My intervention will address three issues located at the intersection of knowledge, data and policy.

1. the first issue is about knowledge and data: I am convinced we need to know more about the links between adaptation to environmental impacts and hardship on the one hand, and mobility on the other hand: is migration an adaptation strategy, or are adaptation strategies being developed to avoid migration? How, through what mechanisms, do environmental factors influence mobility in its various forms, including sudden displacements, and how they affect livelihoods? These are some of the questions being asked in the context of climate change.

Given that the impacts of environmental factors are different in different places, we also need to deal with the fact the "migration changes the geography of social vulnerability"[1], altering the processes of creating and modifying vulnerability and resilience to hazards.

In addition, understanding environmental migration is also considering why people do not want to leave and their right to stay.

Future quantification, prediction, and modeling of the impacts of environmental factors on migration requires the integration of many and very diverse sources of information (quantitative, qualitative, and georeferenced at different scales), and this task is still a challenge.

Data acquisition also needs to contemplate the time dimension through, for example, the collection of longitudinal data, in the form of retrospective migration and life calendars, or with surveillance or monitoring designs. Longitudinal studies with populations affected by hurricanes demonstrate that the time horizons of research and monitoring may be too short to correctly assess impacts, especially in terms of indirect effects and long term impacts on livelihoods.

2. the second issue I want to mention is the role of households: households are instrumental in revealing the influence of climate change and variability within people's everyday life, and also in downscaling global models to subnational and local scales. They are also key to understand the decision-making process of leaving (in the case of mobile populations) or staying (in the case of the so-named trapped populations or immobile populations), and of "who moves" (the whole household or only a few members).

3. finally, I want to address some policy dimensions: it is essential to translate research findings into comprehensive public policies, but ***how*** to eliminate the gap between research and policymaking remains elusive. There are excellent research results that fail to adequately reach decision-makers. So, it is important for decision-makers to be involved in the research design, and participate as well in the validation of the information collected and of the results of the research. And

[1] Meyerson, F., L. Merino and J. Duran. 2007. Migration and environment in the context of globalization. *Frontiers in Ecology and the Environment*, 5:182-190.

researchers need to think ahead of time about how they will deliver the final product to decision-makers in a simple and effective way[2].

Urgent basic needs in relation to climate induced mobility are (1) to consider the consequences for the displaced population, particularly in the cases of sudden and forced displacement; and (2) to consider the implications of environmentally induced displacement for the origin and receiving communities[3] and also transit countries or areas.

Policies need to be flexible and adaptable to local situations, to allow for tailored interventions or responses, and this "tailoring" implies, once again, a clear understanding of the nexus between environmental change and population mobility[4], which in turn requires a "redirection of research toward clarifying conceptual approaches and answering basic questions" (Oliver-Smith 2008:102). To be able to distinguish categories of environmental migrants is an example of redirected research[5], and ideally these different categories would reflect the different ways the environment trigger migration, and the different kind of actions taken by the affected people. Also, these categories could be inputs for determining types of assistance and interventions, identifying who will be most in need of immediate support from either national governments or international aid agencies; and planning for resource allocation at a time of crisis, or to prevent a crisis[6].

Citing IOM, responses can also be tailored to a particular timing, facilitating migration in the early stages of the deterioration process; mitigating forced displacement at irreversible stages; or anticipating the issue altogether by promoting sustainable development. In her consideration of frameworks for managing environmentally induced migration, Susan Martin[7] suggests to use a lifecycle approach with 4 stages and different policy implications in each of them: a first stage is pre-migration, with focus on prevention, mitigation and adaptation to environmental hazards; a second stage is the migration / displacement per se, with

---

[2] OIM & ALAP. 2016. Seminario sobre migración, cambio climático y desarrollo sostenible en América del Sur. Relatoría final.

[3] Oliver-Smith, A. 2008. *Researching environmental change and forced migration: people, policy and practice.* Position paper presented at the Research Workshop on Migration and the Environment, Bonn.

[4] IOM (International Organization for Migration) 2007. Discussion note: migration and the environment. www.iom.int/jahia/webdav/site/myjahiasite/shared/shared/mainsite/microsites/IDM/workshops/evolving_global_economy_2728112007/MC_INF_288_EN.pdf

[5] Renaud, F., O. Dunn, K. Warner and J. Bogardi. 2011. A Decision Framework for Environmentally Induced Migration. *International Migration*, 49(S1):e16-e29

[6] For example, while "environmental emergency migrants" will require unique support, which may need to be mobilized differently than that for "environmentally forced migrants", "environmentally motivated migrants" will likely require the least support from an emergency response perspective, but the most support in terms of aid for sustainable development and implementation of alternative livelihoods (Renaud, F. et al. 2007. Control, adapt or flee. How to face environmental migration? *InterSecTions*, No.5)

[7] Martin, S. 2010. Climate change and international migration. Washington, DC. GMF. Page 1-2.

different type of movements: planned or spontaneous; involving individuals and households or entire communities; internal or international; as an orderly movement of people from one location to another, or happening under emergency circumstances; temporary or permanent; each of these forms of migration requires significantly different approaches and policy frameworks. The third stage is return or resettlement in another location; the decision about whether return is possible involves a range of considerations, including the extent to which the environmental causes are likely to persist, and also specific policies in the receiving communities and countries, not only immigration policies but also policies related to land use and property rights, social welfare, housing, etc. The final stage is the integration into home or new location: policy decisions will play a key role in integration, influencing the access of displaced populations to housing, livelihoods, safety and security.

In summary, the consideration of environmental drivers of migration is a complex issue, with multiple aspects and determinants. Climate change effects on population mobility are already being detected and are likely to increase, but it is still difficult to estimate future trends. Trans-disciplinary research on environmental displacement, as well as collaboration and interaction between the research, policy and relief communities have increased substantially. Policy considerations are coming to the front, but issues remain: how to increase awareness, and how to design proactive policies within a human rights approach?