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Between a Rock and a Hot Place:
Economic Development and Climate Change Adaptation in
Vietnam

by

Khanh Katherine Pham

A thesis submitted in partial fulfillment of the
requirements for the degree of

Master of Urban Studies

Thesis Committee:
Connie Ozawa, Chair
Marcus Ingle
Nathan McClintock

Portland State University
2018

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Abstract

This thesis explores 1) the ways that three Vietnamese infrastructure development projects undermine their cities' climate change adaptation goals and 2) the political and economic forces driving these developments. In-depth interviews highlight four main perspectives of planners and decision makers, which explain why these infrastructure projects often undermine cities' climate resilience goals. I describe how the mainstream climate change adaptation planning approach, with its emphasis on participatory planning, good governance and green growth, implicitly reinforces the neoliberal growth model, even as it seeks to ameliorate the inequality and ecological destruction that such a growth model creates. My research reveals how Vietnam's growth-first economic model and its dependence on international finance means that its climate adaptation priorities are increasingly shaped by the interests of financial institutions, and not necessarily the public interest. I argue that even if the strategies proposed by Vietnamese planners and climate adaptation practitioners are adopted, maladaptive projects will continue in Vietnam, unless the underlying economic growth imperative is addressed.

Acknowledgements

I am deeply grateful to the many people who supported me during the past six years of study and engagement with climate adaptation planning in Vietnam. I first want to thank my partner Hector, my daughter Maya Linh, and my parents, for their patience and support that have kept me going throughout these many years. I would also like to thank my advisor, Dr. Connie Ozawa, for her patience and persistence in working with me and encouraging me, even as work and family commitments forced me to postpone my final thesis writing and defense. I deeply appreciate Dr. Marcus Ingle, Julia Babcock, and the Vietnam-Oregon Institute (VOI) at Portland State University, for providing me with initial connections to UN-Habitat for my first internship on climate adaptation planning, which later led to a second internship with the Institute for Social and Environmental Transition (ISET) in 2013. Both of these internships allowed me to attend climate adaptation planning workshops and conferences, make professional contacts, and gave me an invaluable look at dynamics within NGOs that shape climate adaptation planning on the ground. Dr. Huan Dang and Dr. Marcus Ingle from the VOI provided email introductions to four government officials, and Dr. Bich Phuong Nguyen from the Academy of Planning and Development in Hanoi, also introduced me to several of her colleagues in the Development Strategies Institute (DSI). I deeply appreciate the Vietnamese planners, officials, and NGO professionals who took time out of their busy schedules to talk with me and share their thoughts about the complex

contradictions between economic development and climate change adaptation in Vietnam. These include planners and officials from the Ministry of Construction, the Academy of Managers of Construction and Cities, the Development Studies Institute at the Ministry of Planning and Investment; the Urban Development Academy at the Ministry of Construction, the Vietnam-Japan University's Program on Climate Change and Development, and the Institute for Social and Environmental Transformation (ISET). Lastly, I want to thank Dr. Nathan McClintock and the students of Sustainable Cities and Regions class in 2012 and the Critical Urban Theory Seminar class in 2013. The theorists we studied in those classes, and the conversations we had after classes over pizza, were invaluable in helping to shape much of the analyses in this paper.

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List of Abbreviations

AIIB: Asian Infrastructure Investment Bank

ADB: Asian Development Bank

APD: Academy of Planning and Investment

GDP: Gross Domestic Product

ISSET: Institute for Social and Environmental Transition,
International JICA: Japan International Cooperation Agency

KOICA: Korea International Cooperation Agency

MOC: Ministry of Construction

MONRE: Ministry of Natural Resources and Environment

MPI: Ministry of Planning and Investment

ODA: Official Development Assistance

PPP: Public-private partnerships

WB: World Bank

Chapter 1: Introduction

On November 4, 2017, Typhoon Damrey struck Vietnam and killed over 106 people, and affected about four million people across fourteen provinces in central and southern Vietnam. Less than a week later on Nov 10, 2017, Vietnam hosted the final convening of the yearlong Asia-Pacific Economic Cooperation (APEC) meetings in Da Nang Vietnam, one of the cities directly impacted. Despite the still-emergency conditions which had left many poor communities without clean water supplies, the Vietnamese leaders made no comment about the devastating and deadly floods. The speeches and opening remarks by Vietnamese and other world leaders emphasized the growing prosperity that would arise from increased global trade integration.

Even as Vietnamese President Tran Dai Quang mentioned the need to build climate resilience, his speech and the speeches of others ignored the fact that the hotel resort where the world leaders are staying, located in the heart of Son Tra Nature Reserve, is a stark example of the very kind of development in natural areas that increases Vietnam's vulnerability to climate change. In fact, the Frankfurt Zoological Society warned earlier in March of 2017, that if hotel and resort construction in the Nature Zone did not stop, the green Son Tra rainforest, also called the "lungs of Danang" would become a desert and threaten many endangered species with extinction within the next thirty years (Voice of Vietnam 2017). Indeed,

the remarks from President Trump and other world leaders staying at the Intercontinental Hotel implied that the economic development discussions and actions spurred by APEC had little connection to the intensified flooding, droughts, and hurricanes that have struck Vietnam over the past decade.

APEC is not alone in failing to connect the dots between economic development and climate change vulnerability. A brief scan of climate change adaptation literature—from World Bank and NGO reports, to academic journal articles and books—reveals that discussions of economic development strategy and climate change adaptation are usually kept separate. When they are discussed together, there is often an assumption and assertion that there is no contradiction between the two goals. For example, Korean and Japanese development agencies such as KOICA and JICA, have increasingly been promoting “green growth” as a strategy to **both** adapt to climate change and promote economic development. Similarly, popular conceptions of the “three foundations of sustainability” (social equity, economic prosperity, and environmental protection) generally ignore the conflicts or tensions between the three goals.

Despite the increased attention to Vietnam’s tremendous vulnerability to climate change, urban development is actually going in the opposite direction: increasing development into critical farmland, wetlands, floodplains, and coastal ecosystems that undermines a city’s ability to protect itself from sea level rise, flooding, and superstorms. This paper examines firstly, how urban and

infrastructure developments are undermining climate adaptation strategies, and secondly, why economic development strategies are frequently undermining climate resilience strategies. This thesis addresses the gap in the climate change adaptation planning literature and explains how economic development strategies are inextricably connected to climate change adaptation strategy because economic and urban development decisions clearly and directly impact a city's ability to build their climate resilience.

Research Questions and Methodology

This thesis explores two key research questions: 1) how are Vietnamese infrastructure development projects impacting cities' climate change adaptation

<u>List of Interview Participants</u>
<u>Government planners and officials</u>
<ul style="list-style-type: none">• Head of Urban Development Management Division, Ministry of Construction• Researcher, Development Studies Institute, Ministry of Planning and Investment• Deputy Director General, Vietnam Institute for Urban and Rural Planning• Strategic Planner, Urban Development Division, Ministry of Construction• Director, Institute of International Cooperation, Academy of Managers of Construction
<u>Academic Researchers</u>
<ul style="list-style-type: none">• Professor, Academy of Planning and Development• Professor, Climate Change and Development Program, Vietnam-Japan University
<u>Non-governmental organizations (NGO) workers</u>
<ul style="list-style-type: none">• Technical Lead, Institute for Social and Environmental Transition, International• Technical Consultant, Institute for Social and Environmental Transition, International• Director, UN-HABITAT Vietnam

FIGURE 1: LIST OF INTERVIEW PARTICIPANTS

goals and 2) what are the economic forces driving these development projects? My primary research methods involved 1) ten in-depth qualitative interviews conducted in-person and via Skype, and 2) document analysis of key Vietnamese documents, reports, and articles about economic development, urban infrastructure development, and

climate change adaptation. I reviewed both national and local climate adaptation plans and reports, as well as contemporary newspaper and journal articles to gain some more background on the projects and examples which my interview subjects discussed. My interview subjects included a variety of planners, decision-makers and stakeholders engaged in climate change or urban development work in Vietnam, including: planners in the Ministry of Construction, planners in the Ministry of Planning and Investment, professors of climate change and development, and NGO staffers working on climate change and development (see Figure 1). To protect their privacy, I include the government institutions, but not the specific names of the people, unless they expressly provided permission.

My research questions were shaped by my experience working in Vietnam as an intern for two non-governmental organizations working on climate change adaptation in Vietnam. In the summer of 2012, I travelled to Danang, Vietnam as an intern with UN-HABITAT. I spent two months, from late July to early September, 2012 in Vietnam, attending climate change conferences and meetings and interning at UN-HABITAT's Vietnam office to help them prepare for a climate change adaptation training and workshop with Ho Chi Minh City's Department of Natural Resources and the Environment. The next summer in 2013, I worked as an intern with the Institute for Social and Environmental Transition, the leading international non-governmental organization (NGO) which has been leading climate change adaptation planning in Vietnamese cities, including Danang, Quy Nhon, Lao Cai, and

Can Tho. The lessons and experiences I gained as a participant and observer in these climate change/development spaces provided the foundation and shaped my research question.

Overview

The first chapter of this thesis reviews the impacts of both climate change and of economic development on urban areas in Vietnam. I look at the contradictory results emerging between economic development projects and climate adaptation goals by looking specifically at three important examples: road infrastructure, industrial zone development, and energy infrastructure. These three projects highlight the ways in which Vietnamese cities' development and growth strategies directly contradict expressed climate adaptation goals.

In the second chapter, I examine mainstream climate change adaptation planning, to understand the gaps in the planning process that allow development projects to move forward and undermine a city's resilience to climate change. Some of these forces are related to Vietnam's specific planning processes, while others are more inherent to the economic model which Vietnam has embraced. The current literature on climate change adaptation planning in Vietnam primarily focuses on process-related problems and makes recommendations for how to improve planning, public outreach, and implementation to avoid the worst outcomes.

However, there is currently very little literature exploring the inherent contradictions between economic growth imperatives and climate adaptation.

In the third chapter, I explore what my interviewees generally described as some of the factors leading to these maladaptive projects. They highlighted various planning and governance challenges, however, none of the respondents challenged the underlying economic growth model which drives much of the urban and infrastructure development. The central argument of this thesis is that a city's and country's economic development model must be included and critiqued in any analysis of climate adaptation strategies.

The fourth chapter of this paper explores the economic forces that shape Vietnamese urban development and the ways in which Vietnamese urban governance and planning also shapes development choices, and thus, urban development outcomes. Currently described as a "market-based mixed economy," Vietnam's economy combines elements of state planning with liberalized market reforms to integrate into the global economy. The liberalization of Vietnam's economy has important implications for its economic development strategy. I look at how the financing of these projects reveal the external constraints of international finance that limit Vietnam's autonomy. This section explores the resulting tensions and contradictions between local climate adaptation and economic growth strategies.

The fifth chapter critically examines the mainstream climate change adaptation approach, with its focus on improving planning processes, while ignoring the larger political choices and economic development models which are assumed yet not raised in the climate adaptation literature. I argue that Vietnam is stuck between the proverbial rock and a hot and hard place because its model of export-led, growth-oriented development is requiring the country to develop infrastructure which is at odds with the necessary steps Vietnamese cities need to take to build their climate resilience. The sixth and final chapter of this thesis explores some core concepts of a more genuine and effective climate resilience strategy for Vietnamese cities.

Literature Review

My thesis is based on the theoretical gap that I see in the mainstream climate change adaptation literature. I draw heavily from the theories within urban geography and critical theory to understand the ways in which a deeper understanding of the political economy of Vietnam can explain the failures of urban development to build climate resilience in Vietnam. Ultimately, building a more effective climate change adaptation planning framework entails confronting the political and economic forces which are creating both inequality and environmental destruction.

To begin with, climate policy and planning is generally divided into two main categories: 1) climate change mitigation, which is any action that reduces greenhouse gas emissions which are causing climate change and 2) climate change adaptation, which is defined as “preparing for, and adjusting proactively to, projected climate change impacts, both negative impacts, as well as potential opportunities (World Bank 2011). In general, climate change mitigation strategies have focused on advanced industrialized countries, which are responsible for the bulk of historical emissions. Yet the already-increasing impacts of climate change, particularly in the Global South, is lifting up the crucial importance of preparing for adapting to the climate change impacts, which are inevitable, given historical emissions.

Climate change adaptation is described as a diverse set of formal and informal actions and policies which local areas can adopt in order to prepare for coming climate-related changes of sea-level rise, stronger and more frequent storms, changes in rainfall patterns, higher temperatures, and increased flooding. Climate change adaptation, then, is a broad umbrella term encompassing everything from building 'hard' infrastructure such as sea dykes and improved weather forecasting systems, to investing in 'soft' infrastructure such as educating farms about diversifying crops or strengthening disaster-preparedness education.

Climate change adaptation planning literature borrows heavily from disaster risk reduction literature, with a particularly strong emphasis on understanding specific climate risks that a city faces (Moench et al., 2011a). Thus, scientific models and projections of climate impacts, as well as the data necessary to make those models---are highly valued and centered in the adaptation literature, as the foundation for climate adaptation planning. Urban climate adaptation plans tend to focus on the specific climate change impacts, such as extreme heat or flooding, and to propose specific measures that a city, state, nation, or community can take (Tanner et al., 2009). In a recent report on "Catalyzing Urban Resilience" the non-profit Institute for Social and Environmental Transition (ISET) writes, "the framing of climate change adaptation in relationship to specific climate change impacts perpetuates the 'predict and prevent' paradigm that has traditionally underpinned geo-hazard engineering. Hence, current approaches to urban climate adaptation

have a tendency to focus on technical responses to particular climate hazards, such as defensive coastal infrastructure or zoning coastal areas in response to sea level rise” (2017).

To move beyond a narrow focus on specific climate impacts towards a more systems-based approach, many climate adaptation planners have embraced the concept of “climate resilience.” A resilient city is “characterized by its capacity to with and or absorb the impact of a [climate] hazard through resistance or adaptation, which enable it to maintain certain basic functions and structures during a crisis, and bounce back or recover from an event (Johnson and Blackburn, 2014). Because building a community’s adaptive capacity is connected to building community resilience, I use the terms “resilience” and “adaptive capacity” interchangeably in this paper. Some key elements of resiliency draw from complex engineering and ecological systems, such as “safe failure” “redundancy” “flexibility” and “diversity.” This engineering and ecological emphasis on “maintaining functions and structures” and “bouncing back” is ubiquitous throughout much adaptation and resilience literature (James et al., 2015; Moench et al., 2011b; Tanner et al., 2009), and thus highlights how much of both the climate adaptation and resilience field is founded on an assumption that returning to the original “status quo” is the goal.

The growing body of climate change adaptation literature is draws heavily from planning and international development practices, with contributions from the fields of engineering and hazard risk reduction. Whether focusing on formal or

informal adaptation actions, the underlying framework of climate change adaptation literature in development focuses primarily on a technocratic policy and planning framework. Some authors focus on how to integrate climate science projections, as well as scientific uncertainty into decision-making on adaptation strategies (Tyler and Moench, 2012). Other written reports describe how to conduct climate vulnerability and adaptability assessments and how to create processes that engage the participation of multiple stakeholders (Moser and Ekstrom, 2011) and facilitate a process of prioritizing adaptation strategies from among a menu of options with differing costs, impacts, and benefits across different time scales.

Problems identified in the climate change reports and presentations in Vietnam are frequently portrayed as primarily physical or managerial problems, such as flooding, or a lack of education about an issue, that can be solved through technical solutions, whether through building infrastructure or building the knowledge, skills, and capacity of local government or community members. In fact, however, even the most physical manifestations of climate change impacts are embedded within social relations of power that determine an individual's sensitivity and capacity to adapt to any particular stressor.

The supposedly apolitical narrative of many climate adaptation plans reinforces James Ferguson's notion of development planning as an "anti-politics machine" (1994) in which development and climate adaptation projects are presented as self-standing entities, detached from any social relations of power.

Given the highly political and contested nature of many of the decisions that need to be made, it is notable that most climate adaptation literature presents fairly depoliticized, generalized frameworks and action steps without any discussion of the specific political and economic context (particularly the political and economic forces both globally and domestically) which inhibit effective adaptation.

Measuring the success or failure of a climate adaptation strategy is complicated, since climate impacts may differ over time, and some groups may benefit from an intervention, while others are harmed. The climate adaptation literature defines those climate adaptation strategies that increase vulnerability as “maladaptation” (Adger et al., 2005). In an editorial about maladaptation, the *Global Environmental Change* defines five types of maladaptation. In their framework, maladaptive actions: 1) increase emissions of greenhouse gases, 2) disproportionately burden the vulnerable, 3) have high opportunity costs (high economic, social, and environmental costs) compared to alternative actions; 4) reduce incentives to adapt, or 5) commit capital and institutions to trajectories that are difficult to change (path dependency) (“Maladaptation,” 2010, 212). The ever-present risk of maladaptation highlights the challenges of building climate resilience and adaptive capacity amidst many competing development priorities, primarily that of economic growth.

In climate adaptation and resilience literature, the theoretical separation between climate change adaptation/resilience and economic development models is

clear. This thesis addresses this gap in the literature by examining the ways in which economic development strategies must be an integral part of understanding urban climate resilience. This thesis examines the contradictions of climate change adaptation within a growth-oriented economic development agenda and to reimagine some key components of a comprehensive and critical framework for urban climate resilience.

To understand the economic forces which are shaping Vietnam's urban development, I draw on the literature of Marxian political economy and critical urban theory. Proponents of neoliberal ideology argue that "open, competitive, and unregulated markets, liberated from all forms of state interference, represent the optimal mechanism for economic development" (Brenner and Theodore, 2002: 350). Over the last few decades, Vietnam, has embraced global free market economic integration and an aggressive growth-first economic development strategy. Although climate change adaptation manuals generally present their recommendations as politically neutral, this thesis argues that the planning approaches suggested—and the questions about politics and economics that are left unasked—reinforce a neoliberal ideology that make it difficult for cities to address the forces that are driving and increasing climate vulnerability.

Political economists such as David Harvey (1989) have noted that, due to a variety of factors, including internal crises of capitalism, investors from the Global North have increasingly looked, since the 1970s, to developing countries in Asia and

other parts of the Global South for investment opportunities. At the same time, the failures of agricultural collectivization and centralized state planning in the post-war era of 1975-1985 led the Vietnamese government to begin to dismantle many agricultural and other collectives, institute some modified property rights, and embrace a more market-oriented approach to economic development. In order to join the World Trade Organization in 1997, Vietnam began to reform its state-owned enterprises, increase private investments in state-owned industries, and take away tariffs and other policies designed to protect Vietnam's domestic industries. Vietnam's accession into WTO and entry into global markets has led to a rapid growth in exports and economic growth, reinforcing a growth-first development strategy that depends on continuing to attract foreign investment, through the creation of supportive legal and tax structures.

Harvey's concepts of urban entrepreneurialism and inter-urban competition describe the ways in which cities must increasingly compete against one another, both within Vietnam and around the world, to attract investments and hold capital to a particular locale. The concept of urban entrepreneurialism explains the evolution of urban governance in Vietnam from a more managerial approach in the pre-1986 era, mostly concerned with the provision of public services to a more active, risk-bearing approach today to spur economic development (Harvey 1989). Vietnam's one-party state control creates a unique aspects to a form of

“authoritarian neoliberalism,” but Vietnamese cities are subject to the same global competition to attract and hold capital investment.

The need to attract investment and maintain economic growth influences Vietnamese local and national government choices in what kinds of infrastructure projects they choose to build. Jason Hackworth in *The Neoliberal City* (2006) examines local municipal financing to highlight how local governments are severely constrained by their dependence on finance capital to fund their basic infrastructure and how bond rating agencies, despite their supposedly neutral position, enforce deeply ideological fiscal practices on urban governments that seeking the low interest rates which are linked to good bond ratings. In the case of Vietnam, global financial institutions enforce a similar fiscal discipline that profoundly shapes Vietnam’s development and infrastructure choices (Hildyard, 2014). A deeper understanding of how export-oriented growth shapes Vietnamese city development can help explain why cities act in contradiction to the mandates of climate change adaptation and the government’s professed goals of poverty reduction.

Chapter 2: Contradictions Between Urban Infrastructure Development and Building Climate Resilience in Vietnam

Urban Development Context in Vietnam:

Vietnam's urban areas have undergone a massive transformation over the last 30 years. In 1990, the percentage of people living in urban areas was between less than 18%. By 2016, the urbanized population had grown to 34% of the general population (World Bank, 2016). Rapid urbanization has outpaced the government's ability to provide adequate housing and transportation infrastructure, as is demonstrated by the congested streets, rising rents, and lack of affordable housing. A growth-first approach for economic development strategies in Vietnam has led to rapid and severe environmental degradation, including air pollution, water pollution, and toxic pollution of soil and freshwater sources.

Rapid urbanization has stretched the capacity of the government to provide adequate urban infrastructure to provide for its growing urban population. Vietnam has done "a remarkable job in achieving nearly universal coverage (i.e. 96%) in access to electricity" (World Bank Urban Brief, April 2012). Other basic urban services, such as water and sanitation, housing, and transportation, however, lag behind, creating a host of health and safety problems for urban residents. The Asian Development Bank (2010) reports that as of 2008, only 10 percent of municipal wastewater was treated, and in 2010, only 45% of industrial zones were expected to

have wastewater treatment of some kind. Inadequate water supply, drainage, and wastewater systems represent a serious public health and environmental hazard and the Vietnamese government has leveraged funding to build over eight wastewater treatment plants in Hanoi and 30 wastewater treatment plants in the Mekong Delta (Viet Nam News June 2012).

The impacts of insufficient wastewater collection and treatment are exacerbated by the frequent floods that occur in Vietnam's cities. In October 2008, for example, Hanoi experienced five days of steady rainfall, which led to the worst flood in Hanoi in thirty years (World Bank Urban Brief, 2012). Houses and streets were submerged, and residents were unable to leave their houses. During this time, schools were closed for several days, and people were unable to reach the hospital without a boat. During the flood, the risk of disease outbreaks increased, demonstrating the severe public health threat posed by the failing sanitation system.

Amidst these significant urban development challenges, Vietnamese cities are also facing significant climate change-related impacts. For Vietnamese cities, the most commonly discussed impacts of climate change relate to increased flooding of streets and homes, extreme heat events, destructive typhoons, and vector-borne diseases. Sea level rise and global mean temperature rises are predicted to increase the severity of flooding and typhoons, droughts, and saltwater intrusion (Chaudhry, and Ruysschaert, 2007; McElwee, 2010). The IPCC reports that by 2050, sea level

rise, saltwater intrusion, and flooding could affect up to 7 of the 18 million people living along the Mekong delta in Vietnam (Brown, 2014). Within this century, increasing droughts, heat waves, floods, and typhoons threaten to devastate people's livelihoods and force millions of Vietnamese to migrate. Although the Vietnamese government has publicly recognized these threats and embarked on a climate adaptation strategy over ten years ago, Vietnamese cities' development plans and economic strategies often undermine and contradict their climate adaptation goals.

The National Strategy on Climate Change from 2011, mandates that all cities develop climate change adaptation plans, conduct climate change risk assessments and integrate those climate risk assessments into local urban development planning (Tyler 2017). Yet despite the many national and local climate change adaptation plans in Vietnam, critical estuarine, wetland, and floodplain areas are still being destroyed to make room for rapid urban growth and industrial development. Transportation infrastructure, industrial zone development, and energy infrastructure are high priorities for the Vietnamese government. In my interviews with Vietnamese government officials and planners, the construction of roads, highways, housing developments, and industrial zones are seen as essential prerequisites for economic growth and represent key aspects of what it means to be a developed country (personal interviews, 2017).

Summary of Interview Findings

In my interviews with Vietnamese government officials and planners, my interview subjects acknowledged the frequent contradictions between economic development and climate adaptation strategies. Although they agreed that economic development is generally prioritized, my interview subjects also had a good understanding of how high temperature extremes, flooding, and other climate impacts would detrimentally impact city residents. They described numerous examples of urban development projects that directly contradict a city's climate adaptation goals—from residential and industrial developments that were built on floodplains to industrial parks that destroyed former mangrove forests.

To explain why these maladaptive projects were implemented, planners generally came up with four general explanations. First, some explained that government planners often lack an understanding of localized climate change impacts. Secondly, they argued that many government bureaus and ministries had a faulty planning culture—citing a lack of coordination and the tendency to work in siloes as a key explanation for why projects would contradict the very climate resilience goals espoused by the city and country. Thirdly, many NGO workers talked about how the Vietnamese government planners and officials often fail to consult local communities who are most impacted by the projects, which thus leads to outcomes that increase vulnerability, particularly among poor and marginalized communities. Lastly, my interview subjects lifted up the lack of government

accountability, widespread corruption, lack of transparency, as key governance issues that lead to maladaptive development projects.

Although all of these explanations have merit, notably none of my participants articulated a larger systemic critique of the underlying economic growth model as a key factor leading to these maladaptive projects. Most of them decried the narrow focus on economic value over social and environmental values, as well as the prioritization of short-term profit over long-term value. Yet, most expressed a belief that a more comprehensive approach that balanced social equity, environmental protection, and economic development would enable development projects that built climate resilience while promoting economic development. In this thesis, I delve more deeply into the economic forces which are leading to the maladaptive outcomes.

In this section, I look at three examples of urban and industrial development projects that directly contradict Vietnam's climate change adaptation goals in order to understand the ways in which infrastructure development and residential development practices can undermine climate resilience and make residents more vulnerable to the severe climate. The purpose of this section is not necessarily to delve into the technical details of each project, or to highlight the particular areas of improvement, but rather to give a snapshot view of the ways in which common urban development projects are frequently at odds with climate change adaptation goals. This thesis explores how the underlying economic paradigm of these projects

lead inevitably to contradictory outcomes for cities attempting to both grow their Gross Domestic Product (GDP), as well as build climate resilience.

Industrial Zone construction: Thai Binh Economic Zone

Industrial zones are a key component of export-led development, since they facilitate foreign direct investment. Local city governments compete for investment by building industrial parks or zones that bring together needed infrastructure, such as water and wastewater treatment, access to electricity, easy transport to shipping centers, and a steady pool of labor. Many industrial parks are purposefully sited near major roads that lead to airports, seaports, and rail stations for convenient shipping. The Vietnamese government usually establishes financial incentives, such as reduced tax rates or other subsidies to encourage companies to choose their cities as locations to invest.

The northern province of Thai Binh lies about 110 km from Hanoi. As a coastal province, it faces recurring storms and typhoons that are projected to grow increasingly destructive as global temperatures rise. Starting in the mid-1980s, local villagers and the provincial government embarked on planting and restoring the coastal mangrove forests after a heavy storm in 1986 swept in powerful tides, destroyed the dike and flooded the village (Binh 2017). “The forest has since become a golden shield for thousands of households against storms,” a local resident told *Tuoi Tre* newspaper (2017).

Recently, however, 320 hectares of the mangrove forests are slated to be destroyed to make way for a new industrial zone. On January 3, 2018, the Prime Minister announced the establishment of a new Thai Binh Economic Zone, which will cover 31,000 hectares. Like other economic zones in Vietnam, the TBEZ will offer tax breaks, subsidies, and other economic incentives to attract companies to locate within the zone (Nhan Dan 2018). Nationally, a preferential corporate income tax rate of 10% has been set for a 15-year period for new investments in economic and high-tech zones.

Given that mangrove forests protect against climate change impacts such as rising sea levels, and more intense storms typhoons, the destruction of these mangrove forests to build industrial zones obviously undermines Thai Binh coastal village's climate resilience. As recently as 2016, Thai Binh province renewed its commitment to planting 1,320 more hectares of mangrove forest in recognition of the important role that the forest plays in supporting people's agricultural, seafood, and aquaculture livelihoods. In February of 2017, the Minister of the Environment visited Thai Binh province in celebration of World Wetlands Day, and the entire 320-hectare plot of mangrove forest to be used for the industrial zone lies completely within the bounds of the Red River Biosphere Reserve (*Tuoi Tre*, 2017).

Even the nominal environmental impact assessment, noted that clearing mangrove forests would "allow seawater to reach the mainland and destroy local dike systems and aquatic farms in the event of strong storms" (*Tuoi Tre*, 2017). The environmental impact assessment process itself was criticized for failing to

community members. Journalists noted that although the developer held two separate meetings for public feedback, only local leaders were invited, not community members who would be impacted the most, such as the 354 aquatic farming households and other residents whose livelihoods depend on having a strong protective mangrove forest (*Tuoi Tre*, 2017). Despite this absence of public participation, the industrial zone project was approved in January of 2018. The Thai Binh industrial zone project represents the contradictions between and within local and national government agencies, in seeking to both protect their mangrove forests and aquatic-based industries, while also expanding their industrial development and investments.

Road Infrastructure: Danang and Quy Nhon

Given the emphasis on attracting outside investment in industries, the Vietnamese government has also prioritized the expansion of its road infrastructure. According to the World Bank, less than half of the country's roads are paved (World Bank's Trading Economics website), and the Vietnamese government estimates that the cost of building the necessary highways to connect industrial and manufacturing hubs to ports and other cities ranges in the billions of dollars (Lam, 2017).

With a population of 1.4 million, Danang is the third largest city in Vietnam, located in central Vietnam. It is one of only five cities in Vietnam with a Level 1 ranking, meaning that its city government has more autonomy and is not under the

authority of a higher-level provincial government (Tran et al., 2017). Rapid urban growth in Danang has led to new development in the southernmost areas of the city, such as Hoa Tien commune (Singh et al., 2015). In order to serve the newly urbanized areas of the city, the city of Danang built a new road through Hoa Tien commune, with primary funding provided by the Asian Development Bank (Tran et al., 2017). Called the “ADB5 Road” by local residents, the road was built 2.5 meters higher than surrounding areas. Although elevated road construction above seasonal flood levels might be seen as a precautionary climate adaptation strategy, these actions also bring unintended consequences for surrounding areas. A study by the Institute for Social and Environmental Transition found that expanded road construction, residential developments, industrial zones, and even wastewater treatment plans are filling in floodplain areas and exacerbating flooding. The report authors write “The construction of ring roads to service the city has added to existing hazards by obstructing the water’s natural pathways and directing it to the new residential area and beyond, causing harsher flooding in neighboring wards” (Singh et al., 2015).

As demand for developable land grows, the city of Danang is trucking in soil from nearby mountains to fill in floodplains for development of residential, commercial, and industrial projects. These new developments, like the new roads, are usually built at a higher elevation to prevent the flooding, but in trying to protect some residents, others who live outside the protected areas have to suffer from

higher flood waters.

In the city of Quy Nhon, ISET researchers Michael DiGregorio and Van Cao Huynh (2012) studied the extreme flooding that occurred after Typhoon Mirinae in 2009, which killed 22 people. The researchers noted that although the rainfall in Quy Nhon was not particularly heavy, the new highway construction, as well as new industrial and residential infill projects had transformed the floodplain area, blocking the flow of water into the Thi Nai Lagoon, which serves as the outlet for the many upstream rivers and streams that flow through Quy Nhon. In their study, they found that while climate change is projected to change precipitation levels, in fact recent urban development played a much larger role in creating the extreme, and in this case fatal, flooding. Digregorio and Huynh note that in the period after liberation in 1975, the water management system accommodated the natural cycles of flooding and tides, recognizing the value that floods played in supporting the then-agricultural area. However, this water management system changed as the area became increasingly urbanized in the late 1990s. "From an urban perspective, flooding is a risk associated with the destruction of economic value measured in property, labor, and financial capital," they explain. "Unlike farmers, who perceive benefits in normal seasonal flooding, urban property owners see only threats" (DiGregorio and Huynh, 2012). Urban construction and road development, often prioritize the needs of urban projects over the needs of agricultural farmers.

The new master plans for Quy Nhon include construction of dikes for flood protection, yet dikes cannot prevent flooding--they can only serve by displacing flooding to other areas. Thus, the researchers posit that the incremental expansion of flood prevention infrastructure—from elevated roads to dikes —will ultimately undermine the expressed goal. Digregorio and Huynh predict:

If the master plans and project plans for Quy Nhon are carried out, the next flood is likely to result in new calls for flood prevention infrastructure in Dieu Tri, Tuy Phuoc, southern Nhon Phu, Tran Quang Dieu, and Phuoc My. In this way, the incremental process will continue upstream until the entire lower and middle levels of the river are diked. Eventually, the floodways will be so constrained that the protective dike system itself will be overcome (2012).

As demonstrated in these road infrastructure examples from both Danang and Quy Nhon, flooding is not merely some biophysical force to be modeled and planned for. Rather, flooding interacts with the changing human-built environment, which is shaped by political priorities and power relations.

Energy Infrastructure: Long Phu 1 Coal-Fired Power Plant

In the less than thirty years, Vietnam has moved from being one of the poorest countries in the world in the 1991 to being a middle-income country today. Vietnam's investments in its energy infrastructure have played a key role in supporting its rapid economic development. As the Vietnam Energy Outlook Report 2017 declares, "Economic growth requires secure and affordable supply of energy to all of the society participants and economic sectors." The Vietnamese rapid expansion of energy infrastructure in Vietnam has yielded impressive results. In

1998, only half of Vietnam had access to electricity, while today almost the entire country has access to electricity, which has laid the foundation for Vietnam's emergence as new manufacturing hub in Asia (Lam, 2017).

With new factories opening up and rising consumer spending on a multitude of electrical appliances, Vietnam's electrical demand is growing 11% every year, about double the annual GDP growth rate (Williams, 2017). To meet skyrocketing energy demand, Vietnam is increasingly turning to coal. From 2000 to 2015, the share of renewable energy, mostly hydropower and biomass energy, dropped from over half (53%) to less than a quarter (24%) of total energy supply (Danish Energy Agency, 2017). During this same period, the coal usage grew from 15% to 35% of total supply. It is projected that by 2020, coal will replace hydropower as the main source of electricity generation, and that by 2030, coal-fired plants will generate more than half of the country's total electricity (V. P. Nguyen, 2017).

Vietnam's dependence on coal is already harming its citizens' health, and is projected to lead to almost 20,000 excess deaths per year by 2030 due to air pollution, a fivefold increase from the calculated number in 2011 (4,252 deaths). By 2030, Vietnam will be the country most affected by coal pollution in all of Southeast Asia, with 188.8 excess deaths per million people (Nguyen, 2017). For comparison, the calculated number for the second most affected country in the Southeast Asia, Indonesia, is 85.4 excess deaths per million people. Traffic accidents, the number one cause of unnatural deaths in Vietnam today, cause about 106 excess deaths per million people from 2012-2017. Despite these stark statistics and growing protests

from the citizens who are suffering from coal pollution, economic planners feel that Vietnam has few choices, if it wants to continue its growth-oriented development path.

Long Phu 1 is the first of three coal-fired power stations planned as part of the Long Phu Power Center, located in Soc Trang province in the Mekong River Delta, about 230 km outside of Ho Chi Minh City. Financed by a variety of public and private financial institutions, including various export credit agencies in Europe, as well as the Russian development bank Vnesheconombank, the coal plant is expected to cost about \$1.9 billion (Market Forces website, 2018). Once completed, Long Phu 1 will burn imported coal for Australia and Indonesia and is projected to generate 1200 MW of energy and 5.4 million tons of carbon dioxide a year (DeAngelis, 2018).

International environmental organizations and advocacy groups argue that the environmental impact assessment underreports carbon emissions, and that even the false emissions reports violate standards set forth by the OECD for coal financing by export credit agencies, which are the largest source of public financing for coal plants (Ives, 2018). Likewise, private financial institutions, including Citibank, UK Export Finance, and Wells Fargo, have agreed to the Equator Principles which similarly set forth guidelines to ensure that large development and infrastructure projects consider environmental and social impacts in the process of funding approval (Tatarski, 2018). In its June 2017 report “Failure to Comply,” Friends of the Earth International reported how the Long Phu 1 violates both the OECD standards and the Equator Principles that most of the public and private

banks have adopted with respect to financing coal projects. First, they note that despite claims by the project developers, the plant uses a dirtier “supercritical” technology and not “ultra-supercritical” technology¹. Secondly, they note that the environmental and social impact statements were faulty. Thirdly, the project sponsors “will not be able to demonstrate that less carbon intensive alternatives are not possible,” which is part of the OECD guidelines. And lastly, they note that the project is in direct contradiction to Vietnam’s national energy policy, which states an explicit goal of expanding renewable energy infrastructure and investments (DeAngelis 2018).

In addition to the long-term climate impacts from coal plant emissions, many Vietnamese citizens are starting to voice their opposition to the air pollution and resulting health ailments that these coal-fired power plants bring to surrounding communities. In April 2015, thousands of residents of the southeastern village of Vinh Tan in Binh Thuan province gathered to block National Highway 1 for 30 hours after dust from the nearby Vinh Tan coal power plant covered their homes. The coal ash hit around 1,370 households in the Vinh Tan commune and many residents of Vinh Tan reported developing respiratory diseases since coal plant came into operation (Nam, 2015). Nationwide, coal-fired power plants use about 20 million

¹ Super-critical technology, with a thermal efficiency of around 42%, is more efficient than subcritical coal technology, which has a thermal efficiency of around 38%. Ultra-supercritical technology has a 44-47% thermal efficiency. Ultra-supercritical technology is associated with 14% lower sulphur dioxide and other emissions than sub-critical technology. (Myllyvirta, 2017)

tons of coal per year and discharge about three million tons of coal ash, the disposal of which has created further toxic pollution in land and waterways (Nam, 2015).

The Long Phu 1 coal-fired power plant project exemplifies the glaring contradictions between Vietnam's stated Paris Climate Accord goals, and its economic development goals.

Upon hearing that Vietnam had confirmed plans to build another 40 gigawatts worth of coal-fired power plants, the equivalent of about 40 nuclear power plants, World Bank president Jim Yong Kim told a group of world leaders in unscripted remarks that "If Vietnam goes forward with 40GW of coal, if the entire region implements the coal-based plans right now, I think we are finished. That would spell disaster for us and our planet." (Goldenberg 2016).

Although it was perhaps a surprise to the Vietnamese government to learn that their energy choices have such an impact on global climate change, Kim's assertion is corroborated by climate scientists who have essentially said that coal power needs to be quickly phased out by 2050, if the world is to meet its agreed goal of keeping global warming to less than 2°C, which is a politically-determined threshold in which climate change impacts which are perceived as "dangerous" and the potential for runaway climate change through positive feedback loops increases (Plumer 2014). Since coal-fired power plants can take up to a decade to build, Vietnam's plans to build Long Phu 1 and to add about 40 Gigawatts of coal-fired power by 2030 will definitively lock Vietnam into dirty coal power generation well past 2050, the date at which scientists have said that coal use must have ceased to

avoid more than a one-meter sea level rise, which would force millions of Vietnamese to migrate from parts of the Mekong River Delta and other low-lying coastal regions (Brown, 2014).

Yet nowhere in Vietnam's many climate adaptation plans, is the halting of coal-fired power plants mentioned. Climate adaptation literature considers actions that reduce greenhouse gases to be "climate mitigation" which is a separate category of planning and action. This false separation between climate adaptation and climate mitigation strategies allows and contributes to contradictory energy development plans and climate change adaptation plans that are at odds with one another.

Chapter 3: Interviewees' Four Main Explanations for Maladaptation

My interviewees offered four general categories of explanations for why cities are failing to properly build adaptive capacity, in spite of their climate adaptation plans and goals.

1) Lack of information about climate change

The first could be broadly called the “lack of information” theory, in which many planners believe that city officials lack accurate climate data about climate impacts at the local scale. In addition, To begin with, my interviewees explained, some local government officials do not fully understand how climate change will impact or is already impacting their particular community (personal interviews, 2017). Indeed, my interviews did reveal some lack of understanding of climate impacts. Several officials in Hanoi, where many of my interviews took place, argued that climate change impacts were less clear in Northern Vietnam, because Northern Vietnamese cities didn’t have the same geography as the low-lying Mekong River Delta, nor did it suffer from as many typhoons as Central Vietnam. I heard this assessment several times, and does reflect a common misunderstanding that the impacts of climate change are limited to the biophysical impacts of climate change that occur within the boundaries of a particular city or province or country. This misunderstanding does reflect a lack of information about how climate change can trigger impacts on industrial and agricultural supply chains and human migration patterns that reach far beyond the borders of a particular city.

In addition, people pointed to lack of resources to gather accurate localized information. For example, planners at the Department of Natural Resources and Environment in Ho Chi Minh City pointed out the need to “invest in upgrading the water quality monitoring system” as a key adaptation priority, which would allow them to make more informed decisions about saline water intrusion and water pollution (UN-HABITAT, 2012). The ranges of uncertainty which are inherent to projections of increased rainfall or temperatures also made it difficult for planners to incorporate climate projections into their plans. In this first causal explanation, the problem can be solved through prioritizing education and capacity-building to help planners deal with uncertainty and develop more robust plans that can adapt to a range of climate scenarios. Many foundations and development agencies have prioritized this kind of education and capacity-building, as well as investing in better climate data collection and monitoring systems and more effectively disseminating climate data to planners (Nguyen et al., 2014). And the relative lack of financial resources can be solved by increased investment by donor and financial institutions, which can in turn be used to support necessary investments in both hard infrastructure, and in governmental capacity-building.

2) Uncoordinated planning processes

My interview participants also offered a second general theory for maladaptive development projects which focused on uncoordinated planning processes, including lack of communication and coordination between cities and

agencies. For example, they described instances in which the Department of Construction or the Department of Transport, for example, approves development and construction on an area that has been mapped by the Department of Natural Resources and Environment to be a floodplain. Likewise, many climate change impacts, such as flooding are exacerbated by the lack of regional coordination between provinces. For example, hydropower dams upstream may be controlled by different agencies and be in a different jurisdiction than the downstream towns and cities which experience the impacts from the water flows. Hydropower authorities have an economic incentive to operate at full capacity, which makes it challenging for them to reduce reservoir levels when rainfall is uncertain (Tran and Tran, 2015). Thus, when unexpected heavy rainfall occurs, the dam operators often are forced to release large amounts of water at exactly the time when downstream areas are already experiencing flooding due to heavy rains. The construction of new residential, commercial and industrial developments inevitably leads to impacts elsewhere, as floodplain areas filled and water is redirected to lower-lying areas.

To address this uncoordinated development, climate adaptation practitioners recommend: more coordination between cities, the development of regional plans so cities can coordinate with other cities, and mechanisms for integrating flood and drainage information into various construction and development plans (Moench et al., 2011a; Tran and Tran, 2015). In 2017, the Vietnamese Ministry of Planning and Investment an integrated inter-sectoral

planning law, which was adopted by the National Assembly in November of 2017 (Nhan Dan, 2017). However, one of my interviewees cautioned:

If the National Assembly approves this law, it is a good step, but implementing it will be challenging. The Ministry of Construction and other ministries seem to not want the plan, because they may lose their funding, with their own budget, and control over their plan. (personal interview, 2017).

As his comment highlights, mandating increased coordination does not mean that the departments and ministries will change their practices, given their own self-interests. Increased coordination requires training and the development of new processes to enable city departments and jurisdictions to coordinate and implement plans. Regional coordination along bioregions and watershed regions, requires the creation of new institutional structures such as river basin management organizations, which cross existing jurisdictional boundaries, and may threaten existing spheres of power, funding, and decision-making.

3) Lack of public consultation and participation

Vietnam's Constitution and political culture prioritizes public participation in decision-making. Two familiar slogans in Vietnam that reflect this participatory emphasis are: "People know, people discuss, people do, and people monitor" and "Government of the people, by the people, and for the people" (Nguyen, 2009). Vietnam has a wide array of mass organizations which serve to facilitate public involvement in civic life, such as the Vietnam Women's Union, the Farmers' Union, the Youth Union, and trade unions. Participation in mass organizations does not,

however, mean that people are regularly engaged in land use and development decisions (Wells-Dang et al., 2015). My interview participants acknowledged that the top-down planning culture in Vietnam leads to development projects that frequently do not engage the communities most impacted, and that thus frequently increase certain communities' vulnerability. For example, Toan Vu, a Technical Consultant with ISET explains:

Finding successful climate change adaptation examples is not easy. Vietnam has invested a lot of money in climate adaptation projects, for example, the mangrove projects. But if you don't involve local people in the project, even if it creates 10-100 hectares of mangrove, if you don't engage people and address their livelihoods, it's not successful. (personal interview, 2017)

Vu described one project in Thanh Hoa province in which the government engaged "experts on mangrove plantations," without the participation and decision-making of the poor fisherpeople and shrimp farmers living along the coast. Because they did not involve the local residents, the planners failed to consider how residents would generate income during the early years of the mangrove plantation development. Furthermore, because the local residents were not involved in the project, the organizers were not able to effectively engage them in maintaining the mangrove forests after they were planted (personal interview, 2017).

All three of the infrastructure examples that I highlighted earlier, including the Thai Binh industrial zone project, the Danang and Quy Nhon road and highway projects, and the Long Phu 1 coal-fired power plant projects, were critiqued for the lack of public consultation in the decision-making process. For example, in the case of Can Tho city, a researcher from the Vietnam-Japan University explained that

government planners can frequently circumvent requirements for public consultation by purposefully not engaging the proper stakeholders. “For example, if Can Tho [city] wants to sell the land and rezone it, they will have the public meeting required, but they will invite the wrong person to come,” he explained in his interview. Likewise although Vietnam does require environmental impact assessments, my research revealed that interviewees generally did not believe that, in the face of extreme pressure, many planners carried out environmental impact assessments that were not rigorous or accurate.

4) Governance issues: Accountability and corruption

Lastly, my interviewees pointed to government corruption and a lack of accountability as another key factor in driving maladaptive and harmful development projects. As a one-party state, Vietnam has an executive, legislative, and judiciary branch controlled by the Communist Party of Vietnam. Mass organizations such as the Women’s Union, Youth Union, and the General Confederation of Labor, are tightly connected to the government and the party (Thayer, 2008). In the post-*Doi Moi* period, the government has attempted to strengthen its electoral processes, but its elections are still carefully controlled (Thayer, 2008). According to several interviewees, local leaders are frequently more concerned with impressing their superiors who appointed them, rather than to the local residents whom they ostensibly lead (personal interview, 2017). Moreover, the five-year cycle of leadership encourages a short-term focus, since

leaders are frequently appointed to new positions every five years. One NGO workers explained:

Each official has four to five years, and they want to have some big projects during their mandate. It's the thing people will look at to evaluate. "I did three or four big projects." Usually the impacts come later. But their higher ranking bosses, look at it as an indicator that someone is doing a good job or bad job (personal interview, 2017).

The appointments and relatively short terms of office create an incentive to produce immediate achievements within five years, even if the long-term costs of the project, particularly with respect to future climate change impacts, may be detrimental. The lack of accountability to local constituents means that many communities have little voice in shaping the infrastructure development projects that directly affect their communities and livelihoods.

Many of my interviewees described a focus on short-term economic gain, even at the expense of long-term costs. In contrast to the popular conception of government corruption as an individual gaining large amounts of money illegally, Nicholas Hildyard (2016) argues that there are many common practices, such as a revolving door between private industry and public office, which while not overtly illegal, do represent a corruption of the government's ostensible purpose to protect the common good. A climate change researcher at Vietnam-Japan University points out that although the urban design and planning process is frequently carried out by consultants working with the provincial government. "Most of the planners are on the side of the private sector," he explains. "They just want to buy land and sell the

house—they don't care about the temperature increase, sea level rise, or flooding. They just want to know how much money they can get, and once they get money, they can move on" (personal interview, 2017). In the interview, he described how the private sector companies were driving the planning and development of cities, often in direct contradiction to the cities' master plans. His responses suggest that the local government's deference to capital and relative lack of capacity renders local planners unable to effectively regulate urban development.

Although there is truth to all of these theories with regard to the lack of information and various failures and challenges of the planning process and lack of accountability, in this paper I propose a different explanation. I argue that in fact, the recurring maladaptive actions and projects are inherent in the economic development model that Vietnam has chosen, and that even with more information, better coordination, more participatory planning processes, and even more democratic governance, the inevitable contradictions between growth-oriented economic development and climate resilience would still be happening. By focusing so narrowly on better climate hazard and risk information and stronger planning processes, climate change adaptation scholars and practitioners tacitly suggest, through omission, rather than overt declaration, that climate change adaptation can be tackled without challenging power relations or the existing economic system and development model. In the next section, I explore the ways in which the political economy of Vietnam—from its economic development strategies, dependency on

international finance, and structural reforms—shape climate change resilience outcomes.

Chapter 4: Political Economy of Vietnam: From Plan to Market

In order to understand why urban development is going in opposite direction from climate adaptation plans, we need to understand the history, governance, and political economy of Vietnam, issues which are noticeably absent in climate adaptation literature. Over the past twenty years, Vietnam has engaged in a gradual transition from a socialist state-planned economy to a more market-oriented capitalist economy. For several decades during and after its wars for national independence (from 1950s-1986 in the North, and from 1975-1986 in the South), Vietnam was organized by a centralized state-planned economy. With agricultural collectivization, markets were abolished during this time, and a rationing system distributed food, cloth, and other essential items. This period of strict state planning and rationing is known as the Subsidy Period (*thời bao cấp*). The collectivization of agriculture, combined with a U.S. embargo, led to decreased agricultural production and widespread hunger (Pham, Trinh, and Nguyen 2007). Popular memory and discourse describes these years as a period of tremendous scarcity and hardship.

In 1986, Vietnam, announced its *Đổi Mới* (Renovation) policy, which announced a shift towards a more market-oriented economy. Subsequently, agricultural collectives were ended, and individual households were allowed to farm their own plots of land again, which turned Vietnam from a net importer to a net exporter of rice. The rationing system was abolished, and private businesses were

allowed. The market reforms, as well as the normalization of trade relations with the United States led to a period of impressive economic growth.

Vietnam has explicitly chosen an export-led, foreign investment-dependent development model as a path out of poverty for its people. In many ways, this export-oriented growth model has been wildly successful. Over the past three decades, from the 1990s to the present, Vietnam transformed itself from one of the poorest countries in the world, to now a lower middle-income country. Vietnam's economic growth rate ranged between 7-8% from 2003-2007, and now is hovering between 5 and 7% from 2008-2016, far outperforming most other countries. The poverty rate has fallen from an astounding 58% in 1993 to 14.5% in 2010. (World Bank website, "Vietnam Overview"). In light of these impressive results, the World Bank has declared Vietnam "a development success story." (World Bank website, "Vietnam Overview").

The World Bank notes that between 1993 and 2012 the average income of the bottom 40% in Vietnam grew at an annual rate of 9 percent. Although they praise this as "one of the highest rates of growth for the bottom 40% in the world," they fail to mention the much larger rates of growth for middle and upper income Vietnamese, particularly the very wealthiest Vietnamese. Today, Vietnam's 210 super-rich earn more than enough in one year to lift 3.2 million people out of poverty and end extreme poverty in Vietnam (Oxfam 2017). This economic

inequality undermines the poverty reduction goals that the Vietnamese government has set.

Vietnam is not unique in this growing inequality, which has grown in parallel with the liberalization of its economy. Indeed, the transcendence of neoliberal ideology has led nation-states around the world to steadily, and often rapidly, move away from state regulation and intervention towards more international free market economies over the last 40 years. In Vietnam, however, the one-party rule by the Vietnamese Communist Party does lend unique attributes to its economic restructuring. Neil Brenner and Nik Theodore (2002) use the term “actually existing neoliberalism” to emphasize that neoliberal restructuring operates differently in each place, adapting the “pre-existing uses of space, institutional configurations, and constellations of sociopolitical power” (361). Vietnam’s decades-long history of one-party state planning and governance has profoundly shaped the political and regulatory context in which its now market-led restructuring is taking place. As Vietnam has become increasingly integrated into the global economy over the last twenty-five years, its economy has likewise been transformed through neoliberal restructuring, including the privatization of parts of its state-owned enterprise sector, as well as the liberalization of its trade both within Vietnam and with other countries.

Despite the economic changes and rapid integration into the global economy, Vietnam’s institutions, culture, and practices create a unique brand of neoliberalism,

which Bob Jessop (2002) would call “neostatism,” in which the state plays a more active interventionist role to promote the integration of Vietnam into the capitalist global economy. Ultimately, there is no such country or place practicing what might be considered “true” or “pure” neoliberalism. The neoliberal project itself is rather a contradictory process, full of advances and regressions, new additions and adaptations to local political forces. Thus Peck and Tickell (2003) use the term “neoliberalisation” to convey that rather than a permanent condition, neoliberalization is a continuing and always-contested process between local institutions, agents of resistance, and institutional legacies. In Vietnam, the 1990s and early 2000s represented an early stage of neoliberalisation, which they call “Roll-back” neoliberalism. In this phase of reaction, the many facets that represent the older interventionist welfare state are significantly scaled back and attacked, both rhetorically and concretely. In this phase, public services are privatized, labor protections may be shifted to give capital more power, the financial sector is often deregulated, and taxes are often cut in the name of increasing economic growth. After the destruction of the Keynesian state, Peck and Tickell describe the next phase as a more proactive phase of “Rollout neoliberalism” in which involves the construction of new institutions and structures to consolidate the new neoliberal regime (2003 p 163). In Vietnam, the destruction of the socialist state does not necessarily entail the destruction of the Communist Party nor does it mean the end of one-party rule, but it does mean a fundamental transformation of the purpose of the Party and government apparatus. Rather than the prior socialist focus on the

provision of services and redistribution of wealth, the Communist Party under market liberalization instead focuses on creating new regulatory and policy frameworks that support and facilitate neoliberalized state forms and modes of governance, in which public services and assets are increasingly transferred to the private sector to manage and profit from. The state plays a leading role in economic and social restructuring, including public-private partnerships under state guidance, and a move towards regulated competition rather than overt state control. In this way, despite the continuing presence of the government agencies in urban development, Vietnam's market-oriented reforms represent strategies that advance, rather than challenge, private profit-driven interests. In the next section, I explore the dominant narratives of economic development and progress which justify the growth-at-any cost development model.

Storylines of Economic Development and “Catching Up”

An understanding of Vietnam's dominant narrative of development is key to understanding how climate change adaptation is conceived and implemented in Vietnam. In several informal conversations, people referenced the idea that Vietnam is “x number of years behind” various developed countries like the US. Therefore, the dominant storyline of Vietnam conceptualizes development as a linear progression with some countries “further behind” Vietnam and other countries “ahead of” Vietnam,

as in Japan, the US, and European countries. Increasing wealth, as measured by Gross Domestic Product, as wealth as outward signifiers of wealth, such as number of millionaires, also symbolized some sort of progress (personal interviews, 2017). For example, when asked about his vision of a developed Vietnam, one official from the Urban Development Management Division of the Ministry of Construction, replied:

If we can develop like Thailand, or like Malaysia, within the next 50 years, that would be my own vision. Vietnam should be another Malaysia in the next 40-50 years (personal interview, 2017).

This linear conceptualization and version of history reinforces the belief that “there is no alternative” to integrating into the global free market, as former British Prime Minister Margaret Thatcher once famously declared. Thus, the only question becomes how much should the government privatize and how quickly should be the pace of market reforms? It effectively dismisses any discussion about what kind of development needs to take place, since obviously in a linear progression, it’s only forward or backward.

My interviews revealed a general sense of pride in how quickly Vietnam had moved into lower middle-income status. In general, economic trade liberalization and integration into the global economy was seen as part of a larger process of Vietnam joining an advanced global society. In fact, in many ways, I heard economic reforms consistently conflated with political reforms, implying that any actions that devolved power away from the one-party state, were in some way connected to

more liberal political reforms, such as increased freedom of speech or more democratic governance. Erik Harms describes a similar conflation of political and market-based freedoms in *Luxury and Rubble: Civility and Dispossession in the New Saigon* (2016):

After many years of socialism, when all property was nationalized, this is why so many Vietnamese people consider the return of private property—officially understood as the right to transfer “land use rights”—as a stepping stone on the pathway to increased freedom. (Kindle location 5025 of 7048)

This sense of globalization as a civilizing process and a sign of progress, was a recurring theme in conversations with both officials and ordinary people on the street.

Overwhelmingly, my interviewees expressed great hope in Vietnam’s steady integration into the global economy. One of the top leaders at the Academy for the Construction of Cities, a training arm within the Ministry of Construction, which trains managers throughout the country, stated “The younger generation will study abroad and become global citizens. They’ll take the lessons and progress of the world, and create new ways of thinking” (personal interview, 2017). In statements similar to this, I heard my interviewees express a hope that the younger generation in Vietnam, whose increasing ability to speak English, access the internet, and study abroad, would be able to help Vietnam “catch up” to many more “advanced” countries such as Korea or Japan.

In my interviews, the popular narrative about Vietnam's economic development went something like this: The years under a state-planned economy as years of tremendous suffering, hunger, and hardship, and generally agreed that the economic stagnation of the period indicated a fundamental flaw of a state-planned economy. Forced to change course, in 1986, the Communist government announced the policy of *Đổi Mới*, or Renovation, in which the government announced it would begin to reduce government controls and allow free markets to operate. The reform process was slow to start, but as the Vietnamese government has loosened controls and joined the global market economy, Vietnam has developed quickly, and people are much better off today. In this popular narrative, the destruction of coastal and wetland ecosystems, massive deforestation, urban sprawl, and loss of farmland and biodiversity, are regrettable, yet justifiable under the current master narrative that this is an unfortunate phase that Vietnam must pass through in order to 'catch up' with the rest of the world in terms of economic development.

The globally hegemonic storyline of development as economic growth has a powerful influence on Vietnam's own vision for its development. In its publicly stated strategic plans and goals, Vietnam has put forth ambitious urban development goals, influenced by the image of development from the models it sees in the Global North. For example, one presentation from the Ministry of Construction declares a government goal to reach 70% urbanization by 2050. The

reasoning, according to this presentation, is that this urbanization ratio would then make Vietnam's ratio "equal to developed countries." (Ministry of Construction presentation, 2011). The logic seems easy to understand: If Vietnam wants to aim to be a developed country, it should therefore aim to have an urban/rural population ratio that is similar to that of developed countries. This dominant narrative of Vietnam "catching up" with the rest of the developed world hugely shapes Vietnam's approach to development and climate change adaptation.

Jason Hackworth (2006) describes "the discursive naturalization of neoliberalism" in which "neoliberalism gets transformed from a political moment into something that is natural, democratically chosen, or completely predictable." Currently, the dominant discourse in Vietnam also suggests that there is a general consensus that governments are less efficient and effective than the private sector. This discursive naturalization of neoliberalism is also assumed in climate change adaptation approaches by international financial and development institutions, and necessarily limits the range of policy options that are presented.

The consistently high GDP growth rate within Vietnam over the past thirty years and the rapid reduction in poverty rates seem to be concrete evidence of the superiority of the market liberalization strategy. Indeed, the liberalization of the economy does seem to have unleashed tremendous entrepreneurial energy in Vietnam (Kim, 2008). After decades of being excluded from the global economy through wars and sanctions, a common perception is that Vietnam, by opening up to

global investment and joining the World Trade Organization in 2007, is “catching up with the rest of the world.” But this narrative ignores the larger political and economic forces which shaped economic outcomes in Vietnam.

The US sanctions against Vietnam (starting in 1951 in North Vietnam and going from 1975-1994 for all of Vietnam, after the 1975 reunification) cut Vietnam off from trade, investment, and loans from not just U.S.-based firms and banks, but also from firms and banks in other countries, who were pressured by the U.S. to honor the U.S. embargo (Fallows 44). Because of the US influence, the World Bank, International Monetary Fund, and Asian Development Bank also were prevented from giving loans, which could have been used, following the path of other countries, to rebuild infrastructure in the country after decades of devastation and war (Fallows 45).

The decades-long US embargo severely impeded the Vietnamese economy and contributed to the low economic growth rate. Surprisingly, however, the U.S. embargo is not often mentioned in the mainstream narrative about these two decades of reconstruction and recovery, which are universally remembered as times of incredible hardship and suffering. Rather, the popular discourse emphasizes Vietnamese agency and responsibility for their policy choices. The period in 1986 of *Đổi Mới*, is when Vietnam “*mở cửa*,” or opened its doors, to the global economy. No mention is made of the US sanctions, which kept the door tightly closed.

In a similar manner, larger global economic constraints is rarely mentioned in present-day discussions of Vietnam's economic development policy and evolution, or in discussions on climate change adaptation. But Vietnam does not make these decisions in a vacuum. The next section explores ways in which Vietnam's export-oriented growth model constrains how much choice or autonomy Vietnamese cities have to control their increasingly market-oriented urban development. The following section explores the substantial contradictions and challenges of Vietnam's apparent economic success, including its growing dependence on debt to fund urban infrastructure and development.

Urban Entrepreneurialism and the Provincial Competitiveness Index

Under *Đổi Mới*, Vietnamese cities, particularly the larger Tier 1 cities such as Can Tho, Hanoi, Hai Phong, Danang, and Ho Chi Minh City, have more autonomy to determine their economic growth strategies. The decentralization and devolution of responsibility, means that local city governments need to find local sources of revenue to invest in their local infrastructure, both for their own residents, and also to attract outside investors. Swyngedouw (2010) describes the simultaneous diffusion of power both downward (increasing power and responsibility to local governments) and upward (increasing power of global institutions like finance capital) as "glocalization." As a Director at the Academy of Managers of Construction, which trains urban managers throughout the country, explained:

Each mayor is like the CEO of his own city. How can he develop strategies to attract investment, how to develop culture, improve infrastructure so his city can compete? How to develop cluster economies, so industries can agglomerate? How to connect to the global network, to create opportunities. For example, how can your city attract companies and rich people to invest in your city to create opportunities? You need to have cooperation between corporations, government, and citizens. (personal interview, 2017)

His rhetoric reflects a fundamental shift in how Vietnamese city officials envision their responsibility. Whereas in the pre-*Doi Moi* era, more autonomous rural development was emphasized, today, cities are seen as a key site for industrial development that can attract outside industries and investments. City managers, thus, are being trained to increasingly think about agglomeration economies and public-private partnerships to attract investment.

Although land is still owned by the state, local governments have the ability to sell land use rights, that range from short-term agricultural land leases to long-term urban residential leases, which can be passed on to children. Revenue from the sale of land use rights makes up a significant portion of cities' revenues, yet because these are one-time fees and because there is not a significant property tax structure in place, cities do not have a dependable stream of income from property taxes (Trinh and McCluskey, 2010: 55). Given the rapid, messy, and still unfolding transition from a collectivized state-owned property system now to a quasi-private property system of land use-rights, the process of setting up a system of valuation for properties is challenging.

In this absence of a significant property tax, cities are dependent on these one-time sales of these land use rights, which creates a structural incentive sell land and to continue urban expansion. In addition, because agricultural land is cheaper than urban land (Nguyen, S. 2009: 19), it also creates incentives to develop onto farmlands, rather than urban land, since farmland is much cheaper, so the greatest profit can be made. These structural incentives play an important role in driving urban expansion and the loss of surrounding farmland, and the subsequent displacement of residents in the outer less-developed periphery of cities.

Over the last two decades, large Vietnamese cities become increasingly more responsible for setting up the infrastructure needed to attract foreign investment. Driven by the need to attract capital, cities are perpetually in competition to become an “international” city that is more attractive to foreign investors than other cities (Harvey 1973). Yet in Vietnam, the criteria for what makes a region attractive is unclear to many leaders. Having invested millions in building freeways and setting up industrial zones, some cities and provinces are confused to find that their industrial zones sit under-utilized (Q. Nguyen, 2017). The blame is always put back on the government for its failure to provide an attractive environment for investors (Shira, 2017)

When asked about his vision for his province in the next 20 years, the second-highest ranking provincial officer in Quang Nam province declared that he wanted to make his province one of the top twenty highest-ranked provinces in the

Provincial Competitiveness Index (PCI). Developed by the Vietnam Chamber of Commerce with support from USAID, the PCI Index ranks Vietnam's 54 provinces based on a variety of indicators, including perceptions of land access and security of tenure, entry costs, transparency and access to information, informal costs (bribery), time costs and regulatory compliance, legal institutions, labor and training, and business support services, (PCI website).

The fact that the PCI would have such an influence on a city leader highlights how important attracting outside investment has become to the city leaders, often at the cost of other regulatory responsibilities. The PCI explains, for example, that "Time costs and regulatory compliance" reflects "how much time firms waste on bureaucratic compliance, as well as for how long firms must shut down for inspections by local regulatory agencies." The indicators for this measurement include: "the percentage of firms spending over 10% of their time dealing with bureaucratic regulations", the median number of inspections by any agency; and a subjective assessment if "government officials have become more effective (%Yes)." The political ideology embedded in the PCI sees state regulation as "bureaucratic" and a "waste" of a firm's time, calling for a "rollback" of such meddlesome state intervention. Yet not all government intervention is considered negative, since the PCI looks favorably upon increasing public investments in job training and business support services. These business support services, which include "private sector trade promotion, business partner matchmaking, and provision of industrial zones

or clusters, reflect the corollary “roll-out” of new neoliberal institutions and public-private partnerships required by international capital today.

In addition, Vietnam’s one-party state can also guarantee the legal suppression and control of workers through the Vietnam General Federation of Labour, which is one of the many mass organizations led by the Communist Party. Independent trade unions are prohibited in Vietnam, and the state actively intervenes to keep wages and labor resistance low, in order to remain competitive (Human Rights Watch 2009). As *The Economist* reports:

The foreign chambers also complained about Vietnamese labour laws that limit workers to 200 hours of overtime a year, or 300 hours in some circumstances. This is far below the 900 hours of overtime allowed in other countries in the region, such as Thailand and Malaysia, and means that some companies struggle to fill orders during the busiest times of the year. ... For some companies, the prospect of expanding operations in countries such as Indonesia, Myanmar and Cambodia appears increasingly attractive. The latest EuroCham Vietnam survey found that 34% of respondents planned to ramp up their operations in the country, compared with 42% in the previous poll. (The Economist Intelligence Unit, 2013)

In these ways, the authoritarian neoliberal city represents another manifestation of the new global cities emerging from the neoliberal discipline being imposed throughout the world.

Given this context in which the Vietnamese government’s largest priority is to stimulate economic growth, the separation of discussions of economic development strategy and climate adaptation strategy undermines the potential for

success of the adaptation strategies, and in the long-term, the economic development strategies as well. The next section explores the role that international finance and capital play in constraining the choices for development projects that build climate resilience.

Role of International Finance and Capital in Determining Development

After decades of war and sanctions, Vietnamese cities needed and still need capital to invest in roads, freeways, water systems, and other large-scale infrastructure systems for their own urban development and also to attract more outside investment. In order to build the freeways, bridges, and water and energy infrastructure demanded by residents and foreign investors, Vietnamese cities have to take out loans of often hundreds of millions of dollars from both public and private financial institutions. These international financial institutions exercise tremendous power over Vietnam's economic and political restructuring through their loans, as well as through their advice, technical assistance, and assessments of Vietnam's macroeconomic conditions and investment environment.

For example, from 2012-2016 the World Bank committed to supporting economic and policy reform in Vietnam through its five-year National Partnership Strategy (2012-2016), which focuses on "manpower development, market mechanism enhancement, and infrastructure development" (Saigon Times, July 28, 2012). Victoria Kwakwa, the World Bank's Country Director for Vietnam, points out that the World Bank would provide \$1-\$1.5 Billion in financing in 2012 alone to

support these strategies. The World Bank's significant lending and aid financing to Vietnam indicate its growing influence in Vietnam's policy reforms and state restructuring. Statements from World Bank Vice President for East Asia and Pacific region Pamela Cox, and from Vietnamese Finance Minister Vuong Dinh Hue, during Cox's visit to Hanoi on July 26, 2012, highlight how the World Bank loans are intended to build a legal framework for the restructuring of state-run businesses" (Nhan Dan newspaper, July 26, 2012). Given the power asymmetry between the World Bank and Vietnam, it's not surprising that international institutions like the World Bank are often invited to help essential rewrite the legal frameworks and policies in Vietnam. Thus, when Cox urges the country to "boost the reform process, and restructure public investment, the financial sector and State-owned enterprises" (Saigon Times, July 28, 2012), these recommendations have a powerful influence on Vietnamese policy, backed up by hundreds of millions of dollars in loans that are conditioned on Vietnam taking steps towards these financial and state industrial sector reforms.

At the end of June 2017, Vietnam is no longer eligible for most concessional financing (with lower interest rates and more generous repayment periods) from the World Bank, due to Vietnam's entrance into middle-income status. The World Bank's lead economist in Hanoi, Sebastian Eckhardt, explained in an interview that "Vietnam's financing needs are growing rapidly, and official financing will not be enough to meet the development needs of the country -- so an increasing share of

the financing will have to be mobilized from capital markets.” (World Bank press release 2016). Thus, in the last few years, Vietnam has increasingly had to turn to the capital markets to sell bonds which pension funds, sovereign wealth funds, and hedge funds can purchase.

Vietnam’s dependence on private international financing for major infrastructure projects has huge significant impacts on its economic development strategies. Paying back these loans requires foreign currency, and the only way to get foreign currency is through exports. The export-driven development strategy manifests itself in urban development through the prioritization of industrial zones, or industrial parks, which consist of land that has been set aside with specific state strategies to attract new manufacturing plants. Public funds in these industrial zones include investments in freeways, electricity and energy infrastructure, and access to water (Shira, 2017).

This orientation towards external markets means that domestic needs and consumption are often neglected or less emphasized. For example, infrastructure investments to help the urban poor have access to basic services go unfunded, while investments are funneled instead to polluting industrial zones that offer valuable foreign currency (2010, Hildyard). Moreover, infrastructure investments prioritize the rate of return on investment, often at the expense of building climate resilience. Michael Digregorio pointed out that in this new age of market liberalization, it can be difficult to even know where the investment is coming from. “Someone could be

building a new resort in Danang with a company registered in Vietnam, but you can't see that the funding is coming from Korea, or Japan, or has an off-shore subsidiary," he explained. "You can't see Chinese money." Foreign investors looking for higher profits are less likely to feel responsible for communities and ecosystems that are located far away.

Thus, Vietnam's climate change adaptation strategies are heavily influenced by the directives and priorities of the international financial institutions that also shape their climate adaptation and economic development strategies. In this way, Vietnam's liberalization means that the state is not necessarily being dismantled, but rather is being reformed as a more effective vehicle to advance market-led development. The next section explores the ways which the Vietnamese state is transforming its role in the post-socialist economy.

The "Rollback" of Corporate Taxes and State-Owned Enterprises

Under Vietnam's unique form of neoliberalism, the one-party state retains complete control over all levels of government, and plays an active role in investing public money to attract private investment. For example, Prime Minister Nguyen Xuan Phuc recently announced in March of 2018, that Vietnam would be cutting the corporate income tax rates from the current 20-22% to 15-17% (Nhan Dan 2018). In an effort to make Vietnam more competitive, Prime Minister Phuc also said that tax reform and creating a favorable business environment were top priorities of Vietnam's government (Nhan Dan 2018). The rollback of corporate taxes is a clear

example of the shift in the role of the Vietnamese state, as reduced tax revenue means fewer funds to invest in social services.

The restructuring of the state-owned enterprise sector is another example of the neoliberal project to “roll back” various forms of state intervention as part of a state-led market liberalization process. In the 1970s and 1980s before *Đổi Mới* reforms, state-owned enterprises (SOEs) in Vietnam operated “in a highly centrally planned and subsidized environment.” Prior to 1986, “the state assigned to SOEs plans which had been approved by higher government levels, which included a system of targets, such as gross output, total value of production, main products, totally payroll, profits, and transfers to the government budget. The government supplied the main materials, provided the markets for the products, and set their selling prices.” (Nguyen and Tran 1996). Present-day SOEs are more autonomous and responsible for their profit-making, and thus have become more market-oriented. Nonetheless, SOEs remain powerful in the Vietnamese economy and critics decry SOE’s poor performance, arguing that they drain government resources, without clear transparency about decision-making and profits.

According to the World Bank and other general international financial institutions, the “inefficiency” of SOEs is holding back the competitiveness of the Vietnamese economy (Hai and O’Donnell, 2017; “World Bank Wants to Help Vietnam Speed Up Reform,” 2012). Today, the World Bank and Asian Development Bank continue to call for the restructuring of the SOE sector. “The majority of the

SOE sector in Vietnam is not using the public resources in the most efficient way,” Victoria Kwakwa, the head of the World Bank office in Vietnam, recently stated. “To keep moving forward to reform these two key sectors will be critical for enhancing the competitiveness of Vietnamese economy” (Xinhua, March 30, 2012).

The reform of the state-owned enterprise sector in Vietnam has involved converting small and medium-sized state-owned enterprises into joint stock companies with limited liabilities, (Asian Development Bank Newsbrief, December 22, 2011). According to the ADB website, “many of the remaining SOEs are large, complex and weak performers, accounting for 40% of assets in the enterprise sector.” Following up on an earlier “multi-tranche financing facility,” another grant of \$1.2 million will be devoted to provide technical assistance to the Ministry of Finance to “update institutional and policy frameworks governing SOE restructuring, drawing on lessons learned from pilot restructurings.” Despite significant concerns and critiques of the privatization process becoming a source of windfall profits for some well-connected elites, the ADB, World Bank, and other international financial leaders continue to push the drumbeat for privatization. The pressures to privatize state-owned enterprises mark a fundamental restructuring of Vietnam’s economy (Janssen, 2017). From the financial sector to the state-owned enterprise sector, Vietnam’s economy is undergoing a structural adjustment that is driven by its need for external capital, primarily in the form of loans from international financial institutions like the World Bank and Asian Development

Bank. Increasingly, countries giving Overseas Development Assistance (ODA) are replacing funding for development aid with “climate finance” to encourage climate mitigation and adaptation projects (Brown et al., 2010). In this way, Vietnam’s climate change adaptation strategies are heavily influenced by the directives and priorities of the international financial institutions that also shape their economic development strategies.

Public-Private Partnerships and Infrastructure as an Asset Class

Vietnam’s turn to public-private partnerships is one example of the increasing power of private capital in shaping infrastructure development choices. Vietnam’s decision to focus on export-oriented development means that a large amount of industrial infrastructure must be built to attract foreign investors. Vietnam currently invests 5.7% of its GDP in infrastructure, the highest rate in Southeast Asia (“Vietnam Is Heavyweight Among Asia’s Infrastructure Spenders,” 2017). However, the Asian Development Bank estimates that Vietnam needs at least \$480 billion from 2017-2030 to meet its growing list of infrastructure needs as an industrializing country, including highways, dike systems, ports, industrial zones, and power plants. (Janssen, 2017). Arguing that governments do not have enough money to pay for the vast amount of infrastructure needed for Vietnam to become a leading export-driven economy in Asia, multilateral development banks like the World Bank and China’s new Asian Infrastructure Investment Bank (AIIB) are encouraging Vietnam to “leverage domestic and international capital markets, and

attract private investments” to fund export zones, transportation corridors and other industrial infrastructure (Lauridson, 2017, *UNESCAP 2017*).

The increasing dependence of Vietnam on public-private partnerships to fund industrial and even basic services infrastructure represents the neoliberal expansion of state institutions to roll back the responsibilities of state governments, while advance the power and control of the private sector. These public-private partnerships come in a variety of forms, from BOO (Build-Own-Operate) agreements to BOT (Build-Own-Transfer)² to other complex arrangements, but what they share in common is some kind of contractual guarantee from the government of profit. As Jean Perarnaud of Partners Group, a private equity investment management firm, explained, “For us, infrastructure is stable, contracted cash flow for the long term” (as quoted in Hildyard 2014). This steady cash flow comes from contractual agreements that governments sign, giving payment guarantees, revenue guarantees, and legal rights to keep the state’s infrastructure until the state has paid its debts to the companies. Governments must provide some government-backed guarantees of long-term profitability; thus the government shoulders the risk for new projects, while private company is guaranteed a profit.

² Under the Build-Own-Operate (BOO) model, a private entity builds owns, and operates a facility, while under Build-Operate-Transfer (BOT) model, a private entity constructs and operates a facility for a certain number of years, recovering its investment through revenue from the project. After a certain number of years, ownership and operation of the facility is transferred back to the state.

Previously, public international development funders such as the World Bank or the Japanese International Cooperation Agency (JICA), were primary funders of infrastructure development. Today, however, given the funding gap for ambitious infrastructure projects (ranging from new oil refineries, and pipelines, to more mundane water treatment plants), private equity firms are increasingly playing a larger role in infrastructure financing. Because of activist and advocacy pressure, the World Bank has adopted a list of required safeguard assessments—including assessments of impacts on the environment, indigenous peoples, involuntary resettlement, safety of dams, projects in disputed areas, and projects on international waterways. The private equity firms, however, have weaker or non-existent safeguard policies, as demonstrated by the aggressive funding of destructive coal-fired plans. The World Bank and other development banks began to back away from funding new fossil fuel infrastructure (Elliott, 2017), in part due to pressure from advocates to honor the climate mitigation policies adopted by their home countries. The un-transparent and unaccountable structure of private equity firms makes it more difficult to lobby for socially beneficial outcomes on investments. Again, the overall development goal is key to determining the type of infrastructure needed. Infrastructure decisions are not politically neutral. “There is more than enough public money available to fund the everyday infrastructure needed to ensure heating, lighting, healthcare, clean water and other amenities for ordinary people,” writes Nicholas Hildyard (2016). “But there is not the money

available through conventional infrastructure finance to fund the just-in-time corridors that capital needs.”

Whereas previously infrastructure was seen as an unprofitable “public good,” private equity firms are increasingly seeing public private partnerships as an opportunity to gain public underwriting and guarantees for projects that offer steady returns at above-average profit rates of between 13 to 25% (Hildyard 2014). Goldman Sachs, in their report “Building the World,” advances a very explicit policy agenda for expanding private financing of infrastructure projects in which “governmental interference” is kept “at a minimum.” At the same time, they demand the expansion of state intervention and subsidies in the form of “public/private partnerships, government credit guarantees, and coinvestment by governments.” (Goldman Sachs, as quoted by Hildyard 2010). In Vietnam, private financing and public-private partnerships are increasingly seen as the only solution to the widening infrastructure funding gap.

The Long Phu 1 coal-fired power plant described in Chapter 2 is but one example of many coal-fired power plants funded or searching for funds using public-private partnership agreements. Expected to cost roughly \$1.9 billion, the project has already gotten funding from a Russian development bank Vnesheconom. To fill the remaining funding needed, HSBC Bank, Cathay United Bank, JP MorganChase, and Mitsubishi UFJ have signed on as the “lead arrangers behind a planned \$650 million loan for the plant” (BankTrack website 2018). Despite the

Paris Climate Accord goals, which require a steady decline in coal production and which the United Kingdom, Japan, China, and Russia all signed, their export credit agencies and national and multinational development banks have all chosen to fund this nearly \$2 billion coal-fired power plant, locking Vietnam into decades of burning dirty coal with older technology.

The public private partnerships for infrastructure development highlight the role that private finance is increasingly playing in determining infrastructure in Vietnam, developments that are ostensibly aimed to strengthen climate adaptation or expand access to public services. Vietnam's increasing dependence on international loans and the demands of their private and public funders requires that short-term profit returns are often prioritized over the long-term needs of building communities' climate resilience.

Chapter 5: Critique of mainstream climate change adaptation

The construction of climate change adaptation knowledge is inextricably linked to the international development and international finance industries. International development/financial institutions such as the Asian Development Bank, World Bank, and United Nations, lead efforts to study and document climate impacts, risks, and vulnerability.

In recent years, international financial institutions like the Asian Development Bank and World Bank have moved beyond merely giving out money. They now play critical roles as creators, aggregators, and purveyors of knowledge ("Knowledge Bank," World Bank website). Indeed, the power of public international financial institutions such as the World Bank and development agencies such as Japan International Cooperation Agency (JICA), stems not simply from their large loans and aid packages, but from their control over the dominant conceptualizations of how economies should be run, what good governance looks like, and now increasingly, how countries should respond and adapt to climate change. Although in their materials on their website, knowledge is presented as an unproblematic 'good,' in fact these ideas (about policy frameworks, how to set up economic institutions) are deeply political and enforce a particular system of political, economic, and social relations.

The ISET Urban Climate Resilience Framework in Figures 2 and 3, is one example of common climate adaptation frameworks for understanding the process of building a community's adaptive capacity or resilience in the face of climate

FIGURE 2: ISET URBAN CLIMATE RESILIENCE FRAMEWORK

change. Other NGOs, such as CARE, or international financial institutions such as the World Bank have similar approaches, all of which feature a process of assessing a community's exposure, sensitivity, and vulnerability to climate hazards, with a corresponding process for gathering stakeholders together to plan, prioritize, implement, and evaluate actions taken to strengthen community resilience.

While vulnerability assessments are a key step in climate adaptation planning, the root causes of those vulnerabilities must also be addressed. The ISET Framework lumps all individuals, households, communities, businesses, governmental organizations, and non-governmental organizations, under the category of “Agents,” without delving into the unequal power relations between Agents which are in fact at the root of many of communities’ vulnerability. ISET’s Urban Climate Resilience Framework explains that communities that are politically, socially, or economically marginalized, such as slum dwellers, people living in

FIGURE 3: CORE ELEMENTS OF ISET'S URBAN CLIMATE RESILIENCY FRAMEWORK

floodplain areas, low-income renters, women, and women-headed households, are particularly vulnerable to climate hazards (Moench, Tyler, et al 2011). Although these communities are undoubtedly more vulnerable to climate change, the

framework and other mainstream approaches treat vulnerability as a characteristic or condition of groups of people, not a consequence (James, et al. 2015). In reality, these communities' vulnerabilities are the result of other social, economic, and political systems and inequalities.

By not addressing the inherent economic and political systems in which this climate change adaptation is embedded, these discussions of climate change adaptation and green growth are missing important analyses that would help cities look comprehensively at the real conditions and forces which they need to address if they want to realistically prepare for the current and coming climate impacts.

Movement Generation Justice & Ecology Project, a non-profit organization based in Oakland, CA, writes in *Pathways to Resilience* (2015):

[In conventional climate adaptation frameworks], the policy and practices that have been brought to bear don't address the underlying historical roots of vulnerability. In fact, they often exacerbate vulnerability by denying communities the chance to address economic disparity when leading adaptation and mitigation efforts (25).

The failure to interrogate the existing political and economic systems make it more likely that proposed climate solutions might actually hurt vulnerable communities and exacerbate inequalities. For example, seawalls displace fisherpeople, while also leading to greater coastal erosion in the next town lacking seawalls, and roads that are built higher to allow cars to avoid flooding, end up increasing flooding for those villages upstream from the elevated roads.

Good governance and the post-political approach

Critical urban theorists have used the term “post-political” to describe the ways in which contemporary consensus-based planning has erased the conflicts over power and resources (Allmendinger and Haughton, 2012; Swyngedouw, 2010). Rather than confront and challenge the unequal power relations which are embedded in urban planning challenges, the post-political approach focuses on participatory processes to strengthen and validate the inherently political choices being made. Similarly, the literature produced by international NGOs and governmental agencies suggests that effective climate change adaptation is primarily about improving urban planning processes and reforming institutions to be more transparent, accountable, and participatory so that local people can be more engaged in directing and carrying out adaptive strategies (World Resources Institute, 2011). The IMF, World Bank and other international institutions have declared “good governance as a necessary prerequisite for almost any development goal, whether economic growth or effective urban development (IMF 2012). These “good governance” practices include improving government transparency, accountability, participatory processes, consensus-based decision-making, and the prioritization of equity and inclusion.

Many of these “good governance” reforms are theoretically beneficial, yet they are rooted in Western liberal democratic traditions, and in Vietnam’s political system, with a one-party authoritarian state and no independent media or trade

unions and a very weak civil society, it is questionable how well these governance reforms can be effectively translated, taught, and adopted. In addition, the clear emphasis on public-private partnerships and infrastructure projects suggest that these reforms are focused more on making Vietnam a more investment-friendly environment, than on promoting democratic participation or mechanisms for public accountability.

The apolitical “good governance” perspective for climate resilience emphasizes integrated management of resources (such as water management at the watershed basin scale) and encouraging different sectors to better coordinate plans. These practical solutions fit within the dominant technocratic solutions presented by most international non-governmental organizations. What is noticeably missing is a discussion of the underlying urban expansion model and the dependence of the city government on the continuing sale of land for a significant portion of its revenues. The expansion of urban development into coastal wetlands and estuaries increases a city’s vulnerability to sea level rise, flooding, and typhoons. Of course, it is easier to discuss technocratic reforms, than to discuss transforming the fundamental economic basis of the city. Yet the underlying economic model of the city is of critical importance and relevance to a city’s climate change adaptation.

Without a doubt, stories of uncoordinated development abound, as my interview participants could attest. Better coordination, integrated planning, and good governance practices would indeed improve a city’s ability to develop and

implement a plan to adapt to climate change. Yet in this framework, the larger economic and political systems in which this planning and governance is embedded, is never mentioned. Better intersectoral coordination and participatory processes will have limited impact if the larger economic development systems and pressures towards growth are left unchanged.

Given that independent trade unions and political demonstrations are prohibited and the state has a strong incentive to suppress strikes and worker dissent, the emphasis on inclusive participation seems somewhat naïve. The Vietnamese mass organizations such as the Women's Union, the Vietnamese Trade Union, the Youth Union, the Farmer's Union, do offer one mechanism for public participation. Indeed, many NGOs rely on such state structures to be able to have access to particular constituencies of "women farmers" or "youth" for their participatory workshops. But given that these mass organizations are embedded firmly within the Vietnamese Community Party organizational structure, de facto arms of the Communist Party, the participation of such women farmers or workers, may not result in the same diversity of perspectives envisioned in the theoretical frameworks put forth under collaborative governance and communicative planning.

The ‘good governance’ framework does emphasize equity and inclusion, but remains silent on the power inequalities between stakeholders, such as peasant farmers and the global

FIGURE 4: UNITED NATIONS GOOD GOVERNANCE FRAMEWORK

companies seeking to build an industrial park. The simplified frameworks for participatory decisionmaking in mainstream discourses on participatory climate change assessments and prioritizations thus ignore, and thus serve to reinforce the unequal power relations. In these frameworks, it seems completely irrational for local governments develop in ways that are completely contradictory to what would be in the long-term and even short-term interests of their residents. Within this post-political discourse, writes Jessop (2002), “pollution and environmental destruction appear to be facts of nature, rather than products of specific sets of social relations” (469). In Vietnam, environmental damage is treated as unintended consequences that can be fixed by better management and coordination, rather than inevitable outcomes intrinsic to Vietnam’s development strategy. As Edgar Pieterse (2008) writes, “There is no explicit line drawn between the conditions the document seeks to remedy and the causal drivers of those conditions” (68). The emphasis on effective planning and coordination to respond to climate change

adaptation reinforces this post-political erasure of the unequal social relations which cause disparate climate vulnerability, as well as the political choices involves.

Despite the supposed separation of climate science from politics, climate adaptation planning requires value-laden decisions, not simply technical decisions, about what areas of town should be protected, at what cost, and what groups' interests should be prioritized. Should the hotel developers be protected with an investment in sea dykes which come at great cost, and offer only temporary protection? What about the fisherpeople who have been resettled to make way for the hotels? The adaptations needed often involve fundamental, transformational actions, such as relocation from an area that will become increasingly inundated, or livelihood diversification for farmers. These are not purely objective decisions that can be determined by experts, but in fact demand deliberation and participation by the people who will be expected to change their lives and who will bear the brunt of the impacts of these changes.

Without a power analysis, these methodologies for climate change decision-making remain idealistic guidelines without giving people the analytical tools needed to confront the high-stakes, life-and-death decisions that need to be made. The loose definition of eco-city development leads some city governments to frame the actions of neoliberal development within the discourse of sustainable development and climate change adaptation. For example, in Danang, the city government has produced city development plans that emphasize their goal to

become an eco-city by eliminating industrial pollution ‘hotspots,’ improving waste management and land use planning, and re-orienting urban development practices to be more environmentally-sensitive and sustainable. (Nguyen DONRE Danang presentation 2009). Some of the key accomplishments of which Danang is proud, include: “the removal of all slums (350 households) living on the banks of the Han River and the resettlement of over 60,000 households.” These ‘environmental projects’ are essentially what in the US is known as urban renewal, according to Professor Burkhard von Rabeneau (personal communication 2012). This conflation of urban renewal with climate change adaptation reveals the embeddedness of climate change policy in existing economic and political systems of power. Just as over 60,000 households can be moved in the name of sustainable city development, government-sponsored climate change adaptation can also reinforce the existing power relations that are already pushing out poor people from desirable land in the city. Unless the powerful economic forces reshaping the city are acknowledged in climate change plans, climate change adaptation strategies remain woefully inadequate and ill-equipped to adapt to climate-related change and build climate resilience.

Green Growth as the new Post-Political Framework for Action

In attempting to balance economic, social, and environmental demands, Vietnam has embraced the popular concept of “green growth” as a win-win-win solution that address the needs of cities looking for more investment *and* looking to

prepare for climate change. The Asian Development Bank declares: “Green growth is economic progress that fosters environmentally sustainable low-carbon and socially inclusive development.” Green growth, or “climate-smart development” has become an increasingly popular focus for other international development funders. In 2012, South Korea pledged financial support for Vietnam’s Green Growth strategy, and Ha Chan-ho, Korean Ambassador to Vietnam, said “green growth is one of the three key areas in Korea’s Country Partnership Strategy with Vietnam,” at the signing ceremony of a memorandum of understanding. In 2016, South Korea’s Global Green Growth Institute (GGGI) and Vietnam’s Ministry of Planning and Investment signed a five-year partnership strategy called the GGGI Vietnam Country Planning Framework 2016-2020 to “work together to deliver green growth in the finance, urban and energy sectors”(Vietnam Investment Review 2016).

Although opportunities exist for enterprises to make money through more environmentally friendly or even regenerative practices, many resilience-building activities such as restoring wetlands as part of coastal protection efforts, will remain unprofitable, especially compared to other business projects. Implicit in this green growth strategy is an assumption that Vietnam’s current orientation towards export-driven economic growth is compatible with efforts to protect the environment and human health, and to adapt to climate change. A joint United Nations/Asian Development Bank report explains: “A key concept in approaching green growth is recognition that economic, social and environmental systems are actually complementary, not in conflict. For those focusing on the environment,

green growth is a way to reduce environmental stress; for economists, it can offer increased profits and competitiveness; and for social scientists, it can contribute to ensuring that basic needs are met” (*Green Growth, Resources, and Resilience*, 2012, p. xv)

Under this framework, even catastrophic climate change offers an opportunity for economic growth. As this report from the Economics of Climate Change Working Group titled “Shaping Climate-Resilient Development: A Framework for Decision-Making” (2009) explains:

Climate resilience boosts economic development. These adaptation measures are in many cases also effective steps to strengthen economic development. This is particularly so in the agricultural cases, where measures to adapt to climate risk, such as increased focus on cash crops, can generate revenues greatly exceeding the climate-related loss averted by those measures—and so contribute to improvements in national or regional wealth. For example, in Mali, greater cultivation of cash crops would provide on the order of \$2bn in additional revenue for the country. --“The Economics of Climate Change Adaptation” (36)

This narrow GDP-based conceptualization of climate change impacts ignores the ways in which a shift to greater cultivation of cash crops would endanger food security, without any guarantee that the benefits from additional export revenues would be equitably distributed (Altieri et al., 2012). In reality, the current drive to increase exports places tremendous pressures on cities to sacrifice environmental and human health in order to attract investment and stimulate economic growth.

Several cities in the central region of Vietnam, including Danang and Hoi An, have expressed interest in becoming eco-cities in the future (von Rabeneau, 2012). The definition of what it means to be an eco-city, remains unclear, however. In Danang, for example, eco-city projects include the construction of luxury resorts, a wastewater treatment plant (with support from a World Bank loan), and an information technology industrial zone. In this way, the flexible interpretations and labeling of eco-city projects suggest that many of these ‘green-growth’ strategies are often simply another way to attract both development loans and investment to areas of Vietnam.

In a report on Danang’s urban development strategies, Burkhard von Rabeneau describes how the city government is trucking in tons of dirt to fill in floodplain/estuary areas because the city is running out of land to sell (von Rabeneau, personal communication, 2012). Clearly, this development of a floodplain/estuary increases Danang’s vulnerability to floods, yet the structural logic of Danang’s current revenue system almost forces cities to continually expand outwards, even if it means destroying land that could reduce flood risks and damage by hurricanes and storms. Without addressing these structural pressures of economic growth, the green growth discourse reflects the same post-political orientation of the good governance and climate change adaptation discourse.

In the narrative of building urban climate resilience in Vietnam, green growth has become the new strategy for financial institutions seeking to continue

lending money to Vietnam, while also acknowledging the dire threats facing Vietnam in the future. The post-political framework accepts the current “market-as-supreme” capitalist system as an immutable fact of nature, rather than a particular system in this historical moment, that is undermining the very ecological foundations (stable climate, coastlines, and precipitation patterns) upon which this current economy depends.

Given that international financial institutions, development agencies, and private foundations are deeply integrated into the global economic system, perhaps it should not be surprising that the dominant climate change adaptation narrative and approach in Vietnam accepts neoliberalism as the unquestioned underlying political-economic framework within which Vietnam must implement its adaptation strategies. Jameson states that in the current neoliberal era, perhaps “it is easier to imagine the end of the world than to imagine the end of capitalism” (Jameson, 2003: 73, as quoted in Swyngedouw, 2010: 216). Indeed, the hegemonic nature of global neoliberalism does make it difficult to imagine replacing free market global capitalism with a less ecologically and socially destructive system. Yet the growing signs of ecological devastation and predictions of even further devastation in the coming decades suggest that Vietnam’s market-driven, growth-at-all-costs economic model must be addressed in order to make any significant progress on climate change adaptation.

Chapter 6: Conclusion

Given the devastating impacts that the projected flooding, drought, hurricanes, and sea level rise are having and will have on millions of Vietnamese people within the next few decades, it is striking how decidedly reformist and technical are the recommendations of climate change adaptation practitioners. Effects of Vietnam's growth-first economic development strategy are already undermining long-term viability of many economic sectors, from fishing to tourism to agriculture. From the deaths of coral reefs upon which fisheries depend (O'Loughlin, 2009), to the impact of extreme heat, saltwater intrusion, and drought on agriculture upon which the majority of Vietnamese rely on for survival (Fuchs, 2010; Hong 2016; Tran, 2011), the signs are clear that continuing the "business-as-usual" approach will result eventually, and likely within this century, in a collapse of many ecological and agricultural systems that underpin the economy (World Bank, 2012).

The failure of climate change adaptation and resilience literature to seriously interrogate overall economic development goals, pathways, and assumptions reflects a foundational weakness in theory and analysis that undermines Vietnam's ability to successfully adapt to climate change. In this paper, I explored the ways in which mainstream climate change adaptation focuses on improving planning processes, while ignoring the larger political choices and economic models and

strategies which are assumed, yet never raised in the climate adaptation literature. To understand the discrepancy between the climate change adaptation discourse and actual practice, this paper examined Vietnam's economic and institutional structures which drive urban development. By exploring Vietnam's dependence on international loans for its infrastructure development, this section shows how Vietnamese cities' abilities to choose a more sustainable and climate-resilient path are circumscribed by the restrictions imposed by global capital. Although opportunities do exist to combine economic development and climate change adaptation and poverty reduction, there are inevitable tradeoffs. A de-politicized win-win-win approach to climate change adaptation ignores the fundamental contradictions between Vietnam's economic growth model, its revenue generating strategies, and its climate change adaptation and resiliency goals.

Future Directions for Research

The findings from my study suggest several important directions for future research. Future research is needed to delve more deeply into the institutional, political and economic forces that shape decision-making on urban infrastructure development. Through my initial document analysis and interviews, I began to uncover questions about the financing of projects and the expanding role of public-private partnerships (PPP), but more research is needed to understand the role and influence of international financial institutions in the development process. A case study approach that focuses on one or more infrastructure projects could illuminate

the institutional and economic forces which shape decision-making, as well as the benefits and costs that cities assume in using public-private partnerships to fund such infrastructure. Additionally, in the last ten to fifteen years, China has become an important and powerful player in Vietnam's infrastructure development, with a distinctly different approach from the World Bank and other Western financial institutions; further research is also needed to understand the implications of this shift in the source of infrastructure finance.

Lastly, my study findings suggest that more research is needed to explore alternative models for urban development that support human health and build climate resilience. Feminist and ecological economics have long put forth alternative frameworks and strategies for development and progress, yet these frameworks have gained little traction in Vietnam. Further research is needed to understand Vietnamese discourses on development and progress. Given that several of my interviewees' comments suggested a correlation between the expansion of free markets and private property with a corresponding political liberalization and an expansion of individual freedoms, future research is needed to explore the narrative strategies that are most effective in Vietnam to advance alternative urban development strategies that also build communities' adaptive capacity. This final section explores some initial concepts for communicating new narratives about what development and climate resilience can look like.

Redefining Climate Adaptation and Resilience: A Vision for a Just Transition

This thesis draws attention to the ways in which the mainstream climate change adaptation approaches, funded by international development and finance institutions, and implemented by Vietnamese planners and NGO professionals, are failing to propose solutions and strategies that are commensurate to the scale of the existential threat facing Vietnam. What's needed is nothing less than a social, political and economic transformation. Recently social movements have used the term "just transition" to describe the process of moving from the old fossil fuel economy to a renewable, regenerative economy and society (James et al., 2015). The concept of a just transition originated in the 1960s from the trade union movement, in recognition that workers employed in destructive industries needed to be supported and trained to be able to find jobs in more regenerative and less harmful industries. Today, the concept of a just transition encompasses the idea that the transition to a new economy is not merely a technical transition of technologies, but also challenges the unjust power relations which underpin the current extractive fossil fuel economy. In this last section, I examine lessons from this study as well as from other communities and social movements that point to an alternative approach to building climate resilience in Vietnam.

To begin with, building urban climate resilience must begin with an acknowledgment of the root causes of climate change. The false separation between climate mitigation and climate adaptation must end. One of the root causes of

climate change is the consumer-based growth economy, which depends on an extractive, fossil-fuel based energy infrastructure. As discussed earlier, the international development funders are themselves embedded in political economic systems that are dependent on maintaining unequal power relations. Rather than challenge the U.S. on its vastly disproportionate per capita emissions of greenhouse gases, the global climate change industry instead forces countries to look inward, and to focus on the ways in which their local actions of conserving forests or improving local planning, can help them adapt to catastrophic climate change which the funder and the larger unequal political and economic systems themselves are largely responsible.

Secondly, building climate resilience and a just transition means moving money away from the fossil fuel economy and re-investing in a new renewable economy. The Vietnamese government believes that they have no choice-- that maintaining economic growth requires that they continue to fund oil exploration and more than double the number of coal-fired power plants from up to 20 coal plants in 2018 to 51 coal plants in 2030 (Chugh 2017). It's true that investing in solar and wind would offer new constraints—and opportunities—for industrial projects. But if the current type of unfettered growth-at-all-costs development is allowed to continue, Vietnam's ecosystems upon which a majority of the population still depend on for their livelihoods, particularly in the coastal and Mekong Delta and Red River Delta regions, will collapse. One of the implicit assumptions of the

mainstream climate change adaptation approach is that we can avoid catastrophic climate change without fundamentally altering the current economy. Avoiding catastrophic climate change and building resilience to the inevitable impacts that are inevitable, requires that we must take a radically new approach.

Thirdly, a new climate resilience framework should also address the causes of climate vulnerability. As discussed earlier, mainstream climate change adaptation literature treats vulnerability as a planning consideration, without examining the root causes. For example, planners are exhorted to reach out to low-income renters without residency permits be included in participatory planning workshops to ensure that their voices and experiences are included in the decision-making. Yet, the systemic causes of their lack of formal residency rights remains unaddressed. To be effective, solutions have to address the power inequalities which create such vulnerability.

Fourthly, a just transition means democratic governance and participation of those most impacted. While good governance is truly a prerequisite and foundation for climate change adaptation, the concept of good governance has to move beyond shallow definitions of corruption and transparency. Corruption does not merely mean accepting a personal bribe; it can also mean the many ways in which public funds are used to block democratic participation and to bolster private profit. Currently, Vietnamese city officials are more accountable to their superiors in the Party and in the government than they are to the people they serve. The lack of

democratic accountability leads to decisions that are made to benefit private interests at the expense of the common good, even if no bribes are exchanged. At the same time, transparency and accountability The democratization of governance that would allow those most directly impacted to lead is a critical step in being able to develop plans and projects that build authentic climate resilience.

To finance such climate adaptation and resilience-building, Vietnam could explore progressive and redistributive carbon taxes that could generate reinvestment revenue, instead of depending on foreign loans that must be paid back. For example, British Columbia, the United Kingdom, and Sweden have instituted different versions of a carbon tax, reflecting the social and environmental costs of pollution and generating revenue that can then be reinvested in renewable energy projects or other projects that reduce greenhouse gas emissions. These carbon taxes, by making fossil fuels more expensive, also make investments in renewable energy infrastructure more attractive. Analysts have pointed out that political realities and popular push-back have made it difficult for politicians to raise carbon taxes high enough to actually force changes in the use of fossil fuels (Jaccard, 2016). Therefore, the Vietnamese government will likely also need to institute some kinds of direct regulations to stop the expansion of fossil fuel infrastructure in Vietnam.

In addition, a just transition in Vietnam must build on local history, culture, and traditional practices. Vietnam's traditional approach to flood risk and vulnerability, exemplified in its "Living With Floods" (*sống với lũ lụt*) strategy, is an

example of an approach that draws from the local practical knowledge. Rather than seek to build ever-more dams and structures to control flooding, the “Living With Floods” strategy recognizes both the benefits and risks of annual flooding and uses strategies that seek to build community capacity to respond to flooding safely without depriving farmers of the beneficial sediments, nutrients and pest control that regular flooding brings (Digregorio and Huynh 14).

Rather than a technocratic, “expert”-driven approach, the Vietnamese government could look to its own history of organizing a national movement of peasants, artists, students, and other ordinary Vietnamese people fighting for national liberation. Drawing from the rich and long history of community resilience during their decades of war would be one opportunity to tell the story of climate adaptation and resilience as part of a long history of Vietnamese resistance and resilience to foreign invasion. In this way, the adaptability, creativity, and collective solidarity which Vietnamese drew upon during the multiple wars for national independence would be seen as strengths that in fact Western ‘developed’ nations would be wise to learn from—a stark reversal of the ‘deficit-based’ paradigm which currently dominates much of the climate change discourse.

Ultimately, climate change adaptation is not merely about making policy and technological changes; it’s also about changing people’s ideas about the kind of development they want. In *Planning as Persuasive Storytelling*, James Throgmorton (2003) argues that stories and storytelling are an extremely important but

undervalued part of planning and that good planning includes “collecting and telling stories about both the past and future.” Currently, as Vietnam is in a moment of political transition from a state-planned economy to an authoritarian free market economy, the official hegemonic narratives about the past, present, and future are themselves being reconstructed. Building climate resilience means challenging dominant narratives that we can address “climate change “as long as it doesn’t hurt economic development.” In truth, addressing the exploitative and extractive economy is key to addressing the root causes of the climate crisis.

“Stories and the ‘foundation narratives’ we tell to each other have more than passing interest—they contain or suppress evolutionary possibilities,” argues Stephen Moore (2007). Currently, there does not exist a strong counter-narrative that offers a more attractive alternative to the dominant storyline that “There Is No Alternative” to neoliberal capitalist development. Any attempt to stop the widespread ecological destruction and strengthen Vietnam’s resilience to climate change needs to come up with an alternative narrative that is more compelling and attractive, to motivate a significant portion of Vietnamese to change their vision of what development and prosperity look like.

This paper argues that Vietnam’s climate change adaptation strategies are doomed to be ineffective unless the underlying economic growth imperatives and economic and political inequalities are addressed. Otherwise, the myriad adaptation reports and action plans become fairy tales, idealized plans that are unmoored from

the actual political and economic context of Vietnam, and of the local areas in which they are being implemented. Most importantly, without explicitly addressing power relations, climate change adaptation strategies are likely to reinforce and even exacerbate existing inequalities, and thus increasing vulnerability to climate change.

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