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Published in:
International Journal of Climate Change Strategies and Management

Publication status and date:
Published: 02/02/2024

DOI (link to publisher):
10.1108/IJCCSM-05-2023-0063

Document Version
Publisher's PDF, also known as Version of record

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Citation for the published version (APA):
Nguyen, Q., Kawarazuka, N., Ngoc Nguyen-Pham, T., Hoai Nguyen, T., Minh Le, H., Minh Tran, T. T., & Ngoc Huynh, T. T. (2024). Why adaptation falters: principles for climate change adaptation policy assessment in Vietnam. *International Journal of Climate Change Strategies and Management*, *16*(1), 19-43. https://doi.org/10.1108/IJCCSM-05-2023-0063

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Why adaptation falters: principles for climate change adaptation policy assessment in Vietnam

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Received 1 May 2023
Revised 14 July 2023
Accepted 2 November 2023

Abstract

Purpose – Recognition that not every climate adaptation policy is a good one has shifted attention to new tools and methods to measure the adequacy and effectiveness of adaptation policies. This study aims to propose and apply and applies an innovative adaptation policy assessment framework to identify the extent to which climate adaptation policies in Vietnam exhibit conditions that are likely to ensure a sufficient, credible and effective adaptation.

Design/methodology/approach – In total, 21 conditions, categorized under five normative principles and covering critical issue areas in adaptation domain, form the climate adaptation policy assessment framework. The principles were double-checked and tested in case studies through observations and analyses of policy documents to ensure that each condition should be distinct and not overlapping across principles. To see if the principles and attendant conditions were able to capture all relevant aspects of adaptation, the authors used structured expert judgment. In total, 39 policy documents pertaining to climate change adaptation were selected for qualitative document analysis. In-depth interviews with local officials and experts were conducted to address data gaps.

Findings – The study reveals major weaknesses constituting a reasonably worrisome picture of the adaptation policies in Vietnam since several critical conditions were underrepresented. These results shed new light on why some adaptation policies falter or are posing adverse impacts. The findings suggest that a sound policy assessment framework can provide evidence on what effective adaptation policy looks like and how it can be

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This study was supported by the CGIAR/Asian Mega Deltas Initiative Project in Vietnam. Authors would like to thank all funders who support this research through their contributions to the CGIAR Trust Fund: www.cgiar.org/funders/. The authors gratefully acknowledge the support of the Mekong Environment Forum (www.mekongenvironment.org) in field research, and the contribution of local and foreign experts who spent time for our interviews.

International Journal of Climate Change Strategies and Management
Vol. 16 No. 1, 2024
pp. 19-43
Emerald Publishing Limited
1756-8692
DOI 10.1108/IJCCSM-05-2023-0063

enabled. The framework for climate adaptation policy assessment in this study can be easily adjusted and used for different socio-environmental contexts in which new conditions for policy assessment might emerge.

Social implications – The findings show underlying weaknesses constituting a reasonably worrisome picture of the adaptation regime in Vietnam. In the absence of mechanisms and measures for accountability and transparency in policy processes, adaptation in Vietnam appears more likely to be prone to maladaptation and corruption. While solving these problems will not be easy for Vietnam, the government needs to evaluate whether the short-term gains in sustaining the existing adaptation policies really make progress and serve its long-term climate-adaptive development goals.

Originality/value – Although interpretations of adaptation effectiveness may be very divergent in different normative views on adaptation outcomes, the authors argue that a common, agreed-upon effectiveness can be reached if it is clearly defined and measurable in adaptation policies. Thus, the climate adaptation policy assessment framework proposed in this study is critical for policymakers, practitioners, donors and stakeholders dealing with adaptation to better understand the weaknesses in policymaking processes, pinpoint priority areas of action and timely prevent or prepare for possible adverse impacts of policies.

Keywords Effectiveness, Climate change, Vietnam, Adaptation assessment, Climate adaptation policy

Paper type Research paper

1. Introduction

The Paris Agreement sets out a clear and ambitious agenda for "bottom-up", country-driven action to reduce greenhouse gas emissions and take steps to adequately adapt to climate change (Lesnikowski *et al.*, 2019; Swiderska, 2016). The legally binding agreement promotes local inclusion and coherence and requires nations to assess overall progress made in achieving collective climate goals (see Article 7, Paris Agreement; Singh *et al.*, 2022; Craft and Fisher, 2018). Achieving these ambitious goals requires an *adequate* and *effective* adaptation as well as a polycentric approach comprising multi-level and multi-stakeholder efforts (Cole, 2011).

The associated problem is threefold: First, across developing countries where carbon-intensive industries determine economic growth, adaptation has emerged as a core part of national climate policy (Olazabal *et al.*, 2019; Moss *et al.*, 2013; Pannier *et al.*, 2020; Quang, 2020) due to limited financial and technological resources for a low-carbon transition (Timperley, 2021). Second, nationally led, or "top-down" enabling framework is the most popular institutional approach observed in many countries (Corfee-Morlot *et al.*, 2009). In this model, tasks and jurisdictions are limited to lower governments, and local governments are primarily dependent on policy directives and mandates and financial, legal and professional resources provided by the central government. But this top-down approach has failed to produce significant on-the-ground changes (Grunbaum, 2015; Keohane and Victor, 2015; Jackson and de Coninck, 2019; Jörgensen *et al.*, 2015). Third, in countries where central-local government power relations are asymmetrical, such as the United Kingdom and Global South countries, central government policy actors retain decision-making authority and steer climate governance networks in favour of their own interests (Di Gregorio *et al.*, 2019; Gillard *et al.*, 2017; Tompkins *et al.*, 2002). The practice of non-decision-making may apply in policy arenas in which power imbalances between central decision makers and local people persist, marginalizing local policy stakeholders, especially grassroots communities, who are unable to secure their concerns and interests due to institutional barriers and limited capacity (Balderas-Torres *et al.*, 2020; Di Gregorio *et al.*, 2019; Faysse *et al.*, 2010; Kent, 2015; Quang, 2017).

Vietnam is no exception to these pervasive problems (Cuong and Thuc, 2017; Quang, 2020; Giusto *et al.*, 2021). The country is widely noticed for its high vulnerability to climate change effects, including unpredictable drought and precipitation, heat waves, sea level rise

and rising temperatures. As highlighted in the updated Sea Level Rise Scenarios Report, Vietnam would experience a 2–3°C increase in average temperatures and a 78–100 cm rise in sea levels by the end of the century. Such a sea level rise scenario could inundate 39% of Mekong Delta and put the national food security at extreme risk (MONRE, 2020). Vietnam's climate adaptation policies and strategies tend to address climate-related challenges through providing technological solutions (Eyler, 2019, pp. 307–315; Brown, 2020). Built structures such as dykes and seawalls dominate national discourse on climate change adaptation. While some policy reforms, such as the government's 2017 Resolution 120/NQ-CP on nature-based solutions for climate adaptation, intend to generate positive environmental and socio-economic outcomes, the focus has largely been on which solutions should be adopted to sustain the government's "rice-first policy" (Quang, 2020; Le *et al.*, 2018; Brown, 2016). So far, less attention has been given to the socio-political and human aspects, such as participatory governance and social justice. The recognition that solutions may reproduce inequalities and injustices is seldom made explicit or explored in depth (see also Kabisch *et al.*, 2016; Cousins, 2021). The country's climate governance and policies remain state-led, and inter-sectoral overlapping persists (Strauch *et al.*, 2018; Suong and Quang, 2020).

As the thirst for adaptation increases, there is a patent need to track whether adaptation policies are proving sufficient and effective. This requires new methods, tools and frameworks to measure the adequacy and effectiveness of policies that determine the actual progress on adaptation (Ford *et al.*, 2013; Olazabal *et al.*, 2019). Given the lack of innovative, holistic assessment frameworks, adaptation policies and solutions "can be easily designed, adapted or manipulated to serve distinct agendas and parties rather than to promote the wider, common good" (Boyland *et al.*, 2022) and the civil society has no tools to evaluate policy effectiveness and thus has limited space for public participatory and policy reforms (MONRE, 2021).

This paper seeks to address these issues by proposing an innovative assessment framework to understand the extent to which climate adaptation policies in Vietnam exhibit conditions that are likely to ensure a sufficient adaptation. We derived a set of principles and associated conditions for assessing the credibility and effectiveness of climate adaptation policies. The case is used to draw conclusions on the usability of the framework and the potential to integrate principles of inclusiveness, coherence, integrity, equity and justice into adaptation policymaking processes from the start.

2. Promoting effective and credible climate change adaptation policy: an assessment framework

2.1 Measuring effectiveness: need and challenges

The problem of adaptation to climate change is complex and multifaceted, as different actors may have common yet differentiated interests and responsibilities. Examining adaptation effectiveness is, therefore, even more complex and cumbersome because, unlike in mitigation, there are no specific, commonly agreed upon metrics to measure adaptation (Christiansen *et al.*, 2018; Dilling *et al.*, 2019; Ford *et al.*, 2013; Owen, 2020; UNEP, 2021). Recent literature highlights some other challenges to setting the boundaries of effectiveness, including the lack of a clear adaptation goal that hampers tracking and monitoring adaptation progress (Craft and Fisher, 2018; UNEP, 2021) and "a complex mix of theory and practice, where effectiveness is interpreted differently at different scales and in different contexts" given the highly contextual nature of adaptation (Singh *et al.*, 2022). Finally, measuring policy effectiveness is difficult; as Mueller (2020) argues, "what is a failure to one person might be a success to another, as different people have different policy preferences and policies often lead to winners and losers", and adaptation interventions may have trade-

offs or even cross-sectoral conflicts across spatial scales (Singh *et al.*, 2022; Jacob *et al.*, 2019; Dilling *et al.*, 2019) that are not always apparent or measurable.

These complexities, as a result, appear to challenge the credibility of climate adaptation policies in centralized climate change governance. In this setting, stronger policy entrepreneurs might resort to "mobilisation of bias" to keep things off the agenda by "manipulating the dominant community values, myths and political institutions and procedures" (Bachrach and Baratz, 1963, p. 632), excluding some alternative solutions to the recognized problem (McCalla-Chen, 2000) and determining the boundaries of effectiveness at the expense of weaker policy actors who are unable to compete due to limited capacity or the ignorance of institutional procedures (Bachrach and Baratz, 1970; McCalla-Chen, 2000). After all, the likelihood that adaptation policies will be effective in reducing and adjusting to climate change impacts for all will be problematic and threaten to increase inequity and injustice in adaptation.

These challenges highlight a need to measure the likelihood of policy effectiveness and credibility. A sound policy assessment framework provides evidence on what effective adaptation policy looks like and how it can be enabled. Although interpretations of adaptation effectiveness may be very divergent in different normative views on adaptation outcomes (Singh *et al.*, 2022; Schipper, 2020), we argue that a common, agreed-upon effectiveness can be reached if it is clearly defined and measurable in adaptation policies. Principles of effective adaptation policies are therefore critical to reviewing and assessing adaptation policies and to providing evidence for tracking adaptation progress.

Based on our research, we developed a climate adaptation policy assessment framework by adopting a methodology widely used in the literature (Gupta *et al.*, 2010; Ha *et al.*, 2018; Quang, 2022a). The framework is built around five major principles that are derived from academic literature, including the works of Ostrom (2005), Gupta *et al.* (2010), Pahl-Wostl (2008), Huntjens *et al.* (2010) and Hallegatte *et al.* (2020). These principles and 21 attendant conditions for policy review and assessment are categorized in Table 1. The principles were double-checked and tested in case studies through observations and analyses of policy documents to ensure that each condition should be distinct and not overlapping across principles. To see if the principles and attendant conditions were able to capture all relevant aspects of adaptation, we used the structured expert judgement as suggested in van Steen (1992) and Quang (2022a). Three Vietnamese policymakers and ten senior researchers from foreign research institutes specializing in climate change, environmental policy and governance involved in one-hour-long presentation and discussion during a side event at the MEF Regional Research Symposium "Impacts of Mekong Hydropower Dams and Climate Change in the Lower Mekong Delta" in April 2020 to scrutinize the framework. The principles and conditions have accordingly been modified and are explained in the following sub-section.

2.2 Principles for assessing effectiveness of adaptation policies

According to Cole (2015), Ostrom (2005) and Pahl-Wostl (2008), the climate change governance regime should be polycentric and horizontal with broad stakeholder participation. In this model, multiple stakeholders and levels of government participate in defining options and priorities as well as in implementation and monitoring (Ostrom, 1996; Gupta, 2007; Di Gregorio *et al.*, 2019; Sahin *et al.*, 2013). Multi-level polycentric adaptation approaches enable local authorities and communities to proactively look for and implement climate action initiatives in accordance with national policy or in the absence of national policy (Reisinger *et al.*, 2011; Corfee-Morlot *et al.*, 2009). Learning and experience obtained from their successful actions appear to inform and steer agenda-setting and decision-making at (sub)national levels (Corfee-Morlot *et al.*, 2009; Reisinger *et al.*, 2011; Jörgensen *et al.*, 2015; Jackson and de Coninck, 2019; Quang and Weatherby, 2019). Initial evidence points out that some local climate initiatives are shaped in response to the

Principles	Conditions	References
P1. Participatory and inclusive governance structure	*C1.1* Well-balanced distribution of responsibilities and authorities between levels of government in defining options and priorities as well as in implementation and monitoring	Ostrom (1996), Gupta (2007), Di Gregorio *et al.* (2019), Sahin *et al.* (2013)
	C1.2 Local knowledge and experience of diverse social and gender groups are incorporated	Cole (2015), Green and Raygorodetsky (2010), Naess (2013), Foster (2011)
	C1.3 Policymaking process is gender sensitive, where the needs and priorities of women are explicitly acknowledged	Nelson *et al.* (2002), Singh *et al.* (2022), Terry (2009), Quang (2022), Kronsell (2013), Bacchi (2017)
	C1.4 Policies are publicised and implemented in ways that local people can understand and easily get access to the policy benefits	Ostrom (2005), Pahl-Wostl (2008, 2009), Huitema *et al.* (2009), England *et al.* (2018), Chisita and Fombad (2020), Jost *et al.* (2016)
P2. Inter-sectorial coherence	*C2.1* Climate change adaptation is mainstreamed across multiple sectors without overlaps or conflicts of interest	England *et al.* (2018), Scobie (2016)
	C2.2 Strong institutional coordination, policy framework and political will exist to promote inter-sectorial coherence, navigate and reconcile trade-offs between economic growth and climate goals	Owen (2020), Korhonen-Kurki *et al.* (2016), Shawoo *et al.* (2022), Yamin (2005)
	C2.3 Cross-sectoral data visibility and information is made accessible to enable adaptive decision-making by all stakeholders	Korhonen-Kurki *et al.* (2016), England *et al.* (2018), Chisita and Fombad (2020), Jost *et al.* (2016)
P3. Adaptation policies consider climate-vulnerability and build resilience of local communities and ecosystems	*C3.1* Communities affected by climate and environmental changes and groups of people who are vulnerable to social, cultural, economic and environmental conditions are at the forefront of defining policy problems and solutions	Owen (2020), Hallegatte *et al.* (2020), Harvey *et al.* (2018)
	C3.2. Gender-sensitive adaptation plans are formalized and integrated into the development priorities of local administrations	Daze (2019), UN Women (2022), Nelson *et al.* (2002), Singh *et al.* (2022), Terry (2009), Quang (2022)
	C3.3 Local adaptation plans have a monitoring system to ensure that adaptation practices empower vulnerable social groups (such as women, ethnic minorities and households below poverty lines), educate and inform them about the causes of their suffering	Owen (2020), O'Brien *et al.* (2014)
	C3.4 Getting people out of poverty-driven climate-vulnerability situations is prioritized	Owen (2020), Hallegatte *et al.* (2020)
	C3.5 Adaptation practices enable long-term balance between economic growth, social values and nature conservation	Cousins (2021), Demiral and Demiral (2021)
P4. Efficiency, transparency, accountability and inclusion in adaptation finance	*C4.1* Adaptation funding is made available through a transparent process of allocation	Ameli *et al.* (2020), Omukuti (2021)
	C4.2 Adaptation financing considers a bottom-up approach that acknowledges local reality, feasibility	Owen, 2020; van Trotsenburg, 2022

(*continued*)

Table 1. Climate change adaptation policy assessment framework

Principles	Conditions	References
	and inclusivity with an emphasis on marginalized groups	
	C4.3 Diverse credible financial sources are identified and justified to demonstrate that selected solutions are financially feasible	Williams *et al.* (2021)
	C4.4 Cost-recovery mechanisms exist and are enforced to fund adaptation solutions in sustainable manner	Ha *et al.* (2018), Huntjens *et al.* (2010)
	C4.5 Interrelated principles, procedures and specific measures for preventing and combating corporate fraud and involvement in corruption activities exist and are informed, including a secure mechanism for expressing grievances and seeking redress	Bozhenko *et al.* (2023)
P5. Adverse impact control and prevention	*C5.1* Diversity of policy solutions to tackle the complex climate problems identified in the policy agenda	Cousins (2021), Howarth and Monasterolo (2017)
	C5.2 Selected policy solutions are evidence-based and justified	Chausson *et al.* (2020), Tangney and Howes (2016)
	C5.3 Policies well inform which actors (key beneficiaries) the selected solutions serve over others, which negative impacts might unfold as adaptation interventions take place and how to prevent or mitigate them	Meerow and Newell (2019)
	C5.4 Mechanisms exist to hold a governance arrangement collectively accountable	Steets (2010), Guerin *et al.* (2018)

Table 1. **Source:** Authors' own creation

adverse impacts of centralized top-down national policy (Reisinger *et al.*, 2011; Grunbaum, 2015; Quang, 2017). Local knowledge and experience of diverse social and gender groups, therefore, need to be incorporated (Cole, 2015; Green and Raygorodetsky, 2010; Naess, 2013).

To be effective, polycentric systems require a good flow of information and good social collaboration for vertical and horizontal coordination and collaboration (Ostrom, 2005; Pahl-Wostl, 2008, 2009; Huitema *et al.*, 2009). Climate change adaptation, thus, needs to be mainstreamed across multiple sectors without overlaps or conflicts of interest, and greater policy coherence is essential (England *et al.*, 2018; Scobie, 2016). That being said, this cross-level and inter-sectoral policy coherence is underrepresented across countries where adaptation policies are developed in an ad hoc fashion around the needs of single sectors (Smith *et al.*, 2022; Korhonen-Kurki *et al.*, 2016; Scobie, 2016; Santos-Lacueva and Velasco, 2018). Improved policy coherence at all levels of government can be ensured by strong institutional coordination, policy framework and political will that exist to promote inter-sectorial coherence, navigate and reconcile trade-offs between economic growth and climate goals (Korhonen-Kurki *et al.*, 2016; Shawoo *et al.*, 2022; Yamin, 2005). Cross-sectoral data visibility and information sharing can lead to better decision-making outcomes, cross-sectoral coherence and equity (Korhonen-Kurki *et al.*, 2016; England *et al.*, 2018).

Climate change is interdisciplinary and global in nature, but its impacts are felt locally. Local (vulnerable) communities - whether in urban slums, rural villages or coastal areas - deserve to be at the forefront in adaptation (Hallegatte *et al.*, 2020; Harvey *et al.*, 2018). Adaptation strategies, therefore, must be inclusive, consider vulnerability of local communities and ecosystems to

climate change and build their resilience capability. Inclusive development and poverty reduction that leave nobody behind are effective adaptation options (Hallegatte *et al.*, 2020). Among the most vulnerable groups, women are at stake but also play a key role in mitigation and adaptation because they depend closely on natural resources and dominate rural economies (Daze, 2019; UN Women, 2022). As climate shocks become more frequent and gender inequalities in adaptation persist, experience shows that socially and economically disadvantaged women and female-headed households can be trapped in a vicious cycle of disaster loss and poverty that makes them more sensitive to climate change. Only gender-sensitive adaptation policies that explicitly address gender as politics and prioritize the pressing needs of women can ensure that nobody is left behind (Bacchi, 2017; Foster, 2011; Kronsell, 2013; Nelson *et al.*, 2002; Terry, 2009).

In developing countries, climate finance is an indispensable enabler of enhanced adaptation action. Ensuring that limited adaptation resources are driven to the right sectors, projects and people in equitable and effective ways requires much greater transparency and accountability (van Trotsenburg, 2022; Ellis and Moarif, 2017). However, simply "following the money" is not enough. We argue that climate adaptation policies may turn out to be maladaptive if they fail to justify how fundings are made available through a transparent process of allocation. While billions of US dollars have been spent and will be needed to support adaptation efforts worldwide (UNEP, 2021; van Trotsenburg, 2022), it is difficult to determine precisely the value of losses through corruption. Massive investments in costly infrastructure measures that dominate adaptation policies make climate adaptation sector particularly prone to corruption (Butler *et al.*, 2022; Ceballos and Mullard, 2022; Matthews, 2016). Adaptation policies, therefore, should define and enforce measures that ensure the prevention of corruption and secure mechanisms for protecting whistle-blowers. Where corruption vulnerabilities are high, multistakeholder engagement can play a critical role in promoting accountability.

To improve confidence and encourage greater investment in adaptation, policies would need to justify and provide full and free access to information that helps people understand how the money is allocated for communities' pressing needs in light of local reality and inclusivity and how it will proportionately benefit different groups of people (van Trotsenburg, 2022). This also aligns with bold calls for locally led climate adaptation (Steinbach *et al.*, 2022). Furthermore, financial sustainability can be reached by identifying cost-recovery mechanisms that entirely or partly cover the (in)direct costs required to undertake adaptation measures (Ha *et al.*, 2018; Huntjens *et al.*, 2010).

Finally, while adaptation solutions may appear instinctively correct, they do have their limitations or even cause adverse impacts if adaptation planning is not science-based and without recognition of relevant social and environmental processes (Schipper, 2020; Nunn *et al.*, 2021). It's not easy - sometimes impossible - to track the impact of "grey infrastructure" measures, such as dyke systems and seawalls, since it often takes years for one to observe their concrete outcomes (Brown, 2020; Matthews, 2016). In countries such as Vietnam, where administrative system is highly centralized, weak mechanisms fail to hold policymakers accountable for their decision (Gonzalez, 2014; Bich, 2014; Quang, 2022b). That lack of effectiveness and credibility of adaptation policies becomes even murkier when decision-making processes are manipulated by stronger policy entrepreneurs, as mentioned above, and corruption forms such as bribery, clientelism and cronyism flourish in policy arenas. To that end, a credible adaptation policy should inform its measures for preventing or mitigating potential side-effect impacts of its solutions. Possible measures include

- diversifying solution options;
- justifying which solutions should be adopted instead of other alternatives;
- whether or not different groups of people equitably benefit from those solutions; and

- necessary mechanisms, including sanctions and incentives, are executed to increase accountability of decision makers and contractors (Steets, 2010; Guerin *et al.*, 2018).

The next section clarifies how this framework is used to assess the likelihood of effectiveness and credibility of adaptation policies in Vietnam, with a focus on a coastal province of Ca Mau. However, the applicability of the assessment framework is not necessarily restricted to this area.

3. Methodology

3.1 Case selection

Local adaptation policies and actions are integral part of Vietnam's multi-level governance of climate change and are crucial for understanding the progress of adaptation (Strauch *et al.*, 2018; Suong and Quang, 2020). Ca Mau, the southernmost coastal province in the Mekong Delta (Figure 1), was selected as an in-depth study in view of its strategic importance in terms of food security and climate change adaptation (Nhung *et al.*, 2019; The and Quang, 2020). The province is relatively large in land area (5,636 km^2) and population



Figure 1.
Ca Mau province (in yellow) in the Mekong delta

Source: Created by the authors

(1.2 million people as of 2019) and stands out as one of the country's most vulnerable provinces to climate change (MONRE, 2020). Nearly 80% of the province's land is believed to be inundated if sea level rises 100 cm in 2100 (MONRE, 2020). The negative impacts of climate change, such as increased tidal flooding and extreme weather conditions, have been making headline news in recent years due to heavy toll on agriculture, and the next decade is critical for the province's future (Tuoi Tre, 2015; Quang, 2017; Lao Dong, 2020; Nhung *et al.*, 2019). Over 130 adaptation policies and projects have been implemented, planned or under construction to cope with climate change impacts in the province (The and Quang, 2020). While the impact of those ambitious solutions remains to be seen, initial evidence shows that some policies, such as dykes and sluices, are posing adverse impacts on local environment and people, including corruption, ecological conflicts, exacerbating land subsidence and groundwater contamination (Giusto *et al.*, 2021; Tien Phong, 2020; Quang and Weatherby, 2019).

3.2 Data selection

Primary and secondary data from different sources, including government online portal, hard copies provided by local authorities and focus group discussions (FGDs), were used to create robust data for assessment. In total, 39 policy documents pertaining to climate change adaptation were selected for qualitative document analysis. Policy collection considers cross-sectoral and cross-level balance to ensure their relevancy and applicability with regards to conditions outlined in the assessment framework. To avoid "biased selectivity" (Bowen, 2009) and to create a complete collection for analysis, our data selection criteria also included the integrity, sufficiency and authenticated currency of policy documents (Cardno, 2018). Provincial policies that contain a high level of similarity to national policies, are not implemented, are no longer in effect or will expire soon were not selected. Semi-structured FGDs were conducted to supplement the document analysis method and collect detailed evidence and narratives for triangulation (Boyce and Neale, 2006). To limit bias, we opted to exclude policy makers and focus on senior experts and government officials ($n = 20$) specializing in fields related to the research topic, including climate change, adaptation policy, gender and rural development, as they would have more experience on which to reflect. Some politically sensitive topics, such as corruption, political accountability and devolution, multi-actor participation in decision-making, etc., were not included in the interviews to ensure comfortable conversations. Alternatively, these issues were fact-checked by referring to relevant studies. The information from the interviews was not used to score the policies; instead, it allowed us to understand the (local) context, the causes of the policy weaknesses and the dynamics through which they have emerged. A few narratives drawn from the interviews were cited to provide evidence and enrich our research findings.

3.3 Data analysis

The textual analysis in this paper focuses on understanding how adaptation policies address the principles of effective and credible adaptation policy that are interpreted in concrete conditions in Table 1. To that end, we relied on qualitative document analysis techniques (Cardno, 2018; Wach and Ward, 2013; Dzebo *et al.*, 2019; Quang, 2022a) to set up a protocol for adaptation policy assessment. First, the policy documents were reviewed and analysed with reference to 21 conditions. Three teams of policy analysts, consisting of nine researchers specializing in public policy, environmental science and environmental geography, jointly scanned and evaluated the policies with the help of SPSS v.24 and Microsoft Excel. For consistency, a scoring system was adopted (Table 2). Table 2 shows

Score	Descriptors
2	• The condition is clearly and fully mentioned in the policy or is the focus of the policy; and • The policy reflects the commitment to seriously implement the condition by identifying concrete action plans or projects.
1	• The condition is partly mentioned in the policy; or • The policy reflects limited commitment to implement the condition as failing to define concrete action plans or projects.
0	The condition is not mentioned or absent in the policy
N/A	• The condition is not applicable; or • The policy is not appropriate for assessment due to lack of integrity or limited access to full policy document.

Table 2.
Scoring system

Source: Authors' own creation

what each band score means in terms of policy effectiveness and includes a set of concrete descriptors, or criteria, that guide and facilitate policy scoring processes. The individual scores for the analysed policies were all equally weighted. They were rated from 0 (not mentioned) to 2 (fully mentioned). The overall band score was calculated by taking the mean result for all policies in each condition category.

As we went along, it became apparent that some conditions were not appropriate for certain documents. It also became apparent throughout the course of analysis that we need to be clear as to what exactly we were looking for when we were analysing a document for its commitment to, for example, "inclusiveness", "coherence", "accountability and transparency" or to "gender equity", and what was realistic to expect the policymakers to include in their policies. To do so, the textual content of each policy was examined to identify concrete "key statements" – stated goals, proposed activities, etc. – defined in the policy. These served as data points for the analysis and weighting steps. We started by counting the frequency of and evaluating "key statements" as well as the action plans for policy implementation. Coding was challenging due to different wording across policies, but hand coding was used to address this by defining close synonyms of certain statements (e.g. "river embankment" and "water storage capacities" were coded as "infrastructure"). We coded the data points for all principles and associated conditions. To limit potential biases, we applied inter-examiner reliability, meaning that always at least two independent teams of policy analysts went through the data material. The third team provided *ad hoc* verification and served as a moderator for any inconsistent results between the two primary examination teams. The final round was conducted to review and compare the independent policy assessment results and make final approval of the decisions. Although this method took us a lot of time after fact-checking and justification, it goes beyond what is normally deemed sufficient for coding reliability (Morse *et al.*, 2002) and helps guarantee robust interpretative analysis and reliable conclusions.

4. Results and discussions

4.1 Participatory and inclusive governance structure

The policy analysis reveals that the adaptation policies in Vietnam partly reflect a participatory and inclusive approach (Table 3). The analysed policies applicable for this

condition ($n = 18$), such as the government's Resolution 120/NQ-CP and the Resettlement Plan in Ca Mau Province mekong delta integrated climate resilience and sustainable livelihoods project (MD-ICRSL Project), have involved multiple actors and local levels of government in determining solutions, implementation and monitoring processes (C1.1, mean = 2.00). The serious distribution of responsibilities and authorities between levels of government and among governing bodies at the provincial level is clearly prescribed by the Law on Grassroots Democracy and the National Climate Change Action Plan, which centralize the role of local actors in climate change adaptation. Most of 38 analysed policies also identify concrete activities to ensure that the policies will be made public in ways that local people can understand the policy benefits and contribute to improving and monitoring the policy implementation process (C1.4, mean = 1.55). For instance, the MD-ICRSL Project reports that "560 households affected by the project were well informed about the project, and they were encouraged to contribute feedback, comments and recommendations for enriching resettlement plan" (DARD, 2019).

Public participation, consultation and multi-level involvement in adaptation policymaking are now mainstreamed and clearly mentioned in critical policies. That said, our analysis results suggest that the polycentric and multi-level approaches are defined more clearly in national policies than in local policies. This implies that political commitment to promoting participatory and inclusive climate change governance is currently high at the national level with limited influence at the local level. This, on the one hand, results in fragmented approaches to adaptation policy planning, action and reporting at the local level. On the other hand, governing bodies in charge of climate change at the provincial level face difficulties in practice due to limited political leverage and devolution. The deconcentration process in Vietnam explains this situation - i.e. local governments have less power and authority to frame independent policies; instead, they must follow and localize the national policies to implement in their territory in fear of mistakes. Recent studies confirm this challenge, claiming that local authorities and communities are still marginalized and not consulted properly in the agenda-setting and decision-making processes (The and Quang, 2020; Ha *et al.*, 2018). Some argue that public consultation, if any, is not serious and reliable due to what MacLean (2013) described as the "mistrust" among different layers of state apparatus and the traditional notion that "state leads and all should follow" (Ha *et al.*, 2018; Nhan, 2017; Giao, 2016).

These results further reflect a limited inclusion of local knowledge and experience of diverse social and gender groups (C1.2, mean = 0.63). All of the analysed policies are not gender sensitive, as their stated goals and action plans do not acknowledge the specific needs and priorities of women (C1.3, mean = 0.42). Some policies, such as Decision 385/QĐ-BXD and

Principle	Conditions	Score
P1. Participatory and inclusive governance structure	*C1.1* Well-balanced distribution of responsibilities and authorities between levels of government in defining options and priorities as well as in implementation and monitoring	2.00
	C1.2 Local knowledge and experience of diverse social and gender groups are incorporated	0.63
	C1.3 Policymaking process is gender sensitive, where the needs and priorities of women are explicitly acknowledged	0.42
	C1.4 Policies are publicized and implemented in ways that local people can understand and easily get access to the policy benefits	1.55

Source: Authors' document analysis results

Table 3. Presence of conditions related to governance structure in adaptation policies

Decision 1332/QĐ-UBND, sparely mention the need for inclusion of local knowledge and social equity in climate change adaptation. But their definitions of "local knowledge" and "gender balance" are vague and convoluted, while concrete action plans to ensure these objectives are eventually neglected. After all, the role of developing climate change response action plan for provinces left to outsiders, ministries and their think tanks, with less awareness of local specific contexts, as T.Q.N., a local senior expert working for Ca Mau provincial Department of Agriculture and Rural Development for over twenty years, claimed:

"They excluded the complexity of Ca Mau's geography and highly functioning ecology when developed the dyke-building policy. They saw three things: freshwater management, rice production, and hard engineering solutions that make them stand out and allow them to benefit personally from the projects they design and manage". (FGD, November 2022).

Our findings are consistent with conclusions by Hemmati and Röhr (2009), Kruse (2014) and Cuong and Thuc (2017). CARE and SRD's (2020, 8) reports that "between 2013–2016, on average, 32% of donor adaptation projects report gender co-targets, and 76% of adaptation finance does not address gender equality". UN Women (2021) argues it is the information unavailability and limited capacity of government officials and practitioners across sectors that hinder the progress of sectorial gender-sensitive adaptation strategies.

4.2 Inter-sectoral coherence

Cross-sectoral coherence is well reflected in the analysed policies. As seen in Table 4, the first and second conditions (C2.1 and C2.2) have the highest assessment mean scores, 1.65 and 1.92, respectively, suggesting the growing mainstreaming of climate change and disaster risk in sectoral action plans. The National Climate Action Plan and Resolution 120/NQ-TTg provide national frameworks for inter-sectorial collaboration in climate action. Some policies reaffirm the government's strong commitment and political will to reduce overlaps and wastes of adaptation resources and to promote policy coherence and synergy across sectors and levels of government (Prime Minister's Decision 1670/QD-TTg, Decision 1055/QĐ-TTg and Decision 896/QĐ-TTg). These results shed some positive light that the adaptation policies in Vietnam have been enhanced to complement each other to some extent.

However, many research findings recently figure out obstacles challenging policy coherence, including weak coordination mechanisms for inter-sectoral and inter-level collaboration (MONRE, 2021; Strauch *et al.*, 2018; MPI and UNDP, 2022), limited vertical and horizontal coherence and information sharing within sectoral governing bodies (Phuong *et al.*, 2018) and limited cross-sectoral consultation that often results in policy conflicts and overlaps (Nhan, 2017; Suong and Quang, 2020). "The new-style rural commune building program and other adaptation policies have similar funding programs designed to support small-scale farmer households to transition to low-carbon farming practices", said P.T.T.M., a district official in charge of

Principle	Conditions	Score
P2. Inter-sectorial coherence	*C2.1* Climate change adaptation is mainstreamed across multiple sectors without overlaps or conflicts of interest	1.65
	C2.2 Strong institutional coordination, policy framework and political will exist to promote inter-sectorial coherence, navigate and reconcile trade-offs between economic growth and climate goals	1.92
	C2.3 Cross-sectoral data visibility and information is made accessible to enable adaptive decision-making by all stakeholders	0.72

Source: Authors' document analysis results

Table 4.
Presence of conditions related to inter-sectoral coherence in adaptation regime

agriculture in An Giang province (FGD, November 2022). "We have little incentive to come up with independent solutions or alternatives due to overlapping responsibilities and incoherence among sectors and levels of government", she added.

These obstacles are rooted in the limited cross-sectoral data visibility and information sharing that are found in most of the analysed policies (C2.3, mean = 0.72). The government has recognized this problem and has recently issued a national strategy for "building interdisciplinary database platform for climate adaptation and sustainable development in the Mekong Delta" (Prime Minister's Decision 1619/QĐ-TTg). While the impact of this strategy remains to be seen, some provide evidence of policy overlaps and conflicts due to the lack of cross-sectoral data and information sharing (MONRE, 2020; Suong and Quang, 2020). Phuong *et al.* (2018) conclude:

> "The hierarchical system has also resulted in 'silofication' where departments stick to their legally determined tasks and responsibilities and hardly share information or coordinate actions. As a result, the sharing and updating of information about climate change adaptation between the agricultural and other sectors have not yet occurred, particularly not at provincial and district level" (2018, 525).

Locally, the analysis results show that some provincial adaptation strategies are at odds with the Mekong Delta's regional vision stated in the government's Resolution 120/NQ-CP, highlighting a lack of intra-regional coherence (MD-ICRSL Project, Plan 54/KH-UBND). The perpetuation of weak institutional coordination across sectors and levels of government in Vietnam solidifies existing incoherence in adaptation governance, further undermining its progress in achieving national climate goals. The government's efforts to promote inter-sector and cross-level policy coherence and execute a hierarchical system in adaptation are emblematic of its national policy reform but also of its persistent governance constraints.

4.3 Adaptation policies consider climate-vulnerability and build resilience of local communities and ecosystems

Table 5 presents rather low assessment scores across the conditions. This principle is primarily applicable in local policies which consider affected communities as the target beneficiaries of their solutions, albeit partly mentioned (C3.1, mean = 0.86). This is because

Principle	Conditions	Score
P3. Adaptation policies consider climate-vulnerability and build resilience of local communities and ecosystems	*C3.1* Communities affected by climate and environmental changes and groups of people who are vulnerable to social, cultural, economic and environmental conditions are at the forefront of defining policy problems and solutions	0.86
	C3.2 Gender-sensitive adaptation plans are formalized and integrated into the development priorities of local administrations	0.31
	C3.3 Local adaptation plans have a monitoring system to ensure that adaptation practices empower vulnerable social groups (such as women, ethnic minorities and households below poverty lines), educate and inform them about the causes of their suffering	0.17
	C3.4 Getting people out of poverty-driven climate-vulnerability situations is prioritized	0.92
	C3.5 Adaptation practices enable long-term balance between economic growth, social values, and nature conservation	1.09

Source: Authors' document analysis results

Table 5. Presence of conditions related to resilience building

local policies are translated from the national adaptation policies to address particular local needs. However, the assessment results reveal that vulnerable groups such as women and disadvantaged people are not explicitly identified and targeted in many critical policies (Plan 03/KH-UBND, Plan 71/KH-UBND, Decision 1332/QD-UBND and Decision 10/QD-UBND). These policies lack solutions or serious commitment to ensure that vulnerable groups are empowered and have access to resources they need to adapt to climate change. The modest assessment scores of Conditions 3.2 (0.31) and 3.3 (0.17) reflect these limitations, which are consistent with what we found in the Principle 1. Our findings are conformable with other studies that confirm the limited engagement of local actors and women's differentiated vulnerabilities in Vietnam's climate change adaptation (The and Quang, 2020; Huynh and Resurreccion, 2014; Ylipaa *et al.*, 2019; see also Quang, 2022a).

It is worth noting that poverty alleviation measures are partly mentioned in the analysed policies (C3.4, mean = 0.92), although poverty reduction is the key to improve adaptive capacity of affected communities (Eriksen and O'brien, 2007). Our FGD results suggest that a variety of constraints can influence local decision-making processes, so local policymakers are likely to resort to palliative measures recommended in national policies or decision heuristics and neglect vulnerability-poverty links. These include financial shortages for locally led adaptation initiatives, exclusion of the factors creating vulnerability when local officials face situations which require decision-making under limited time and knowledge of climate change, and the dominance of dyke reinforcement in national climate adaptation discourse. Generally, poverty reduction alone does not automatically improve the poor's capacity to cope with climate stress. Yet, adaptation measures that fail to target the interface between vulnerability and poverty may lead to increase inequity and injustice, or maladaptation (Eriksen and O'brien, 2007; Bee *et al.*, 2015; Schipper, 2020). This is evident in the Mekong Delta, where numerous costly concrete adaptation structures, such as urban infrastructure reinforcement, dykes and sluices, do not go hand in hand with practical measures to help poor small-scale farmers and women to sustain their livelihoods. As a result, 1.1 million people have migrated out of the delta over the last decade (Chapman and Tri, 2018; Nhung-Nguyen, 2022).

The neglect of poverty-driven climate vulnerability in Vietnamese adaptation policies can challenge the efforts to build resilience of the poor and undermine the long-term sustainability. This limitation is reflected in Condition 3.5 which is partly mentioned in 34 policies analysed (C3.5, mean = 1.09). Some of these policies, especially those at national and ministry levels, approved action plans that enable long-term balance between economic growth and nature conservation in their stated goals and associated implementation plans (Decision 1670/QD-TTg, Decision 1055/QD-TTg and Decision 819/QD-BNN-KHCN). Other policies partly mention Condition 3.5 by emphasizing the need for long-term trade-off reduction and co-benefits in its stated goals (Decision 2678/QD-BTNMT, Decision 811/QD-BXD and Decision 1456/QD-BGTVT). However, when we searched across the policies for mechanisms or incentives for enforcing these pledges, the answers too often lack the specificity and concreteness required to make real progress towards their goals. For instance, Decision 10/QD-UBND on agricultural promotion 2021–2025 in Ca Mau province emphasizes the need to reinforce the durable equilibrium between environmental sustainability and agricultural profitability. But mechanisms or solutions to guarantee this objective are completely absent in the policy.

4.4 Efficiency, transparency, accountability and inclusion in adaptation finance

This principle is partly mentioned across the analysed policies (Table 6). As the government's anti-corruption efforts keep expanding, state funds for adaptation are now

Principle	Conditions	Score
P4. Efficiency, transparency, accountability and inclusion in adaptation finance	*C4.1* Adaptation funding is made available through a transparent process of allocation	1.24
	C4.2 Adaptation financing considers a bottom-up approach that acknowledges local reality, feasibility and inclusivity with an emphasis on marginalized groups	1.20
	C4.3 Diverse credible financial sources are identified and justified to demonstrate that selected solutions are financially feasible	1.51
	C4.4 Cost-recovery mechanisms exist and are enforced to fund adaptation solutions in sustainable manner	1.08
	C4.5 Interrelated principles, procedures and specific measures for preventing and combating corporate fraud and involvement in corruption activities exist and are enforced, including a secure mechanism for expressing grievances and seeking redress	0

Source: Authors' document analysis results

Table 6. Presence of conditions related to adaptation finance

allocated among sectors and levels of administration in a more transparent, efficient and equitable way, which is carefully described in the analysed policies (C4.1, mean = 1.24). The decentralization process allows policymakers in ministries and provincial governments to propose budget plans they need for particular adaptation solutions (The and Quang, 2020).

All government officials (at provincial level) confirmed in the interviews that budget planning processes are "very serious" and verified by financial departments in the People's Committees, People's Councils and the Ministry of Finance. In some stages of budget planning and approval processes, think tanks and independent consultants are invited to ensure transparency, accountability and feasibility. Thanks to this, a few analysed policies, such as the Decision 2096/QD-UBND, display a recognition of local reality with an emphasis on poor and disadvantaged people when allocating adaptation funds. Still, our FGD results point out that several policies, including the Ca Mau Provincial Climate Change Action Plan, heavily rely on the one-size-fits-all financial laws and regulations issued by the Ministry of Finance to determine climate fund allocation. This sheds light on the twin processes of financial *deconcentration* and *recentralization* in Vietnam - meaning that current law allows local governments to design budget plans based on local needs, but the final approval is ultimately vested in the National Assembly and the Ministry of Finance. Given this, some critical policies related to resettlement, reforestation and financial assistance for adaptation initiatives in agriculture are not really localized, and their feasibility are not ensured. This limitation is reflected in the medium category (C4.2, mean = 1.20).

Both national and local governments recognize this challenge, and they appreciate the diversification of credible financial sources as a key to ensure adaptation progress. This approach is highlighted in many master policies analysed (C4.3, mean = 1.51). On the one hand, these policies prescribe policymakers to identify possible financial sources to ensure that their selected solutions are financially feasible and implementable (Decision 20/2013/QD-UBND and Decision 10/QD-UBND). On the other hand, these policies open doors for non-state actors, including international donors, NGOs and private investors, to support and jointly implement the solutions (Decision 403/QD-LDTBXH, Resolution 120/NQ-TTg and Decision 1332/QD-UBND). Yet, the private sectors are still not interested in adaptation actions, in part because, unlike mitigation, adaptation generally does not always generate profits. Some policies, such as dyke and irrigation-related policies (Decision 20/2013/QD-UBND and MD-ICRSL Project), approve cost-recovery mechanisms to sustain the solutions

in the form of fees for services or the price for commodities (C4.4, mean = 1.08). However, these possible incomes have not been collected because most of these adaptation projects are under construction or primarily funded by the state budgets and foreign loans, as confirmed in our interviews with local government officials (see also Ha *et al.*, 2018).

Although anti-corruption efforts and mechanisms are well instituted in the Law on Anti-corruption, the policy analysis indicates that anti-corruption is not mainstreamed in climate policies as the policies exclude measures for preventing and combating corporate fraud, corruption activities and a secure mechanism for expressing grievances and seeking redress (C4.5, mean = 0). This is critically confirmed in our FGD with local officials. Recent reports, including Ngoc and Thuy (2013), MONRE (2021), MPI and UNDP (2022), highlight their concern about the serious lack of transparency, accountability and integrity in adaptation finance systems, which is constraining adaptation progress in Vietnam.

4.5 Adaptation policies identify possible risk of adverse impacts and solutions to them

The assessment scores of this principle highlight an urgent need for reconsidering the adaptation policies in Vietnam (Table 7). Many policies analysed ($n = 32$) adopt a number of possible solutions to the defined problems in their action plans or integral indexes (C5.1, mean = 1.84). However, those solutions are merely replicated from the national policies or introduced by consultancy and donors. There is no evidence or no part of the analysed policies that justifies why those solutions were approved instead of alternatives (C5.2, mean = 0). Selected solutions are often associated with trade-offs (e.g. coastal embankment and groundwater extraction); policymakers' explanation primarily refers to reduced landslide or increased water supply, although their evidence is geographically restricted. There is also a bias in their evidence towards agricultural conglomerates and richer peasantry, which stand to benefit most from solutions that are not nature-based (e.g. intensive shrimp farming), despite small-scale farmers and women dominating rural areas being generally more vulnerable to climate impacts. The adaptation policies even exclude efforts to ensure that communities or individuals directly or indirectly affected by the policies will be well informed about whom the selected solutions serve, the possible negative impacts they might encounter as the policies take place and how they could prepare to grab the policy benefits or for the adverse impacts (C5.3, mean = 0.53).

In addition, none of the policies mention mechanisms or solutions to ensure that policymakers, or solution providers, will be accountable for their decision if their decision or solutions would fail or cause adverse impacts. These problems explain the zero score of Condition 5.4. All of the FGD participants ($n = 20$) confirmed these challenges. Some of them agreed that while these problems need to be solved as soon as possible to progress

Table 7.
Presence of conditions related to risk control and reduction

Principle	Conditions	Score
C5. Adverse impact control and prevention	*C5.1* Diversity of policy solutions to tackle the complex climate problems identified in the policy agenda	1.84
	C5.2 Selected policy solutions are evidence-based and justified	0.00
	C5.3 Policies well inform which actors (key beneficiaries) the selected solutions serve over others, which negative impacts might unfold as adaptation interventions take place and how to prevent or mitigate them	0.53
	C5.4 Mechanisms exist to hold a governance arrangement collectively accountable	0.00

Source: Authors' document analysis results

adaptation, it would not be an easy change in the country's top-down administrative system, wherein climate funds and decision-making power remain highly centralized in Hanoi.

5. Concluding remarks

This paper describes an innovative assessment framework designed for understanding the extent to which climate adaptation policies exhibit conditions that are likely to promote effective and credible adaptation efforts. Starting with a view that adaptation policy is often weak in developing countries such as Vietnam, the paper highlights an urgent need to measure the likelihood of policy effectiveness and credibility. This is particularly useful for policymakers, practitioners and donors to understand previously unreported weaknesses in adaptation policies and timely pinpoint priority areas in need of action. Based on existing literature, the research has identified 21 conditions, categorized under five principles, covering the critical issue areas in adaptation domain. They ensure inclusiveness, coherence, integrity, equity and justice in adaptation and allow for assessing the credibility and effectiveness of climate adaptation policies. The conditions were used to investigate multi-level climate adaptation policies in Vietnam as an exemplified case study.

As the results point out, the adaptation policies in Vietnam are relatively hybrid in nature, reflecting a mix of nationally led and bottom-up approaches, whereby tasks and responsibilities are clearly defined and dispersed across levels of government in policy processes (C1.1). To ensure the publicity of adaptation policies, reinforcement of public participation in policy implementation process is instituted in most of policies analysed (C1.4). The policy analysis also reveals government's serious commitment to promoting cross-sectoral coherence in adaptation policies by mainstreaming climate adaptation across multiple sectors (C2.1), improving institutional coordination and political will for inter-sectoral collaboration and achieving long-term balance between economic profits and climate goals (C2.2 and C3.5). Solutions and financial sources for adaptation are somewhat diversified in the analysed policies as part of the government's efforts to make their policies reliable and implementable (C4.3 and C5.1).

While those strengths appear to be promising for an in-the-making polycentric adaptation regime, the research findings, on the other hand, underscore several challenges and weaknesses that need to be addressed. These include the underrepresentation of local knowledge, empowerment of vulnerable groups and gender consideration in adaptation policies (C1.2, C1.3, C3.1, C3.2 and C3.4) that is likely to reproduce social inequalities and injustice; weak coordination mechanisms and limited inter-sectorial information sharing that is hampering substantial coherence among sectoral policies (C2.3); the neglect of poverty-driven climate vulnerability in adaptation policies (C3.4); the centralized adaptation financial governance that is complicated with limited consideration of vulnerable groups and cost-recovery mechanisms for sustainability (C4.2 and C4.4), and without anti-corruption commitments (C4.5); and the lack of strategies for preventing and mitigating possible adverse impacts of adaptation policies (C5.2, C5.3 and C5.4). These weaknesses constitute a reasonably worrisome picture of the adaptation regime in Vietnam – that is, adaptation policies are currently defined at the national level, guiding local climate action with limited decision-making authority being dispersed down to local governments, but tasks and responsibilities. This top-down approach eventually results in some problematic policies that do not meet local socio-environmental contexts and hazards and, even worse, have caused adverse impacts on the environment and increased social inequalities (Giusto *et al.*, 2021; Eyler, 2019, pp. 307–315; Quang, 2017; Brown, 2020). Moreover, in the absence of mechanisms and measures for accountability and transparency in policy processes, adaptation in Vietnam appears more likely to be prone to maladaptation and corruption.

While solving these problems will not be easy for Vietnam, the government needs to evaluate whether the short-term gains in sustaining the existing adaptation policies really make progress and serve its long-term climate-adaptive development goals.

To achieve global and national climate goals, we will need a series of carefully conceived decision-making processes in credible adaptation policies and programs, in addition to mitigation efforts. The research findings suggest that the proposed adaptation policy assessment framework can be easily adjusted and used for different socio-environmental contexts in which new conditions for policy assessment might emerge. Although this methodology may not provide adequate evidence for one to conclude if a policy will be successful or not, it enables policymakers, practitioners, donors and stakeholders dealing with adaptation to understand what sufficient adaptation policy should look like and timely identify and address the weaknesses that threaten to undermine the policy's effectiveness and credibility.

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