philippines Population Institute** (UPPI) conducted in 2018 the first National Migration Survey.

Ateneo Innovation Center (AIC) deploy digital tools for ecosystem stewardship and risk reduction.

Climate Change Commission (CCC) aim to build healthy, sustainable and resilient communities.

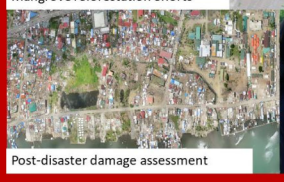
Specific projects

1. The results of the **National Migration Survey** will provide representative baseline data on migration in the Philippines, which will be used to:
   - Estimate international and internal migration flows, and major migration streams;
   - Examine different characteristics of migration and migrants;
   - Determine levels, patterns, and processes of migration, and identify factors affecting these.
2. Using **unmanned aerial vehicles** (UAVs) can provide stakeholders with data to better understand the environment and the impacts of activities on their communities. Information from sensors and ground truthing are combined to create maps that allow informed decision-making, reducing risks to livelihoods and well-being.

   Additionally, UAVs can help manage and mitigate risks. During disasters, UAVs enhance capabilities of personnel on the ground in assessing risk and damage. UAVs can also be used as data ferries, especially in information-isolated areas, until traditional communication networks are restored.
3. The **Communities for Resilience (CORE) Initiative** endeavour to strengthen universities to mentor local governments on the science and issues of climate change. Training programmes enhance knowledge of local communities on risks and vulnerabilities to climate change, and promote partnership between higher education institutions and local government units.

Conduct of National Migration Survey

Mangrove reforestation efforts


Post-disaster damage assessment

Map verification

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CCC: **Mr Alexies Lapiz, Chief for Strategic Partnerships** sakay71@gmail.com

Philippine Statistics Authority · Solid · Responsive · World-class

Ateneo Innovation Center

Climate Change Commission · Philippines

5 Annex (Discussion paper)

*This discussion paper summarises the main findings of the three papers produced as part of the research project "**Environmental degradation, climate change and migration: Global review of research and forecasts**", financed by the German Federal Ministry for the Environment (**BMU**) and the German Environment Agency (**UBA**), and implemented by **adelphi** and the International Organization for Migration (**IOM**). The three papers are currently being finalised. If you would like to receive a copy of the reports once they are published, please contact wright@adelphi.de.*

If you wish to use the information provided in the discussion paper, please reference as follows:

Melde, Susanne; Andrea Milan, Lukas Rüttinger, Dennis Tänzler and Emily Wright (2019): Climate and Environmental Change and Human Mobility. Discussion paper. June 2019.

Discussion paper

Climate and Environmental Change and Human Mobility

June 2019

Despite the complexity and multi-dimensional nature of the climate change, environment and migration nexus, policymakers and practitioners now have access to increasingly sound research findings and evidence-based recommendations and guidelines. These can help to create greater coherence between relevant international frameworks and support effective policy implementation.

This discussion paper has been prepared as input for the discussions at the International Conference and Networking Event "Climate and Environmental Change and Human Mobility", which will take place on Friday, 28 June 2019 in Bonn. It is based on the findings of three papers being prepared by adelphi and the International Organization for Migration for the German Federal Environment Ministry (BMU) and German Environment Agency (UBA) within the framework of the project "Environmental degradation, climate change and migration: Global review of research and forecasts". The first paper is a review of the literature analysing the environment-migration nexus and seeks to provide an up-to-date overview of key findings from the growing number of studies on this topic. Drawing on the literature review, the second paper, titled "Impact Analysis", focuses on some of the key ways in which selected environmental phenomena shape human mobility, as well as how other political, economic, and demographic factors can affect decisions to migrate. Drawing on these two papers, the third paper focuses on policy implications and possible responses, particularly in the area of climate policy under the UNFCCC and climate finance. The conference is intended to complement the work on these papers and provide additional insights or perspectives on the main findings identified so far.

1 Evidence base and forecasts

There is an emerging consensus among academics that environmental factors can play an important role in influencing migration, but they often exert their influence on human mobility indirectly, by exacerbating other drivers (economic or political drivers, for instance). Climate change impacts are already occurring at the moment and in the future, and changes to our environment, caused by sudden-onset events, slow-onset processes or increasing temperatures, are likely to become increasingly important drivers of migration globally.

Thesis 1: Although data collection and analysis can still be improved, policy-makers can already draw on solid research findings, guidance and best practices to develop responses to human mobility in the context of environmental and climate change in many policy areas, including climate change adaptation.

- Despite the complexity and multi-dimensional nature of the field of environmental migration, in recent years there has been a marked improvement in the qualitative understanding of the challenges that affected and vulnerable communities are likely to face as the climate changes in different regions, and how migration and mobility are both supporting and undermining their efforts to adapt to the impacts of climate change[i].
- These research findings have underpinned the development of recommendations, guidance and tools for responding to human mobility in the context of environmental change as well as increasing resilience and reducing push factors for migration. These provide approaches for improving the data, evidence and knowledge that decision-makers base policy and programmes on, as well as for designing, implementing and evaluating measures so as to ensure the most benefit to migrants and communities of origin, transit and destination. An overview of over 200 of these tools and sets of guidance was produced under the workplan of the UNFCCC Task Force on Displacement[ii].
- The Intergovernmental Panel on Climate Change (IPCC) has most recently confirmed 1 degree Celsius of warming, with linked effects that need to be handled now already. Future warming can at least partially still be averted, but its impacts also need to be addressed in terms of adaptation.[iii]

Thesis 2: Global forecasts of the number of future environmental migrants are subject to critical uncertainties and of limited use. Efforts to understand the interplay of different causal factors, including environmental change, on migration in specific contexts (local, national or regional) are far more valuable to policymakers.

- Many of the best-known quantified predictions about the future global scale of environmental migration have had methodological weaknesses and been subject to critical uncertainties[iv]. Reliable evidence on existing environmentally driven migration to Europe is scarce, primarily due to the complexity of singling out environmental drivers among other drivers (multi-causal nature of most migration).
- Environmental migration, similar to migration more generally, usually occurs within countries or regions. There is evidence that some people moved in a 'stepping stones' pattern, from smaller, nearby towns to larger, more distant cities[v].
- The Groundswell study[vi] by the World Bank provides projections of future internal migration[vii] depending on the policy approach in three regions of the world, but do not include cross-border movements. Thus overall figures are likely going to be higher than those prognoses.

2 Migration, environment and climate change: impacts

Environmental changes have an impact on human mobility in diverse, complex and often subtle ways. Any given context is also likely to be characterised by multiple economic, political, demographic and social trends and drivers of migration that are all interlinked. Increasing resilience therefore requires a comprehensive approach covering many areas of policy, including climate change adaptation, disaster risk reduction, development cooperation, humanitarian aid, migration policy and the involvement of non-state actors such as diaspora communities. This section addresses the four 'impact types' of mobility and immobility responses to environmental and climate events, and links to conflict examined in closer detail for the project.

2.1 Mobility responses to sudden-onset hazards

Thesis 3: Public disaster risk reduction policies and climate adaptation policies are important elements of a comprehensive policy approach to climate-change related migration. Financing and implementing early warning systems and the formulation of evacuation and contingency plans reduce vulnerability to sudden-onset natural hazards, decrease the duration of displacement and increase overall resilience.

- The linkages between vulnerability and hazard-induced displacement are complex. Vulnerability, including gender, shape (im)mobility, and in turn mobility shapes vulnerability.
- Disaster risk reduction (DRR) policies taking a rights-based approach have a strong influence on mobility outcomes in disaster situations and can reduce the pressure to migrate. Early warning systems as well as evacuation and contingency plans can go a long way toward reducing fatalities and limiting the impacts of displacement on populations that are often already subject to multiple vulnerabilities.
- It is hard to assess how drivers of displacement risk will evolve into the future, and of course much will depend on contextual factors. However, it seems likely that – due to continued urbanisation and population growth – displacement risk of affected populations due to sudden-onset hazards will continue to increase fastest in urban areas, primarily in (low-lying) low- and middle-income countries.

2.2 Mobility responses in the context of slow-onset hazards

Thesis 4: The degree to which alternative options are available in the context of slow-onset hazards (such as climate change adaptation measures) is a key factor in analysing vulnerability and mobility the climate changes. Planned relocation may be necessary – as a measure of last resort – in cases of irreversible degradation/inundation of land.

- Slow-onset events, ranging from drought to sea-level rise, impact human mobility in complex ways. People´s vulnerability, including gender aspects, shape mobility responses and indeed can determine whether moving is even an option. Increasing resilience based on protection principles can provide opportunities to remain, making mobility just one among several adaptation options. At the same time, mobility responses shape future vulnerability.

- Sea-level rise impacts human mobility in different ways. While permanent inundation of land and settlements is often the image conjured up by the concept of sea-level rise, there are in fact a range of ways in which sea-level rise impacts human activities and settlements. For example, coastal communities regularly experience the effects of sea level rise well before permanent inundation, including through frequent flooding and salinization that affect the habitability of the place. In many cases, people will use mobility as a response well before the stage of inundation, as the severity of other related impacts increases.
- Relocation should generally be considered a last resort, due to the sizeable challenges it poses, both for the population to be moved and the population at the destination. Relocation needs to be carried out in an inclusive way, ensuring human rights protection and considering gender issues. Providing sustainable livelihoods at destination is a particular challenge.

2.3 Linkages between environmental change, conflict and mobility

Thesis 5: Climate change, (forced) migration and conflict are more likely to be interlinked in complex crises, where climate change exacerbates the effects of existing conflict drivers (threat multiplier). The case of pastoralists is a particular one, as their livelihoods are based around mobility.

- The linkages between environmental change, conflict and mobility are complex. Inadequate governance or indeed situations of prolonged conflict or persecution can be important drivers of migration, and are often interwoven with environmental drivers, leading to prolonged 'complex crises'. Conversely, with regard to the effects of migration on conflict, studies of the effects of in-migration on receiving communities have found that tensions are more likely in the case of large-scale influxes taking place over short timeframes, particularly where the influx modifies existing socio-economic, environmental or cultural balances.
- Pastoralists move herds in line with seasonal changes along established routes (often across international borders) to ensure adequate access to water and pasture. Increasingly recurrent drought and other climate change impacts, in conjunction with diverse political and demographic factors (political marginalisation, land-use restrictions, land grabbing, population growth, etc.) are leading to pressure on pastoralist livelihoods, as they struggle to adapt to less predictable weather cycles and longer journeys to get to water points and grazing pasture for their herds[viii].
- The multidimensional character of conflicts also influences the context in which pastoralists live. In addition to the impacts of climate change, other factors may influence the nature of conflicts between pastoralists, as well as conflicts between pastoralists and other groups. Observations have shown that the increasing militarisation of conflicts in the Sahel can also be explained by other factors such as easier access to small arms in the region.

2.4 Immobile populations

Thesis 6: As the impacts of climate change begin to be felt more strongly, an increasing number of people that are highly vulnerable to environmental changes will be unable to move.

- Across the globe the number of people living in areas exposed to sudden- and slow-onset environmental stressors is growing, with key drivers being population growth, climate change and

urbanisation. However, many people do not move away from areas exposed to environmental stressors.

- The reasons why people do not move away from environmental stressors are diverse, but broadly speaking can be divided into two overarching categories. Non-migration in the face of environmental stressors can be the result of choosing to stay (voluntarily/immobile), or being unable to leave (involuntarily immobile or 'trapped').
- Climate/environmental change is likely to increase the prevalence of 'trapped' populations, through erosion of livelihoods (falling crop yields, for instance) resulting in depletion of the capital needed for migration. This process could affect many of those for whom immobility is currently a choice. The threshold for 'inhabitability', defining the 'tipping point', is subject to discussion and merits a comprehensive, rights-based approach taking gender concerns into consideration.

3 Responding to human mobility in the context of environmental and climate change

The effectiveness of governance and policy responses will be an important factor determining the scale, nature and impact of current and future migration related to environmental and climate change. Establishing distinct policy, programme or project elements addressing the migration – environment - climate-change nexus could maximize benefits and minimize risks associated with environmental change and related human (im)mobility, thereby increasing the resilience of vulnerable or marginalised groups likely to be displaced or be trapped in precarious situations.

Thesis 7: There is still substantial scope for further integrating the challenges and benefits associated with human mobility into climate policies at national level.

- In all, 33 out of 181 countries referred to migration in the context of environmental change in their Nationally Determined Contributions (NDCs) submitted to the UNFCCC. These NDCs frame migration in five main ways. Around half of the NDCs refer to migration either: (1) as a risk, (2) as related to adaptation in general, (3) as a co-benefit of adaptation funding (as adaptation measures may play a role in averting or minimising displacement) or (4) as a potential prerequisite for or outcome of mitigation measures[ix]. 17 of the NDCs refer to migration (5) as a challenge to be addressed by relocating vulnerable populations to areas less exposed to hazards.
- Initial analysis of National Adaptation Plans (NAPs) and the most recent National Communications (NCs) for these 33 countries showed that there has been some progress towards integrating these new priorities related to human mobility into climate change adaptation policy planning and relevant supporting documents, but there is significant scope for improvement.
- Only two of the 33 countries have taken the important step of integrating migration or human mobility related issues in their NDC, NAP and NC, and even in these cases there are still substantial benefits to be drawn from further integrating the issue into climate policy planning – namely by developing and implementing specific projects or project components that address migration and displacement issues.

- NDCs and NAPs form only part of country's approach to tackling the climate change - environment - migration nexus, and it is therefore important to look beyond them to also consider how initiatives stemming from other policy documents, such as national economic development plans, may address environmental and climate-change related migration.

Thesis 8: Already marginalised or vulnerable groups in society are likely to require additional support and protection to cope with the slow and sudden-onset impacts of climate change. These groups should be taken into consideration and ideally consulted throughout the planning and implementation of policies, programmes and projects.

- Groups requiring additional support may include certain demographic groups, such as children and older people, marginalised ethnic or religious groups, people living with disabilities, people living in poverty or other vulnerable groups in society that lack the social or financial capital to cope with natural hazards or with long-term livelihood, food or water insecurity. Communities that are highly dependent on ecosystem services may be especially vulnerable, particularly if they lack access to state services or have high illiteracy rates.
- The lack of statistics that are disaggregated by sex and age is a particular concern since this limits understanding of the vulnerability, resilience and needs of specific sub-groups. This information is crucial in order to improve response strategies and provide effective, targeted/tailored support and assistance to affected populations.
- Taking an inclusive, rights-based approach and consulting with people from communities in high-risk areas to understand their needs and concerns can significantly improve the outcomes of projects and programmes aiming to address the migration – environment – climate-change nexus. Involving and empowering civil society and diaspora groups in affected countries can also play an important role in this regard.

Thesis 9: Beyond climate policy, there are entry points for addressing the migration-environment-climate change nexus in many other areas of policy at national and international level. Better understanding and articulating how these policies, frameworks and agendas impact human mobility in the context of climate change, and increasing the coherence between them, can improve migration and climate change adaptation outcomes.

- Just as migration decisions and the migration-environment-climate change nexus are influenced by a range of factors alongside climate change impacts (e.g. socio-economic factors affecting livelihood security), responses to human mobility in the context of climate change are important in many areas beyond climate policy. Strengthening resilience in high-risk areas requires a comprehensive approach spanning many different areas of policy.
- National and international institutions, policies, frameworks and agendas related to environmental, migration, disaster management, human rights, labour standards, education and training, gender, health, sustainable development and humanitarian aid policies all shape migration and displacement in the context of environmental and climate change. Actions in all these areas can serve to strengthen the resilience of vulnerable communities, but different policy areas are more relevant for particular timeframes (i.e. from short-term disaster management to long-term sustainable development).
- Initial mappings of relevant agendas and frameworks at national[x] and international[xi] level were undertaken in 2018 as part of the workplan of the UNFCCC Task Force on Displacement. Findings included:

(1) The human mobility and climate change nexus could be better addressed at national level by stepping up efforts to connect the climate/environment and human mobility communities, particularly during the policy development process; and

(2) That UN entities can achieve important synergies by working together across the nexus between climate change, the environment and migration to avert, minimise and address displacement, e.g. by coordinating relevant policies and activities in the environmental and development sector.

Thesis 10: Formulating dedicated project components or climate-related funding streams related to migration could be a valuable step forwards in raising the profile of the responses to environmental migration among international climate funds or financial mechanisms.

- Our analysis of climate funds and financial mechanisms showed that only a very small number of the programmes and projects they funded explicitly address migration and human mobility issues. Greater efforts are needed to ensure that responses to human mobility and climate change are supported by climate change adaptation financing streams.
- International climate funds or financial mechanisms are funding numerous projects that address key issues highly relevant to the migration - environment - climate-change nexus, such as projects strengthening livelihood security. Formulating distinct project elements related to migration for such projects could be a valuable step towards a holistic approach that also considers human mobility, and in raising the profile of the responses to environmental migration among international climate finance funds or financial mechanisms.
- Analysis of the 33 NDCs that mention migration shows that there is still a mismatch between priorities related to migration in the NDCs and the specific programmes and projects being funded by international climate funds in those countries. There are only a few, mostly recent examples in international climate finance portfolios (notably of the Green Climate Fund, the Adaptation Fund, the International Climate Initiative and the Least Developed Countries Fund) that highlight the relationship between environmental migration and climate change as an overall priority. This is also the case in the area of disaster risk reduction and management.
- In this context, creating dedicated funding streams for averting, minimising and addressing displacement in the context of the adverse impacts of climate change would also play an important role in offering more durable solutions to those groups most affected. This option has an important role to play in potential solutions and can offer valuable entry points for offering concrete guidance for climate finance activities on how climate change projects could address migration.
- While in time it may be possible to mainstream "a migration lens" across all projects and programmes, creating a focal point[1] for environmental and climate change migration within a government or institution serves as a valuable first step toward creating dedicated projects and programmes. For example, these focal points could support policymakers looking address environmental migration by coordinating the preparation of national assessments on migration, environment and climate change, and monitor progress across a range of relevant indicators.
- An absolutely critical barrier to action is that many vulnerable countries do not have the resources and capacities to develop and implement long-term approaches to tackling the migration – environment – climate change nexus. Climate funds and financial mechanisms should consider reviewing and updating their funding and investment criteria with this nexus in mind. For example, in the case of the Green Climate Fund, a policy briefing on this subject would be a valuable first step.

[1] The focal point (e.g. ministry) is likely to be different in every country.

Thesis 11: Lessons need to be drawn from existing climate change adaptation projects with relevance for migration to inform the next round of NDCs and the development of project portfolios of main climate funds and financing mechanisms.

- Although the few climate change adaptation projects with specific migration components are mainly still in the early phases of implementation, initial or interim assessment of their progress could offer valuable insights, not least to inform the next generation of updated or expanded NDCs. They could also provide other countries facing similar challenges with important information and best practices to inform the development of their climate finance portfolios.
- Preliminary insights need to be communicated carefully, but they can be used to outline specific co-benefits in this area that can serve as input for GCF proposals in the realm of climate change adaptation. To this end, interim evaluations of what works and what does not work are needed and should be commissioned.
- Analysing the gender dynamics of a given context has been shown to have a positive influence on the outcomes of climate change adaptation programmes. Such experiences from other policy areas suggest that systematically assessing the different coping capacities of women and men when developing and implementing programmes can also have a positive effect on migration policy.

Thesis 12: Policies in the areas of climate (NDCs and NAPs), environment and development are conceived at national level. However, the international community has a "common but differentiated responsibility" to support (developing) countries in planning and implementing relevant programmes, projects and activities such as climate change adaptation programmes, including those that can play a role in averting, minimising and addressing displacement related to environmental and climate change.

- Countries already experiencing the impacts of climate change require support from the international community to build up the necessary financial, human, technical and institutional capacity to implement policies to protect natural resources that form the basis of livelihoods, to safeguard the functioning of ecosystems, to prevent disasters, and to protect human rights (e.g. in resource extraction, production and consumption).
- To this end, it is especially important to increase climate finance, and particularly climate change adaptation finance, at the levels committed to in Paris in 2015 ($100 billion a year from 2020), to increase its support for multilateral support mechanisms, such as the NDC Partnership, and to strengthen relevant international and multilateral frameworks – such as the Compact for Migration, the SDGs, the Platform on Disaster Displacement and environmental agreements.

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[i] See for example: Laczko, F. and C. Aghazarm [eds.] (2009) Migration, Environment and Climate Change - Assessing the Evidence, IOM, Geneva. Available from http://publications.iom.int/system/files/pdf/migration_and_environment.pdf. ; Warner, K., & Afifi, T. (2014). Where the rain falls: Evidence from 8 countries on how vulnerable households use migration to manage the risk of rainfall variability and food insecurity. Climate and Development, 6(1), 1-17; Melde, S, F. Laczko and F. Gemenne [eds.].(2017). Making Mobility Work for Adaptation to Environmental Changes - Results from the MECLEP global research. IOM, Geneva.

[ii] UNHCR (2018): Mapping of existing international and regional guidance and tools on averting, minimizing, addressing and facilitating durable solutions to displacement related to the adverse impacts of climate change. https://unfccc.int/sites/default/files/resource/WIM%20TFD%20II.4%20Output.pdf (29.11.2018)

[iii] For example: "Trends in intensity and frequency of some climate and weather extremes have been detected over time spans during which about 0.5°C of global warming occurred (medium confidence)." IPCC (2019: 4).

[iv] Early research tended to focus on identifying the extent to which migration can be attributed to environmental factors, or identifying populations in areas at risk from environmental stressors. Extrapolations based on these types of study provided alarming predictions about the scale of future movements, but were generally flawed in terms of methodological rigour (Myers, 1993; 1997; 2002;. They have been termed "alarmist" (Suhrke, 1994) and "maximalist", being based on high-end climate/environment forecasts/impacts, and the assumption that all people facing such impacts would migrate in response. Examples of such forecasts include the Myers' forecast in 2002 that there would be 200 million environmental migrants by 2050 and Christian Aid's forecast (based on an interview with Myers) that there would be 300 million environmental migrants by 2050.

[v] The Where the Rain Falls research study (Warner et al, 2012) found evidence that some people moved in a 'stepping stones' pattern, from smaller, nearby towns to larger, more distant cities. See: Warner, K. et al (2012), "Where the rain falls: climate change, food and livelihood security, and migration". Care France and UN University – Institute for Environment and Human Security.

[vii] In 2018, the World Bank published results in its 'Groundswell' report, based on a global-scale study which uses a gravity model to examine future internal environmental migration, an interesting development in environmental migration research but only focused on internal migration. See: Kumari Rigaud, K., De Sherbinin, A., Jones, B., Bergmann, J., Clement, V., Ober, K., Schewe, J., Adamo, S., McCusker, B., Heuser, S., and Midgley, A.. (2018). Groundswell: Preparing for Internal Climate Migration. Washington, DC: The World Bank.

viii IOM (2010): Pastoralism at the Edge – Effects of drought, climate change and migration on livelihood systems of pastoralists and mobile communities in Kenya. IOM: Kenya.

ix This aspect is evident in two NDCs. Tunisia's NDC states that the impacts of mitigation measures on sustainable development may include "population stabilization and prevention of rural depopulation"; China's NDC states that the country will "proactively promote the development of hydro power under consideration of ecological and environmental protection as well as inhabitant resettlement".

x See: IOM (2018a): Mapping Human Mobility and Climate Change in Relevant National Policies and Institutional Frameworks. https://unfccc.int/sites/default/files/resource/20180917%20WIM%20TFD%20I.1%20Output%20final.pdf (19.11.2018).

xi See: IOM (2018b): Mapping Human Mobility (Migration, Displacement and Planned Relocation) and Climate Change in International Processes, Policies and Legal Frameworks. https://unfccc.int/sites/default/files/resource/WIM%20TFD%20II.2%20Output.pdf (11.12.2018).