
Unpacking the Complexity of Climate Migration: Theoretical and Methodological Guidelines

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Introduction

Climate migration studies have made important strides over the last decade developing into an actual field of research comprising a multitude of disciplines from across the social sciences and humanities. In this process, the complexity of climate migration has come to the fore as a major challenge (Brown, 2008; Gov. Off. Sci., 2011; Felipe, 2018, Flavell, et al, 2020). Climate migration is a result of a multitude of intertwining environmental, political, and socio-economic causes originating in and operating across a variety of geographical scales (global, regional, national, local). In addition, climate migration is a dynamic phenomenon manifesting itself differently according to a given context. And, finally, and perhaps most challenging: the scale and conditions that will define climate migration in the future remain highly uncertain due to the uncertainty of the extent to which climate change will precipitate environmental and societal transformations in the future.

It is beyond this short article to address the challenge of this complexity adequately in any sense of the word. Instead, my aim will be to outline three interconnected focus areas that together, I believe, will offer a fertile step towards dealing with some of the underlying theoretical and methodological challenges posed by this complexity. The focus areas are based on three hypotheses; namely that climate migration studies will benefit from: 1) increasingly pursuing the roots of its multiplicity of causes well beyond the horizon of climate migration proper; 2) an enhanced awareness of the interconnections defining both climate migration itself and the multidisciplinary field studying it; 3) looking towards borders and recent border studies for a viable lens or method through which to analyze the complexity of climate migration; i.e., the dynamics of its multiple causes, its geographical scales, and its context dependency – across disciplines.

Pursuing the root causes of climate migration

The multiplicity of societal drivers of climate migration makes it inherently difficult to trace and influence these. Nevertheless, climate migration studies shares the interest in addressing this challenge with the socio-economic climate sciences in general. Hence, the potential fertility in a greater integration between these fields.

The place to start here is the Intergovernmental Panel on Climate Change's (IPCC) "shared socio-economic pathways" (SSPs) framework, recently applied in (IPCC 2022). The SSPs represent five different overall scenarios for how the world may deal with climate change during this century (O'Neill et al. 2014; Riahi et al., 2017). That is, each SSP describes how a potential global trend in political and socio-economic priorities is likely to affect international mitigation and adaptation efforts.⁴³

In the present context, the SSPs provide a bird-eyes perspective on potential global societal developments that are likely to be underpinning the multi-causality of climate migration. Crucial in this context is how the SSPs are articulated around socio-economic narratives that are easily adaptable to climate migration studies.⁴⁴

This can be illustrated by looking at the narratives defining SSP 3 and SPP1 that respectively represent the worst- and best-case scenarios for climate mitigation and adaptation. SSP3, which by all accounts are likely to lead to a catastrophic global temperature rise, is characterized by how: "a resurgent nationalism, concerns about competitiveness and security, and regional conflicts push countries to increasingly focus on domestic or, at most, regional issues. ...Countries focus on achieving energy and food security goals

within their own regions at the expense of broader-based development. ...Economic development is slow, consumption is material-intensive, and inequalities persist or worsen over time. Population growth is low in industrialized and high in developing countries. A low international priority for addressing environmental concerns leads to strong environmental degradation in some regions" (Riahi et al., 2017). In terms of climate migration, SSP3 outlines a highly negative scenario consisting of both several drivers of migration in countries of origin (conflict, lack of resources to low-income countries, inequality, population growth, environmental degradation) and a likely increased hostility to migrants in receiving countries (resurgent nationalism, focus on domestic and regional issues).

Over against this, the best-case scenario, SSP1, provides an alternative and positive vision, where "the world shifts gradually, but pervasively, toward a more sustainable path, emphasizing more inclusive developments that respects perceived environmental boundaries. Management of the global commons slowly improves, educational and health investments accelerate the demographic transition, and the emphasis on economic growth shifts toward a broader emphasis on human well-being. Driven by an increasing commitment to achieving development goals, inequality is reduced both across and within countries" (Riahi et al., 2017).

The SSP framework suggest a strong alignment between efficient solutions to both climate change and climate migration. This further indicates the potential fertility of integrating socio-economic climate research into climate migration studies. As such, the SSPs may provide a basis for climate migration studies to trace and analyze the complex roots of many of the multiple causes of its subject matter. Vice versa, migration studies in general and climate migration studies in particular may provide crucial knowledge and knowhow as to how to facilitate international cooperation in the face of contentious issues such as climate mitigation and

43 In an explanatory article in [Carbonbrief.org](https://www.carbonbrief.org) the SSPs are described by the following headlines: "a world of sustainability-focused growth and equality (SSP1); a "middle of the road" world where trends broadly follow their historical patterns (SSP2); a fragmented world of "resurgent nationalism" (SSP3); a world of ever-increasing inequality (SSP4); and a world of rapid and unconstrained growth in economic output and energy use (SSP5)" (Hausfather, 2018).

44 The Report (IPCC, 2020) also discusses climate migration in detail. However, due to its very recent publication, I am not able to develop this important point further here.

adaptation in general. Furthermore, climate migration itself is an issue that must be taken into consideration when dealing with climate change both normatively, because climate migrants represent the people most vulnerable to climate change, and as a matter of fact. A successful and coordinated response to climate migration is likely to facilitate SSP1, while a narrow nationalist response to climate migration is likely to be

conducive to the worst-case scenario of SSP3. Finally, this alignment between the two fields also provides a broad foundation for projecting and articulating policies that are beneficial for both areas of interest. In sum, the SSP framework provides climate migration research with a point of departure for an increased integration with research in the socio-economic responses to climate change.

An integrated approach to climate migration

The SSPs framework offers an analytical approach of a temporal (projective) character. To complement this an analytical perspective is needed that is capable of addressing the spatiality of climate migration in relation to both the socio-economic and the interdisciplinary spaces of the field as well as its geographical dimension (for the latter, see next section).

Recently, the multidisciplinary fields engaged in studying the socio-economic transformations related to mitigation and adaptation encountered a similar challenge of complexity to that of climate migration studies: how to develop a comprehensive overview capable of synthesizing and integrating a field of research characterized by a multiplicity of causes, processes, and scientific approaches? In response, the political geographers O'Brien and Sygna (2013) developed a "three spheres of transformation" model. Consisting of a practical, political, and personal sphere, the model aims to provide the means to analyze the complex interactions and interrelations characterizing societal transformations brought about by climate change. Shortly put, O'Brien and Sygna define the three spheres in the following manner: "The practical sphere represents both behaviors and technical solutions. ...These include behavioral changes, social and technological innovations, and institutional and managerial reforms. The political sphere includes

the social and ecological systems and structures that create the conditions for transformations in the practical sphere. The personal sphere includes individual and collective beliefs, values and worldviews that shape the ways that the systems and structures (i.e., the political sphere) are viewed, and influence what types of solutions (e.g., the practical sphere) are considered 'possible'." (O'Brien and Sygna, 2013)

The three spheres are related as concentric circles with targets and goals (practical sphere) at the center, enabling/disabling conditions (political sphere) in the middle and individual and collective "views" of systems and solutions (personal sphere) represented by the outermost circle. Also, transformations within one sphere are likely to affect the other two even if all interventions do not have the same degree of impact (O'Brien and Sygna, 2013).

In relation to climate migration studies, the model is not only of interest because of the apparent alignment with the socio-economic studies of climate change as just discussed, but also because of its direct applicability as a model for a comprehensive approach to the complexities of climate migration studies themselves. That is to say, the three spheres encompass and structure the entire socio-economic space of climate migration, just as the model has the potential to propel future theoretical and meth-

odological research aimed at strengthening the interdisciplinary unity of the field. In addition, it may also support coordination of interventions, policy-measures, and other activities related to

climate migration by non-academic stakeholders. Finally, this opens for enhancing the crucial interaction between academic and non-academic actors as well.

Borders as an analytical prism for climate migration studies

The three spheres model provides an important step towards developing an integrated interdisciplinary approach to climate migration. Likewise, the SSP framework and the IPCC research in general offer an important point of reference for understanding the roots of the multi-causal underpinnings of climate migration. However, it remains open how to combine the various levels of analysis these represent with an analysis of the geographical scales of climate migration and to avoid neglecting its equally important aspect of context dependency. For this purpose, I propose turning to the field of border studies and take inspiration from its various notions of borders as prisms through which to analyze complex and dynamic societal phenomena.⁴⁵

The underlying argument behind these is that borders can be considered privileged analytical vantage points because of their defining and encompassing societal role. Territorial borders process and regulate the complex circulation of people, capital, and commodities across the globe, while at the same time also functioning as pivotal polysemic markers of culture, identity, and belonging.⁴⁶ Hence, borders no longer comply to a traditional and universal conception of them as static strict lines. In fact, this conception has come to be considered a “territorial trap” (Agnew, 1994). It fails to capture the complex and

dynamic role and function of borders as they process and regulate cross-border interactions, which may have very different concrete and symbolic significances according to a host of social, political, economic, and cultural parameters as well as geographical scales. Embedded in the social fabric of society borders are everywhere (Balibar, 2002), yet, they are also social phenomena or institutions in their own right (Newman 2003) and as such form coherent unities capable of influencing and regulating societal processes at large (Mezzadra and Neilson, 2013). It is in this perspective, that borders have come to be approached as prisms through which to study complex, multifaceted, and context dependent societal phenomena.

Accordingly, climate migration studies may find borders to be a valuable prism through which to analyze societal trends and developments such as the SSPs while still maintaining a point of reference through which to examine the concrete and geographically multi-scalar contexts of climate migration.⁴⁷ Furthermore, the encompassing societal role of borders make them ideal points of reference for integrating and synthesizing the practical, political, and personal spheres and disciplines of the field. Realizing this potential is, however, the task of another study and another article.

45 See, for example, the concepts of “lens” (Houtoum, 2005), “compass” (Vaughan-Williams, 2012), “method” (Mezzadra and Neilson, 2013), and “seismograph” (Tinning, 2019).

46 For an overview of contemporary border studies literature, see Cooper and Tinning (2019)

47 The different roles of borders as defined by societal trends is also alluded to in the short descriptions of SSP 1 and 3 above due to the dissimilarity between the respective cross-border interactions they entail.”

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