

This letter is the first edition of a monthly series that will follow the development of the ClimHB research programme. ClimHB is a 4-year project, funded by the French National Agency for Research (ANR) under the special call for academic contribution "Make Our Planet Great Again" and coordinated by the Ceped. It aims at exploring the connections between climate migration and health systems resilience in Haiti and Bangladesh through fieldworks data collection. This will require looking at climate-driven population displacement, health care access and health status perceptions, health systems vulnerabilities as well as health care coping strategies.

Upcoming activities :

website creation
partnership
agreements
field visits

Recruitment

A few words about me: I am a Postgraduate in Social and Cultural Studies from Sciences Po Aix-en-Provence, and I hold a Masters degree in African Studies from SOAS, London. I have worked within French Foreign Affairs Analysis Units in Senegal and Paris, before joining a think-tank specialised on research for development. I have more specifically been involved in research projects on mixed migration flows and returns in West and Central Africa with IOM.

I am very pleased to be part of interdisciplinary research programme exploring the connections between climate migrants and health system resilience, as I believe this is a promising and imperative area of research for development. Do not hesitate to reach me if you have any question or need some assistance. I look forward to collaborating with you all.

Scoping review : objectives and research question

The project ClimHB (*Climate Change, Migration and Health Systems Resilience in Haiti and Bangladesh*) aims at exploring the impact(s) of climate migration(s) on health systems resilience, in Haiti and Bangladesh. This entails the need to evaluate the current state of the theory-driven conversation and empirical research on these two concepts - health systems resilience, on one side, and climate migration, on the other.

The concept of health systems resilience has been examined throughout a scoping review conducted in 2018¹. This scoping review will be the basis for our strategic designing of a Conceptual Framework. In a parallel scoping review, our approach will be to map out, identify and review the existing scientific evidence on the concept of climate migration. Deriving from this scoping review, a Conceptual Analysis and a Best Fit Framework Analysis will be developed. This will help our team agree upon a project definition of *climate migrants*, as well as to adopt an analysis framework to be applied to the data collection.

¹ Pailliard-Turenne C., Gautier L., Degroote S., Guillard E., Chabrol F., Ridde V. : 'Conceptual Analysis of health systems resilience : a scoping review', *Social Science & Medecine* : Elsevier. April 2019:
<https://www.sciencedirect.com/science/article/pii/S0277953619302205>

We are currently in the process of clarifying the research strategy and defining the research question and the specific objectives. **Feel free to send your suggestions and comments.** If you wish to collaborate further or contribute to the scoping review, please notify it to me **via email before May 15**. In addition, an intern will join our team at the start of June to support the completion of the scoping review.

Contributions will aim at :

- 1) validating the research strategy
- 2) complementary reviewing the selected/excluded articles - in case of a disagreement
- 3) Reviewing final syntheses

Field visits

One option would be to conduct a first field visit in both Port-au-Prince and Dacca throughout the summer (*July and August*). This would lay the ground for the upcoming workshop in Paris, in the fall, to validate the Conceptual Framework.

Would you identify any difficulty that could stand in the way of an fieldwork mission at this particular time (events, availabilities, etc.)?

The field missions objectives will be the following :

- meet our local partners and relevant institutions
- officially launch and present the ClimHB research programme
- conduct field visits on identified data collection sites

This field trip will support the groundwork for the upcoming workshop in Paris, to be scheduled in the fall, to validate the Conceptual Framework and select/design the research tools. Due to budget restrictions, selected representatives from each partner team will be attending the workshop. This Doodle link [here](#) will help select the most convenient date for the workshop : kindly fill it out with your availabilities **before May 31**.

Lastly, we are currently clarifying administrative and financial provisions for our partnerships to be effective as soon as possible. We will keep you updated in that regard.

FIGUET E. (2010) Linking climate change, environmental degradation, and migration: a methodological overview, Wiley Interdisciplinary Reviews : Climate Change , vol. 1, 517-524.

Two research strategies are considered scientifically relevant to study the connections between migration and climate :

- 1) descriptive and prospective : assessment of vulnerabilities and resilience of residents of endangered areas
- 2) analytical : singling out environmental drivers of migration, questioning the role and weight of environment in already occurring human migration

Piguet suggests a 6-group typology of research methodologies to study climate change/migration :

1. ecological inference based on area characteristics

- ❑ The main hypothesis is that the environmental characteristics of a specific geographic area should be correlated with the migratory characteristics of that same area during the same period of time. This implies reconstructing individual behaviour from group-level data. Ecological variables are often much easier to collect than individual data and allow for a good level of comparability between studies. Most studies that apply ecological inference deduce a significant impact of the environment on emigration.

Limitations :

- ❑ **Paucity of environmental variables used** : Most indicators are very basic and concern either rainfall or natural disasters, leaving aside more elaborate indicators of climate change or environmental degradation.
- ❑ **'ecological fallacy'**: nothing guarantees that the very people who emigrated and contributed to a negative migration balance in an area under environmental stress, for example, are the same individuals who experienced that environmental stress and took a decision to migrate accordingly.
- ❑ **Limited sociological approach** : ecological inference makes it very difficult to differentiate the impact of environmental variables between population subgroups, in relation to gender or socioeconomic status for example, unless one can use specific migration data for these groups.

2. Individual sample surveys

- ❑ Data on environmental pressure and socioeconomic context are collected through relatively large surveys (from a few hundred to several thousand cases). The surveys either inquire about past migrations (reconstitution of biographies) or take the form of a panel in which households are contacted several times and questioned about the migration of one, or several, of their members during the interval. Environmental variables are captured either by asking direct questions in the survey or by collecting information at the local level.
- ❑ Example of a counterintuitive impact of sudden disaster: Paul questions 291 respondents from eight tornado-affected villages in Bangladesh and discovers that none of their household members had migrated because of the 2004 tornado, that respondents were unaware of any outmigration within their localities, and that one-third of respondents even suspected that outsiders had been flocking into the tornado-affected areas in the hope of benefiting from disaster relief schemes.

Limitations:

- ❑ **Environmental change is only very incompletely captured.** In certain cases, the information on environmental evolution is limited to one single documented event (hurricane, drought, etc.) and the analysis compares 'before' and 'after' situations.
- ❑ **'Atomistic fallacy'** : Analyses strictly centered on individual data miss the context in which behavior takes place.

The following methods are all different, yet all seek to bridge the gap between individual and ecological data to avoid both ecological and atomistic fallacies.

3. Time series

- ❑ This approach establishes if, and to what extent, migration patterns are explained by the evolution of environmental parameters, controlling for other factors that might evolve during the period.

Limitations:

- ❑ **Absence of monthly or quarterly migration flow data time series**, which would enable us to link changes in the environment at time 't' with migration at subsequent periods.
- ❑ **Difficulty to collect reliable contextual information** apart from the most basic climatic data such as pluviometry.

4. Multilevel analysis

- ❑ Combines ecological data (including, e.g., satellite imagery), individual data from household surveys and, in certain cases, time series. Well suited to the study of human–environment interactions in geography as they allow for a significant expansion of the range of variables analyzed and thus enhance the precision of the analysis.

Limitation:

- ❑ **Use of a predefined hierarchy of spatial units** (usually the administrative units at which level the data is collected) that might not reflect the spatial distribution of the phenomenon at stake. This weakness could only be overcome by defining small enough statistical units to capture the spatial variation of the environmental degradation.

5. Agent-based modeling

- ❑ Identify or hypothesize the **rules of behavior that lead to migration decisions in a context of multiple stimuli**. It can easily take into account heterogeneities of behavior between agents (e.g., according to gender) or bounded rationalities (the fact that the rationality of individuals is limited by their level of information, cognitive abilities, and amount of time available to make decisions), and that interactions between agents and retroaction loops can be dealt with (e.g., if a certain number of agents decide to emigrate, the remaining agents face an increased incentive to leave too). Only very tentative studies have used ABM in the field of environment-migration relations.
- ❑ It forces researchers to explicitly formalize their hypotheses about the mechanisms at stake and could be fruitfully combined with participative methods involving local populations in the process of building the model

Limitations :

- ❑ **Preexisting knowledge is very limited** about the ways in which people react to environmental stress and, more specifically, about the reactions of specific subgroups makes it difficult to create the rules of behavior necessary for ABM.
- ❑ **The routine behaviors themselves** (i.e., rules and regularities developed over a certain period of time) **might not be so common in the field of environmentally induced migration**, where many stimuli consist of sudden events with which populations have never had to cope before. These two points render the situation of environmental migration quite different from the classical fields of application of ABM.

6. Qualitative/ethnographic methods

- Invaluable insights into people's attitude toward, and their perception and representation of, climate change in general and the migration option.

Limitation :

- No quantitative measure** of the weight of environmental factors on migration

Ways forwards :

- It should be kept in mind that migration is only but one of a range of responses to environmental degradation. It can be a last resort solution but can also be a complementary, efficient individual choice to promote *in situ* adaptation at the household or community level. Studies should thus not treat migration outcomes in isolation but connect them with nonmigration responses.
- The collation of results and the combination of methods applied on more relevant datasets thus appear promising avenues in order to overcome the limitations of single approaches.