Recent progress and future directions for research related to migration and conflict

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Main text

Displacements caused by conflict, violence and disasters have been rising in the past decade from 3.5 million people being internally displaced due to conflict and violence, and 15 million persons by disasters in 2011, to 9.8 and 30.7 million, respectively in 2020 (IDMC, 2021). Since the outbreak of the civil war in Syria in 2011, the media and academics have often mentioned climate change as a key driver of civil unrest and consequently of forced displacement and migration in the region (Ash and Obradovich, 2020; Ide, 2018). The 2014-2016 drought in Central America, which led to food insecurity, loss of livelihoods and conflict, is also cited as a driver of the migrant caravan from this region in 2018 (Pușcaș and Escribano, 2018). While the causal link between climate change, conflict and migration is theoretically plausible, very little empirical evidence on the topic is available.

Our study published in *Global Environmental Change* in 2019 (Abel et al., 2019) assesses empirically the causal mechanisms that run from changing climatic conditions to the likelihood of conflict, and consequentially leads to forced migration. Our results indicate that climatic conditions, by affecting drought severity and the likelihood of armed conflict, played a significant role as an explanatory factor for asylum seeking in the period 2011–2015. The effect of climate on conflict occurrence was particularly relevant for countries in Western Asia in the period 2010–2012, when many countries in the sample were undergoing political transformation; suggesting that the impact of climate on conflict and asylum seeking flows is limited to specific time period and contexts

Other subsequent studies have employed different methods to capture this relationship empirically. In their meta-analysis of quantitative studies on environmental migration, Hoffmann et al. (2020) identify conflict as a key mediator of the impact of environmental change on migration. A recent article by Schutte et al. (2021) uses data on asylum movements to the EU from 175 countries in the period 1999-2018, and finds that political violence and repression are the key predictors of asylum flows, while information based on climate variability has rather weak predictive power. The dynamic nature of this branch of interdisciplinary literature investigating the climate-migration link is reflected in the multitude of studies reported in the meta-analysis by Hoffmann et al. (2020). The use of modern methods based on machine learning, such as those exploited by Schutte et al. (2021), exemplify how the field is being advanced using a sound and innovative methodological toolkit.

Recognizing that the effects of climatic shocks and conflict are likely to be localized and that climate-related migration may tend to take place internally over short distances, in Abel et al. (2019) we call for more studies that focus on the role of conflict to explain climate-driven migration at a subnational level.

Recently, Fenz et al. (2021) use bilateral internal migration data for Colombia to validate the modelling framework used in Abel et al. (2019) for internal migration flows, and establish a similar causal relationship as that found for the case of international forced migration flows.

Likewise, our 2019 study only illustrates one potential mechanism through which climatic shocks affect migration. Apart from conflict, which has a strong predictive power for refugee and asylum flows (Schutte et al., 2021), it is theorized that climate change is likely to affect migration indirectly through its effect on other socioeconomic drivers of migration (Black et al., 2011). Rural residents, for instance, may choose to migrate to seek employment elsewhere if droughts damage crop yields and consequently reduce agricultural income. Conflict may also arise due to food price fluctuations induced by climatic shocks. So far, there has been no empirical literature that systematically investigates these other potential mechanisms in a similar methodological setting as that used for conflict. This avenue of research is potentially very fruitful and statistical models that credibly unveil causal mechanisms triggered by environmental shocks and leading to displacement should be exploited further in empirical studies.

The availability of data to study the link between climate change, conflict and migration is continuing to improve. In our 2019 study, we concentrate on asylum seeker application data between 2006 and 2015. The latest data indicate that the global level of asylum seeker applications has almost tripled; from 3.6 million in the period 2006-2010 to 9.4 million in 2016-2020[1] (see Figure 1). The pattern of refugee flows has also evolved; with a larger number of forced migrants from Western Asia and Southern Asia to Western Europe and a significant increase of asylum movements within Southern America, as well as from Central America to Northern America in 2016-2020.

[1] Based on UNHCR asylum application data downloaded in August 2021 from https://www.unhcr.org/refugee-statistics

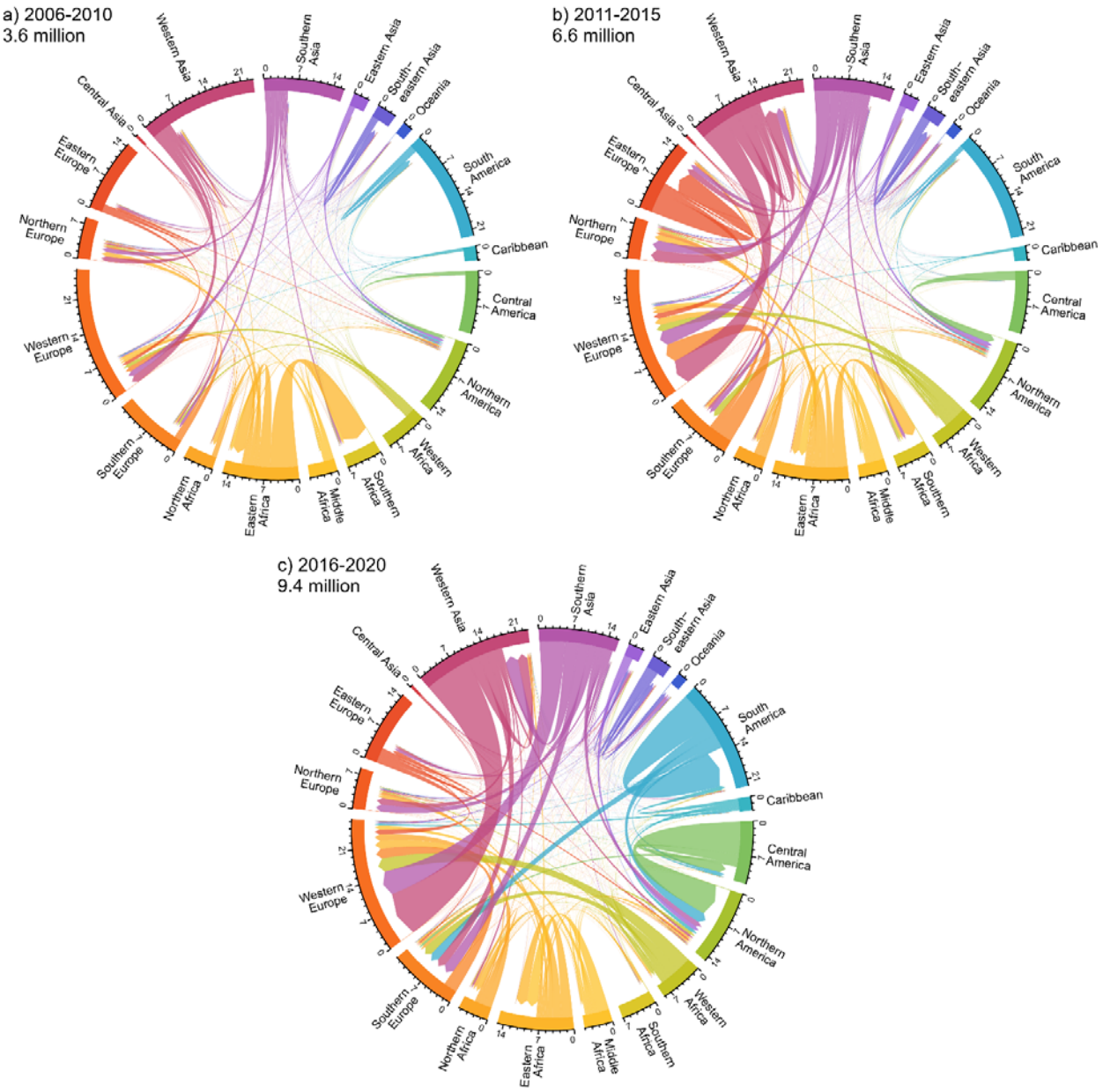

Figure 1: Asylum seeking flows by world region, 2006–2010, 2011–2015 and 2016–2020.

The increasing availability of geo-referenced data, particularly on demographic, socioeconomic and political variables, coupled with advancement in statistical techniques and computational power, provide a promising research framework for investigating the climate-migration link (Muttarak, 2021). Recent efforts to harmonize internal migration data based on census microdata, for instance, make it possible to consistently analyze climate-related migration at a granular subnational level (Abel et al., 2021). Likewise, the developments in the application of digital crowdsourcing platforms through mobile phone data collection to derive high-frequency georeferenced data of food commodities (Adewopo et al., 2021) provides a new source of information that may prove extremely important in the context of

these research questions. Such improvement in data and methods allows for a systematic investigation of the underlying mechanisms through which climate change influences migration at a higher degree of geographical granularity and will consequently contribute to relevant empirical insights on how future migration patterns will unfold under different environmental change scenarios.

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