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PLANNED RELOCATIONS IN THE MEKONG DELTA: A SUCCESSFUL MODEL FOR CLIMATE CHANGE ADAPTATION, A CAUTIONARY TALE, OR BOTH?

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Front Cover Photograph: A Vietnamese woman receiving fresh water after the floods in the Mekong Delta (EU/ECHO, March, 6, 2012).

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ACRONYMS

CCA	Climate change adaptation
DRR	Disaster risk reduction
FGD	Focus group discussions
HCMC	Ho Chi Minh City
IDI	In-depth interviews
LECZ	Low elevation coastal zones
MARD	The Ministry of Agriculture and Rural Development
MOLISA	The Ministry of Labor, Invalids and Social Affairs
SLR	Sea level rise
VND	Vietnamese Dong

EXECUTIVE SUMMARY

The Vietnamese government has adopted numerous national policies related to climate change adaptation and disaster risk reduction, reflecting its concern and attention to the issues. In this context, relocation programs feature as one of the government's key climate change adaptation strategies to decrease the exposure and vulnerability of populations at risk. This case study seeks to shed some light on government relocation outcomes, using a case study from the Mekong Delta, with data derived from the author's PhD thesis[1], based on empirical findings from two upstream areas—Vinh Tri commune, Long An province and Long Thuan commune, Dong Thap province.

Population redistribution and state-managed relocation have historically been prominent policies in Vietnam, undertaken for a variety of reasons, including disaster risk reduction. The Land Law and its ideological underpinnings offer valuable insights into legal frameworks on planned relocation, land reclamation, and compensation. This case study explores empirical findings within this broader policy context.

Ultimately, the designation of households targeted for relocation is at the discretion of local authorities, who select households based on their exposure to the hazard in question and their poverty status. While Poor and Near-poor households (as they are designated by officials) are eligible for long-term, low-interest government loans to fund the move (to cover the costs of the housing plot and house construction), Better off households are given the option to purchase housing plots in the relocation sites.

On the whole, financial allocation and management lack transparency at the local level, raising doubts as to the quality of relocation sites and their management as well as the feasibility and rationale for the programs' loan-centered structure.

With regard to community participation, given Vietnam's political context and the decentralized structure of policy implementation, decisions about target populations to be relocated and relocation sites are left largely to the discretion of local authorities. Community participation in decisions about relocations is lacking.

Regarding individuals' motivation to relocate, a strong incentive was found to be the opportunity to own a permanent house normally beyond the means of poor households. Given that relocations occur within commune boundaries, the programs also allow for households to remain in their current commune and hometown.

Nevertheless, differences in the dominant environmental stressors between the two locations produced divergent outcomes. Whereas riverbank erosion in Long Thuan left households with no options but to move elsewhere, seasonal flooding in Vinh Tri did not pose enough pressure on its own to force households to relocate. Importantly, however, wealth differentials were apparent in terms of adaptation measures available, with

[1] Jane M. Chun, "Response to Dynamic Flood Hazard Factors in Peninsular Malaysia." (DPhil dissertation, University of Oxford, 2014).

wealthier households having access to a greater range of adaptation measures in both locations.

Overall, while the relocation programs in Vinh Tri and Long Thuan have been able to provide households with safe homes away from hazards, they have often done so at the cost of short and long-term livelihood outcomes. Accordingly, the majority of households reported decreased incomes following relocation, as well as the inability to repay debts incurred as part of the relocation process. These are significant findings which raise questions about the loan-centered approach of the relocation programs, particularly as the targets of relocation for climate change adaptation are poor households, who on the whole struggle to put aside any savings after covering their subsistence costs.

As such, I argue that long term vulnerability has been exacerbated by relocation in Vinh Tri and Long Thuan, particularly for poor households. This is reflected in the increased debt accrued as part of the relocation process, as well as the negative livelihood outcomes for the majority of households.

1.1 INTRODUCTION

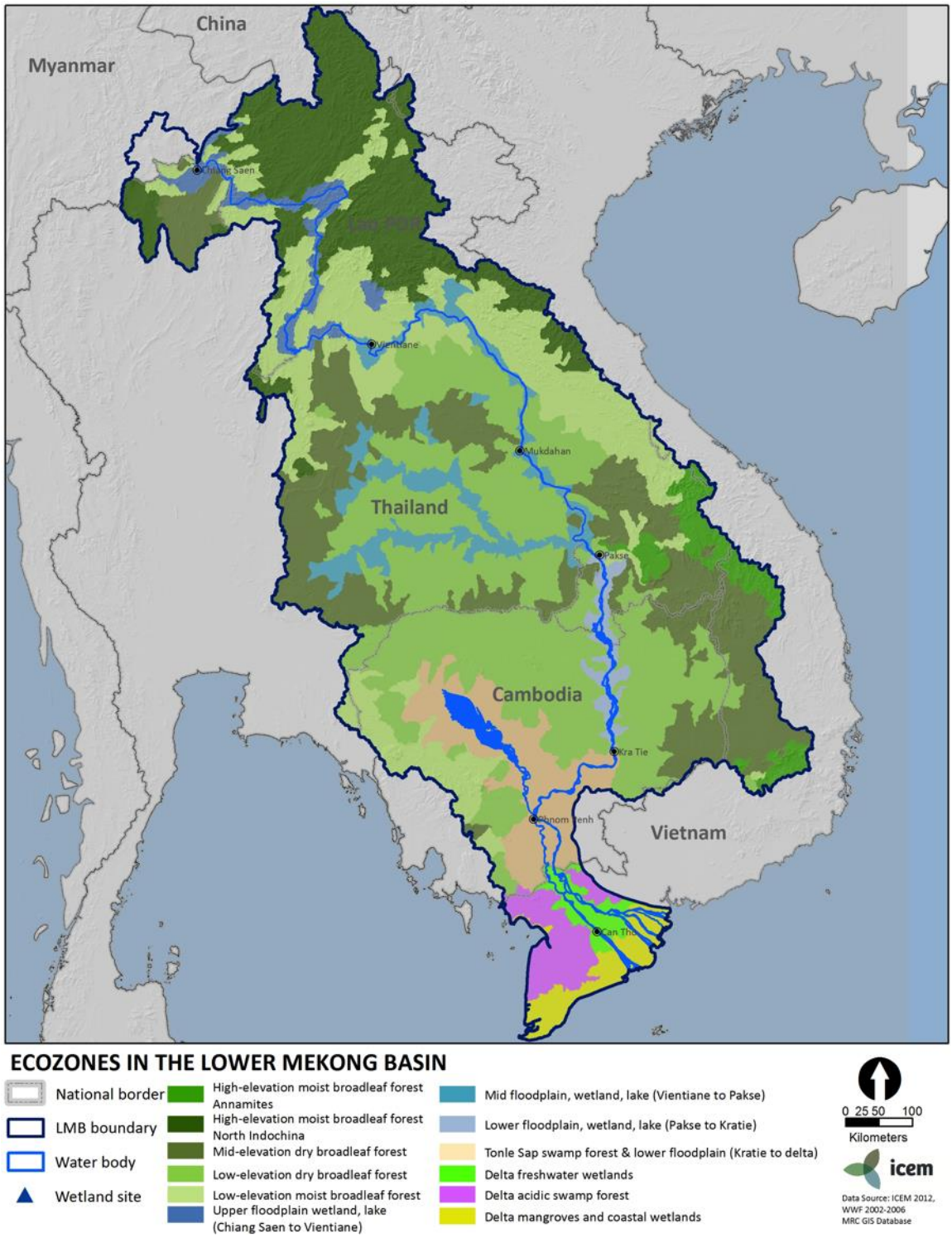
This case study is derived from the author's PhD thesis[2], based on empirical findings from the Mekong Delta, Vietnam. Fieldwork was conducted in March and April, 2012.

1.1 Vietnam and the Mekong Delta

Vietnam encompasses an area of 331,690 km^2, spanning 16 latitude parallels, bordered by the South China Sea on the east with over 3,200 km in coastline, neighbored by China, Laos, and Cambodia. The Mekong Delta region, 80 percent of which lies in Vietnam, is the most downstream portion of the Mekong Basin, which passes through or is adjacent to six countries—China, Burma, Laos, Thailand, Cambodia, and Vietnam. The Mekong River itself extends 4,200 km from the Tibetan plateau to the Mekong Delta in Vietnam and is drained by a network of distributaries into the South China Sea.[3] Comprised of thirteen provinces and inhabited by 18 million people—22 percent of the country's total population—the Mekong Delta is predominantly covered by low-lying floodplains measuring 0.5 to 3 meters above sea level (the exception being a small mountainous area in the north).[4][5] With gradations in duration and intensity between locations, at its peak the July to November wet season floods roughly 47 percent of the region.[6]

[2] Jane M. Chun, "Response to Dynamic Flood Hazard Factors in Peninsular Malaysia."
[3] Chris Sneddon and Thanh Binh Nguyen, "Politics, ecology and water: the Mekong Delta and development of the Lower Mekong Basin," in *Living with Environmental Change: Social vulnerability, adaptation and resilience in Vietnam*, eds. Adger, W. Neil, P. Mick Kelly and Huu Ninh Nguyen, (New York: Routledge, 2001).
[4] Philip Taylor, "Redressing Disadvantage or Re-arranging Inequality? Development Interventions and Local Responses in the Mekong Delta," in *Social Inequality in Vietnam and the Challenges to Reform*, eds. Philip Taylor, (Singapore: Institute of Southeast Asian Studies, 2004).
[5] Olivia Dun, "Vietnam Case Study Report: Linkages between flooding, migration and resettlement," UNU-EHS Environmental Change and Forced Migration Scenarios (EACH-FOR), 2009.
[6] Chris Sneddon and Thanh Binh Nguyen, "Politics, ecology and water: the Mekong Delta and development of the Lower Mekong Basin."

Map 1. Map of the Lower Mekong Basin and the Mekong River



Endowed with nutrient-rich soils, the Delta is the most crucial agricultural region of Vietnam, producing over 50 percent of the state's rice and 60 percent of its fish and

shrimp yields. With 40 percent of the cultivable land made up of flood plains, the Mekong River's predictable, slow, and steady flooding is essential for the livelihoods of the Delta's inhabitants.[7] Hence, floods, unless they are severe, have historically been viewed as a natural part of the ebb and flow of the Delta.

In this environment, rice farmers of the Mekong Delta are typically able to grow two crops per year, with some areas conducive to three crops. In addition, wealthier farmers are able to farm their land throughout the year by constructing small irrigation systems and dykes to shelter their land from flooding.[89] In general, the use of modern agricultural technology is limited, although alternative seed varieties and crops are commonly planted, sometimes in rotation, to increase the resilience of crops to environmental stress and change. For example, 'floating rice' is one such flood-resistant rice variety.[10] As flooding is a natural aspect of the Mekong Delta landscape, many farmers plan their crop calendar around the flood season and embrace the floods for their nutrient-rich sediment and role in cleansing the land of pollutants.[11]

The last four decades have, however, witnessed a greater frequency of severe floods that in the past occurred on average only once every 50 years.[12] The Southern Region Hydro-Meteorological Centre in Ho Chi Minh City also claims that typhoons hitting Vietnam are increasing in number, intensity, magnitude, and unpredictability of travel path. This is potentially significant for the Delta as typhoons not only cause harm on their own, but also affect the level of precipitation and the extent of flooding in the region.[13] The destructive power of severe floods should therefore not be dismissed, as evidenced by the most recent extreme floods of 2011 which caused serious loss and damage across seven provinces[14], affecting over 600,000 people, damaging 11,768 acres of rice fields and secondary crops, causing 85 casualties, and leading to the evacuation of nearly 13,000 families.[15]

As a result, Vietnam is often cited as one of the most vulnerable countries in the world to sea level rise (SLR)[16171819] and saline water intrusion. Rising sea levels are projected

[7] Olivia Dun, "Vietnam Case Study Report: Linkages between flooding, migration and resettlement."
[8] Philip Taylor, "Redressing Disadvantage or Re-arranging Inequality? Development Interventions and Local Responses in the Mekong Delta."
[9] Suppakorn Chinvanno, Soulideth Souannalath, Boontium Lersupavithnapa, Vichien Kerdsuk, and Nguyen Thuan, "Strategies for Managing Climate Risks in the Lower Mekong River Basin: A Place-based Approach" in *Climate Change and Adaptation*, ed. Neil Leary, James Adejuwon, Vincente Barros, Ian Burton, Jyoti Kulkarni, and Rodel Lasco (London: Earthscan, 2008), 228-246.
[10] Suppakorn Chinvanno, Soulideth Souannalath, Boontium Lersupavithnapa, Vichien Kerdsuk, and Nguyen Thuan, "Strategies for Managing Climate Risks in the Lower Mekong River Basin: A Place-based Approach," 228-246.
[11] Philip Taylor, "Redressing Disadvantage or Re-arranging Inequality? Development Interventions and Local Responses in the Mekong Delta."
[12] Olivia Dun, "Vietnam Case Study Report: Linkages between flooding, migration and resettlement."
[13] Ibid.
[14] An Giang, Dong Thap, Long An, Can Tho, Vinh Long, Hau Giang, and Kien Giang.
[15] International Federation of Red Cross and Red Crescent Societies (IFRC), *Emergency appeal, Viet Nam: Mekong Delta floods*, Revised emergency appeal no. MDRNV009, 24 July, 2012.
[16] Graeme J. Hugo, *Migration, Development and Environment*, IOM Migration Research Series No. 35 (Geneva: International Organization for Migration, 2008).

to alter the landscape and exert significant pressure on the Mekong Delta and Ho Chi Minh City (HCMC) (the biggest urban center in Vietnam), portions of the Red River Delta, and parts of many other coastal areas.

Vietnam also ranks sixth in the world in terms of the proportion of the population living in Low Elevation Coastal Zones (LECZ)[20], and seventh in number of urban inhabitants living in LECZs[21]. Consequently, the Mekong Delta in Vietnam and Cambodia is cited by some sources to be among the world's three hotspots with regard to potential displacement due to SLR[22], with flooding considered a potentially strong push factor for temporary or permanent migration or displacement. It should be noted, however, that the recently released fifth assessment report[23] has tempered such claims regarding mass displacements as a result of climate change effects (including SLR), instead acknowledging the complex nature of assigning causality to population movements. Nevertheless, of further concern is the fact that according to Vietnam's Strategy for Industrial Development, 80 percent of the country's most rapidly growing industrial sector is located within a coastal corridor from Hai Phong to HCMC, and coastal urban agglomerations such as HCMC, Da Nang, and Hai Phong host a considerable portion of both the urban population and ongoing development of manufacturing and service infrastructure. Cited vulnerabilities for LECZs include harmful inundation, increased intensity of storms, and salinization of arable land and aquifers.[24]

In terms of government ministries involved in internal and international mobility, the legal, policy and administrative framework is often nebulous and spread across various government agencies and legal documents. The Ministry of Agriculture and Rural Development (MARD) is in charge of state-managed relocation. The Ministry of Labour, Invalids and Social Affairs (MOLISA) deals with economic migration matters, including the migration of laborers to new economic zones in Vietnam, as well as the overseas

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[17] Koko Warner, Olivia Dun and Marc Stal, "Field observations and empirical research," *Forced Migration Review* 31 (2008): 13-15.
[18] Oxfam, *Owning Adaptation, Factsheet: Viet Nam*, (Oxfam International, 2011).
[19] Asian Development Bank (ADB), *Addressing Climate Change and Migration in Asia and the Pacific,* (Mandaluyong City: ADB, 2012).
[20] Connected areas along the coastline measuring less than ten metres above sea level.
[21] Graeme J. Hugo, *Migration, Development and Environment*.
[22] IPCC, *Climate change 2007: Impacts, Adaptation and Vulnerability, Contribution of Working Group II to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change*, eds. Parry, Martin, Osvaldo Canziani, Jean Palutikof, Paul van der Linden, and Clair Hanson (Cambridge: Cambridge University Press, 2007).
[23] IPCC, *Climate Change 2014: Impacts, Adaptation, and Vulnerability. Part B:Regional Aspects. Contribution of Working Group II to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change,* eds. Barros, Vincente R., Christopher B. Field, David J. Dokken, Michael D. Mastrandrea, Katharine J. Mach, T. Eren Bilir, Monalisa Chatterjee, Kristie L. Ebi, Yuka Otsuki Estrada, Robert C. Genova, Betelhem Girma, Eric S. Kissel, Andrew N. Levy, Sandy MacCracken, Patricia R. Mastrandrea and Leslie L. White (Cambridge, United Kingdom and New York, USA: Cambridge University Press, 2014).
[24] Jeremy Carew-Reid, *Rapid Assessment of the Extent and Impact of Sea Level Rise in Viet Nam*, Climate Change Discussion Paper 1 (Brisbane: International Centre for Environmental Management, 2008).

employment of Vietnamese workers (mostly for unskilled or semiskilled labor). In addition, MOLISA also coordinates with MARD on labor and certain population relocation programs. The People's Committees at different levels also issue their own policies and regulations concerning population and mobility.

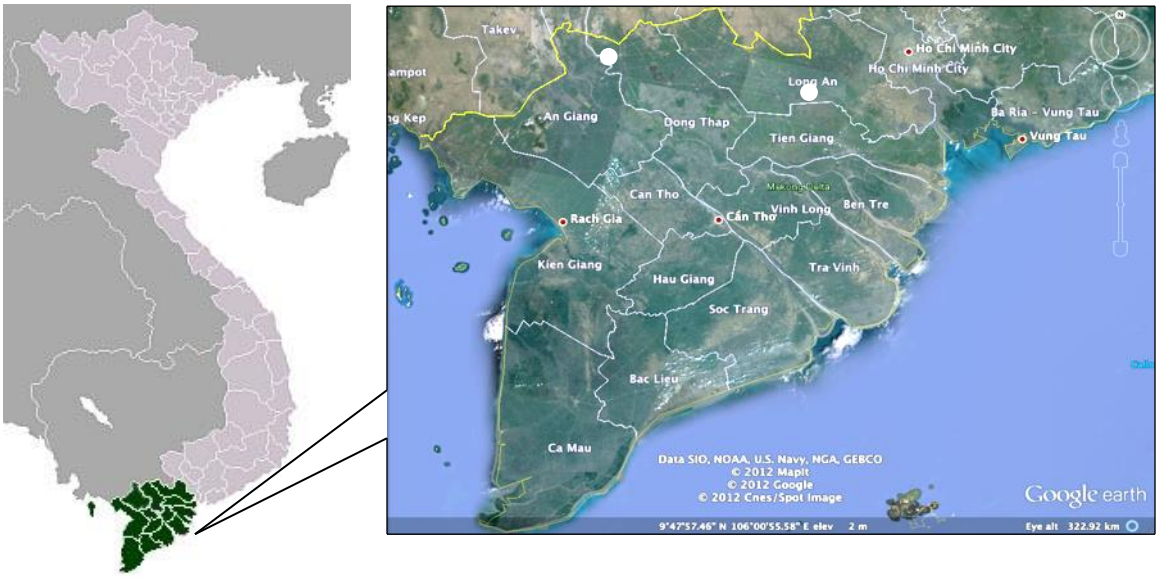
1.2 Study Sites

For this research, two communes were selected in upstream areas of the Mekong Delta— (1) Vinh Tri commune, Vinh Hung district, Long An province and (2) Long Thuan commune, Hong Ngu district, Dong Thap province. Seasonal flooding is the primary environmental stressor in Vinh Tri, while riverbank erosion as a result of seasonal flooding is the main environmental stressor in Long Thuan.

The two communes were selected as they contain both rural areas experiencing flooding/erosion and government-planned relocation sites predominantly for those affected by these environmental stressors. Vinh Tri had two relocation clusters and one dyke while Long Thuan had four dykes, with data gathered in one cluster and one dyke in Vinh Tri and two dykes in Long Thuan, as permitted by the authorities.[25]

Map 2 below is a map of the Mekong Delta and the two study locations.

Map 2. Mekong Delta and the two study sites



[25] According to government documents, a *residential cluster* is a concentrated residential area, two to three hectares for 100 to 200 households, adjacent to rice fields, suitable for habitation and livelihood activities, with access to basic facilities and infrastructure. A *residential dyke* refers to a residential area based along a main canal, a canal of first grade or main roads.

1.3 Sampling

A mixed methods approach of non-probability sampling methods is used, including purposive sampling, stratified sampling, convenience sampling, and snowballing sampling. Purposive sampling was first used to select the provinces of interest and sample the two groups necessary for the research—rural and rural relocated.

Following this initial stage of purposive sampling, cluster sampling was utilized to select the study districts with the guidance of local authorities; selection criteria were discussed with the district then commune/ward officials, leading to the final selection of communes.[26]

Next, stratified sampling was used in Vinh Tri, to identify the rural and rural relocation sites, and the participating households within these two groups who were categorized as being Poor, Near-poor, and Better off. Lists of households with the names of household heads and addresses were generated by commune officials in Vinh Tri, and from this list, households were selected for in-depth interviews (IDI) and focus group discussions (FGD) using purposive sampling. In Long Thuan, purposive sampling was used to identify potential participants with the assistance of local guides. Any households not fitting the selection criteria or unable to participate in both locations were not included and replaced with other households. Purposive sampling ultimately facilitated both representativeness (within sample groups) and comparability (across sample groups).

The table below outlines the sample numbers by sample group, method, and study site.

Table 1. Sample groups by size, method, and location

	Rural	Rural relocated	Total
In-depth interview	**18** 9 VT 9 LT	**36** 18 VT 18 LT	**54**
Focus group discussion	**4** 2 VT 2 LT	**6** 4 VT 2 LT	**10**

VT = Vinh Tri, LT = Long Thuan

Nine IDIs were conducted for each sample group, with the relocated group divided into a relocation cluster and dyke group in Vinh Tri and two dyke groups (phase one and phase two of construction) in Long Thuan. Poor and Near-poor households were targeted as they are generally more vulnerable and exposed to the effects of environmental stress compared to wealthier individuals.[27] [28][29][30] Such 'Poor', 'Near-poor',

[26] Communes are administrative units below districts, used in rural areas.
[27] Ngai Weng Chan and Dennis J. Parker, "Response to Dynamic Flood Hazard Factors in Peninsular Malaysia," *The Geographical Journal* 162/3 (1996): 313-325.

and 'Better off' categories are determined by the local authorities at the hamlet level,[31] according to each household's income and land ownership and in accord with district poverty lines. Three and four IDI respondents respectively were better off in Vinh Tri and Long Thuan, while the others were Poor and Near-poor (eleven Poor and twelve Near-poor in Vinh Tri, thirteen Poor and ten Near-poor in Long Thuan). All FGDs in these locations involved Poor and Near-poor respondents.

1.4 Challenges and Limitations

Among the most obvious challenges encountered during fieldwork is that of government monitoring of some of the interviews. The respondents' narratives would have been influenced to some extent, with answers likely biased toward views favorable to the government. The author further censored some of the interview questions in the effort to limit any possible negative repercussions to respondents. It is for this reason that questions deemed to be controversial were omitted, thereby minimizing the bias effect of monitors.

Another possible bias is that of the government's participation in the sampling process. Nevertheless, all respondents did meet the selection criteria, and the author's impression would be that local officials were generally cooperative without imposing ulterior motives.

[28] Edmund C Penning-Rowsell, "Flood-hazard response in Argentina," *Geographical Review* 86/1 (1996): 72-90.
[29] Roger Few, "Flooding, vulnerability and coping strategies: local responses to a global threat," *Progress in Development Studies* 3/1 (2003): 43-58.
[30] Nguyen Dang Anh, "Vietnam Internal Migration: Opportunities and Challenges for Development" (paper presented at the Regional Conference on Migration and Development in Asia, Lanzhou, China, March 14-16, 2005: 228-246).
[31] Hamlets are the administrative units below communes, used in rural areas.

2. The Decision to Relocate

Population redistribution and migration have historically been prominent policy concerns in Vietnam; their discussion here provides the backcloth and policy context for subsequent empirical discussions. State-managed relocation programs were initiated in the North beginning in 1961 and in other parts of the country since 1975, with millions of people relocated from densely to sparsely populated areas.[32] Following the end of the Vietnam War, the late 1970s saw the beginning of state-managed relocation programs. An estimated 4.57 million people were relocated from 1976 to 1995[33], with most moving short distances.[34] From 1994 to 1999, the total number of people relocated was 2,105,000, while spontaneous migrants started to outnumber organized migrants.[35] These planned relocations are predecessors to the programs of today.

State-managed relocation is used for a variety of reasons and targets diverse population groups. For example, the National Strategy for Natural Disaster Prevention, Response and Mitigation to 2020 (hereafter called National Strategy) is Vietnam's national policy framework for disaster management, designed to address sudden-onset extreme climate events and minimize their impact on sustainable development.

The 'general goal' of the National Strategy is:

> Mobilize all resources to effectively implement disaster prevention, response and mitigation from now up to 2020 in order to minimize the losses of human life and properties, the damage of natural resources and cultural heritages, and the degradation of environment, contributing significantly to ensure the country sustainable development, national defense and security.

Of the nine 'specific objectives,' one specifically addresses the relocation of people for environmental reasons:

> Complete the **relocation, arrangement and stabilization of the life for people in disaster prone areas** according to the planning approved by authorized government agencies. Up to 2010, manage to **relocate all populations from flash flood and landslide high-risk areas and dangerous areas to safe places**.[36]

[32] Dang Nguyen Anh, "Viet Nam Internal Migration: Opportunities and Challenges for Development," (paper presented at the Regional Conference on Migration and Development in Asia, Lanzhou, China, 2006).

[33] Nguyen Dang Anh, "Vietnam Internal Migration: Opportunities and Challenges for Development," 228-246.

[34] Philip Guest, "Mobility Transitions within a Global System: Migration in the ESCAP Region," *Asia-Pacific Population Journal* 14/4 (1999): 57-72.

[35] Nguyen Dang Anh, "Vietnam Internal Migration: Opportunities and Challenges for Development," 228-246.

[36] Bold inserted by author.

The National Strategy proposes a program for 'reviewing, revising and implementing **relocation plans** in disaster-prone areas.' The objective is to "review and revise **relocation plan for 150,000 households** and improve poverty ratio in relocated areas down to 15 percent. Priorities for relocation are especially given to people in disaster-affected areas, highly disadvantaged areas, and border areas, on islands, nomadic living people, and people living in critical and highly critical protective forest areas and strictly protected specialized forest areas, etc."

The relocation plans are thus seen as a means to reduce poverty rates in relocation areas; this makes sense given the history of state managed relocation in advancing national socioeconomic goals and in the national development and urbanization plans for areas such as the Mekong Delta. The targeted populations for relocation in the National Strategy are not only those living in disaster-prone areas, but also those from 'highly disadvantaged areas' (poor areas), border areas (likely for national security interests), and nomadic people (people who are not permanently settled and registered in one location).

In this way, planned relocation serves multiple purposes for the government, one of which is disaster risk reduction (DRR) and climate change adaptation (CCA). As further discussed below, in the context of CCA and DRR, planned relocation is a key strategy of the Vietnamese government to reduce the exposure of people living in hazard-prone areas.

2.1 'Living with Floods' and Planned Relocation Policies

In response to the catastrophic floods of the Mekong River in 2000, the government introduced the concept of 'living with floods' into its disaster mitigation and management policies, based on the premise that flood risks should be mitigated, but at the same time, are essential to livelihoods and the country's economic development. The development of residential clusters and dykes in the Mekong Delta is a core component of this strategy, intended to improve living conditions and provide stable livelihoods for flood-affected communities. Investment for construction of residential clusters/dykes was thus one of the seven main objectives of the 'socioeconomic development of the Mekong Delta region' from 2001 to 2005. With respect to the relocation of people in the Mekong Delta living in conditions deemed unsafe to residential areas on higher ground, the strategy includes the provision of safe and permanent residences with access to basic infrastructure such as clean water, schools, and health clinics. As such, the on-going building and enhancement of residential clusters and dykes is relatively new, and will likely continue to be a core strategy in response to the changing environment,[37] linked with initiatives for increased economic development and urbanization of rural areas.

[37] Adam Forde and Associates, *Report on Residential Clusters Research in An Giang, Dong Thap and Long An Provinces in the Mekong Delta, Vietnam,* (CARE, 2003).

The government's first policy to develop residential clusters and dykes in the Mekong Delta occurred in 1996, for irrigation and transportation development and construction of clusters/dykes.[38] In 2001, as mentioned above, the Decision on the 'socio-economic development of the Mekong Delta region in the 2001 to 2005 period'[39] was issued, of which one of the seven objectives was to develop residential clusters/dykes. This was followed by numerous decisions in the following years, including the Ministry of Construction's Decision on the 'establishment of the Steering Committee for Residential clusters/dykes and building houses program in the Mekong Delta.'[40]

Specifically targeting relocation from disaster-prone areas is Decision No. 193/2006/QD-TTg, issued on 24 August 2006 on 'Approving the Program on population distribution in **natural disaster-** and special difficulty-hit areas, border regions, islands, areas inhabited by free migrants, and important and very important areas of protective forests and strictly protected zones of special-use forests in the 2006 to 2010 period, and orientations up to 2015'.

Here we see another example of a policy promoting relocation for a range of reasons – in addition to DRR, other reasons include migration control, economic development, environmental protection, and national security. Accordingly, one of the 'principles' of the program states:

> Population redistribution and rearrangement constitute an objective as well as a **solution for economic, cultural and social development, security and defense protection** and eco-environmental protection. Population should be distributed in concentrated and selected areas, in parallel with the stabilization and development of production and living conditions, of which **production development shall be considered the most important factor**.

The clear instruction is that relocation is to occur within short distances, with agreement between provinces required should cross-provincial relocation be necessary. The ultimate goal is furthermore that of permanent settlement:

> Population distribution shall be conducted **mainly within communes, districts and provinces**. Where population should be relocated to other provinces, **agreement should be reached between provinces** where people leave and those where they move to in order **to arrange them in the planned areas** so as to stabilize their life and production for **permanent settlement**.

Regarding its coordination with other policies:

[38] Decision No. 99/TTg, approved 9 February 1996.
[39] Decision No. 173/2001/QD-TTg, approved 6 November 2001.
[40] Decision No. 146/QD-BXD, approved 28 November 2002.

> Land policy: According to current provisions of the Land Law, localities shall implement measures to **recover unused or inefficiently used land of organizations, agricultural and forestry farms or change the use purpose of land according plans** already approved by competent authorities **for allocation to households and individuals under population distribution projects**.

In this way, the determination of who is allocated land following relocation and for what use is at the sole discretion of authorities. While numerous relocation policies exist at the central and provincial levels, implementation at the local level is largely decentralized. Districts are allocated varying amounts of funding for such programs, with the responsibility of securing remaining needed funding left with district and commune authorities. Furthermore, the lack of clear guidelines and enforcement often results in confusion at the household level regarding official procedures as well as entitlements. For example, interviews in Vinh Tri and Long Thuan found a lack of transparency and consistency in the relocation process, particularly in Long Thuan, whereas implementation was generally consistent in Vinh Tri (discussed further below).

2.2 Relocation in Vinh Tri and Long Thuan

According to interviews with officials in Vinh Tri, the relocation program in the commune is informed by the Prime Minister's Decision 105.[41] Based on this decision, the People's Committee of Long An province issued Decision 4382[42] to regulate the implementation of relocation cluster and dyke programs. Households meeting the criteria are thus entitled to buy a foundation with a maximum value of 10 million Vietnamese Dong (VND) (equivalent to USD 470) on a 10-year deferred loan with no interest, with repayment starting at year six and 20 percent repayment per year for the last five years. In addition, each household is entitled to buy a house with a maximum value of 7 million VND (equivalent to USD 329) with a 10-year deferred loan and 3 percent annual interest. Repayment is also due starting the sixth year, at a rate of 20 percent of the total value per year, including interest. Only resident households falling under the category of Poor and Near-poor are eligible for these loans with household poverty status determined by hamlet leaders according to official criteria based on income and land ownership.

According to interviews with officials in Long Thuan, the central government in accordance with the Prime Minister's Decision 204, provides loans for erosion-affected households in the amount of 20 million VND (equivalent to USD 940) to build houses – a 10-year loan with no interest until year six. In addition, 10 million VND is provided to each household to support the physical move itself, following the Prime Minister's Decision 1046. The 10 million VND grant is funded by the provincial budget while the 20 million VND loan is provided by the Vietnam Bank for Social Policies.

[41] Decision 105/2002/QĐ-TTg, dated 2 August 2002.
[42] Decision 4382/2002/QĐ-UB, dated 20 December 2002.

Based on these policies, the designation of households targeted for relocation is left to the discretion of local authorities, who select households based on their exposure to the hazard in question and their poverty status. While Poor and Near-poor households are eligible for the government loans mentioned above (for the housing plot and house construction), Better off households are given the option to purchase housing plots in the relocation sites.

In assessing relocation programs in the Vietnam context, the question of voluntariness is of critical importance. In Vinh Tri, three respondents explicitly stated that they had no choice in the matter and were in essence 'forced' to move into the relocation site by local authorities, with two being relocated to make way for development projects and one relocated from a flood prone area. I do not note the number of respondents from Long Thuan making similar statements, due to the police monitoring of interviews and self-censorship that would have resulted on the part of the respondents. Similarly, the number of respondents speaking to this topic is likely under-represented in Vinh Tri as well, given the political environment and monitoring.

Moreover, in Long Thuan, and likely the case in Vinh Tri, the local policy was such that if a household refused to relocate and was later affected by riverbank erosion, it would not be entitled to government support or assistance. The prospect of being left to fend for oneself without government aid, in circumstances of impending erosion was therefore a strong motivation for households to relocate in Long Thuan.

Nevertheless, the opportunity to own a permanent house normally beyond the means of poor households was found to be a strong incentive for households to relocate, and by extension, remain in their current commune and hometown. Related to this point is the hope expressed by some households that loan payments may in the end be forgiven by the government.

In regards to funding, according to interviews with local officials in Vinh Tri, the budget for the relocation cluster construction was fully supported by funding from the central government, while central funding was insufficient for the construction of the relocation dyke. Private businesses in the commune were requested to compensate for this lack of funding through investments, with repayment to come from the local commune government. Loan repayments from relocated households were furthermore said to contribute to infrastructure development. What is unclear is how the local government will repay the businesses, given the lack of repayment by households (discussed below), as well as the fact that household repayments are purportedly allocated to infrastructure development.

During interviews with local officials in Long Thuan, the relocation program was said to be funded in part by central funding, local private business investment and donations from private individuals. An annual donation drive organized by mass organizations[43] such as the Fatherland Front, Women's Union and Youth Union calls for residents and

[43] Mass organizations function to mobilize people and implement tasks at the community level according to government policies and programs.

migrants working in cities and industrial zones (with household registrations remaining in Long Than) to contribute to the construction of dykes. This model does not appear to be sustainable, however, given the lack of a clear and expendable budget prior to dyke construction. Signs of insufficient funds were apparent in Long Thuan as many sections of the dyke did not have water systems in place, with Better off residents filling the gap by using their facilities to pump river water into large tanks along the road, where other households are able to collect water at the cost of a small monthly fee. The main road leading to and along the dyke was also not yet paved or complete.

Furthermore, in both Vinh Tri and Long Thuan there were close relationships between the local officials, construction companies (including state-owned enterprises) and contractors responsible for building the relocation sites and the houses for most households receiving the standard housing loan as part of the relocation process. The contractors appeared to be paid through the relocation program budgets, with household moving support grants often reportedly given not to the households themselves, but given instead to the contractors (in cash) toward the housing loan.

On the whole, financial allocation and management was found to be murky at the local level, raising doubts as to the quality of relocation sites and their management, and larger questions about the feasibility and rationale for the programs' loan-centered structure.

In regards to community participation, given the political context of Vietnam and the decentralized structure of policy implementation, decisions regarding target populations and areas and the location of relocation sites are at the discretion of local authorities.

Where relocated households appear to exercise the greatest degree of participation is during the ballot process of picking the location of housing plots within the relocation sites. Nevertheless, some discrepancies were found between Vinh Tri and Long Thuan. While all the respondents in Vinh Tri reported picking ballots to randomly choose their allotted housing plot, some of the Long Thuan respondents were assigned plots by officials. This may be seen as an indicator for transparent procedures, or lack thereof, during the relocation process.

3. The Physical Move

Relocation in Vinh Tri and Long Thuan occurred within commune borders, which meant that people were moved relatively short distances. Under the respective policies, households were provided with moving grants, in theory, intended to support households with the costs associated with the move—such as dismantling the house (to reuse housing materials such as wooden planks, sheet metal, and other materials), the physical move, and reassembling and building a house. In practice, while some households reported receiving the grants in a timely manner, others were unable to move as they could not afford to do so, either because of a delay in receiving the grant (some households reported receiving the grant *after* they had already moved), or because the grant had been given to the contractors hired by officials to build the houses in the relocation site, which was credited towards the housing loan. Hence, some respondents described signing for the moving grant at the local government office, to then see the cash handed over to the contractors, as partial repayment for their housing construction loan.

The delay in relocation is particularly problematic in Long Thuan, given the nature of the natural hazard, riverbank erosion. Households are allocated housing plots in the relocation site and 'permitted' to move, not well in advance of an erosion event, but only when facing imminent erosion or following the event. By this point in time, the houses are near or on the edge of the riverbank supported by stilts, or, if they have already experienced erosion, they would have partially or completely collapsed into the river. In such circumstances, poor households are trapped—unable to fund their move, living with relatives or neighbors until they are able to do so, or getting by on what they have been able to salvage from their old home.

When it comes to the construction of houses, unless households can afford to hire their own contractors without depending on government loans, houses in the relocation sites are built according to the dimensions and design as stipulated by local officials, although the households are able to choose the construction materials (reflected in the cost of construction). While households are able to bring their belongings with them and reuse old housing materials, they are not permitted to bring their livestock, which results in negative livelihood outcomes.

4. The Relocation Experience

Before discussing empirical findings from Vinh Tri and Long Thuan, a short introduction to the legal context pertaining to land acquisition, compensation and relocation is presented.

4.1 Land Law and Land Acquisition

In order to understand the process of land acquisition for relocation sites, it is important to understand the Land Law and its ideological underpinnings.

Between 1956 and 1973, private land ownership was granted to certain regions, depending on political affiliations (MacDonald 1970). The end of the Vietnam war in 1975 gave way to a state-subsidized national economy. Agricultural land was owned by agricultural cooperatives, while industries and services were owned by state-owned enterprises and community-owned economic organizations. Agricultural land was distributed by the state in accordance with socio-economic development policies and based on requests, and subsequently reclaimed if deemed to be improperly used.

The 1980 Vietnam Constitution established the ownership of all land as belonging to the collective people, as land did not have market value and could not be bought or sold. By 1986, the initiation of economic reforms entailed a shift from a command to a market-based economy, where agricultural cooperatives were dispersed and land was allocated to households and individuals. Agricultural, aquaculture and forest lands that had previously belonged to cooperatives were hence appropriated to households for their economic and daily use. Starting in 1996, the state initiated the redistribution of household-owned agricultural lands to the construction of infrastructure to develop residential areas and new economic, industrial and commercial service zones.

The Land Law was first established in 1988, with a second more expansive Land Law passed in 1993. Subsequently, the 1993 Land Law has been amended four times, in 1998, 2001, 2003, and most recently, 2013. The 2013 Land Law came into effect in July 2014, drafted in response to the expiration of the 20-year land use leases set out in the 1993 Land Law, and the stipulation for local governments to assess the effectiveness of the use of land during this period and whether extensions should be granted.

The 2003 Land Law introduced several policies, including the legal framework for individual ownership of land, while clearly stating the state's ultimate authority on all land use planning, recovery, and allocation. The 2013 Land Law remains largely unchanged in this respect. Article 4 on land ownership states:

> Land belongs to the entire-people with the State acting as the owner's representative and uniformly managing land.

Section 1 (Rights of the State involving land), article 13 (Rights of the representative of the land owner) stipulates the rights of the state:

2. To decide on land use purposes.
4. To decide on land recovery and land requisition.
5. To decide on land prices.
6. To decide on hand-over of land use rights to land users.
8. To prescribe the rights and obligations of land users.

According to article 16, the state is entitled to recover land in the following circumstances:

> 1a) For the purpose of national defense or security; socio-economic development for the national or public interest;
> 1b) Land recovery due to termination of land use in accordance with law, voluntary return of land, or the **risk of threatening human life**.
> 2. The State shall decide to requisition land in case of extreme necessity to perform national defense and security tasks, or in cases of war or emergency circumstances, or to prevent and **combat national disasters**.

Regarding land recovery due to 'risks of threatening human life,' article 65 outlines such cases, including:

> e) Land located in **environmentally polluted areas** which bears the risks to threatening human life;
> f) Land having **risks of being eroded or sunk or otherwise affected by other national disasters threatening human life**.

Government authorities are therefore legally permitted to reclaim land for purposes relating to DRR, among others. On compensation and relocation following land reclamation, article 26 states:

> When State recovers land for national defense or security purpose; or for socio-economic development for the national or public interest, land users shall be entitled to **compensation, support and relocation** as prescribed by law.

According to the same article:

> State adopts policies in the form of **vocational training, change of occupation and job seeking** to facilitate for persons directly engaging in agriculture, forestry, aquaculture or salt production and having no land for production due to land use restructuring or economic restructuring.

Article 69 further expands on land recovery procedures:

> 1d) In case the land users in the recovered area do not cooperate with the organization in charge of compensation and ground clearance… the commune-level People's Committee and Vietnam Fatherland Front in the

locality and the organization in charge of compensation and ground clearance shall **mobilize and persuade the land users to cooperate**.

If the land users still do not cooperate with the organization in charge of compensation and ground clearance within 10 days after the mobilization and persuasion, the chairperson of the district-level People's Committee shall issue a decision on compulsory inventory. Land users whose land is to be recovered shall comply with that decision. In case the land users do not comply with the decision, the chairperson of the district-level People's Committee shall issue a decision on enforcement of the decision on compulsory inventory and organize the enforcement in accordance with Article 70 of this Law.

Hence, the state ultimately determines for which purposes the land is used, as well as its ownership. This is also true in the case of land acquisition for the construction of relocation sites. According to the previous 2003 Land Law, where individuals refuse to vacate their land for the purposes of defense, security, national interests and public interest, "the People's Committees competent to recover land shall issue decisions on coercive execution of the decisions" (article 39). The authority of the People's Committees remains in place in the 2013 Land Law, with article 71 on the "Enforcement of land recovery decisions" stating:

3. The chairperson of the **district-level People's Committee** issues the decision on enforcement of the land recovery decision, and organizes the execution of the decision.

4. The order and procedures for enforcement of land recovery:

a) Before executing the enforcement, the chairperson of the district-level People's Committee shall decide to establish an enforcement board;

b) The **enforcement board shall mobilize, persuade, and conduct dialogues with, the coerced persons**. If the coerced persons comply, the enforcement board shall prepare a written record to acknowledge the compliance. The **land must be handed over within 30 days** from the date of making the minutes.

In case the coerced person fails to comply with the decision on enforcement, the enforcement board shall execute the enforcement;

c) The **enforcement board has the power to ask coerced persons and related people to leave the coerced areas and to move their properties out** of the land areas by themselves. **If these people fail to comply, the enforcement board shall move the coerced persons, related people and their properties out of the areas**.

5. Responsibilities of organizations and individuals in executing decisions on enforcement of land recovery:

b) In case there remain properties on the coerced land, the enforcement board shall preserve the properties. **The preservation cost shall be born by the properties' owners**;

c) The **police shall maintain social order and safety in the process of organizing the execution of the decision** on enforcement of land recovery;

d) The **commune-level People's Committee** of the locality concerned shall coordinate with related agencies in delivering and posting up the decision on enforcement of land recovery, participate in the enforcement process and coordinate with the organization in charge of compensation and ground clearance in sealing and moving the properties of coerced people;

Hence, the state possesses the right to acquire land on the basis of protection against 'natural disasters' (articles 16, 72) and has the authority to overrule individual objections in the enforcement of government decisions. Nevertheless, the 2013 Land Law does include provisions outlining legal avenues to settle land disputes, including (article 203 on Competence to settle land disputes, clause 2):

a) Filing a written request for dispute settlement with a competent People's Committee…

b) Filing a lawsuit with a competent People's Court in accordance with the law on civil procedures.

The degree of transparency and neutrality afforded to individuals disputing land reclamation is questionable, however, given the prevalence of corruption, nepotism and lack of transparency in government systems.

Regarding compensation, section 2 (Compensation for land, support and relocation), article 74 (Principles of compensation upon land recovery by the State) stipulates:

1. Land users who meet the conditions prescribed in Article 75 of this Law upon land recovery by the State **shall be compensated**.

2. The compensation must be made in the form of **allocating new land with the same land use purpose with the recovered land**. If there is no land available for compensation, the land users shall receive **compensation in money calculated according to the specific land price of the type of recovered land which is decided by the provincial-level People's Committee at the time of the recovery**

decision.

3. The compensation upon land recovery by the State must be made in a democratic, impartial, equal, public, **timely and lawful manner**.

Thus, according to law, households and individuals whose land is reclaimed by the state are entitled to compensation in the form of land or money, including land requisitioned for the purposes of building relocation sites. Empirical findings from Vinh Tri and Long Thuan reflect adherence in these respects, but also shed light on the frequent delays in the disbursal of compensations, i.e. the 'timely' manner in which compensations are paid (see section 5).

Addressing the dissemination of information consultation with the community is article 69:

1. The making and implementation of plans for land recovery, investigation, survey, measurement and inventory are prescribed as follows:

a) The **People's Committee** having competence to recover land shall issue a **notice of land recovery**.

2. The making and appraisal on plans for compensation, support and relocation are prescribed as follows:

a) **The organization in charge of compensation and ground clearance shall make the plan** for compensation, support and relocation and **coordinate with the commune-level People's Committee in the locality** to conduct consultations on the plans for compensation, support and relocation in the forms of **meetings with land users** living in the recovered area, **posting up the plan for compensation, support and relocation at offices of the commune-level People's Committee and at common public places** of the residential areas of which land is recovered.

The consultation results must be recorded in minutes which are certified by representatives of the commune-level People's Committee and Vietnam Fatherland Front, and land users whose land is recovered.

The organization in charge of compensation and ground clearance shall make a written summarization of opinions which clearly specifies the numbers of opinions for, against and other opinions regarding the plans for compensation, support and relocation; coordinate with the commune-level People's Committee in the locality in **organizing dialogues with those who have objections on the plans** for compensation, support and relocation; and **improve the plans** for compensation, support and

relocation for submission to competent agencies.

b) **Competent agencies shall appraise the plans** for compensation, support and relocation before **submitting them to the competent People's Committee for decision on land recovery**.

3. The decision on land recovery, the approval and the organization of implementation of the plans for compensation, support and relocation are prescribed as follows:

a) **The People's Committee** which has the competence as prescribed in Article 66 of this Law **shall issue a decision on land recovery** and a decision on approval of the plans for compensation, support and relocation **in the same day**;

b) The **organization in charge of compensation and ground clearance shall coordinate with the commune-level People's Committee to publicize and post up the decision on approval of the plans for compensation, support and relocation at the commune-level People's Committee offices and at common public places** of the residential areas of which land is recovered. The organization shall **send the decision on compensation, support and relocation to each person whose land is recovered** and that decision will clearly show the level of compensation and support, arrangement of the relocation land or house (if any), time and place of payment for compensation or support, time to arrange relocation land or house (if any) and time to hand over the recovered land to the organization in charge of compensation and ground clearance;

c) The organization in charge of compensation and ground clearance shall implement activities in accordance with the approved plans for compensation, support and relocation;

The notice of land recovery must be sent to every land user whose land is recovered, publicized in the meetings with people in the recovered area and through the mass media, posted up at offices of the commune-level People's Committee and at common public places of the residential areas of which land is recovered;

A welcome amendment introduced in the 2013 Land Law was the mechanism for consultations with affected households (clause 2a). While the 2003 Land Law required the dissemination of guidelines (by posting them in People's Committee offices and public meeting areas and through public meetings and announcements on the radio), the 2013 law further requires the decision and notice to be sent to each individual household. Nevertheless, unless tangible changes occur at the local level, what may result is a continuation of old modes of operation, where public meetings tend to be

information sessions rather than opportunities for dialogue, and local officials commonly neglect to post and make public information and guidelines, beyond periodic announcements over public loud speakers. This remains particularly problematic for people living in remote areas, as they remain out of range of the loud speakers and hamlet leaders do not visit their areas as frequently as areas that are more accessible. Hence, it remains to be seen whether efforts will be made to raise awareness and reach individual households.

Article 85 (Formulation and implementation of relocation projects) refers to infrastructure development in relocation sites:

> 2. In the concentrated relocation areas, **infrastructure must be developed synchronously**, ensuring construction standards and regulations and conformity with the conditions, customs and practices of each region and area.

The simultaneous occurrence of both the construction of relocation sites (including basic infrastructure) and the relocation of households into the sites was evident in Vinh Tri and Long Thuan. While the completion of basic infrastructure prior to the physical relocation of households may be ideal, this may not be a feasible option in the Mekong Delta given the fluid, ad hoc and localized nature of funding for construction and implementation of relocation programs. Such a phased approach for relocation would instead require sufficient funds from the start of the program and long-term planning starting well before the onset of severe environmental stress (such as the encroachment of the riverbank due to erosion).

Consequently, respondents in Vinh Tri and Long Thuan reported moving into the sites prior to the completion of basic infrastructure. Signs of insufficient funds and related infrastructure shortcomings were particularly apparent in Long Thuan as many sections of the dyke did not have water systems in place. Better off residents were found filling the gap by using their facilities to pump river water into large tanks along the road, where other households are able to collect water for a small monthly fee. The main road leading to and along the dyke was also not yet paved or completed.

Thus, in general, the state maintains ultimate authority in determining for which purposes land is used, as well as its ownership. Nevertheless, following several high profile cases of public resistance in recent years, the government came under pressure to enact reforms in the 2013 Land Law providing greater protection for the rights of land users. The new law extends land use rights of agricultural and forestry land from 20 to 50 years and enacts greater limitations on government acquisition of land for purposes of economic development by requiring the permission of high levels of authority. The timing of compensation payments is addressed to some extent with the stipulation that disbursal of payments be made in a ‘timely’ manner. Mechanisms for dispute resolution are furthermore outlined in the event of disagreement over compensations. Nevertheless, the implementation of such amendments is dependent on the political will of local authorities and enforcement at all levels.

4.2 The Relocation Experience in Vinh Tri and Long Thuan

At the commune and district levels, among the primary CCA measures adopted by officials are those of relocation and the development of residential clusters and dykes and hazard-proof infrastructure. It is however important to note that people susceptible to environmental hazards are not the only group targeted. Development-induced relocation and poor households are also subject to relocation, resulting in some relocation sites (residential clusters and dykes) housing people moved for one or a combination of these reasons.

In terms of operations, while various decisions and decrees are issued at national and provincial levels, given the decentralized nature of policy implementation in Vietnam, the planning and implementation of relocation programs are largely carried out by the district and commune level People's Committees. The identification of individual households to be relocated occurs at an even more local level, falling under the purview of the local hamlet leader. Some respondents spoke of the power concentrated in the hands of one individual—the hamlet leader—in designating the wealth level of households (Poor households receive more government assistance than do Near-poor households, and the status is as such coveted for its benefits) and in determining which households should move and when. These households expressed frustration at the lack of transparency and abuse of power by their hamlet leader as they did not agree with the decisions made.

As mentioned above, each relocated household is entitled to one housing plot, with one household comprised of all of the members listed in a given household registration book. Housing dimensions are stipulated by local authorities, while the initiation and duration of housing construction is left to the households and thus usually depends on their financial capabilities. Unless the household possesses the ability to build the house themselves, the construction company designated by local officials is contracted. Given the fact that the majority of Poor and Near-poor households cannot afford to pay for the housing plot and construction out of pocket, the costs are usually paid for with government loans (as part of the relocation package). Furthermore, as the construction loan is not adequate to cover the cost of completing the house, further loans are often incurred through other sources.

In terms of infrastructure in the relocation sites, while the vast majority of the Vinh Tri respondents reported an improvement in access to clean water, most of the Long Thuan respondents felt the opposite had occurred. The reasons for this discrepancy appear to be twofold—the local landscape and quality of infrastructure development. Vinh Tri commune is predominantly characterized by flood plains, whereas Long Thuan is an island surrounded by the Tien River. Accordingly, individuals living along the riverbank in Long Thuan have access to free and 'clean' water year round, for their domestic use as well as for agriculture, livestock and other livelihood activities. Following relocation, however, they were moved further inland and away from this water source, where they are required to pay for water, and where water systems had not yet been installed in much of the relocation site (as mentioned in section 2.2). As a result,

the only way to access water from their homes is to walk to the nearest water tank, fill up as many plastic containers as they can fit into their push cart, all while paying for this service which had in the past been easily accessible and free. In contrast, respondents in Vinh Tri spoke of severe pollution in their canals and waterways during dry season, and being surrounded by polluted water (in the flood plains) during flood season. In the relocation sites, however, they had access to clean tap water although they too had to pay.

Access to electricity was generally reported by respondents to be improved in both Vinh Tri and Long Thuan following relocation, as was access to toilets, transportation, health care, education and public services. In terms of toilets, all houses in the relocation sites are required to have toilets. This is in contrast to many households in the Mekong Delta, where the use of pond and communal toilets are common. Furthermore, public services (such as health clinics, schools and government offices) tend to be located in closer proximity to households living in residential clusters and dykes. Before construction of these sites, services were dispersed throughout the commune, including in remote areas, where the road infrastructure is weak and transportation more cumbersome and difficult, particularly during flood season.

In terms of the motivation to participate in relocation, the desirability of a safe and durable house was found to be among the most critical. The concept of ownership in this context is important to clarify, as I am not referring to legal ownership and its accompanying land use certificate and legal rights. Instead, the right to build a house on a housing plot and accompanying possibility of legal home ownership in the future (legal land use, according to the Land Law) are often what respondents meant when speaking of the importance of owning a home, most commonly in the context of relocation programs in the area.

In Vinh Tri and Long Thuan, ownership of a strong and ‘permanent’ house equated to the cultural significance of laying the foundations of one’s life, thus making it possible to focus on improving other aspects, including livelihoods. Against this backdrop, government relocation programs targeting poor and hazard-prone households are often seen as opportunities to gain ownership of a permanent home. This is a goal beyond the reach of most poor households who tend to live in temporary homes made of weaker materials such as thatched leaves and bamboo, susceptible to damage and collapse from environmental elements.

For example, in Vinh Tri, of the nine non-relocated respondents, five were not homeowners, and three of these five non-home owning respondents wished to be relocated and had applied to the local authorities. (A fourth was not eligible due to their temporary residency status, and a fifth did not discuss the subject during the interview.) In contrast, the remaining four respondents owned their own house, with most—three—stating their intention to live in their house for the rest of their lives and expressing disinterest in being relocated, despite their exposure to environmental hazards, especially flooding. (The topic was not discussed with the remaining one household during the interview.)

Particularly in the rural context, homeowners are likely to also own some amount of land, varying from a yard to larger plots of agricultural land. Evidence from this study suggests the difference in attitude towards relocation may largely be determined by the ownership of key assets—a permanent house and some degree of land.

While results were similar in Long Thuan in terms of the home as a valued asset for both relocated and non-relocated respondents, the differential nature of the dominant environmental stressor, riverbank erosion, produced divergent outcomes. Of the eight respondents living outside the relocation sites in Long Thuan, six were homeowners. In contrast to Vinh Tri where most homeowners had no interest in being relocated and often chose to remain in their homes, those in Long Thuan had no option but to move due to the encroaching riverbank and the certainty of their houses and land, in the near future, collapsing into the river. Due to these inevitable circumstances, the majority—five of the six homeowners—felt they had no other option but to move into the residential dyke, where they had already been allocated housing plots. The sixth homeowner had been requested by the local authorities to move into the dyke, but he refused to do so, and planned to move his house further inland. His family owns large amounts of land and can afford to hire people to dismantle and rebuild the house in the new location, when needed. The remaining two households in this non-relocated group did not own housing and were keen to move into the dyke to live in safe and 'stable' homes.

This is in stark contrast to Vinh Tri, where environmental stressors on their own are not sufficient to force home and land owners to relocate. In this way, riverbank erosion affects households across the income spectrum, while adaptation measures are correspondingly limited. Access to the only possible in situ adaptation measure – to move the house further inland and away from the riverbank – is confined to households of sufficient wealth. While the relocation program is available to all households affected by erosion regardless of their income status, the option to remain on one's land is possible only for households which either have enough land to move or sufficient financial resources with which to purchase new land. Consequently, as a result of differences in the environmental stressors, the importance and need for relocation programs in Long Thuan is far more pronounced across all income categories than was found in Vinh Tri.

Among the relocated group in Vinh Tri, 12 of the 18 respondents spoke explicitly about two converging factors—how life is now better overall due to their 'permanent' and 'stable' house, and how they are now safe from hazards such as flooding and rain and do not need to worry about potential damage to their houses.

In comparison with their landowning counterparts, landless (residential and agricultural) and poor households tend to live in weak housing in hazard-prone areas, resulting in their greater exposure and susceptibility to environmental stress. In contrast, landowning households, while exposed to the elements, did not need to relocate to higher ground during flood season, as they tend to be wealthy enough to build houses that were strong enough to withstand the storms as well as floods that may enter or

surround the house, and they did not feel the need to move given their possession of housing and land.

Interestingly, of the 18 relocated respondents in Vinh Tri, six were agricultural landowners, with only one expressing the view that relocation sites provided their household with greater protection from natural hazards. For this household, given their relative wealth, when severe floods did affect their home, they did not experience considerable loss/damage as they were able to hire workers to dismantle and reassemble a portion of the house to live in temporarily on higher ground. Furthermore, among the six landowning households, none of their circumstances for relocation were due to environmental stress. Instead, four had been relocated to make way for development projects, a fifth had recently inherited land from a relative but household members were too elderly to farm the land, and a sixth, a Near-poor household, had been able to purchase the housing plot and attached land in the relocation site through their connections with local government officials.

Similar findings emerged from the relocated respondents in Long Thuan. Of the 18 respondents, 15 expressed their opinion regarding their new home during interviews. The majority—thirteen—of these respondents had been very keen to move into the dyke as their houses had already been or were faced with imminent erosion. Tellingly, only two of these respondents had owned agricultural land in their former place of residence by the riverbank, while the landowning respondents had lost all of their land to erosion and had become landless prior to relocation. The remaining two landowning respondents were relatively neutral in regards to their new homes, mainly due to decreased livelihood options and income, and said they would not have moved to the dyke had it not been for erosion. The houses of these two households had either been damaged by erosion, or were close to the riverbank (one to five meters away) at the time of relocation, reflecting the lack of alternative options at their disposal. Thus, property ownership was found to have some influence rooting people to their areas of residence in Long Thuan. This was also exemplified by the non-relocated landowner who refused to relocate and planned instead to move further inland on family land. Although definitive statements cannot be made given the small sample, what is clear is the pressure of erosion eventually leaving people with no option but to relinquish their homes and land.

4.2.1 Livelihood Outcomes of Relocation in Vinh Tri and Long Thuan

While the relocation programs in Vinh Tri and Long Thuan have been able to provide households with safe homes away from hazards, there have been negative consequences, most notably, decreased incomes and increased debt.

In Vinh Tri, of the 18 relocated respondents, a third of all households—six—reported decreased incomes after relocation. For the remaining households, incomes had remained the same for seven households, while only four households were able to increase their incomes following relocation.

In Long Thuan, of the 18 relocated respondents, four reported incomes which remained the same, three saw improved incomes, while a third—six—reported a decrease. The topic was not discussed with five respondents. Thus, a total of seven households were able to maintain or improve their income generation following relocation, while a comparable number of six households saw their livelihoods suffer as a result.

These figures reflect heterogeneous livelihood outcomes depending on the households' livelihood activities and the characteristics of the relocation site, with incomes most negatively affected in the Vinh Tri cluster and Long Thuan dyke, and largely remaining the same with a continuation of previous livelihood activities in the Vinh Tri dyke.

Table 2. Income outcomes following relocation

	Income decreased	Income same	Income increased	No data	Total
VT cluster	5	2	1		8
VT dyke	1	5	3	1	10
LT dyke[44]	6	4	3	5	18
Total	12	11	7	6	36

When accounting for all locations, however, the largest number of respondents—twelve—reported decreased incomes after their relocation, followed by eleven respondents whose incomes had remained unchanged, and seven who saw increased incomes. When taking into account the loan-centered structure of relocation programs and the significant size of these loans, however, the overall consequences for the 23 households experiencing diminished or no change in household incomes translate to an even greater degree of long-term asset depletion and impoverishment. Of these 23 households, ten were Poor, nine Near-poor, and four Better off. Given that much of the Poor and Near-poor population struggle to consistently earn enough to meet daily needs and accrue any savings at all, the financial repercussions of taking on large debts to pay for assets beyond their means are all the more severe. This ultimately strains their already weak financial circumstances, where the debt for relocation far outweighs the capacity for repayment.

Among the factors reported by respondents to have contributed to reduced incomes following relocation, the most frequently cited were – the lack of space and regulations prohibiting households from continuing to raise livestock in relocation sites; increased distance from floods and water sources where fish are raised and caught; and depleted social assets in relocation sites leading to less hired work being offered to relocated individuals. Interestingly, the impact of relocation on livelihoods was not found to correlate with income levels, with households in "Poor," "Near-poor," and "Better off" categories found across livelihood outcomes.

[44] As outlined in section 1.3, Long Thuan relocation sites are comprised exclusively of dykes, and no clusters.

Hence, the discontinuation of some or all previous income-generating activities destabilizes household livelihoods, translating not only to decreased income, but also diminished self-sufficiency.

In terms of households reporting increased incomes post relocation, the most frequently mentioned reasons in Vinh Tri and Long Thuan were (1) the greater availability of work (hired farm work and construction jobs) in the Long Thuan dyke and (2) the more densely populated relocation site leading to an increased number of customers for those owning small shops, selling lottery tickets, and street vendors in both the cluster and dyke in Vinh Tri—essentially non-agricultural work benefiting from the increase in number of customers.

Nevertheless, relocation away from natural assets—land and water—used to fish in or to raise livestock and fish consistently produced negative livelihood outcomes. This points to the importance of natural resources to livelihoods in the two locations, particularly land and water, and also sheds light on the irony of moving people away from areas prone to hazards, but which simultaneously constricts their livelihoods.

When people are moved away from natural resources essential for their livelihoods, some respond by returning to their places of origin (with varying degrees of permanence) to continue their livelihood activities. For example, a few households reported maintaining shelters in their old areas of residence, either to raise fish during flood season in Vinh Tri or to maintain their livestock in Long Thuan—essentially defeating the purpose of relocation programs to move people away from hazard-prone areas. In fact, for those who return to their previous flood-prone areas of residence to fish and raise fish, they do so precisely during the time of year when floods occur.

For those households in Vinh Tri and Long Thuan reporting unchanged income levels after relocation, the reason seems to be that they had been able to continue their old livelihoods, These livelihoods ranged from hired farm work, farming on owned or rented land, selling lottery tickets, construction, domestic work and street vending.

4.2.2 Impact of Relocation on Household Debt

Debt is a prominent feature of life in rural Mekong Delta, with loans frequently taken out at the start of a crop cycle to purchase agricultural inputs such as seedlings, fertilizer and pesticides, and subsequently repaid after the harvest. Small loans among relatives, neighbors and friends are also common, used to cover daily expenses such as food. These loans are vital, particularly for poor households who earn just enough to get by day to day and are unable to amass savings to use during times of stress or shock.

Despite the widespread presence of debt, the loans associated with relocation programs are distinct. They are substantially larger than what most poor households would accrue as part of their daily lives, as they are meant to cover the costs of high-value assets—housing land and house construction—normally unaffordable for households with limited financial capital.

Of the 36 relocated households in Vinh Tri and Long Thuan, all but two in Vinh Tri and one in Long Thuan had debts for their housing plots and/or house construction as part of the relocation process (two Better off and one Near-poor household). These debts were perceived by many households to be beyond the possibility of repayment, as the vast majority of Poor and Near-poor households were unable to put aside any savings after paying for their living expenses.

Among the 33 relocated households in debt, the loans accrued as part of the relocation process were a prominent feature of their lives, given the difficulty of repayment and resulting burden on household finances. Unless an individual possesses the financial assets to pay for the housing foundation and house construction up front, they are left with no other option but to take on debt as part of the relocation process.

For these 33 households, less than half—15 households—expressed confidence that they would be able to make repayments, with only three of these households in the Poor category, eight being Near-poor and three Better off. Of the remaining 18 households who did not feel confident about repayment, 17 did not believe it was possible for them to pay off the loans given the large amount and the limitations of their low incomes and overall poverty.[45] Of these 17 households, the majority—eleven—were Poor, five Near-poor and one Better off. These figures highlight the wealth-differentiated burden of debt, with poor households most unable to make payments due to their low incomes and lack of savings.

Further exacerbating vulnerabilities is the need for many households to take out additional loans from private sources to cover housing construction, as the standard loan amount stipulated by the government is often not enough to construct a relatively durable house. Moreover, this is taking place in an environment where the cost of living, including utilities and management fees, is higher than it was prior to relocation. This means that households have to pay more for their living expenses at a time when their incomes have decreased. Accordingly, the large proportion of households in debt because of relocation is unsurprising given the fact that these programs specifically target poor households.

Moreover, unmanageable debt keeps households in a state of uncertainty, as the legal land use certificate is received by households only when they fully repay all loans to the government. Moreover, this uncertainty, coupled with a lack of transparency on the part of local authorities when implementing the programs, fuel a sense of dependency by poor households. They hope that local officials will eventually ‘have pity for their situation’ and ‘forgive their debts’ into de facto housing grants. Thus, this depletion of financial assets further increases dependency on local authorities, erodes the sense of self-sufficiency and entails an overall lack of legal protection and certainty for poor households.

[45] The remaining household was able to pay for their house construction by using cheap and recycled materials from their previous house, but was not aware that the housing plot was provided on a loan, not a grant, and left out of this figure given their lack of awareness regarding the loan.

5. Longer-Term Issues

Given the political context of Vietnam and the implications of criticizing the government, particularly to foreigners, it was not possible to systematically collect unbiased firsthand accounts of how individuals viewed the relocation programs. Nevertheless, some respondents spoke of a culture of corruption and nepotism among government officials, ranging from the allocation of housing plots in more favorable locations to those with connections; the purchase of housing plots in residential clusters and dykes by government officials for investment purposes; the unfair management of moving grants (given to building contractors in partial repayment of government loans rather than the households themselves); and in contexts of land reclamation, the payment of compensation several years later when the value of land had risen significantly, but compensation was based on to the land value at the time of reclamation.

When asked about participation, most respondents mentioned the process of picking ballots for plot allocations and community meetings where local officials informed the community of their plans, reflecting the lack of opportunities to critically engage in political decision-making processes in Vietnam.

Land owners and wealthier households, on the other hand, do appear to have some opportunities to voice their opinion in community meetings with local officials. One respondent in Vinh Tri spoke of a community meeting where provincial and district People's Committee officials were present, where community members were asked to contribute financially to the construction of the local water station servicing the relocation dyke. Individuals from the community agreed under the condition that the local community, not local officials, would manage the water station.

In terms of long term support for relocated households, the relocation programs in Vinh Tri and Long Thuan do not include such a component, as is common for relocation programs in Vietnam for DRR and CCA, and development-induced relocation. Rather, long term vulnerability has been exacerbated by relocation in Vinh Tri and Long Thuan, particularly for poor households, given the amount of debt accrued as part of the relocation process, as well as the negative livelihood outcomes for the majority of households.

On the whole, the government is allocating significant resources to a strategy for CCA which has had mixed results. There are questionable standards and ethics in its implementation and a lack of financial accountability. Most importantly, in spite of being moved from areas at risk, economically households are worse off as a result of the relocation.

It is then worth asking: Is relocation the best and most cost effective method to keep people safe from environmental hazards? Should other less invasive options not be explored in tandem, to accommodate differentiated environmental contexts and varying household needs? Furthermore, relocation programs are cost intensive for governments and are among the most disruptive for households and their asset profiles. To minimize

financial costs for the government and present households with alternative options, a more nuanced approach to CCA is worth considering.

6. LESSONS LEARNED AND RECOMMENDATIONS

Based on the study's findings, this section offers some general recommendations for planned relocation in the climate change context.

1. **A nuanced understanding of vulnerability.** Although a community may be exposed to the same environmental stressor, the differential vulnerability of varying groups to environmental and other stressors is of central importance when designing relocation programs. Individual vulnerability and capacity are shaped by, among others factors, age, gender, income-generating activities, livelihood skills, health status and wealth. Relocation programs should take these differential factors into consideration, focusing not only on a community's exposure to environmental hazards (by way of their physical location and proximity), but also on how these elements shape both the vulnerability and resilience of households. Depending on the environmental variable in question, relocation may not be the best response for all households. A household level analysis would therefore help to identify specific areas of need, as well as appropriate methods to increase the resilience of households, through relocation or alternative means.

2. **Support for long-term livelihood outcomes.** The purpose of planned relocation programs should not simply be to move people from one location to another. Relocation is rather a means to improve the wellbeing of individuals and to this end, their immediate and long-term livelihood outcomes are of critical importance. Increasing the impoverishment of relocated households, as such, defeats the purpose of planned relocation. In line with the first recommendation, a sophisticated understanding of the livelihoods needs of relocated households is paramount, with short- and long-term support built into the planning and implementation of relocation programs. To achieve this entails adequate policy frameworks guiding relocation programming, protection measures for relocated individuals and others affected by the relocation process, sufficient funds, officials with sufficient technical capacity, and the political will to devote the time and resources necessary for ensuring positive relocation outcomes.

3. **Rethinking loan-centered structures.** Particularly when poor individuals are identified for relocation, adopting a loan-driven design for relocation programs is likely to meet with financial obstacles and may ultimately be unsustainable. Financial and budgetary instability impact both planning and implementation throughout the different stages of the program, including the provision of basic infrastructure and services, the quality of houses and infrastructure, as well as the overall level of delays encountered throughout the process.

Furthermore, the loans incurred by households would most likely increase their impoverishment considerably, given the substantial amount of loans. This financial burden would be multiplied in contexts where relocated individuals experience disruption to their livelihoods and increased costs of living.

4. **Mechanisms for transparency and accountability.** Given the amount of resources managed by government officials, contractors and other involved actors when carrying out planned relocations, systematic mechanisms for not only monitoring but also enforcing transparency and accountability, particularly at the local level of implementation, is of critical importance.

5. **The need for timely relocations.** As seen in Long Thuan, some hazards pose immediate threats to the safety and survival of communities. The need for timely relocation is paramount in such contexts, to avoid preventable injury, casualty and loss of household and community assets. This is also relevant for less immediate and slow-onset events, which if neglected, may in the long-term, result in similar consequences.

6. **Planned relocation as an opportunity for mitigation and green planning.** This study investigates planned relocations in the context of climate change. Given that relocations are made necessary because of anthropogenic changes to the climate and environment, every opportunity should be taken in relocation programs to incorporate carbon mitigation technologies and green planning and architecture. Moreover, in areas of origin, environmental conservation may be possible, to rehabilitate ecosystems or strengthen natural defenses to hazards (e.g. mangrove forests).

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