

# Compelled to Compete: Rendering Climate Change Vulnerability Investable

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## ABSTRACT

The imperative for vulnerable populations to adapt to greater environmental variability is increasing in lockstep with the onset of wide-ranging climate change impacts. However, while critical adaptation research emphasizes the necessity of addressing the underlying drivers of vulnerability to climate change, mainstream approaches to adaptation stress economic growth as a prerequisite for climate responses. Accordingly, capital-intensive adaptation measures promote competitiveness to spur economic growth in the Vietnamese Mekong Delta, where more than 18 million people face environmental hazards such as seawater intrusion, flood, drought and cyclones. This study evaluates competitiveness as a mandate for effective climate change adaptation. It finds that adaptation can advance either competition or vulnerability reduction, but it cannot logically or pragmatically pursue both.

## INTRODUCTION

In the ‘Adaptation Gap Report 2021’, the United Nations Environment Programme (UNEP) estimates that developing countries require US\$ 70 billion annually to fund climate change adaptation, and this figure is expected to rise to between US\$ 140 and US\$ 300 billion by 2030 (UNEP, 2021). True to the Report’s name, the authors highlight a worrying shortfall in such finance, be it from public, private or international sources. Calls to mobilize greater adaptation finance have become increasingly strident and widespread, growing in tandem with the awareness that the populations that

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contributed the least to climate change are the most vulnerable to its impacts. However, general appeals to mobilize more adaptation funding elides the fact of its highly asymmetrical distribution. Emblematic of this trend, Vietnam received over US\$ 2.5 billion of climate finance in both 2015 and 2016, predominantly from multilateral development banks and bilateral aid agencies, making it the third largest recipient of climate aid during this period (Timperley, 2018). Meanwhile, many other countries in Asia and elsewhere receive comparatively little funding (Weikmans, 2015).

Existing studies of overseas development aid focus on funding bodies, highlighting dynamics like herding, international relations, and soft-power geopolitical manoeuvring to explain preferential lending to some countries over others (Davies and Klasen, 2019; Olivié, 2011; Weiler et al., 2018). Yet, they pay insufficient attention to *recipients and their practices* — specifically, how developing countries and their constituents respond to market pressures to make themselves attractive to funders. Here, I draw attention to the ways that neoliberalism as a ‘governing rationality’ operates through norms and practices of competition and investment that shape people, places and institutions at multiple scales of climate change adaptation and finance. Increasing the competitiveness of climate-vulnerable groups to attract outside investment has become an organizing principle of adaptation measures and marks a culmination of decades of neoliberal reforms.

The neoliberalization of environmental governance since the 1970s has been characterized by reduced government expenditures, increased involvement of the private sector, and the devolution of responsibility onto individuals, households and communities (Castree, 2008). While the combination of these approaches varies by location, the result has been a shift of responsibility, but not necessarily power, onto end users (Bracking and Lefel, 2021). This study examines how neoliberal techniques of environmental governance clash with liberal notions of distributional and procedural justice (Grasso, 2010) to engender greater precarity, even as they appear to align in mitigating it. Adaptation projects in Vietnam exemplify a broader process by which climate adaptation finance exacerbates some populations’ vulnerability to storms, both meteorological and economic.

This article examines the unequal outcomes of conflicting imperatives within mainstream climate policy for economic growth and effective adaptation. It argues that the logics of competition-driven growth pervade contemporary adaptation measures yet inevitably increase the vulnerability such efforts aim to address. It provides an overview of the connections between growth, development and adaptation and briefly describes the research area and methods. It then offers a case study analysis of delta planning in Vietnam to examine how the economization of life shapes the ways that vulnerability is produced and approached at multiple levels of governance. The last section weighs the prospects of mainstream climate change adaptation strategies for ameliorating vulnerability. Although improving competitiveness emerges as a principal objective of adaptation interventions, the study

concludes that this strategy is intrinsically maladaptive and unjust. It makes competitiveness, and thus adaptation success or failure, a property of vulnerable populations, thereby deflecting responsibility away from structural processes and state and corporate actors who catalysed and continue to fuel the climate crisis.

## FROM GROWTH TO ADAPTATION

Development projects and government policies take for granted the relevance of competitiveness to adaptation, but the link between the two relies upon multiple conceptual leaps. Determining the actual and assumed connections between growth, development and adaptation is necessary to understand how competition shapes adaptation outcomes.

Economic growth over the past two centuries has underpinned significant gains across a spectrum of development indicators, including those pertaining to literacy, longevity, income, participatory and representative governance, and gender equality. However, many development agendas at state, regional and local levels have been plagued by the assumption that growth will necessarily yield development benefits, to the extent that such agendas have pursued economic growth in the absence of clearly articulated development goals or pathways (Kuhnhenh, 2018). Economic growth in such cases may simply result in greater wealth generation and accumulation without translating into broader societal benefits (Slater, 1973; Tacoli, 1998). This is to say nothing of the relationality of development, whereby the realization of conventional markers of progress in some areas has been achieved through colonial and corporate subjugation, exploitation and the dispossession of people and places on the global margins (Hickel et al., 2021; Mosse, 2010).

Development and adaptation are likewise bound together (Chandler and Reid, 2016; Ireland, 2012). People endowed with social safety nets, robust information and social networks, quality healthcare and infrastructure, and stable, living incomes weather environmental shocks better and are more equipped to face future climate threats than those with limited assets or social entitlements (Bohle et al., 1994; Ribot, 1995). Development thus increasingly appears as a key component of adaptation, and adaptation in turn has been mainstreamed into development practice (Hall, 2017; Huq and Ayers, 2008), despite the hazards of doing so (Scoville-Simonds et al., 2020). The entanglement of development and adaptation reflects pertinent realities about how societal well-being translates into reduced exposure and sensitivity to climate change, as well as a greater capacity to manage extreme weather events (Dodman et al., 2009; Lunduka et al., 2014). However, such interconnectivity also frustrates efforts to clearly delineate development and adaptation, which has become an imperative for tracking financial flows earmarked for either development or adaptation (Hall, 2017; Weiler et al.,

2018), as well as the classification and assessment of specific interventions (Ayers and Abeysinghe, 2013). Donor agencies, for example, have come under scrutiny for misclassifying and inflating their adaptation finance contributions (CARE, 2021a; Weikmans, 2015), which is as revealing of the politics of foreign development aid and responsibility for climate change as it is of the challenge of accurately categorizing activities according to terms that are notoriously difficult to define (Page, 2008; Selseng et al., 2021).

Now growth has become a proxy for adaptation. The mechanisms by which economic growth yields development benefits, which in turn boost community capacity to weather increasingly severe and erratic climate hazards, are indirect and involve a complex suite of processes (see also Salamanca and Rigg, 2017). However, many government actors, development and adaptation practitioners and climate analysts flatten and simplify such dynamics. The conflation of economic growth and development, and of development and adaptation (Ayers and Abeysinghe, 2013; Barnett, 2020), translates into an erroneous assumption that growth is necessary for adaptation (Bowen et al., 2012; Dercon, 2014; Vivid Economics, 2010). This parallels the shift between 1972 and 2012 ‘from a notion of growth versus the environment to a notion of growth for the environment’ (Gómez-Baggethun and Naredo, 2015: 385). Economic rationality likewise postulates that effective adaptation will buffer against economic losses and open new markets for accumulation (Dumas and Ha-Duong, 2013; New Climate Economy, 2018; OECD, 2013).

Such assertions neglect the primary role that economic growth has played in driving the precarity and environmental degradation that characterize vulnerability to climate change and make adaptation necessary in the first place (Nightingale et al., 2019; Remling, 2018). Several prominent entities, including the European Union and UNEP, have embraced the idea that economic growth can be isolated, or decoupled, from the natural resource use and environmental impacts with which it has been tightly bound to date. Green growth advocates insist that environmental sustainability and economic growth are compatible rather than antagonistic, but the notion has been discredited as being economically infeasible and dismissed as a ‘fantasy’ given the paucity of supporting evidence across multiple scales and social contexts (Fletcher and Rammelt, 2017; Ward et al., 2016). Critics also argue that this paradigm perpetuates historical patterns of exploitation and oppression (Gómez-Baggethun and Naredo, 2015; Hickel and Hallegatte, 2022). Despite these shortcomings, the promise of green growth continues to shape climate mitigation and adaptation policies (Noonan and Vrizzi, 2020; OECD, 2013). While policy makers and analysts concede that economic growth may not reduce vulnerability to climate change, they assert that ‘the right kind of growth’ will (Bowen et al., 2012: 96; Vivid Economics, 2010: 1).

The work of political theorist Wendy Brown is instrumental in tracing the implications of the growth paradigm in climate adaptation policy and

action. In *Undoing the Demos: Neoliberalism's Stealth Revolution*, Brown (2015) draws on Michel Foucault's lectures on biopolitics to examine how neoliberalism has reconfigured political life, recasting the state and the individual as projects of economic management rather than political rule. Under classical liberalism, the state assumed a passive or compensatory role vis-à-vis the market by either letting the market operate unencumbered or stepping in to mitigate its more noxious social and environmental impacts. However, with the shift toward neoliberalism, the state adopted a stance of actively supporting the market (Mosse, 2005). This entailed the neoliberal state's promotion of economic growth as an end, and competition as a means to that end. According to Brown, the operating logic is that 'economic growth by itself should enable individuals to prosper and to protect themselves against risk, so economic growth is the state's social policy. Competition is a means facilitating an end; the state primes this means so that the economy can generate the end' (Brown, 2015: 63–64).

If growth is taken to be both a measure and means of adaptation, and competition is a means to realizing growth, then what role does competition play in shaping adaptation implementation and outcomes? To what extent do policy measures adopt competition as a mandate for effective climate change response? What are the consequences of organizing adaptation efforts around the logic of competition? The remainder of this article interprets adaptation measures in Vietnam, as well as the various actors involved in them, through Wendy Brown's theorization of neoliberal competition. The cases show that adaptation configured in this way produces winners and losers, with dire consequences for confronting the climate crisis equitably.

## RESEARCH AREA AND METHODS

Vietnam is an opportune site for examining the asymmetrical distribution of adaptation finance and its growth-oriented implementation. The country has received US\$ 80 billion over the past 25 years, earning it the label of 'donor darling', and it has played a prominent role in international adaptation dialogues and programming. It assumed an early leadership role in the climate adaptation arena as one of the 10 founding members of the Climate Vulnerable Forum (CVF), a consortium of 48 climate vulnerable states.<sup>1</sup> Vietnam also co-founded the Vulnerable Twenty (V20) — an offshoot of the CVF tasked with mobilizing public and private climate finance.

State officials, as well as development banks, agencies and practitioners, invoke Vietnam's physical geography, demographic makeup, and political economic history to establish it as one of 'the countries most vulnerable to

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1. For more information on the Climate Vulnerable Forum, see: <https://thecvf.org/>

the adverse impacts of climate change' (CVF, 2009). Their accounts often note that Vietnam's 3,260 km-long coastline is exposed to sea-level rise and coastal storms and that the country occupies the most downstream position of two major river basins: the Red River in the north and the Mekong River in the south. Of these, climate analysts and policy makers emphasize the Mekong Delta due to its flat topography, dense settlement ( $\approx 425/\text{km}$ ) of 18 million people, and predominantly agrarian economy. They also highlight the region as one of three deltas in the world at risk of extreme human displacement ( $> 1$  million people) due to sea-level rise by 2050 (IPCC, 2007). The delta is downstream of 13 mainstream dams in China and Laos, which have disrupted the flood-pulse ecology of the world's largest freshwater fishery and trapped nearly 50 per cent of the sediments that replenish the delta (Bussi et al., 2021). Furthermore, several decades of French colonial rule (1877–1941, 1945–54) and 20 years of war with the United States (1955–75) have drained the country of resources. Although Vietnam has experienced remarkable growth since the Doi Moi economic reforms of the late 1980s, it continues to face significant gaps in its ability to reduce vulnerability and meet adaptation needs (CARE, 2021b).

Government and development actors dutifully acknowledge the complex interplay of forces operating within and upon the Mekong Delta. Sea-level rise, upstream hydropower development, groundwater extraction and sand mining have all been implicated in worsening seawater intrusion. However, the routine subordination of diverse regional processes to climate change in planning and policy documents betrays a tendency toward climate reductionism (Thomas, 2020a). Indeed, formal assessments of household and community vulnerability mobilize depoliticized facts about elevation, sedimentation rates, sea-level rise and precipitation patterns that produce vulnerable climate subjects needing assistance (Mikulewicz, 2020). The United Nations Development Programme (UNDP) and the Prime Minister of Vietnam estimate that the government is unable to cover 70 per cent of the costs of adaptation (Phan, 2021; UNDP, 2018). Various governmental and non-governmental entities combine this financial need with descriptions of Vietnam's inadequate technical and administrative capacities, which development agencies are then ideally suited to address (e.g. ADB, 2013; AusAID, 2011).

Development strategies can be read as sanctioned narratives of what is wrong, what is desirable, and what is possible. They entail 'the distillation of manageable problems from often overwhelmingly complex issues, an interpretative act, involving problem definition as well as problem solving' (Bakker, 1999: 211). This study therefore details how planners imagine an idealized future Mekong Delta and engineer that future into being. Following Büscher (2019), I attend to the representational and performative aspects of this transformation by investigating via interviews and policy analysis how various actors envision what futures are possible in the Mekong Delta, which pathways they privilege, and how they pursue them.

To what problems, and based on what assumptions, are capital-intensive infrastructural measures taken to be the solution? And who, ultimately, is adapting to what?

Dutch hydrologists and engineers deserve special attention, as they actively imagine and engineer waterscapes around the world (Büscher, 2019; Zegwaard et al., 2019). Bolstered by funding from the Government of The Netherlands, Dutch water sector expertise has been advertised, promoted and implemented in such diverse settings as Bangladesh, Indonesia, Mozambique, the USA and Vietnam. Dutch experts guided the 2013 Mekong Delta Plan, hereafter the Delta Plan (Royal HaskoningDHV, 2013), which presents development scenarios for delta sustainability and economic growth to 2100. The Delta Plan serves as the blueprint for water management and agri-business industrialization in the Mekong Delta and was formally adopted by the Government of Vietnam in 2017 via Resolution 120 (GoV, 2017a).

Despite the outsized role of the Dutch in shaping the future of the Mekong Delta, numerous development partners are active in the region. These include the World Bank, Japanese International Cooperation Agency (JICA), the German aid agency for international cooperation (GIZ), the Asian Development Bank (ADB), the International Fund for Agricultural Development (IFAD), the International Union for the Conservation of Nature (IUCN), and the United States Agency for International Development (USAID) — the first four of which provided 83 per cent of all climate finance to Vietnam during 2013–17 (CARE, 2021b). These international organizations coordinate their respective activities through high-level annual meetings where powerful actors carve out their development niches in the Mekong Delta, distinguishing themselves from one another while advertising their respective areas of expertise.

To capture this breadth of perspectives on climate adaptation finance, I conducted 59 semi-structured interviews in four countries (Japan, Scotland, USA and Vietnam). I was a designated observer at three United Nations Framework Convention on Climate Change (UNFCCC) events — COP 23, COP 26 and the Standing Committee on Finance Forum 2018 — over a four-year period (2017–21). I met with climate adaptation practitioners and funders (such as GIZ, the Green Climate Fund, IUCN, IFAD, JICA, IUCN, UN Women and the World Bank), climate finance negotiators from consortia (CVF, G77+China) and individual countries (Ghana, Nepal and Sierra Leone), and Vietnamese officials at the provincial, district and commune levels of government. Meetings with local officials in Vietnam also included seven visits to project sites in five provinces (An Giang, Ben Tre, Kien Giang, Soc Trang and Tra Vinh) where I made field observations of water infrastructure and land-use practices. In 2019, I conducted four participatory rural appraisals (PRAs) with 29 residents in two coastal provinces (Ben Tre and Tra Vinh) to understand how diverse groups perceived and experienced environmental hazards. I combine interview data with a close reading

of project documents and government policies related to the Mekong Delta Plan to establish how competition-driven growth shapes adaptation funding and practice.

## ENVISIONING THE MEKONG DELTA

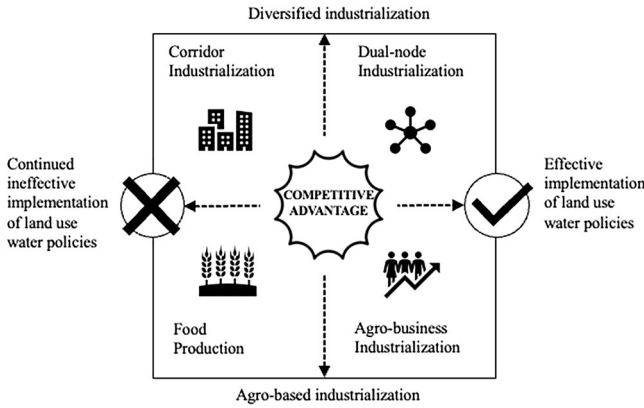
The centrepiece of the national government's strategy for the region is Resolution 120/NQ—CP on 'Sustainable and Climate-resilient Development of the Mekong Delta' (hereafter Resolution 120; see GoV, 2017a). The 2017 legislation articulates 1) a vision and objectives for the remainder of the century; 2) the viewpoints that guide the strategy; 3) a development policy and strategic orientation; 4) solutions; 5) ministry-specific tasks; and 6) guidelines for implementation. The document formalizes the government's adoption of the Mekong Delta Plan, which it developed in partnership with the Government of The Netherlands.

Published in 2013, the Mekong Delta Plan (Royal HaskoningDHV, 2013) is the result of a four-year-long Dutch-led delta planning process that employed a scenario-based approach to envision potential development pathways under a climate-altered future. The Delta Plan presented four such pathways that variously emphasized agricultural production and industrialization, as well as their respective land use and water policies (see Figure 1, adapted from Royal HaskoningDHV, 2013: 36, Fig. 4.2). Each scenario (corridor industrialization, dual-node industrialization, agro-business industrialization, food production) was accompanied by a summary of projected changes across six categories: population, economy, urbanization/industrialization, equity, agricultural productivity and environment. No empirical evidence accompanied the socio-economic development pathways, but corridor industrialization and food production were nonetheless predicted to have poor economic performance and environmental outcomes, their undesirability underscored by a large 'X' as shown in Figure 1. What announces the document's normativity, however, is the concern that anchors the four scenarios — the scenarios were devised and articulated with respect to competitive advantage rather than resilience, sustainability, or some other concept that even nominally reflects the Delta Plan's concern with the delta's vulnerability to climate change.

Having outlined the four scenarios, the Delta Plan settles on agro-business industrialization as the optimal development pathway for the Mekong Delta 'both from an economic development as well as a climate change adaptation perspective' (ibid.: 53). Combining the Delta's agrarian base with recent 'scattered' and 'fragmented' industrial activities, the scenario reimagines the entire Vietnamese Mekong Delta as a high-quality agricultural commodity export production zone catering to the tastes and standards of international and urban consumers. This transformation entails the establishment of vertically integrated value chains appropriate to the different



Figure 1. The Four Developmental Scenarios Envisioned in the Mekong Delta Plan, Anchored by the Central Concern of Competitive Advantage



Note: Notation belies the Vietnamese and Dutch governments’ normative preference despite presenting the scenarios as exploratory and open-ended.

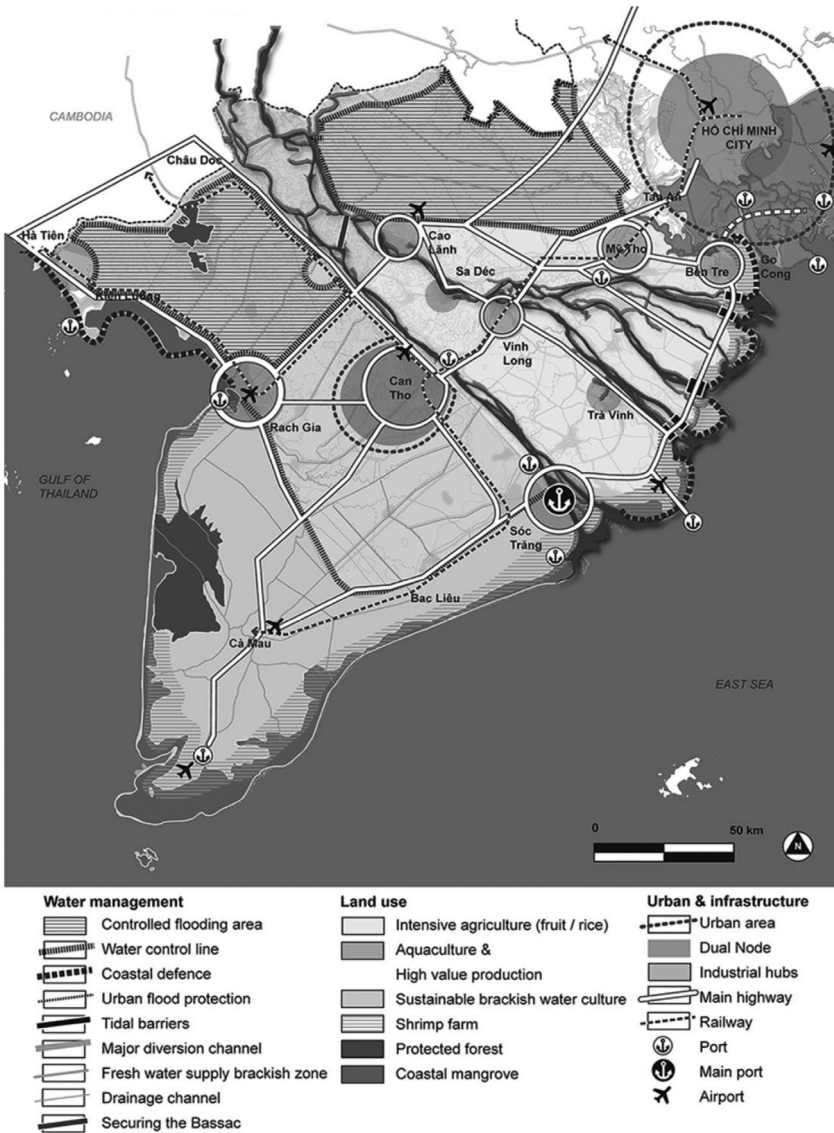
Source: Author’s adaptation based on Royal HaskoningDHV (2013: 36, Fig. 4.2).

environments of the delta (for example, rice cultivation in the floodplain of the upper delta and shrimp aquaculture in the brackish coastal belt), along with enabling infrastructure (water, energy, transport, communications) and institutions (legal, financial) (see Figure 2).

While Vietnamese involvement in the planning process was limited (Zwarteveen, 2018), the Delta Plan’s explicit endorsement of agro-business industrialization bears the clear imprint of the Vietnamese government’s preference for strong policy guidance amenable to top-down implementation (Weger, 2019). The Delta Plan goes beyond charting a long-term development strategy for the world’s third largest delta, however. It also serves as a roadmap for reconfiguring state–society relations according to the dictates of neoliberal rule: ‘apart from the private–private economic links in the chain, also *the role of governments* develops from a direct role in achieving production targets into a more supporting, stimulating or enabling role. *Legislation must allow for organization of the farmers, constraints for forming contracts and investments in the different segments need to be removed*’ (Royal HaskoningDHV, 2013: 68, emphasis added).

Similar prescriptions for the government to remove institutional barriers, facilitate trade and mobility, attract investment, and create flexible and adaptive systems conducive to capital growth and flows are reiterated throughout the document (Royal HaskoningDHV, 2013). This model is consistent with idealized neoliberal state–economy relations, whereby ‘neoliberalism activates the state on behalf of the economy, not to undertake economic functions or to intervene in economic effects, but rather to facilitate economic competition and growth and to economize the social’ (Brown, 2015:

Figure 2. Schematic Map of the Mekong Delta under the Agro-business Industrialization Scenario



Source: Royal HaskoningDHV (2013: 41, Fig. 4.7).

62). Resolution 120 reflects the Government of Vietnam’s embrace of this task. It harnesses the power of the Central Committee of the Communist Party, which has ultimate authority over the country’s ‘socialist-oriented market economy’, to assign specific duties to each of the 15 national-level

ministries. The result is a whole-of-government approach that marshals the resources, mandates and skills of each ministry in service of transforming the environment, society and economy in accordance with the Mekong Delta Plan's vision of agricultural modernization.

One preliminary analysis suggests that significant progress has been made in implementing the Mekong Delta Plan in terms of its influence on how actors at various levels think and make decisions (Seijger et al., 2019). The study applauds this intermediate step of soft implementation, whereby the hurdle of changing people's minds to be more aligned with the Delta Plan has been largely overcome at all but the local level. However, shaping the Mekong Delta into an agricultural commodity export production zone is not a process of opening people's eyes to the reality of the delta but an act of restructuring the social and environmental fabric to fit state and development planners' vision (see Figure 2). While the Delta Plan and Resolution 120 provide the material representation of this imaginary, donor-funded projects demonstrate its material realization (Büscher, 2019).

## ADAPTING TO DELTA PLANS

The Mekong Delta Plan, Resolution 120, and other regional development reports portray the delta as a landscape facing numerous challenges yet one ripe with potential. In line with their green growth agenda, they present sustainability, economic growth and protection from environmental hazards as compatible and even mutually enhancing. 'Prosperity and [environmental] safety are very much connected factors: a high safety is required to attract industry and enhance a sustained economic prosperity and vice versa high prosperity in the delta makes the investments for safety affordable' (Royal HaskoningDHV, 2013: 48). But it takes money to make money, and the Vietnamese government has been strategic in framing its vulnerability to climate change not from the position of a passive victim but as an investment opportunity: 'climate change and sea level rise are an indispensable trend, thereby requiring to live together and adapt it [sic], and turn challenges into opportunities' (GoV, 2017a: 3). Therefore, rather than approaching climate change, and uneven vulnerability to it, as an outcome of centuries of colonial and capitalist wealth extraction, it should be seen as an 'indispensable trend' — one that requires adaptation, to be sure, but also one that creates fresh opportunities for same said extraction.

This orientation has proven very enticing to multilateral development banks and bilateral aid agencies, as attested in part by Vietnam's record of securing overseas development assistance since the early 1990s (Open Development Vietnam, 2018). Formerly one of the poorest countries in the world, Vietnam has experienced meteoric growth to the tune of 6.8 per cent (+1.24 per cent) average annual GDP growth for the past three decades

(1990–2019).<sup>2</sup> This track record, though disrupted by the coronavirus pandemic, has been useful in attracting adaptation funding to the Mekong Delta. Prime Minister Nguyen Xuan Phuc announced at the Climate Adaptation Summit, a high-level event hosted by The Netherlands in January 2021, that Vietnam needs US\$ 35 billion in foreign adaptation finance over the next decade (Phan, 2021). Adaptation funding typically comprises only 19–25 per cent of total climate finance flows (Oxfam, 2020) because it does not have the same profit-generating potential as mitigation projects. While commitments do not match need, Vietnam has been remarkably successful in garnering hundreds of millions of dollars annually for climate adaptation projects (CARE, 2021b). Vietnam's relative success hinges on organizing adaptation measures around competition and growth that make it attractive to potential funders.

Although the Government of Vietnam did not formally endorse the Mekong Delta Plan until 2017, it initiated donor-funded adaptation projects aligned with the plan as early as 2013. These efforts include various capacity building, technical assistance and policy development activities, but a major thrust of adaptation efforts is shrimp farming. Shrimp aquaculture, primarily of White Leg (*Litopenaeus vannamei*) and Black Tiger (*Penaeus monodon*) varieties, has been a significant source of foreign currency since 2000. Vietnam is the world's fifth largest producer of shrimp and its third largest exporter. The industry brings in US\$ 4 billion annually, a figure that the Government of Vietnam seeks to increase to US\$ 10 billion by 2025. A 2018 Prime Ministerial Decision identified shrimp production as sustainable, adaptive to climate change and protective of ecosystems (GoV, 2018). Although the legislation is labelled as a national action plan, it is principally concerned with the Mekong Delta, where more than 80 per cent of Vietnam's shrimp is cultivated (Pongthanapanich et al., 2019).

The combination of falling rice profitability, shifting water conditions and farmers' ability to fetch high prices for shrimp led to the rapid conversion of farmland in the Mekong Delta to shrimp aquaculture (Hoanh et al., 2003), which ballooned from 289,400 ha to 514,600 ha between 1995 and 2008 and to 720,000 ha in 2018 (Lan, 2013; Pongthanapanich, et al., 2019). The government plans to expand on the region's explosive growth by further increasing the land under cultivation to 800,000 hectares by 2025 (GoV, 2018). While some of the shrimp is consumed domestically, the majority is exported to markets in China, the European Union, Japan and the United States.

The promotion of brackish water shrimp aquaculture as an adaptation strategy rests on the official consensus that sea-level rise and associated seawater intrusion are inevitable and that residents of this low-lying coastal

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2. Calculated from World Bank data: <https://data.worldbank.org/indicator/NY.GDP.MKTP.KD.ZG?end=2020&locations=VN&start=1985&view=chart>

landscape must conform to this reality.<sup>3</sup> As one project leader with the World Bank noted, ‘we need to transition people away from rice toward a brackish water system’.<sup>4</sup> In an about-face from its earlier commitment to protecting and regulating freshwater resources for rice and fruit cultivation, the Government of Vietnam now embraces ‘actively living with ... inundation, brackish water and saltwater’ (GoV, 2017a: 10) and deems it necessary to ‘regard brackish water and saltwater as natural resources for economic development’ (*ibid.*: 3).

The government’s stance on saline water stands in stark contrast to that of PRA participants in the coastal provinces of Ben Tre and Tra Vinh. Participants were disaggregated by income, gender and ethnicity to account for power differentials between wealthy and poor households, men and women, and majority (Kinh) and minority (Khmer) ethnic groups and to ensure that participants could speak freely. The participants thus captured a broad spectrum of subjectivities that also included large differences in physical mobility, literacy and age. Yet, every group identified salinity intrusion as the top environmental hazard they face. The participants thus raised important questions about who can ‘rationally exploit the potentials of brackish and saltwater resources ... for socio economic development’, as dictated by the government (*ibid.*).

Government officials and development agencies frame shrimp aquaculture as a logical win-win strategy for delta residents. Earnings from shrimp are 15–50 times greater than those from rice (EJF, 2003), while shrimp farming is deemed a sustainable cultivation strategy for an increasingly saline environment (GIZ, 2017). However, such narratives obscure the high financial barriers to entry, reduced employment, social exclusion and environmental transformations that shrimp aquaculture entails. While donor-funded projects tout professionalization opportunities for farmers, shrimp farming requires a fraction of the labour of traditional rice agriculture, thus eliminating employment opportunities for landless households.

Landlessness in the Mekong Delta is the highest of any region in the country, yet large-scale land-use change projects like the World Bank’s Integrated Climate Resilience and Sustainable Livelihoods Project (ICRSL) favour landowners who can afford to transition production systems from rice to shrimp. Indeed, provincial government officials criticize ICRSL for not

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3. There are four systems of shrimp aquaculture in the Mekong Delta: intensive, extensive, rice-shrimp and integrated mangrove shrimp. The latter two are sustainable when conducted properly and are also strongly encouraged by some development agencies. However, they comprise a minority of operations, and farmers often undermine sustainability through over-pumping groundwater, overuse of chemical inputs, or maintaining less than the optimal 70:30 ratio of mangrove cover to shrimp pond area. This study focuses on intensive and extensive shrimp farming due to their market and spatial dominance (51,000 ha and 675,000 ha, respectively).

4. Interview, World Bank representative, Hanoi, 13 June 2017.

benefiting the poor,<sup>5</sup> despite the project's acknowledgement that the Mekong Delta has the country's highest concentration of poor residents, who are also the most vulnerable to climate change (World Bank, 2016). Commenting on the potential reduction in labour demand in aquaculture production systems, one German aid agency noted:

[A]lthough the transition to a professional aquaculture industry would surely benefit GDP growth in the region, the question is how much employment a highly professionalized aquaculture industry would actually need. Might a transition to a high-standard aquaculture industry be good for the economy but bad for per capita income on a broader level? If jobs should be lost through the professionalization of aquaculture, where do former farmers find new employment? (GIZ, 2017: 637)

After raising this possibility with one project leader, I was told, 'We are not going to track employment. We are tracking training, different parameters of infrastructure provided. Beyond that, there's only so much we can do'.<sup>6</sup> Thus, the largest adaptation projects target landowners who are less vulnerable to climate change. Meanwhile, landless households who can only sustain themselves by selling their labour power have fewer employment opportunities. Nor does land ownership ensure shrimp profits. The high capital investment for adopting shrimp aquaculture is prohibitive for many households (Nguyen et al., 2021). Those who do join the market may assume large debts and risk incurring more debt or losing their collateralized land in the high probability event of crop failure due to floods, pollution or disease (EJF, 2003). Foreign adaptation consultants consider agricultural debt to be a reasonable and appropriate risk and claim that people are 'very comfortable' borrowing money.<sup>7</sup> One project thus features 'co-financing for climate change adaptation' in which farming households and 'household enterprises' prepare 'detailed project proposals' and, if successful, receive up to half the cost of adaptation investments and then match the funding with their own resources or loans (IFAD, 2013: 13).<sup>8</sup> However, when interviewed, several residents expressed reluctance to take out loans for fear of not being able to repay them.<sup>9</sup>

The Mekong Delta Plan and related programmes suggest that industrial agriculture is not only best suited to the environment but is also less susceptible to external shocks. By taking advantage of the region's 'agricultural niche, growth is organically driven and is less vulnerable for stagnating (global) economic growth' (Royal HaskoningDHV, 2013: 48). Here,

5. Interview, Development Partners' Mekong Delta Working Group member, Ho Chi Minh City, 31 May 2017.

6. Interview, World Bank representative, Hanoi, 13 June 2017.

7. Interview, UN Women representative, Hanoi, 23 August 2018.

8. Curiously, IFAD's co-financing tops out at US\$ 1,430 per household under this scheme but establishing a new intensive shrimp farming operation typically costs US\$ 5,800 (GIZ, 2017). Even when households out-compete others for these grants, they are responsible for covering closer to 75 per cent of start-up costs rather than 50 per cent.

9. Interviews, residents, Ben Tre, June 2019.

the Delta Plan and the foreign-funded programmes enacting it ignore the very market linkages that they argue require more attention and development. Their explicit vision is to transform the entire delta into ‘a regional hub specialised in high-value agriculture and agro-food products for export and domestic markets’, where ‘modern, commercially oriented, production systems [are] focused on high product quality that meet international and middle-class urban consumer standards’ (ibid.: 42). It is difficult to comprehend how global economic integration and export-oriented production of ‘high-value’ and ‘high product quality’ agricultural commodities are less rather than more exposed to price volatility and market capture. Indeed, food safety standards have been found to benefit middle-class farmers, larger producers and affluent countries that outcompete and exclude poorer countries and smaller firms (Hansen and Trifković, 2014; Henson and Jaffee, 2006).

Once committed to economic growth as a means and an end to adaptation, however, there appears to be no alternative except to double down on the same reasoning that creates insecurity (see Taylor, 2009). For instance, IFAD’s ‘Adaptation to Climate Change in the Mekong Delta in Ben Tre and Tra Vinh Provinces’ (AMD) project acknowledges that ‘the risk of external shocks to the macro-economy ... is ever present in a relatively open economy such as that of Viet Nam, particularly with the high proportion of income being derived from export revenue’ (IFAD, 2013: 85). In response, the project focuses on personal finance measures such as increasing savings and access to credit. Meanwhile, a USAID report on adaptation in the Mekong region suggests that the answer to the ‘important, largely negative effects’ of agricultural price volatility associated with ‘integration with global commodity markets’ is greater access to markets (ICEM, 2013: 176). The antidote to the poison is more poison.

Finally, shrimp farming is not benign. Coastal mangrove forests provide critical habitat for a great diversity of aquatic and terrestrial species. They also trap sediments and absorb wave action, two ecosystem functions that offer vital protection against coastal erosion and storm surge (Tong et al., 2004). Yet, an analysis of remotely sensed imagery from 1973 to 2008 found that more than half of the southern delta’s mangrove forest was cleared for shrimp aquaculture (Nguyen et al., 2011), and the trend has continued (Phan and Stive, 2022). Such large-scale land conversion was facilitated by government decrees permitting open coastal areas to be developed for agriculture, as well as tax abatements on newly cleared forest (Van et al., 2015). Mixed rice–shrimp cultivation provides a more sustainable alternative that enables farmers in brackish transition zones to augment their earnings and to generate yields during periods of saline water intrusion. However, this model is not suitable for smallholders (<0.5ha) due to low economy of scale and barriers to accessing essential inputs, while profit incentives and environmental challenges have prompted a large proportion of rice–shrimp

farmers to shift to shrimp monoculture (Loc et al., 2021; Nguyen et al., 2021).

Once in place, shrimp farms require regular inputs of shrimp seed, antibiotics, feed and fertilizer that concentrate into toxic effluents; mangroves help to absorb these, yet they are threatened by expanding shrimp operations. In addition to managing chemical and biological inputs, farmers regulate the salinity of shrimp ponds by mixing fresh groundwater with saline surface water. However, groundwater extraction for shrimp aquaculture is driving the land to subside at rates of 1–2 cm per year (Anthony et al., 2015; Minderhoud et al., 2017). Over a 25-year period, anthropogenic activities such as groundwater extraction for shrimp farming has caused the Mekong Delta to sink at a rate nearly 10 times that of global sea-level rise (Minderhoud et al., 2017). Lower coastal elevation in turn enables seawater to penetrate further inland and expose more land and households to climate change impacts.

Projects such as IFAD's AMD project and the GIZ Integrated Coastal Management Program (ICMP) measure success in economic terms. Rather than prioritizing household exposure to hazards or capabilities for managing climate impacts, they evaluate how many households adopt biosecure shrimp farming methods, invest in climate-proof value chains, develop business plans, identify funding sources, or establish market linkages. The focus on market success over direct markers of social well-being is evident:

*The ultimate test of success* will be how well farmers who transition to alternative production systems succeed in placing products in the market. In doing this, new producers can expect to have to compete with existing producers and suppliers who are likely to have established comparative advantage. Thus, it will be necessary for new producers to produce to the highest standards and to be as competitive as possible from the very beginning. (GIZ, 2017: 8, emphasis added)

Shrimp cultivation is not an option for most poor, women-headed, or minority households of the Mekong Delta. But even for residents who can avail themselves of the wealth-generating opportunities it affords, the need for inexperienced producers to be competitive straightaway leaves little room for error. This is an unrealistic expectation in the Mekong Delta where the average age of decision makers in farming households is 53 years old and where learning about new production methods is primarily informal (Nguyen et al., 2021). Yet, while foreign-funded projects count successful outcomes as their own, those who are less fortunate bear all the costs. The neoliberal adaptation subject is thus 'doubly responsabilized: it is expected to fend for itself (and blamed for its failure to thrive) and expected to act for the well-being of the economy (and blamed for its failure to thrive)' (Brown, 2015: 134).

The result of aquaculture-focused adaptation projects is a highly productive and profitable socio-ecological landscape. These gains, however, come at the expense of heightened social exclusion, precarity and environmental hazards for those unable to 'rationally exploit' saline water conditions — conditions that these same projects exacerbate yet which also serve as



justification for foreign climate intervention (Taylor, 2009; Thomas, 2020b). As the Mekong Delta is engineered into a technologically advanced agricultural export zone, so too are individuals and households transformed into risk-bearing competing capitals. They must evaluate risks, identify opportunities, weigh variables and adjust their behaviour to optimize their outcomes within an environmental and economic context not of their making but to which they must successfully adapt (Kandlikar and Risbey, 2000). Residents are adapting to delta plans as much as to climate change.

## STATES OF COMPETITION

The Mekong Delta Plan exemplifies the idea that economic growth alone should be sufficient for individuals to thrive and protect themselves from harm and, as a result, economic growth becomes the state's overriding project and policy (Brown, 2015). The singular focus on growth has translated into a reliance on markets rather than the state to provide social needs, as well as the devolution of responsibility onto individuals, households and communities to effectively manage environmental hazards and resource use (Khan et al., 2019; Mosse, 2005). Responsibilization has known material and social impacts for local-level actors (Vilcan, 2016; Welsh, 2013), but closer attention to the political economy of climate change reveals that provinces, states and donors are equally subject to the mandate to compete.

Prioritizing funding to highly vulnerable, low-income states is a central tenet of climate finance justice and is codified in the UNFCCC accords and agreements. However, some least developed countries have received scant funding, while the bulk of climate finance flows to middle-income states (Timperley, 2018). When inquiring as to why some climate-vulnerable developing countries garner financial support for climate adaptation and others do not, climate finance negotiators and development practitioners repeatedly raised one factor: bankability. One prominent negotiator identified 'the capacity to actually advance bankable project proposals in country' as the first factor affecting differential access to adaptation finance.<sup>10</sup> The World Bank defines bankability as, 'The state of preparedness of a particular adaptation project such that *funders find the project sufficiently attractive and secure in terms of investment value*' (World Bank, 2019: 43, emphasis added). While profit potential is an important variable, it is leading to countries being compelled to make themselves attractive sites of adaptation investment by reducing risks *for investors*. Calls to 'unlock' private sector adaptation finance often invoke the need to assuage risk-averse investors: 'An important pre-condition for projects to be bankable/investable is that they meet the risk–return appetite of banks or investors' (Cochu et al., 2019: 8).

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10. Interview, G77+ China representative, Glasgow, 10 November 2021.

Accordingly, the World Bank has shifted its focus from lending to de-risking projects and even whole countries (Bigger and Webber, 2020). Climate vulnerability, therefore, is not inherently investable from an investor's standpoint but must be made so through a suite of institutions, policies, social relations and financial and legal infrastructures (see Goldstein and Yates, 2017).

The foregoing analysis of Vietnam's green growth agenda demonstrates how the Vietnamese government has internalized the imperative to be competitive, but the mandate to compete also penetrates to the subnational scales of the region and province. Since 2015, Vietnam has hosted the Mekong Delta Forum, where development partners gather with government officials to coordinate their activities in the region. At the March 2021 meeting, the Prime Minister unveiled a new strategic viewpoint for the Mekong Delta organized around the eight 'Gs' as shown in Figure 3: giao thông (traffic), giáo dục (education), giang (rivers), gắn (connecting), giàu (rich, wealthy person), giỏi (talented), già (old/ageing), and giới (gender) (*VietnamPlus*, 2021). Although the event was titled 'Climate Resilient and Sustainable Development of Mekong Delta of Vietnam', the climate-vulnerable environment that motivated the meeting is reduced to a single factor in which rivers feature as a site of food production and waterborne traffic. By contrast, two of the eight 'Gs' emphasize the importance of attracting rich and talented people to invest in and contribute to the delta's development. Three other factors reiterate the government's economic focus by highlighting jobs, economic activities and commercial connectivity (see Figure 3).

The Prime Minister's attempts to spur investment in the Mekong Delta betray anxieties about attracting investment to the country as a whole. To facilitate this effort, USAID introduced the Provincial Competitiveness Index (PCI) in 2005 to help firms make informed decisions about where to locate their operations and to give them an opportunity to submit feedback about the quality of the public services that affect their activities (Malesky et al., 2019). These subjective measures of provincial governance are used by domestic and international private sector actors alike (see Figure 4). Indeed, not only do measures like the PCI pit provinces against one another to secure investment, but they also feed directly into international rankings. As USAID stated, 'Publication of the annual PCI has spurred an unprecedented number of reforms at the local level, helping increase Vietnam's overall competitiveness in the global economy' (USAID, 2020: 1). Local reforms include reducing policy bias toward state-owned or well-connected firms; facilitating land access, land tenure and security for business premises; improving transparency; and streamlining bureaucratic procedures. The central government has reinforced local reforms by issuing national policies to boost PCI rankings including Resolution 19–2017/NQ-CP on 'Improving the Business Environment and National Competitiveness toward 2020' (GoV, 2017b), a ministry level mandate to make Vietnam more business-friendly, and Resolution 02/NQ-CP, which incorporates the

Figure 3. The Prime Minister’s Vision for the Mekong Delta

Factor	Objective
1. Giao thông (traffic)	Resources must be prioritized for developing the traffic system to facilitate travel and economic activities.
2. Giáo dục (education)	Basic education, vocational education, high level education.
3. Giang (rivers)	Development strategies should make use of local rivers to promote agriculture and aquaculture as well as waterway traffic and logistics, and there should be a study of river-based activities.
4. Gắn (connecting)	Connecting central agencies with localities, people with businesses, domestic parties with international organizations, and intra-regional connectivity.
5. Giàu (rich person)	Actively attracting rich people and businesses to invest in the region.
6. Giỏi (talented)	Actively attracting talented people to contribute to local development.
7. Già (old/ageing)	Proactive policies on ageing population, better social welfare.
8. Giới (gender)	Enhancing gender equality, boosting women’s access to job opportunities, and bringing into play their role.

Source: VietnamPlus (2021).

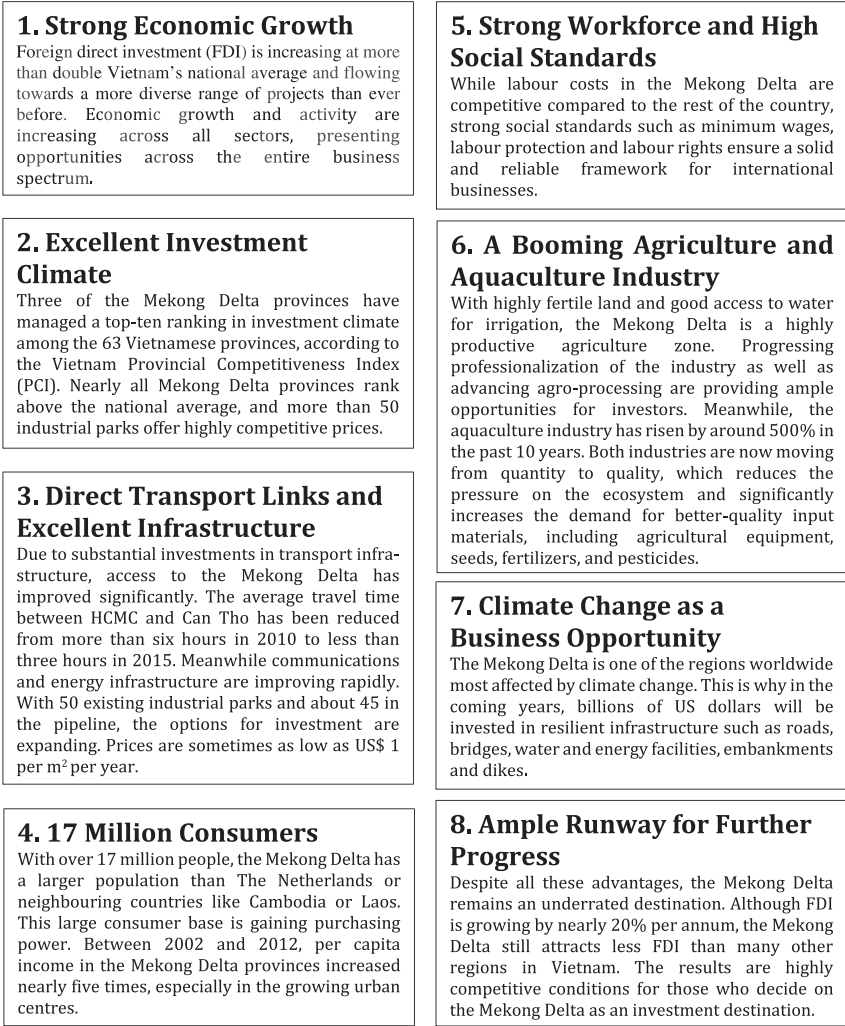
PCI as a target for improving private industry and investment in Vietnam (GoV, 2022).

**Competing Subjects**

Efforts to maximize investability are part and parcel of neoliberalism’s economization of political and social life, in which political aspects of life are transformed into economic ones (Brown, 2015). As a result, political subjects are responsabilized as individual capitals to self-invest and self-provide according to the needs and priorities of the economy. This subject ‘has been significantly reshaped as financialized human capital: its project is to self-invest in ways that enhance its value or to attract investors ... and to do this across every sphere of its existence’ (ibid.: 33). Through the renewed engineering of an already heavily impacted landscape, residents are compelled to adapt just as much to delta imaginaries and associated government directives as they are to climate change itself.

Bringing the agro-industrial imaginary of the Vietnamese Mekong Delta Plan to life demonstrates well how adaptation becomes both a mechanism and intended outcome of neoliberal subject formation. The Delta Plan envisions residents as ‘adaptable Southeast Asian subjects’ (Salamanca and Rigg, 2017: 280), who like ‘model adaptation subjects’

Figure 4. ‘Eight Reasons to Invest in the Mekong Delta’



*Note:* These eight points were listed in a glossy brochure touting the reasons to invest in the Mekong Delta. The list combines the attractiveness of top PCI ratings (no. 2) with climate change impacts as profitable investment opportunities (no. 7).  
*Source:* Author’s compilation based on GIZ (2015: 8–9).

elsewhere (Mikulewicz, 2020: 1807), are imagined as rational, autonomous and innovative, and therefore capable of protecting themselves from harm. Moreover, climate subjects regulate themselves in ways that reproduce established political and economic structures (Lindgaard, 2020), such as converting mangrove forests into shrimp ponds to meet government

economic and social development targets. Thus, ‘climate change policies and programmes not only respond to climate change impacts, but simultaneously fulfill other political goals through subject formation’ (ibid.: 161).

Existing studies of neoliberal climate subjects have productively challenged the responsabilizing and depoliticizing tendencies of mainstream climate adaptation approaches (Chandler and Reid, 2016; Mikulewicz, 2020; Salamanca and Rigg, 2017). Yet the imperative for adaptation subjects to compete has been inadequately addressed, allowing grave justice effects to recur — namely, the unchecked diffusion of competition logic in adaptation programming locks in and naturalizes inequality (Fieldman, 2011). When markets shifted from a liberal focus on exchange to a neoliberal focus on competition, equality gave way to inequality: ‘equivalence is both the premise and the norm of exchange, while inequality is the premise and outcome of competition. Consequently ... when market principles are extended to every sphere, *inequality becomes legitimate, even normative, in every sphere*’ (Brown, 2015: 64, emphasis added). Adaptation premised on competition can only have the inescapable outcome of engendering more inequality and thus greater precarity and vulnerability to climate change. However, Brown’s (2015) thesis warrants fine-tuning, as domestic actors are not alone in being responsabilized as investable capitals. So are people and institutions at other scales, including donors themselves.

### Donor-driven Adaptation

Donors are not immune to the imperative to compete and adapt; the governing rationality of neoliberalism operates in and through bilateral and multilateral development institutions as well. Donors issued a joint statement at the 2019 Mekong Delta Forum to convey their readiness to ‘bring [their] comparative advantages to work in partnership with ... stakeholders ... to make the objectives of Resolution 120 reality’ (MWG, 2019). However, in conversations and project documents, development actors express anxieties about maintaining their relevance as they jockey for consumers of their expertise and financial products. Despite active donor coordination activities, I learned that competition is quite fierce among donors<sup>11</sup> and that ‘it would be naïve to think [otherwise]’.<sup>12</sup> Presumably a burgeoning economy like Vietnam’s could accommodate all interested parties. However, in 2018, Vietnam set its public debt ceiling at 65 per cent, and by early 2019 it arrested all new projects from donors when it reached 61.5 per cent.<sup>13</sup> According to one JICA representative, this led donors to be ‘very concerned about strict

11. Interview, JICA representative, Tokyo, 20 December 2018.

12. Interview, IFAD representative, Zoom interview, 3 November 2021.

13. Interview, JICA representative, Hanoi, 28 January 2019.

public debt management', and while they complained to the Vietnamese government, they still found themselves unable to meet with the Ministry of Finance to advance new projects.<sup>14</sup> These accounts contrast sharply with the framing of foreign development agencies as resources from which recipient countries seek assistance to realize their 'country-led' projects.

Publications also reveal the extent to which development agencies strive to distinguish themselves. Organizations draw connections between their home countries and target audiences abroad, highlighting the specialized knowledge and technical expertise they are prepared to bring to recipient areas. The Mekong Delta Plan itself includes sections that read like the 'sponsor content' of a magazine, such as a brief history of Dutch delta planning and a three-page profile of The Netherlands, which offers 'tempting examples for agro-business industrialization' and serves as a 'model for economic growth of a delta rich in natural resources' (Royal HaskoningDHV 2013: 60–62). While there are practical reasons why JICA cites Japan's experience with disaster response (JICA, 2020) and AusAID notes Australia's climate modelling capabilities (AusAID, 2011), such details also reveal that donors, and not just recipients, are forced to compete.

Competition among development agencies has significant implications for climate justice and the asymmetrical distribution of climate finance. Multilateral development banks have pivoted from direct lending toward de-risking that prioritizes investors' economic risks over the human security risks confronting climate-vulnerable groups. In the process, development banks establish their value and legitimacy as expert brokers for private investors. Meanwhile, bilateral aid agencies are accountable to domestic politics to advance public and private sector interests. Development institutions compete amongst themselves to create profitable opportunities for expertise, manufacturing, technologies and capital sourced from their respective countries. Thus, when climate-vulnerable populations vie for essential adaptation resources, they do so according to terms determined by the competitive forces that shape donor behaviour. Vulnerability to climate impacts falls away as the most important determinant of climate assistance, while the distribution of adaptation funding becomes a function of the capacity to mollify skittish investors and transform vulnerability into lucrative business prospects.

## CONCLUSIONS

This study has examined the unequal outcomes of conflicting imperatives within mainstream climate policy for economic growth and effective

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14. Ibid.

adaptation. Through interviews and policy analysis, it shows that the organization of social, political and economic life around competition is driving profound socio-ecological changes, with significant consequences for the distribution and implementation of foreign climate aid. It draws on the specific case of Vietnam and its development partners to highlight a generalizable dynamic in which competition for funding, consumers and market share among climate-vulnerable populations is advanced as a precondition for economic growth and effective adaptation but instead exacerbates the unequal outcomes of climate change.

The Mekong Delta Plan amounts to a wholesale transformation of the delta's socio-ecological system, entailing changes at the level of the state, region, province, household and donor. The Government of Vietnam has activated its ministries to make the environment, society and economy of the Mekong Delta conducive to agro-business industrialization (GoV, 2017a). Through the CVF, V20 and the Association of Southeast Asian Nations (ASEAN), it advocates for grants and concessional loans from multilateral climate funds, foreign development agencies and international financial institutions to finance these costly changes. The Prime Minister induces the region to attract wealthy talent to accelerate the delta's development through gimmicky campaigns (see Figure 3), while the Mekong Delta Plan envisions each province capitalizing on its comparative advantages to maximize productivity and economic growth (see Figure 2). Provinces also take their cues from domestic enterprises to improve their prospects for private sector investment (Figure 4). Target households and communities participate in foreign-funded adaptation projects to shore up their economic profiles by adopting new cultivation techniques that promise to augment adaptive capacity. Through such projects, donor agencies endeavour to locate outlets for expert knowledge, technologies and finance from their home countries. These actions suggest the seamless coordination of many moving parts toward the goal of improved collective adaptation to climate change. However, in practice they disaggregate actors at every level into individualized, competing capitals.

Although climate change dominates national and international policy discourse, the sources of precarity among vulnerable groups are multiple. To what, then, must they adapt? Adaptation policies demand that populations accommodate themselves not just to climate change but to the mode of production and associated logics that have engendered the crisis. This imperative is visible in explicit mandates for groups to fashion their vulnerability as urgent, and therefore a priority for intervention, but also as an attractive business investment. Unfortunately, competition-driven growth makes for a grievous response to climate change. Competition, by definition, creates winners and losers. While adaptation efforts animated by competition have become ubiquitous, it is time to recognize them as antithetical to vulnerability reduction.

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