

Living with Floods in a Mobile Southeast Asia: Vulnerability, Migration and Environmental Change

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Policy Pointers

People living with floods may express their agency through vulnerability reduction strategies that include migration

People's "vulnerability" to flooding in Southeast Asia reflects a larger story of socio-economic and political inequality. Knowledge co-production methods can foster trust and collaboration in cases where there has been a history of conflict, but only within limits.

In rural areas, seasonal floods are often beneficial and people know how to live with them. However, exceptional floods can be destructive, and cause displacement.

In urban case studies, migrants are often blamed for living in risky places, rather than recognizing the wider socio-political circumstances that locate them there.

The effects of floods are mitigated or exacerbated by institutionalized response strategies (or the lack thereof), as well as shaped by long-term development planning policies.

For projects and policies on flood mitigation, disaster preparedness and migrants to be effective and socially just, a multi-dimensional framing of migration is required.



A small-scale fisher on Tonle Sap Lake, Cambodia (Credit: Carl Middleton)

Flooding is a common experience in monsoonal regions of South East Asia, where diverse flood regimes have for centuries shaped agrarian and fisheries-based livelihoods. In this policy brief, we respond to the need for a nuanced understanding of the connections between flooding and migration in Southeast Asia. The policy brief summarizes key insights from a research project with eight empirical case studies in urban and rural areas across Southeast Asia. Overall, through a better understanding of the relationship between migration, vulnerability, resilience and social justice in Southeast Asia, we aim to sensitize flood hazard policy agendas to the complexities of migration and mobility.

Whilst regular seasonal floods are often beneficial in rural areas, in recent public discourse, the link between flooding and migration is most often made with regard to catastrophic flood events (e.g. CNN, 2012). News images of intense weather-related flood events in the region's low-lying megacity and delta regions has contributed to a perceived link between extreme environmental events and mass migration through displacement (Myers, 2002), for example, Cyclone Nargis in the Ayeyarwady Division of Myanmar in May 2008; country-wide flooding in Thailand including of Bangkok in late 2011; and Typhoon Haiyan in the Philippines in November 2013. Yet, a focus on such events alone misses the complexity and diversity of links between migration and floods in Southeast Asia, as well as environmental change more broadly.

In this policy brief, we propose a “political ecology of mobility” that incorporates a nuanced appreciation of diverse forms of floods, and a recognition of varieties of migration (Elmhirst et al, 2018). We briefly synthesize the insights from four urban case studies in Vietnam, the Philippines, Indonesia and Myanmar; and four rural cases studies in Cambodia, Laos, Thailand and Malaysia (Middleton et al, 2018). The case studies represent the diversity of flood regimes in the region as well as to different migration contexts, and seek to identify the environmental, social and political factors that create and perpetuate vulnerability. We show how migration may be a form of people's adaptation to dealing with disastrous floods, whilst also emphasizing the government's responsibilities and linking the creation of vulnerability to flooding to broader policy decisions including on economic growth and development.



A paddy field in Xieng Ngeun District, Luang Prabang province, Laos filled with sand and gravel from a major flood (Credit: Outhai Soukkyh)

Floods

In Southeast Asia, floods are extremely varied including seasonal floodplain inundation, irregular riverbank overflow, flash floods in urban areas, landslides and flash floods in mountain areas, coastal floods and tsunamis (Lebel and Sinh, 2009). Flooding can result in negative and positive impacts. For example, farmers and fishers in rural areas hold a very different relationship with floods to those who live and work in urban or peri-urban areas. Furthermore, the experience of these different types of flooding varies distinctly between groups of people according to their livelihood, location, socio-economic status and level of political voice.

On the one hand, floods are beneficial and bring means to livelihood, as is the case around Cambodia's Tonle Sap Lake where fishers and farmers depend on the annual flood cycle for the vitality of the wild-capture fisheries and floodplain agriculture. On the other hand, flood events can also be destructive, however, in both rural and urban areas. The effects of floods can be mitigated or exacerbated by institutionalized disaster response strategies (or the lack thereof), as well as shaped by broader long-term development planning policies and decisions, for example on water management, urban growth, industrial and infrastructure development, and natural resource management.

We highlight that floods are not simply “natural” events, but both in terms of their physical characteristics and their impact on people (positive and negative) they are shaped by public policy and people's decisions and actions (Braun, 2006). Thus, how flood hazards are created through natural and human activities shapes people's vulnerability to them.



A bridge in Phonexay District, Luang Prabang province, Laos destroyed by a flood (Credit: Outhai Soukkyh)

LIVING WITH FLOODS IN A MOBILE SOUTHEAST ASIA

A Political Ecology of vulnerability, Migration and Environmental Change



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Migration

Southeast Asia is a very mobile region. Migration may be local, cross-border and transnational migration, and short-term, long-term, seasonal or permanent. Migration may not always be an expression of vulnerability, but can also be understood as a manifestation of people expressing their agency to secure their livelihood and aspirations. Rather than focusing on the individual migrant, it is often useful to consider migration as a household livelihood strategy, where some members may migrate and send remittances, whilst others remain at their place-of-origin. The efficacy of migration in reducing vulnerability and bringing benefits is strongly linked to intermediary factors, including the ties that households and individuals might have with other places, people and labor markets, and the formal and informal institutions that shape these. There are many reasons why people migration that range from diversifying income sources, including across different locations, to spreading household risks related to environmental, economic and political shocks (Rigg, 2012).

Who is vulnerable to flooding?

Vulnerability can be understood as "...the characteristics of a person or group and their situation that influence their capacity to anticipate, cope with, resist and recover from the impact of a natural hazard" (Wisner et al., 1994:11). People's vulnerability to flooding often reflects a larger story of socio-economic and political inequality, whereby destructive floods disproportionately affect marginalized groups including due to unequal access to political, environmental, social and economic resources and rights. Risk reduction for particular target populations or places, can result in risk redistribution, where non-target populations find themselves at greater exposure to flood waters, including migrants that frequently inhabit informal settlements in "risky spaces" (Lebel and Sinh, 2009).

Migration-based livelihoods, in which migration is "managed" by households, can be an important means by which people avoid or mitigate the effects of environmental catastrophes, through diversifying income, building social networks, spreading risk spatially, and the use of migrant remittances earned in locations unaffected by the catastrophe. At the same time, processes associated with migration themselves can produce forms of social vulnerability where the freedom to move is tempered by social and political exclusions in terms of access to rights, recognition and justice. For example, migrants may end up in risky environments in flood-prone cities and thus face new vulnerabilities in place of old ones. During a hazardous flood, it's important to note that not everyone chooses to move away, and some people are unable to move away even if they would like to (Black et al, 2011).



Small-scale fishers in Battambang Province around Tonle Sap Lake, Cambodia (Credit: Carl Middleton)

Impacts of floods on migration and mobility

Table 1 summarizes the key case study research findings now published in the book "Living with Floods in a Mobile Southeast Asia: A Political Ecology of Vulnerability, Migration and Environmental Change" (Middleton et al, 2018). Some of the synthesis findings of the book are summarized in the concluding chapter. Regarding the impacts of floods on migration and mobility (Lebel et al, 2018):

- ❑ Flooding alone does not determine long-term migration – there are many other influential factors that motivate or discourage migration
- ❑ The effects of floods on mobility depend on whether or not these exceed an acceptable level, as well as whether a household has other in situ options to turn to or not
- ❑ Sometimes, floods can reduce mobility, for example through impacting transport systems
- ❑ Voluntary relocation in response to high or rising risks of floods may be a strategy for some households with sufficient resources, but decisions also influence by social and emotional attachment to a place
- ❑ Government policies can be a source of risk itself, including by making people move (to safe places devoid of livelihoods), and linked to related policies such as on natural resource allocation



A rural school damaged by flooding in Battambang Province Cambodia in November 2011 (Credit: Carl Middleton)

Regarding the consequences of migration on vulnerabilities to floods (Lebel et al, 2018):

- ❑ There have been significant impacts by floods on migrants that move to flood-prone areas of major cities, including: damage to assets; loss of employment (formal and informal); and health risks
- ❑ Floods impact some migrants much more than others, and generally more than residents
- ❑ Migrants may stay in high risk flooding environments because the benefits outweigh the costs, including affordable accommodation and to be near employment. They therefore exchange one form of risk for another



A flooded road junction in Bangkok, November 2011 (Credit: Carl Middleton)



Floodwaters inundated Rojana Industrial Park in Ayutthaya Province, Thailand, in the 2011 floods. (Credit: Cpl. Robert J. Maurer via Wikimedia Commons)

Table 1: Key research findings

<p>"Living with the flood: A political ecology of fishing, farming, and migration around Tonle Sap Lake, Cambodia" by Carl Middleton and Borin Un</p>	<ul style="list-style-type: none"> ❑ Competition for land and wild-capture fisheries is intense around Tonle Sap Lake lake, the natural resource base is under pressure, and rights to access resources contested ❑ Year-to-year differences in the seasonal flood cycle of the lake affect the viability of small-holder farming and family-scale fishing livelihoods differently, and this shapes decisions over family members migrating ❑ Vulnerability is significant and growing including due to resource exclusion and degradation, and migration is a key strategy in response
<p>"Migrants seeking out and living with floods: A case study of Mingalar Kwet Thet settlement, Yangon, Myanmar" by Maxime Boutry</p>	<ul style="list-style-type: none"> ❑ Migrants have sought out and settled land at risk of flooding at the peri-urban fringe of Hlaing Tha Yar township ❑ One particular vulnerability relates to how the process of migrants settling in flooded areas ultimately leads to landlords' investment in improved flood management and towards the land's formalization. As this process unfolds, rents increase, and the original migrant settlers, unable to afford them, must once again move on.
<p>"Risky spaces, vulnerable households, and mobile lives in Laos: Quo vadis flooding and migration?" by Albert Salamanca, Outhai Soukhy, Joshua Rigg and Jacqueline Ernerot</p>	<ul style="list-style-type: none"> ❑ Studies four rural villages in upland and lowland Laos where both flash floods and slow-onset floods occur, yet was not a tendency for community members to respond to flooding through mobility. ❑ As livelihoods remain closely connected to land, instead of mobility, there was a common desire for secure land rights, improved infrastructure, and the comfort of sustainable, fixed, livelihoods.
<p>"Living with and against floods in Bangkok and Thailand's central plain" by Naruemon Thabchumpon and Narumon Arunotai</p>	<ul style="list-style-type: none"> ❑ Empirical research on the impacts of the 2011 major flood in Thailand on three urban, one semi-urban and three rural communities ❑ For rural communities, whilst largely adapted to seasonal flooding, the 2011 flood increased vulnerability due to damage of property and livelihoods. ❑ In urban areas, communities were not well-prepared and therefore were highly vulnerable. ❑ Contentious politics emerged as people's vulnerability was exacerbated by government policy to protect core urban and industrial areas
<p>"Generating Vulnerability to Floods: Poor Urban Migrants and the State in Metro Manila, Philippines" by Edsel E. Sajor and Bernadette P. Resurrección</p>	<ul style="list-style-type: none"> ❑ Research on the migration experiences of poor urban migrants and their reasons for settling in flood-prone areas of Malabon City in the Philippines ❑ Poverty, urban employment and inequitable access to land and housing means the adaptive capacity of migrants to flooding are not only multi-local and multi-level, but also emerge from actions and influences of government in other sectoral policy domains.
<p>"Responses to Flooding: Migrants' Perspectives in Hanoi, Vietnam" by Nguyen Tuan Anh and Pham Quang Minh</p>	<ul style="list-style-type: none"> ❑ Assesses linkages between migration, rapid urbanization and floods in Hanoi, Vietnam, in a context where government interventions have sought to 'manage migration' through policies designed to restrict entry to the city, and 'manage floods' by re-engineering the city's infrastructure. ❑ Those most vulnerable to flood disasters include migrants who have settled without registering in the city, and who lie outside circuits of government support.
<p>"Flooding in a city of migrants: ethnicity and entitlement in Bandar Lampung, Indonesia" by Rebecca Elmhirst and Ari Darmastuti</p>	<ul style="list-style-type: none"> ❑ Investigates the intersection of historical migration, kin networks and clientelism at very localized scales in Bandar Lampung, Indonesia ❑ A long history of migration continues to resonate in the ethnic networks that shape the political capital people are able to draw on at very localized scales and that enable them to gain access to support during and after flood events. ❑ Household and community efforts to tackle floods have become a way of signaling a right to remain in places where formal tenure is unclear.
<p>"Vulnerabilities of Local People and Migrants due to Flooding in Malaysia: Identifying Gaps for Better Management" by Mohammad Imam Hasan Reza, Er Ah Choy and Joy Jacqueline Pereira</p>	<ul style="list-style-type: none"> ❑ Examines the impact of severe floods in Johor State, Malaysia, which is a key destination for local and international migrants seeking factory employment in the state's industrial zones ❑ Although there is no deliberate discrimination against migrants in flood risk management, they are a group that are relatively hidden ❑ The analysis of disasters needs to be extended to include migration and migrants, particularly where the latter have difficulties in accessing the support of the state.

Conclusion and recommendations

People living with floods may express their agency through vulnerability reduction strategies that include migration to: spread risk across multiple locations; and by being able to move away when disaster strikes. Yet, people's "vulnerability" to flooding in Southeast Asia reflects a larger story of socio-economic and political inequality; destructive floods disproportionately affect those from lower socio-economic groups who lack of access to secure forms of livelihood, and have a weak voice in political processes, often including migrants.

- ❑ Reactive, humanitarian aid, after flood disasters is important to migrants but it is not sufficient. Programs are needed that provide systematic support to marginalized communities, including migrants at risk from and affected by floods.
- ❑ Need, not personal relationships and patronage, should determine access to services or support.

In urban case studies, migrants are often blamed for living in risky places, rather than recognizing the wider socio-political circumstances that locate them there. They are often subject to policies that regulate their movement, including forced resettlement, and that reinforces vulnerability

- ❑ Policies aimed at reducing vulnerabilities of migrants to floods need to pay special attention to livelihood security and not just issues of exposure.
- ❑ Forced displacement is a major cause of serious and compound vulnerabilities and should be avoided and opposed.



Volunteers and members of the Royal Thai Army, military police, fill and place sandbags to redirect flooding in the northern Sai Mai district in October 2011. (Credit: Cpl. Robert J. Maurer via Wikimedia Commons)

The effects of floods are mitigated or exacerbated by institutionalized response strategies (or the lack thereof), as well as shaped by long-term development planning policies that include the construction of infrastructure intended to manage floods but that also redistribute risks from one (often privileged) group to another.

- ❑ Ensure warnings and guidance on flood preparedness is accessible and understandable
- ❑ Vertical coordination among local, city-wide or regional, and national government agencies

The Association of Southeast Asian Nations (ASEAN) is now seeking to shape a common policy framework for dealing with events such as flood disasters (di Floristella, 2015), and have engaged in international processes such as the Nansen Initiative. However, the ASEAN Agreement on Disaster Management and Emergency Response does not mention migrants, migration or mobility (ASEAN, 2013). Donor attention is also being directed towards building resilience to climate change-related hazards (including flood hazards) in rural and urban areas in Southeast Asia (Rockefeller Foundation, 2016). The Sendai Framework for Disaster Risk Reduction makes several references to the needs of migrants and notes that "Migrants contribute to the resilience of communities and societies, and their knowledge, skills and capacities can be useful in the design and implementation of disaster risk reduction" (UNISDR, 2015).

- ❑ For projects and policies on flood mitigation, disaster preparedness and migrants to be effective and socially just, a multi-dimensional framing of migration is required.

Project partnership

This research was undertaken jointly by:

- Asian Research Center for Migration, Institute of Asian Studies, Chulalongkorn University
- Master of Arts in International Development Studies Program, Faculty of Political Science, Chulalongkorn University
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Knowledge Products

The Center for Social Development Studies (CSDS) is within the Faculty of Political Science, Chulalongkorn University. We produce interdisciplinary critical research on social development in Southeast Asia, engages in policy-making through building partnerships, and provides a public forum for debating critical issues.

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