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Where do we go now? Disasters, climate change, and durable solutions from displacement in Southeast Asia

ABSTRACT

Climate change is a risk multiplier for hydrometeorological disasters that poses additional hazards for low-lying islands, river deltas, and coastal zones due to projected sea level rise. According to the Internal Displacement Monitoring Centre (IDMC), disasters in Southeast Asia already displace about a million people per year, and this number is very likely to rise in the future, given the region's vulnerability to climate impacts. Although most of the Association of Southeast Asian Nations (ASEAN) countries have improved their disaster response in recent years and institutionalised regional efforts to deal with disaster risk management, the response to displacement still poses a significant challenge to many countries in the region.

This paper focuses on the issue of durable solutions for addressing population displacement due to disaster and climate change. While many displaced populations can return to their homes relatively quickly after natural disasters, cases of prolonged displacement are increasing globally. Climate change is likely to exacerbate the situation further as climate hazards might make returning to some areas impossible. This article uses recent cases of displacement, lessons learned in the region, and analysis of government policies to propose potential strategies for dealing with internal displacement. These strategies include displacement prevention, durable solutions, and ways for international, regional, and national actors to improve the region's response to displacement from disasters and climate change.

1. INTRODUCTION

The rate of disaster-induced displacement of populations in Southeast Asia has been rising rapidly in recent years and is likely to continue on an upward trend due to the exacerbation of natural disasters by climate change. Although most of the ASEAN countries have improved their disaster response and institutionalised regional efforts to deal with disaster risk management, the response to displacement still poses a significant challenge to many countries in the region. Most ASEAN countries do not possess comprehensive legal and regulatory frameworks to deal with internal displacement, creating an obstacle for overcoming growing challenges relating to climate change.

This paper looks at how countries in the region fare in regards to providing durable solutions to displacement stemming from disasters and climate change impacts. It also investigates how countries can improve their response through the development of national or regional regulatory frameworks and evaluates the role that ASEAN can play to support these efforts.

2. DISASTER-INDUCED DISPLACEMENT IN SOUTHEAST ASIA

This paper follows the Guiding Principles on Internal Displacement definition of internally displaced persons (IDPs) as “persons or groups of persons who have been forced or obliged to flee or to leave their homes or places of habitual residence, in particular as a result of or in order to avoid the effects of armed conflict situations of generalised violence, violations of human rights, or natural or human-made disasters, and who have not crossed an internationally recognised State border" (United Nations Office for the Coordination of Humanitarian Affairs (OCHA), 2004). The term “disaster-induced displacement” in this paper refers to displacement caused by natural hazards, including rapid-onset events, slow-onset events, and pandemics. Disaster-induced displacement can be either internal (within national borders) or international (crossing an international border). It can also range from short-term displacement on the scale of a few days (such as a temporary stay in an evacuation centre) to long-term (protracted) displacement that can last many years (such as living in a new city).

Globally, Southeast Asia is one of the regions most affected by disaster-induced displacement. In 2018, with over 5 million people displaced by disasters, Southeast Asia accounted for about 30% of displaced persons globally (IDMC & Norwegian Refugee Council (NRC), 2019). Although there is a lack of comprehensive long-term data series on disaster-induced displacement, thus necessitating reliance on modelling, better data collection on the displacement in recent years shows a detailed and reasonably accurate picture (Table 1). IDMC collected data from 2015 to 2018 showing that the impacts of natural hazards in the region caused the displacement of more than 21 million people in total, with the number of displaced surpassing 4 million in each year (Figure 1). The most affected countries were the Philippines, Myanmar, Indonesia, and Viet Nam.

Disaster-induced displacement in numbers					
Country	**2015**	**2016**	**2017**	**2018**	**Total per country**
Brunei Darussalam	0	0	94	0	94
Cambodia	8,900	8,300	15,000	37,000	69,200
Indonesia	204,000	1,246,000	365,000	853,000	2,668,000
Lao People’s Democratic Republic (PDR)	12,000	660	190	19,000	31,850

Malaysia	21,000	18,000	82,000	38,000	159,000
Myanmar	1,618,000	509,000	351,000	298,000	2,776,000
Philippines (the)	2,221,000	5,930,000	2,529,000	3,802,000	14,482,000
Singapore	0	0	0	0	0
Thailand	200	90,000	50,000	4,600	144,800
Viet Nam	9,600	81,000	633,000	143,000	866,600
Total per year	4,094,700	7,882,960	4,025,284	5,194,600	21,197,544

Table 1: The number of people displaced by disasters in each country in Southeast Asia for the period 2015 – 2018 (source: IDMC & NRC, 2015 – 2019).

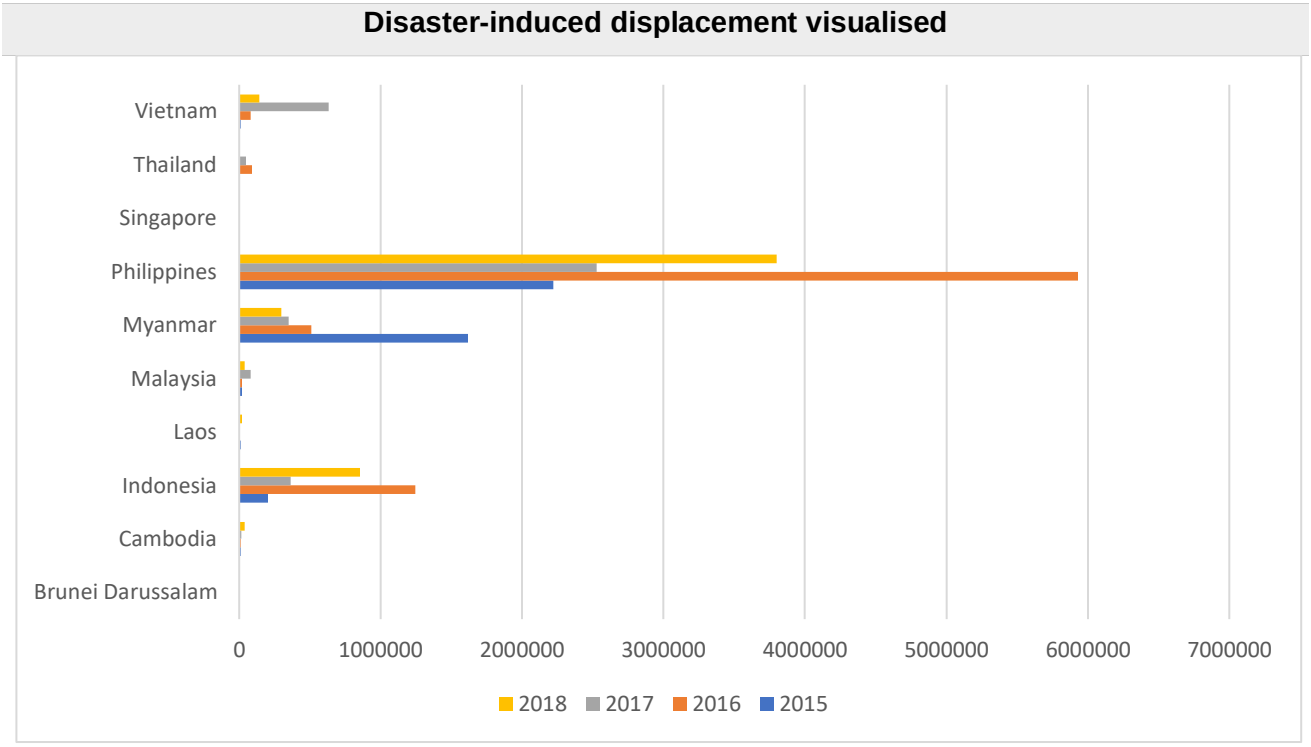

Figure 1: Disaster-induced displacement in each ASEAN country for the period 2015 – 2018 (source: IDMC & NRC, 2015 – 2019).

Because natural hazards are highly variable from year to year and the data only include four years of events, Table 1 and Figure 1 provide just a glimpse of the broader phenomenon. ASEAN countries experienced many significant events before 2015, such as the floods in Thailand in 2011 that displaced about 1.5 million people (IDMC, 2012). A 2014 paper on displacement risk in Southeast Asia and China found that the risk of displacement due to disasters has been growing at a rate even faster than the population growth rate. The uneven distribution of risk also causes Laotians and Filipinos to be more than 10 times as likely to experience displacement than Indonesians (Lavell & Ginetti, 2014, p. 9). Displacement modelling in Southeast Asia from 1970 to 2014 shows an increase in disaster-displaced persons from a high of about 1 million people per year in the 1970s to between 3 and 7 million people per year between 2009 and 2014. Data from 2015 to 2018 indicate a further increase in displacement of between 4 and almost 8 million people per year (Table 1).

While the region's location in the Pacific Ring of Fire makes it prone to geophysical disasters, most displacement in recent years has been due to hydrometeorological disasters, in particular tropical cyclones (TCs) and floods. IDMC has found that hydrometeorological disasters accounted for 87% of displaced people globally during 2008 – 2018, with data also showing a rise in the number of events leading to displacement (IDMC, 2019b, p. 8). Among hydrometeorological disasters, floods cause the largest amount of displacement, followed by TCs. The long-term climate risk index looking at fatalities and losses from climate-related disasters during 1999 – 2018 shows that four ASEAN countries are in the top 10 of the most affected countries in the world: Myanmar (2nd), the Philippines (4th), Viet Nam (6th) and Thailand (8th) (Germanwatch, 2019, p. 9).

3. CLIMATE CHANGE AS A DISPLACEMENT RISK MULTIPLIER

One of the main effects of climate change is that it acts as a risk multiplier by increasing the frequency and ferocity of natural hazards and thus leading to more severe disasters. Climate change affects the strength and location of precipitation, leading to heavier rainfall that can cause flooding or landslides. At the same time, it can lead to less rainfall and cause more frequent and prolonged droughts. A recent study has shown that even if the world meets the Paris Agreement's mitigation targets, which is the most optimistic scenario, flood displacement risk is likely to double by 2100 (IDMC, 2019a, p. 5).

TCs are another prevalent type of hazard in Southeast Asia. Climate scientists debate whether warming oceans allow TCs to strengthen more rapidly or maximum wind speeds to rise, but the relative rarity of TC events makes it difficult to obtain proof for these theories (Bindoff et al., 2013; Field et al., 2012; Lee et al., 2012; Stott et al., 2016). Several destructive TCs have affected Southeast Asia in recent years, leading to large numbers of displaced persons.

Sea level rise is the climate change hazard that will have the highest impact in Southeast Asia due to the region's many small islands, low-lying coastal areas, and river deltas. Although sea level rise is a slow-onset hazard, it has the potential to increase the severity of sudden-onset hazards. For example, higher sea levels increase the potential of coastal flooding and flood surges during storms and TCs. Climate change drove a global sea level rise of 11 – 16 cm in the 20th century, and even with sharp emission cuts, sea level could continue to rise by 50 cm during the rest of the 21st century. In high-emission scenarios, it could rise up to 2 m by 2100 (Kulp, & Strauss, 2019). The Intergovernmental Panel on Climate Change (IPCC) notes that sea level rise will continue for centuries, even if human societies manage to stabilise carbon dioxide concentrations under 500 ppm (Church et al., 2013, p. 1139). Kulp and Strauss (2019)

find that even with deep cuts to carbon emissions (Representative Concentration Pathway 2.6), Bangladesh, Viet Nam, and Thailand may face high tide lines extending above areas holding huge swathes of their populations (estimates ranging from 15% to 31%) before accounting for episodic large flooding events. They also project that, under a scenario of continuing high emissions with Antarctic instability (Representative Concentration Pathway 8.5), land currently home to roughly one-third of Viet Nam's population could permanently fall below the high tide line.

In Southeast Asia, major metropolises such as Bangkok, Ho Chi Minh City, and Jakarta might be particularly vulnerable to sea level rise and related hazards due to their low elevation. Additionally, subsidence due to groundwater extraction often accompanies the low elevation and compounds the impacts of hazards. The historically unprecedented 2011 floods in Bangkok and 2020 floods in Jakarta offer early glimpses into what the climate-charged future of these cities may hold. New policies addressing sea level rise should take a long-term perspective of over 150 years, as actions on shorter time scales are likely to lead to a waste of resources and maladaptation. Such unprecedented, long-term, and intergenerational policy planning is challenging and might benefit from the supplementation of short- and mid-term strategies that are at the core of regular policy planning. It might also face a range of feasibility concerns regarding issues of public support, operational implementation, technical challenges, and uncertainties in climate change impact projections. Nonetheless, working to overcome these challenges can lead to significant benefits, particularly in the area of preventing displacement.

This brief discussion of several natural hazards and climate change shows that displacement risk will likely increase in the future for most Southeast Asian countries. However, hazards are only one aspect of displacement risk — displacement is a complex phenomenon that interacts with several factors. Aside from direct climate change impacts on natural hazards, the scope of displacement will depend on how climate change will impact socioeconomic realities in Southeast Asia. For example, climate change impacts such as sea level rise, ocean acidification, and the bleaching of coral reefs will likely have major effects on tourism and fisheries. Furthermore, climate change may negatively impact agricultural yields and thus livelihoods of rural populations. While rapid-onset events will likely lead to displacement, governments in the region should not underestimate the effects of slow-onset events on migration and displacement patterns. Growing populations and urbanisation will also shape the displacement picture in the region by both increasing the at-risk population and making displacement a more urban phenomenon (United Nations Department of Economic and Social Affairs, 2019, p. 17). Governments can, to a certain degree, limit displacement risk through disaster risk reduction (DRR) measures and climate change adaptation (CCA). Population

management, urban development strategies, and land use planning will impact the scope of displacement risk in the region and are all factors that policy can significantly influence. The level of global mitigation will especially impact displacement risk, making it imperative for subnational governments to use all policy instruments available (e.g. diplomacy or in-country mitigation) to minimise global warming to 1.5°C above pre-industrial levels.

Most prior disaster-induced displacement in the region has been internal (i.e. displaced persons do not cross an international border), and it is likely that displacement will continue to follow this pattern in the near future (Lavell & Ginetti, 2014). However, conflict in the region has led to refugee movements, and high emission scenarios could lead to large portions of submerged land in some countries. Thus, there is no guarantee that the internal pattern will hold in the future, and governments should prepare provisions for dealing with other scenarios. This preparation is particularly important because disaster-displaced people do not fall under the United Nations Refugee Convention, and there are currently no other regional mechanisms to handle potential displacements (The Nansen Initiative, 2014, p. 11).

4. DURABLE SOLUTIONS TO DISPLACEMENT

The United Nations Inter-Agency Standing Committee has developed a Framework on Durable Solutions based on the Guiding Principles on Internal Displacement (OCHA, 2004; The Brookings Institution, 2010). The Framework argues that achieving a durable solution means that IDPs no longer have specific assistance and protection needs due to their displacement, and such persons can enjoy their human rights without discrimination resulting from their displacement" (The Brookings Institution, 2010, p. 5). It further defines that achieving a durable solution can happen through one of the following:

- Sustainable reintegration at the place of origin ("return")
- Sustainable local integration in areas where IDPs take refuge ("local integration"), or
- Sustainable integration in another part of the country ("settlement") (The Brookings Institution, 2010, p. 5).

It is essential to frame displacement in terms of durable solutions because displaced persons' needs do not necessarily end upon return after a disaster, as livelihoods and infrastructure might still be experiencing problems. Additionally, local integration or settlement in other parts of the country might be a complex endeavour due to housing and livelihood needs, loss of documentation, permits, access to government services, or similar challenges.

There exists a common perception that disaster-induced displacement is shot-term, and it is easier to find durable solutions for people displaced by natural disasters than those displaced

by cases of conflict. While, in some cases, this perception is true, many recent disasters have shown that the impacts of displacement can affect people for many years (for an example, see OCHA, 2017). Even for those who can return, negative financial impacts such as loss of income, needs for repairs and reconstruction, effects on livelihoods, and damages to important infrastructure such as transport, education, and healthcare can last for years. The United Nations Special Rapporteur on the human rights of internally displaced persons argued that, in the context of climate change, durable solutions would likely need to be more complex rather than static and one-dimensional. The Special Rapporteur argues that "they may combine a number of solutions, including movements which are seasonal or temporary, or solutions which include continuity with the place of origin as well as integration in a different part of the country (for example, part of the family returns to the place of origin permanently or on a seasonal basis, while the breadwinner works in another location). Strategies addressing internal displacement should therefore be sufficiently flexible to include and support various scenarios of human adaptation and ensure that durable solutions are based on free and informed consent" (United Nations General Assembly, 2011, p. 19).

Unfortunately, there are relatively few studies that look at durable solutions and the long-term impacts of displacement in Southeast Asia (Stange, Kourek, Sakdapolrak, & Sasiwongsaroj, 2019). A detailed study by Sherwood, Bradley, Rossi, Guiam, and Mellicker (2015) on the aftermath of Typhoon Haiyan (locally known as Typhoon Yolanda) in the Philippines identifies several challenges for durable solutions and can be instructive in highlighting some of the main issues for governments in the region. In November 2013, Typhoon Haiyan displaced over 4 million people, and the study shows that one and a half years after the disaster, only 17% felt that their life had returned to normal (Sherwood et al., 2015, p. 1). The study highlights that, while some durable solutions tied directly to the restoration of housing, a wide range of other issues arose. The main challenge was deciding how to prioritise the complex interlinking justice questions in regards to "inequalities that arise from investing in a holistic range of interventions in particular communities, leaving fewer resources for other areas" (Sherwood et al., 2015, p. 2). For example, over 200,000 households required relocation because their former houses and dwellings were in what became "no-build zones". Questions of livelihoods were pressing for this group, with many families returning to their places of origin as there was a lack of livelihood opportunities in the resettlement areas far from centres of commercial and economic life. Many of the displaced persons felt that they had a lack of consultation or choice in the matter of their relocation (Sherwood et al., 2015, p. 3 and 30). Similar patterns have occurred in Indonesia, where lack of strict government regulations has led many displaced people to return to the ground zero areas (or red zones) of the 2004 Indian Ocean earthquake and tsunami. The most notable example is the Ulee Lheue, Aceh area, which has now become crowded again after experiencing severe damage during the 2004 tsunami 16 years ago

(Wahyuni, Rum, Fitrah, & Octastefani, 2018). Wahyuni et al. (2018) found that the main reason people still live in disaster-prone areas is the dependence on their livelihoods there and a lack of alternative economic opportunities from the government. Therefore, a narrow focus on reconstruction and a lack of enforcement of no-build zones leads to IDPs returning to at-risk areas. Thomas (2016) shows that the same is true for displacement due to floods and landslides in Myanmar.

The above cases mirror similar findings from other areas hit by disasters (OCHA, 2017; Sherwood, Bradley, Rossi, Gitau, & Mellicker, 2014; Yonetani, 2017) showing that the process of finding durable solutions is a challenging mid- to long-term operation that requires multisectoral and sustained development interventions, and it might prove challenging for many governments in the region as climate change exacerbates hazards and displacement. Even for short-term displacement, a range of protection challenges arises. The United Nations Inter-Agency Standing Committee suggests that government interventions should use a rights-based approach that aims to protect vulnerable persons (i.e. children, pregnant women, the elderly, and persons with disabilities) in a post-disaster environment (The Brookings Institution, 2011). Doing so allows for the integration of all the basic needs of the victims into a holistic planning and delivery process, preventing discrimination that is often prevalent for vulnerable persons and groups.

In addition to highlighting the challenges facing those who can return after a hazard has passed, the above cases also demonstrate the rising urgency and complexity of planned relocations. Climate change will increasingly complicate the process of finding durable solutions for displaced persons. Over time, return might become too dangerous or costly for many people, requiring other solutions such as planned relocation.

Planned relocation can take place in at-risk areas before disaster strikes as part of anticipatory CCA. Alternatively, as in the case of Typhoon Haiyan, it can also be part of a post-disaster measure to provide durable solutions for those who cannot return. Experience shows that planned relocation is a highly complex endeavour (for an example, see Chun, 2015; Petz, 2015, 2017; Thomas, 2015), but it may still be an important and viable option for areas experiencing high risk of sea level rise and hydrometeorological disasters. Limited resources may inhibit the provision of sufficient protection or adaptation measures to all areas, making retreat the only viable option. Therefore, it is necessary to develop sound criteria based on scientific evidence that identify when relocation is necessary and legal. To avoid arbitrary case-by-case decision-making, legal and policy frameworks should also incorporate complicated issues concerning consent and participation of affected persons, as well as issues of compensation and livelihoods. The recent development of an international guidance

document and a toolbox on planned relocation aims to support governments with this difficult task (The Brookings Institution, Georgetown University, ISIM, & UNHCR, 2015; UNHCR, Georgetown University, & IOM, 2017).

Addressing the challenges of disaster-displacement in an age of climate change will require a shift from a reactive to a proactive approach. While most governments in the region have significantly improved their disaster response capacities in recent years (both through legal and institutional reforms), investment in DRR and CCA is still low compared to the costs of disaster response. However, there is clear evidence that investments in DRR, including measures to boost preparedness and community resilience, pay off financially (Kelman, 2013; Lavell & Ginetti, 2014). National displacement policies should thus include a strong element of displacement prevention, such as measures of anticipatory relocation. Governments should also review and support policies on voluntary internal migration of persons who live in high-risk zones. Climate change makes it crucial to include climate projections, land use planning, and urban and rural development policies with mid- to long-term perspectives to keep long-term risk under control.

Having identified several issues that stand in the way of finding durable solutions for disaster-displaced persons in Southeast Asia, the next sections look at legal and policy frameworks at both national and regional levels to identify the displacement-preparedness levels of countries in the region.