



The Crisis Behind The Crisis? Forced Migration and its Consequence as a Result of Environmental Change and Natural Disaster in ASEAN

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Climate Change and Migration

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Rising sea-levels and increases in intensity of extreme events pose serious risks to people living in low-lying coastal areas.¹⁷ The challenges are particularly acute for small island states, but also important for cities in the floodplains of rivers and deltas. Further inland more intense or extended droughts could make agricultural-based livelihoods increasingly difficult.¹²

People might respond by migrating to other safer more habitable locations. Relocation or retreat might be a planned, step-wise process or largely-self organized movement. It may take decades or might be a direct response to a major disaster. Resettlement might be forced or voluntary. The outcomes of movement may include positive and negative elements for those who move or stay behind or for those in destination communities. Rarely, however, would changes in climate be the sole or even dominant factor inducing migration; in practice migration has and is likely to continue to be influenced by multiple factors.²⁷

Security or development

Analysts interested in national security have speculated about the consequences of climate-related migration, especially where it may take place across borders, raising the spectre of

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‘climate refugees’. Typically concern is about competition for land and other natural resources and what this might mean for conflict and political stability²⁴. In this framing migration is a failure to adapt and the consequences are seen as largely negative.

An alternative view is that migration is a coping or adaptive, mechanism – a way to build household resilience and deal with various vulnerabilities. Migrants with insecure livelihoods may move to take up jobs elsewhere. Their remittances, in turn, may lead to improved infrastructure and economy in home locations. In this framing migration is a development issue and potentially a much more positive process.

Either way it is far from clear how much quantitative influence climate change might have on migration flows. Some commentaries have suggested huge impacts with as many as 1 billion climate refugees with 200 million by 2050 a more common figure.¹¹ Other reviews have been much more cautious, concluding it is unlikely that large scale relocation is an unlikely response for a number of reasons²³. They point out, for example, that environmentally-induced migration is often temporary, that remittances from labor migrants help those that stay behind, and people are creative at finding ways to cope and adapt. The IPCC itself has tended to downplay migration as a direct outcome placing more emphasis on vulnerability and indirect pathways.¹² Big numbers, if nothing else, have drawn attention of policy-makers to climate change and migration as an issue that needs to be understood better.

Empirical evidence

There is not a lot of clear empirical evidence that climate change has influenced recent patterns of migration within ASEAN. Even drawing more widely on evidence from the Asia-Pacific region, as is done in this paper, the knowledge base is modest. This is not surprising given difficulties in measuring climate change in local places, the fact that migration is only one of several possible responses to degradation, and that many factors influence migration making it difficult to attribute roles to climate among other factors.^{21, 26} Few studies have had rigorous designs, for instance, appropriate counterfactuals.

Nevertheless, there are useful insights from studies of: responses to climate events; effects of resettlement policies and projects; impacts of climate in history; and, implications of climate projections into the future.

Climate events

The impacts of climate change may be experienced as relatively discrete, individual, events, like serious floods or storm surges, but also as slower, cumulative, changes in soil salinity, sea-level rise, or shifts in temperature or seasonality of rainfall.

The International Organization for Migration estimated that more than 20 million persons were displaced by extreme weather events in 2008; compare this with 4.6 million internally displaced by conflict and violence.¹¹

A study of villagers in rural Bangladesh following cyclone Aila in 2009 gives some insights into movements induced by climate events. Migration was local and often temporary as a consequence of economic and social constraints¹³. People were concerned about limited number of cyclone shelters, their poor condition, lack of sanitation facilities and poorly maintained embankments. The benefits of movements were small as destinations had similar conditions apart from the damage from cyclone; and in some cases living conditions were worse when moved to urban slums.

Other studies in Bangladesh have documented internal migration to cities and forced migration as a result of erosion and deposition processes that change location of river channels and banks. Extreme floods frequently leave many people homeless, but whether out-migration occurs depends a lot on aid and recovery of livelihoods.²² Movements immediately following extreme events, in particular, do not necessarily translate into long-term relocation.²³

There is some evidence that internal migration from outlying to more central and urbanized islands within Tuvalu is already taking place and, may in part be attributable to climate change.¹⁵

Cumulative stress

Reviews of previous studies of responses to slow-onset degradation suggest that early labor or livelihood migration with remittances being important to those who stay behind. With decisions spread out more over time it can be difficult to separate voluntary and forced forms of migration.¹¹ People may cope with and adapt to changes rather than migrate; whereas in other cases mass movements have occurred.

Vast areas of Central Asia are already water stressed and at risk of additional stress as a result of climate change. In 1996 more than 100,000 people were displaced in the Aral Sea Region. Drought in 1999-2001 led to about 273,000 people moving from Uzbekistan to Kazakhstan and the Russian Federation⁸.

Much further back in history the collapse of the urbanized Indus civilization after a thriving 700 year period has been attributed to many factors¹⁴. Climate has been part of several theories. Droughts which led to collapse of Egypt and Mesopotamia, for instance, may have contributed to loss of markets and economic crises centuries later in the Indus system. Direct impacts are also suspected based on climate records around 2100-2000 BCE when archaeological evidence indicates river levels were low and crops changed to deal with a drying climate.

Resettlement and displacement

The government of Kiribati has adopted a long-term strategy of securing migration options in Australia and New Zealand.¹⁶ This is envisaged as stepwise, in building initial communities in these locations that would make it easier for gradual, transitional, resettlement if and when entire population had to move. It should be noted such options would be sought even in the absence of climate change rationale and that this builds on existing policies, for example, in New Zealand to support economic development in Pacific island states.

The difficulties of resettlement as a strategy are revealed by past experiences associated with mega-projects and other development schemes.²⁰ Studies suggest that it is important to engage and empower stakeholders from both origin and destination communities throughout the process.¹⁰ These experiences also underline the importance of reconstructing livelihoods, careful planning and financing, and allowing sufficient time to establish social and cultural capital in destinations.¹⁰ Weak, discriminatory or corrupt governance has often had large, adverse, impacts on migrants in resettlement projects.⁴

Most residents of Tuvalu are not concerned with climate change and do not see it as an important reason to migrate.¹⁸ Most are strongly attached to their homes and would view large-scale displacement as a disaster or tragedy in itself. These perceptions contrast to international media, politicians and scientific studies which often argue that large-scale migration from Tuvalu is inevitable and even a 'sensible' adaptation option. Perceptions of risks and the burdens and benefits of migration are not uniform.

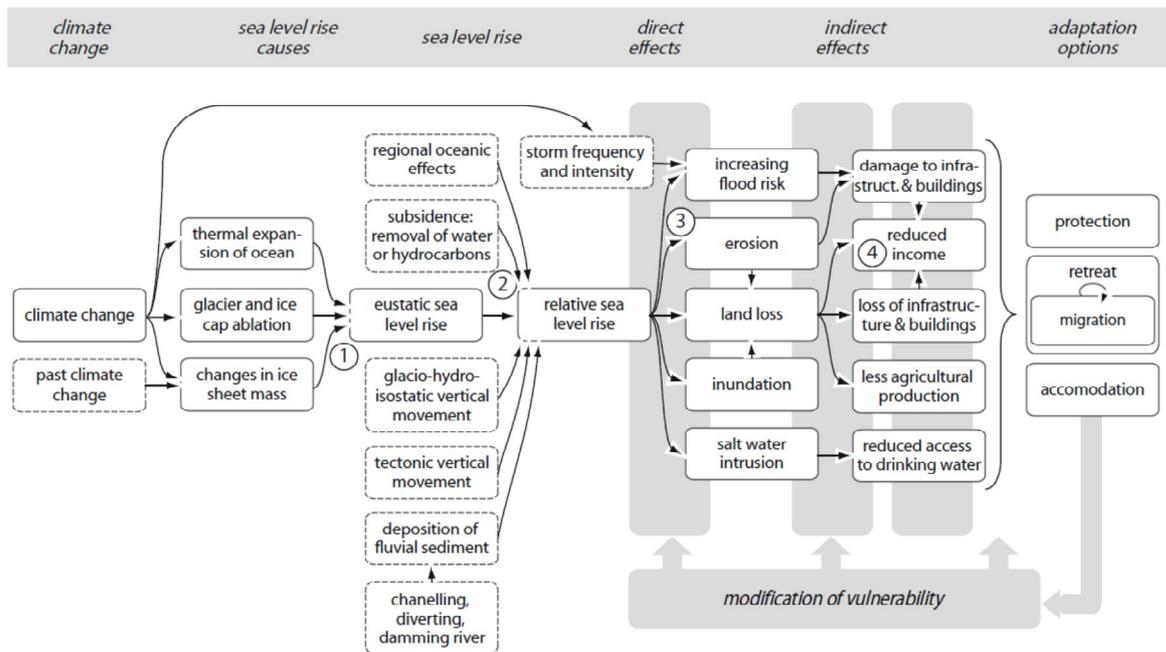
Projections and prospects

Another way the impacts of climate change on migration have been inferred is from calculating possible inundation of populated areas under different assumptions of sea-level rise. Thus, under a high 2m sea-level rise in the Mekong Delta it was noted that half of 28.5 million residents would be inundated.²⁷ Programs like that of 'living with flood' which include protected residential clusters and encourage other livelihoods in wet seasons like aquaculture, however, may make a certain level of adaptation possible.^{6, 25} Other studies in Vietnam have suggested as many as 1 in 10 might be displaced.⁵ Similar types of estimates have been made for other parts of the world; on their own are not very informative to understanding migration or how it will change as they lack adequate consideration of timing and neglect other drivers of migration and possible adaptive responses.

Sea-level rise and increased intensity of precipitation, for instance, could combine with groundwater withdrawals and land-use changes to greatly increase the risk of severe flooding episodes in Bangkok.^{7, 9} As the 2011 events showed the impacts of such events cascade throughout the region including major effects on employment of migrant labor. Repeated and prolonged flooding events as a result of climate change would alter the cities role in regional

migration networks.² What this thought experiment underlines is the links between climate change and migration in the case of floods or sea-level rise can be fairly complex (Figure 1). In the case of sea-level rise, for instance, need to consider factors like salinization, subsidence and erosion as well as a land loss from inundation.¹⁹

Figure 1. Conceptual framework for links between climate change and migration in the case of sea-level rise. Source:¹⁹



Policy implications

The historical evidence reviewed above suggests that migration in response to climate change is as much a development as a security issue; such insights should inform studies that project alternative futures.

The security framing, however, has so far dominated international discussions. One suggestion has been to expand the definition of refugees under the 1951 Geneva Convention or to extend the human rights framework. Legal liability needs other mechanisms, perhaps under the UNFCCC.¹³

There have also been calls for a treaty on climate change-related displacement. Proponents are particularly concerned that those responsible for the problem should have differentiated responsibilities to help solve it, for instance, provide financial resources and other assistance. Critics question whether such an approach will be helpful on the ground.¹⁶

First, norms which are generally applicable tend to be vague and thus not easily translated into practical policies. Second, a focus on protection and rights-based frameworks may not be best

way to deal with needs-based problems. An alternative and more realistic approach might be to deal with challenges through negotiations under existing bilateral and regional agreements or soft-law. Either way international cooperation is going to be important as developing nations will need technical, institutional and financial resources.^{2, 3}

Most population movements in response to climate change are likely to be within national borders. This implies a lot more attention is also needed in domestic policies. For event-driven changes experience with disaster response, refugees and internal displacement will be a useful starting point². Long-term cumulative and slow-onset impacts are more challenging to address as they lack immediacy. Planned relocation of cities for example may take decades to be achieved and require complex mixture of incentives and regulations¹. Experiences with current policies on resettlement and for treating migrant are also likely to be valuable to making policies related to climate change.

Conclusions

Migration is driven by multiple factors, in particular, concerns with employment and livelihoods. Climate change may have already contributed to decisions to migrate in some instances, and is likely to do so more in the future. Our understanding of the likely impacts of climate change on internal and international migration in Asia remains modest. Additional comparative studies with improved and innovative methods are needed. Such studies would help better recognize the risks and opportunities which arise from climate change-related migration.

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