

The Political Economy of Climate Change Adaptation: Indonesia in the post-Paris Agreement

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Declaration

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This thesis by compilation includes the following papers:

1. Apresian, Stanislaus Risadi (2024). 'The Contestation of National Adaptation Policies in Indonesia'. *Journal of Current Southeast Asian Affairs*. Under review (second review).
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Table of Contents

<i>List of Figures</i>	<i>iv</i>
<i>List of Tables</i>	<i>vi</i>
ABSTRACT	<i>vii</i>
CHAPTER 1 Introduction	1
Adaptation Case in Indonesia.....	5
The Paris Agreement and International Pressure.....	8
Two Rival National Adaptation Strategies	10
Vulnerability Assessment Divergences	13
The Political Economy of Climate Change Adaptation.....	14
Research Design and Methods: Adapting to COVID-19 Uncertainty	18
<i>Case Study Design</i>	18
<i>The Eight Case Studies</i>	19
<i>Data Collection</i>	24
<i>Data Analysis</i>	28
Profile of Fieldwork Sites in Indonesia	29
<i>West Java Province</i>	29
<i>East Java Province</i>	30
<i>West Nusa Tenggara Province</i>	30
<i>Special Region of Yogyakarta Province</i>	31
Structure of Thesis.....	31
CHAPTER 2 The Political Economy of Climate Change Adaptation in the Global South	34
Literature Review.....	34
<i>The Political Economy of Climate Change Adaptation in the Global South</i>	35
<i>Multi-level Governance of Climate Change Adaptation</i>	37
<i>Vulnerability and Adaptation</i>	42
Theoretical Framework.....	45
<i>The Five Dimension of Political Economy of CCA</i>	47
<i>Multilevel Governance in Climate Change Adaptation</i>	53
<i>Norm Diffusion</i>	61
<i>Vulnerability to Climate Change: Who is Vulnerable and Why?</i>	62
<i>Unequal Power Relations in Climate Change Adaptation</i>	64
<i>Defining Community</i>	66
Conclusion.....	66
CHAPTER 3 From Paris to Jakarta: Climate Change Adaptation Norms and Policies	68
Constructivism, State Preferences, and International System	70
The Emergence and Contestation of Climate Change Adaptation Norms in the UNFCCC	76
Understanding Adaptation Politics in Indonesia	82

Global-National Relations in Climate Change Adaptation Governance.....	85
The Implications of the Paris Agreement for Indonesia	88
Whose Will to Improve	91
Conclusion	94
CHAPTER 4 National Contestation and Fragmentation	96
Political Economy of Multilevel Adaptation Governance in Indonesia	97
Polycentric Structure of CCA Governance in Indonesia	100
Indonesia’s National Adaptation Policies in the post-Paris Agreement	105
Two Branches of CCA Governance.....	112
Sectoral Ego and Contestation Quartet.....	116
<i>Sectoral Ego: The classic mantra for poor coordination problem</i>	116
<i>Contestation quartet</i>	121
The Political Economy of National Adaptation Policies	127
<i>Exclusion</i>	127
<i>Enclosure</i>	129
<i>Encroachment</i>	131
<i>Entrenchment</i>	132
Conclusion	133
CHAPTER 5 Vulnerability Assessments Divergence.....	135
Three Types of Vulnerability Assessment Discrepancy.....	135
Politicising Vulnerability Assessments	138
A Divergence of Vulnerability Assessment between Ministries.....	139
National and Local Divergences.....	149
Patterns of Adaptation Resource Distribution	155
<i>Locations Selection under the MoEF</i>	155
<i>Location Selection under the BAPPENAS</i>	158
Local Adaptation Strategies and Interests in CCA.....	162
Local Contestation and The Variety of Vulnerability Perspectives	168
Conclusion	170
CHAPTER 6 Climate Village Programme and the Claim Chain Politics.....	172
An Ambitious Climate Village Programme	173
Fieldwork Sites	175
The Claim Chain and the Instrument-Effects of Climate Village Programme	178
Mount the Mountain and Salt the Ocean	185
Suboptimal Implementation of the Climate Village Programme	190
1. <i>Failure to Address Community Needs and Potential</i>	190
2. <i>Focusing on Technicality</i>	192
3. <i>Administrative Burden</i>	194
4. <i>Minimum Support from Village Government</i>	194
5. <i>Data Manipulation</i>	196
6. <i>Unsustainable</i>	198

The Claim Chain: Why Are Suboptimal Programmes Replicated?	199
<i>The Instrument-Effects of the Climate Village Programme</i>	199
<i>The Claim Chain Operationalisation</i>	201
<i>Harnessing Concrete Effects of Climate Village Programme for the Communities</i>	204
Conclusion	209
CHAPTER 7 The Uneven Distribution of Adaptation Project Benefits under ICCTF	210
The Indonesia Climate Change Trust Fund and the Will to Improve	211
Fieldwork Sites	216
Distribution of Adaptation Resources: Who are the Winners and Losers?	221
<i>Economic Dimension</i>	222
<i>Political Dimension</i>	226
<i>Ecological Dimension</i>	229
<i>Social Dimension</i>	230
Cultural Dimension in Political Economy of Climate Change Adaptation	231
The Nature of Climate Change Adaptation Actions at the Local Level	236
Conclusion	239
CHAPTER 8 Conclusion	241
The UNFCCC Pressure and Indonesia's National Interests	242
Two Paths of Adaptation Governance	243
The Variety of Representations and Experiences of Vulnerability	244
The Five Dimensions of Political Economy of Adaptation.....	246
<i>Political Dimension</i>	247
<i>Economic Dimension</i>	248
<i>Ecological Dimension</i>	249
<i>Social Dimension</i>	249
<i>Cultural Dimension</i>	250
The Nature of Climate Change Adaptation in Indonesia	251
A Beacon of Hope for Vulnerable Communities.....	254
Suggestions for Further Research	255
<i>List of References</i>	257
<i>List of Abbreviations</i>	289
<i>Appendix I</i>	293
<i>Appendix II</i>	297

List of Figures

Figure 1.1 The Map of Fieldwork Locations	19
Figure 1.2 RAN-API Pilot Project Locations	20
Figure 1.3 Natural Disasters in Indonesia in 2020	21
Figure 1.4 The Distribution of Adaptation Programme Locations under the ICCTF (Blue Circles)	21
Figure 1.5 Three Provinces Meeting Three Criteria for Fieldwork Locations	22
Figure 1.6 Three Phases of In-depth Interviews.....	26
Figure 2.1 Political Economy of CCA Theoretical Framework.....	46
Figure 2.2 Cultural Dimension in the Political Economy of Climate Change Adaptation.....	53
Figure 3.1 Two Strands of Analysis in Constructivist Research Design.....	72
Figure 3.2 Adaptation Norms Emergence and Contestation Involving Indonesia.....	82
Figure 3.3 Indonesia and the Global Climate Change Adaptation Governance under the UNFCCC.....	87
Figure 3.4 Polycentric Governance of Climate Change Adaptation.....	93
Figure 4.1 Multilevel Governance in Indonesia.....	98
Figure 4.2 Polycentric Governance of Climate Adaptation Planning in Indonesia..	102
Figure 4.3 Seven Pillars of CCA Governance in Indonesia.....	108
Figure 4.4 Two Branches of CCA Governance.....	113
Figure 4.5 The Origin of Sectoral Ego in CCA.....	120
Figure 5.1 The Ideas, Institutions and Interests of BAPPENAS and MoEF.....	140
Figure 5.2 Vulnerability Mapping in the RAN-API document by BAPPENAS.....	143
Figure 5.3 Vulnerability Mapping for Agriculture Sector in the RAN-API Review Document.....	144
Figure 5.4 Vulnerability Mapping of Provinces in SIDIK Document.....	145
Figure 5.5 Vulnerability Mapping in the NDC adaptation roadmap by MoEF.....	147
Figure 5.6 Overlaid Vulnerability Mappings by BAPPENAS and MoEF.....	148
Figure 5.7 Mapping CCA Actors' Interests in Vulnerability Assessment.....	151
Figure 5.8 SIDIK Vulnerability Mapping of Indramayu Regency.....	156
Figure 5.9 SIDIK Vulnerability Mapping of Gunung Kidul Regency.....	156
Figure 5.10 SIDIK Vulnerability Mapping of Malang City.....	157
Figure 5.11 SIDIK Vulnerability Mapping of East Lombok Regency.....	157
Figure 5.12 SIDIK Vulnerability Mapping of Indramayu Regency.....	158
Figure 5.13 SIDIK Vulnerability Mapping of Gunung Kidul Regency.....	159
Figure 5.14 SIDIK Vulnerability Mapping of Malang Regency.....	159
Figure 5.15 SIDIK Vulnerability Mapping of North Lombok Regency.....	160
Figure 5.16 Top 50 Vulnerable Areas and the Actual Adaptation Programme Locations.....	161
Figure 6.1 The Claim Chain Process of the Climate Village Programme.....	202

Figure 7.1 The ICCTF Business Process.....	212
Figure 7.2 Key Climate Change Adaptation Policy Documents	213
Figure 7.3 The Distribution of Climate Change Adaptation Projects Nationally by the ICCTF as of March 2024	214

List of Tables

Table 1.1 Comparison of National Adaptation Governance in Seven Developing Countries.....	11
Table 1.2 Eight Fieldwork Locations in Four Provinces.....	23
Table 2.1 Existing Literature on CCA Governance in Indonesia... Error! Bookmark not defined.	
Table 2.2 The Typology of Political Economy of Climate Change Adaptation	49
Table 3.1 The Comparison of Adaptation Definition between the IPCC and the RAN-API.....	77
Table 3.2 The Comparison of Vulnerability Definition between IPCC and RAN-API..	78
Table 4.1 Ministries and Agencies Involved in CCM and CCA.....	101
Table 4.2 Indonesia’s CCA Commitments.....	105
Table 4.3 Key Terms Related to Sectoral Ego Theme.....	118
Table 5.1 Three Types of Vulnerability Assessment Discrepancy	137
Table 5.2 Vulnerability Mapping Divergence between Ministries’ Policy Documents.....	141
Table 6.1 Variations in Climate Village Programme Performance	179
Table 6.2 Side Effects of Climate Village Programme from Community’s Perspective.....	205
Table 7.1 Summary of Fieldwork Sites	216
Table 7.2 Summary of Political Economy Factors	222

ABSTRACT

The 2015 Paris Agreement has put pressure on developing countries such as Indonesia to elevate their climate adaptation ambitions and conform to global adaptation norms to enhance adaptive capacity, strengthen resilience, and reduce vulnerability to climate change. The annual Conference of the Parties (COP) meeting and the Nationally Determined Contribution submission enable the United Nations Framework Convention on Climate Change (UNFCCC) to review the implementation of the Paris Agreement, including the Parties' climate pledges. The Indonesian Government has set ambitious adaptation commitments to evade the naming and shaming in the international climate negotiations.

There are some peculiarities in the adoption of global adaptation norms into national adaptation policies and the implementation of Indonesia's international climate pledges at the national and local levels. Rather than having a singular coordination line or unified approach to implementing global commitment into national adaptation policies and local adaptation actions, Indonesian ministries are adopting and implementing their own rival climate programmes and agendas. Two rival national adaptation strategies exist between the Ministry of National Development Planning (BAPPENAS) and the Ministry of Environment and Forestry (MoEF). This competition leads to fragmentation between them in formulating national adaptation plans and vulnerability mapping. Contestation over adaptation policies also happens at the local level, where local implementing agencies have different perspectives in determining vulnerability and selecting adaptation programme locations. Moreover, adaptation interventions have distributed adaptation benefits unevenly, and some interventions have led to maladaptation.

It then raises a primary question of this thesis: What is the nature of climate change adaptation in Indonesia in the post-Paris Agreement era? The arguments of this thesis draw from information gathered in Indonesia through semi-structured interviews of 38 elites, five village heads, and 44 farmers conducted online and in person during the COVID-19 pandemic from July 2020 to January 2022. The fieldwork occurred in eight villages in West Java, East Java, West Nusa Tenggara, and Yogyakarta Special Region Provinces. This thesis analyses climate adaptation in Indonesia by using the political economy of climate change adaptation framework established by Sovacool, Linnér, and Goodsite (2015), as well as multilevel governance theory (Hooghe and Marks 2021).

Overall, this thesis makes three noteworthy contributions to advance our knowledge of climate change adaptation. First, it enhances our understanding of the nature of national adaptation politics in Indonesia by revealing the contestation over national adaptation policies between two dominant ministries, the BAPPENAS and the MoEF. Second, the empirical findings of this thesis provide evidence of the variety of representations and experiences of vulnerability observed in eight villages in four provinces. Third, it contributes to extending the dimensions of the political economy of climate change adaptation typology into five dimensions by incorporating the cultural dimension to understand the implementation of adaptation programmes in the global south.

Keywords: Climate Change Adaptation, Climate Vulnerability, Indonesia, Political Economy, Multilevel Governance

CHAPTER 1

Introduction

This thesis critically examines the nature of climate change adaptation in Indonesia in the post-Paris Agreement era by using the political economy approach developed by Sovacool, Linnér, and Goodsite (2015) that considers political, economic, ecological, and social dimensions of adaptation as the main framework. The rise of the Paris Agreement bolstered the development of adaptation agendas in the climate regime. The Paris Agreement has Article 7, a dedicated article focusing on adaptation, that consists of 14 paragraphs amplifying the Global Goal on Adaptation (United Nations 2015). After being overshadowed by mitigation for quite a long time, adaptation is emerging and gaining more attention from world leaders now (Phillips 2021). Indonesian President Joko Widodo, also known as Jokowi, is one of them. President Jokowi, in several climate summits, stated ambitious adaptation commitments. For instance, the President mentioned that Indonesia targeted establishing 20,000 climate villages by 2024 during the Climate Adaptation Summit in 2021. Indonesia has also set ambitious adaptation commitments in its Nationally Determined Contribution (NDC) documents submitted to the United Nations Framework Convention on Climate Change (UNFCCC) and included adaptation in its national development policies.

The Indonesian Government's approach to adopting the Global Goal on Adaptation to enhance adaptive capacity, strengthen resilience, and reduce vulnerability to climate change into national adaptation policies has been peculiar from the outset. Mikulewicz (2018) emphasises that the way climate change adaptation (hereafter CCA) functions within national and local contexts remain a highly contested political space in developing countries. Two dominant ministries in adaptation governance, the Ministry of National Development Planning (Badan Perencanaan dan Pembangunan Nasional, BAPPENAS) and the Ministry of Environment and Forestry (MoEF), produce national adaptation policies and programmes that are often overlapping and contradictory due to lack coordination and competition between them. For example, the BAPPENAS has established the Indonesia Climate Change Trust Fund (ICCTF), and the MoEF has also established the Indonesian Environment Fund (Badan Pengelola Lingkungan Hidup, BPD LH) in collaboration with the Ministry of Finance.

In the context of adaptation programme implementation at the local level, the national competition between the BAPPENAS and the MoEF also shapes local contestation over adaptation prioritisation, which raises political questions such as which communities are

vulnerable, which locations should be prioritised, what kind of adaptation projects will be delivered. To understand the politics of adaptation and political contestation further, Taylor (2014) and Glover and Granberg (2020) have raised related political questions about who undertakes CCA interventions, who produces knowledge, who is excluded (and in what circumstances), and how claims relating to adaptation priorities are made. Using the case study of Indonesia, this thesis responds to calls for exploring the political dimensions of CCA in the global south (Dodman and Mitlin 2015; Mikulewicz 2018; Struthers 2020).

Building on the political economy of climate change adaptation framework developed by leading scholars Sovacool, Linnér, and Goodsite (2015), this thesis argues that the nature of CCA policies in Indonesia in the post-Paris Agreement is beset with interministerial rivalry and contestation over national adaptation policies. These unresolved tensions lead to the suboptimal implementation of adaptation programmes, often with insignificant improvements in the adaptive capacity of most communities, vulnerable or otherwise, at the village level. Some interventions can even result in maladaptation. The Ministries often target locations or village communities with established adaptation actions as beneficiaries to ensure the success of adaptation projects instead of prioritising the most vulnerable communities as identified through vulnerability assessments and mapping. The framework of Sovacool, Linnér, and Goodsite (2015) helps to identify exclusion (political), enclosure (economic), entrenchment (social), and encroachment (ecological) processes that exacerbate the uneven distribution of adaptation projects benefits among communities.

Even though the arena of political contestation over adaptation policies mainly occurs at the national and local levels, Persson (2019) suggests that the analysis of adaptation interventions implemented at the national and local levels cannot be done in isolation because they are inseparably linked with the global political process. This thesis, therefore, incorporates the multilevel governance theory developed by Hooghe and Marks (2004; 2021) into the analysis to understand the political process from the adoption of adaptation norms through climate negotiations at the international level, contestation over national adaptation policies between ministries at the national level, and how benefits from the adaptation projects are unevenly distributed at the local level.

Governance in CCA has become multilevel since subnational units have received some authority from the central government, and authority to conduct adaptation actions has been pooled and delegated to the UNFCCC (Hooghe and Marks 2021). To understand how multilevel governance works, it is crucial to explore connections and interactions across levels (Wälti 2010). This thesis argues that coordination in multilevel adaptation governance

within and across jurisdictions is still lacking in the Indonesian case. The Indonesian Government has failed to translate ambitious adaptation commitments made in the UNFCCC fora, such as the 20,000 climate villages target, into adaptation actions that bring significant changes to the local communities. Despite having the regional autonomy (*otonomi daerah*) programme that has been implemented since democratisation in 1998 to prevent the renewal of a centralised authoritarian rule (Power and Warburton 2020), the central government in Indonesia can maintain the status quo as a dominant actor by selectively including or excluding local actors in the adaptation decision-making process.

The case study of Indonesia advances our knowledge of CCA in three ways. First, the adoption of global adaptation goals into national adaptation policies is beset with interministerial competition between the BAPPENAS and the MoEF. The rivalry has resulted in Indonesia having two paths of adaptation governance with two rival national adaptation strategies. Competition occurs in four main adaptation agendas, including adaptation planning (Chapter 4), climate financing (Chapter 4), vulnerability mapping (Chapter 5), and adaptation programmes (Chapters 6 and 7). The two adaptation strategies were developed with very different prerogatives. Second, the use of the category 'vulnerable' itself is problematic as evidenced by the variety of representations and experiences of vulnerability observed in eight villages in four provinces. This thesis helps reveal the discrepancies of vulnerability assessments and the variety of vulnerability perspectives that jeopardise the implementation of national adaptation plans. Third, the cultural dimension becomes an important theoretical aspect that needs to be included in the political economy analysis. It helps to understand the nature of CCA in the global south, where the influence of culture over daily activities and CCA remains strong.

The primary objective of this thesis is to analyse the emerging patterns of climate change adaptation, using Indonesia as a case study to understand the changing nature of climate adaptation initiatives as well as the diverse representations and experiences of vulnerability in specific local settings. This thesis also has several aims that correspond with the primary objective. First, this thesis investigates the adoption of global climate adaptation goals by the Indonesian Government to reveal its implications for Indonesia's national adaptation agenda. Second, this thesis scrutinises the nature of CCA at the national level, which is characterised by competition between ministries, particularly the BAPPENAS and the MoEF. Third, based on the observation that target communities often dispute their status as 'vulnerable', this thesis sheds light on the variety of representations and experiences of vulnerability by examining the vulnerability assessment discrepancies between the

BAPPENAS, the MoEF, donor agencies, and local implementing agencies, while unveiling the experiences of target communities. Finally, this thesis examines how the benefits of adaptation programmes distributed by the BAPPENAS and the MoEF have been unevenly distributed among communities at the local level using the political economy typology coined by Sovacool, Linnér, and Goodsite (2015), while expanding the framework by including a cultural dimension in the analysis. Considering the complexity of the adoption of global climate adaptation goals under the Paris Agreement into Indonesia's national adaptation policies and local adaptation interventions, this thesis examines the development of CCA policies in Indonesia that are shaped by interactions occurring at (and across) the international, national, local levels. The primary question in this thesis asks: **What is the nature of climate change adaptation in Indonesia in the post-Paris Agreement Era?**

The subsidiary research questions are:

1. Why did Indonesia Ratify the Paris Agreement and what are the implications of the Paris Agreement ratification towards Indonesia's national adaptation policies?
2. Why has national contestation over climate adaptation policies emerged between the BAPPENAS and the MoEF in Indonesia, and to what extent does this rivalry undermine the implementation of the Paris Agreement adaptation framework?
3. Why are there discrepancies between the BAPPENAS and the MoEF assessments of vulnerability to climate change, and to what extent do these discrepancies undermine Indonesia's national adaptation strategy?
4. Following the distribution of adaptation projects at the local level through the Climate Village Programme and the ICCTF funding, to what extent are the benefits of local-level climate adaptation programmes unevenly distributed among local communities in Indonesia?

The whole thesis is anchored around the question of the changing nature of climate change adaptation in Indonesia. Subsidiary RQ1 is addressed in Chapter 3 and focuses on examining the adoption of climate adaptation agendas from the international to national levels. Subsidiary RQ 2 is addressed in Chapter 4 with the BAPPENAS and the MoEF contestation theme. Subsidiary RQ3, which is focused on vulnerability assessment discrepancies, is addressed in Chapter 5. Subsidiary RQ 4, which mainly questions the implementation of adaptation programmes at the local level, is addressed in Chapters 6 and

7. Chapter 6 investigates the Climate Village Programme under the MoEF, while Chapter 7 examines adaptation programmes funded by the ICCTF under the BAPPENAS.

Adaptation Case in Indonesia

According to the Intergovernmental Panel on Climate Change (IPCC), adaptation is the “process of adjustment to actual or expected climate and its effects. In human systems, adaptation seeks to moderate harm or exploit beneficial opportunities. In natural systems, human intervention may facilitate adjustment to expected climate and its effects....” (Noble et al. 2015, 838). The fundamental concept of this definition is “adjustment”, but not everyone has equal capability to adjust. Many people and communities in developing countries, such as in Indonesia, do not have adequate power, knowledge or capital to adapt to climate change. Therefore, adaptation interventions through adaptation projects delivered by the Indonesian government, donor agencies, and local implementing agencies are needed to assist vulnerable communities improving their adaptive capacity.

Indonesia is one of the largest emitters of greenhouse gasses, and one of the most vulnerable countries to climate change impacts concurrently. According to the World Resource Institute, Indonesia ranks 8th in the world, contributing approximately 2.1% of total global emissions (Friedrich, Ge, and Vigna 2023). A large proportion of Indonesia’s greenhouse gas profile comes from electricity/heat, though agriculture, as the second biggest contributor sector, is also significant. Indonesia is vulnerable to climate change as it is a heavily populated archipelagic country with 17,504 islands (BPS 2017), has a high population density, and endures numerous climate hazards. As an archipelagic country with 50,300 miles of coastline (Kapoor 2018), Indonesia faces a severe threat of sea-level rise, which might submerge its islands and displace people who live in coastal areas. The Indonesian population in 2022 was 275,773,800 (BPS 2023, 92). It is predicted to reach nearly 300 million people in 2030 (BPS 2018). Indonesia endured climate hazards such as 1,531 floods, 1,068 extreme weather events, 634 landslides, and 252 forest fires in 2022 (BNPB 2023a). Based on disaster data gathered from 2015 to 2022, there were approximately 5.6 million people injured and displaced due to natural disasters dominated by climate change effects (BNPB 2023a).

Indonesia, an emerging upper-middle-income country, still deals with significant livelihood and poverty issues. Current President Joko Widodo claimed that his administration succeeded in lowering poverty to single digits for the first time in Indonesia’s history (Nakamura 2019). Still, the total number of poor people was significant, considering the

poverty rate in Indonesia was 9.41% in 2019, meaning 25.14 million people remained in poverty (BPS 2019). Climate hazards might worsen this condition if poor people and other vulnerable groups, such as small-scale farmers, become increasingly exposed and are unable to cope with climate change impacts. Poverty as a development problem or a non-climatic factor is also a factor that shape vulnerability to climate change (Kelly and Adger 2000). It might influence the adaptive capacity of a group of people resulting in them becoming vulnerable to climate change impacts. Unfortunately, non-climatic factor like poverty is often overlooked because vulnerability research usually privileges climatic factors over the non-climatic ones (Ford et al. 2018). It is crucial to consider poverty as a factor that can shape vulnerability to climate change. In general, poor people still struggle to meet their basic daily needs and spend most of their budget on food (Hallegate, Fay, and Barbier 2018). They do not have sufficient resources and cannot afford to invest in climate resilience, such as purchasing equipment or accessing information with respect to CCA, which results in vulnerability to climate change (Sovacool and Linnér 2016).

Therefore, it is apparent that sustainable CCA is needed in Indonesia. Some poor communities in Indonesia can conduct autonomous adaptation, but the outcomes are often suboptimal due to a lack of knowledge and funding. Interventions by the government are often needed when poor and vulnerable people cannot afford the adaptation cost. However, the problems do not stop right after the Indonesian Government and adaptation stakeholders deliver adaptation interventions and funding because not every adaptation intervention is a good one (Eriksen et al. 2011). The risk of maladaptation that shadows every adaptation intervention globally also reoccurs in Indonesia.

The implementation of adaptation initiatives in Indonesia is a unique case study. Indonesia is one of the rising actors from developing countries actively involved in international climate negotiations. The 2007 Bali Action Plan is one of Indonesia's achievements at the UNFCCC negotiations. The plan includes enhancing adaptation actions and funding for developing countries to meet the cost of adaptation (UNFCCC 2008). Moreover, Indonesia has set an ambitious adaptation target, such as establishing 20,000 Climate Village Programmes (*Program Kampung Iklim*/PROKLIM) nationwide by 2024 (The Republic of Indonesia 2022). It is intriguing to examine what political agenda is at play behind this ambitious target and to investigate whether those ambitious targets are substantive or merely symbolic policies.

Indonesia has the fourth largest population in the world with many vulnerable communities which remain difficult to map due to discrepancies in assessing vulnerability

between ministries. The massive population becomes a great challenge faced by the Indonesian Government, donor agencies, and local implementing agency in mapping vulnerability and determining priority locations. There is fragmentation at the national level, as the BAPPENAS and the MoEF have different vulnerability mapping methodologies and outcomes.

For example, the BAPPENAS and the MoEF have different levels of vulnerability mapping. The BAPPENAS mapped vulnerability level at the province level, whereas the MoEF conducted vulnerability mapping at the village level. In 2014, the BAPPENAS published the National Action Plan on Climate Change Adaptation (Rencana Aksi Nasional Adaptasi Perubahan Iklim, hereafter RAN-API) which included vulnerability mapping in the document, yet it did not assess vulnerability at the village level like the MoEF did. The RAN-API document maps vulnerability based on province level indicators and shows the most vulnerable provinces to be West Sumatera, South Sumatera, West Java, East Java, Papua, Bali, Nusa Tenggara, North Kalimantan, and North Sulawesi (BAPPENAS 2014a). Based on vulnerability assessment conducted by the MoEF in 2015, some 90% of all Indonesian villages (69,915 out of 77,961) were vulnerable by some degree, with classifications ranging from most vulnerable (2,507), to very vulnerable (2,443), moderately vulnerable (31,876), and to least vulnerable (32,999) (Directorate of Climate Change Adaptation 2015).

From these divergent approaches, it is evident that both ministries have different methods of assessing vulnerability. The differences in mapping methodologies and indicators of vulnerabilities are examined further in Chapter 5. The Indonesian case study sheds light on how the ambiguity in assessing vulnerability can impede the CCA implementation. In general, the MoEF village level assessment can be more powerful tool in vulnerability mapping because adaptation programmes are usually distributed at the village level such as climate villages and adaptation programmes in some villages funded by ICCTF. Hence, it is crucial to have baseline vulnerability information at the village level, before distributing adaptation programmes.

The existence of competition between ministries or agencies over national adaptation policies in Indonesia underlines that climate adaptation is political and not merely a technical issue. Furthermore, the contestation over adaptation policies also occurs at the local level, where the local implementing agencies and donor agencies act without following adaptation planning or vulnerability mapping developed by the central government. For example, the local implementing agencies and donor agencies often select adaptation project locations based on their own independent assessments and justifications. Local contestation

in CCA also occurs in Indonesia when village communities challenge the government's adaptation policies by abandoning the government's programmes in their village. The Indonesian adaptation case reveals feature of the political domain of CCA that relate to the broader challenges facing countries in the global south.

Indonesia as a single country case study cannot be used to generalise the nature of CCA in developing countries, but it can contribute new knowledge about the complexity of implementation of global adaptation commitments in developing countries that might face national contestation and fragmentation between ministries at the national level. The Indonesian case can also contribute to understand the politics of multilevel adaptation governance. Adaptation implementation usually takes place at the local level, but the nature of CCA at the local level is also shaped by the national and global adaptation governance. To understand the politics of CCA in developing countries, it is crucial to analyse the nexus between global, national, and local adaptation governance.

The Paris Agreement and International Pressure

The government's motives and the interest behind the establishment of the National Action Plan on Climate Change Adaptation need to be questioned. Does the Indonesian government aim to improve the adaptive capacity of people classified as vulnerable, or are there other reasons, such as to gain more economic benefits from international aid and to build a positive image of Indonesia internationally? If the CCA policies focus on gaining economic benefits or just conforming to international demands, the government might be engaged in an elaborate greenwashing practice. Greenwashing is identifying inconsistencies between the actual implementation of climate measures and corporate claims about being green (Gallicano 2011). Alons (2017) uses this concept to examine state actors' behaviour and to investigate the European Union's common agricultural policy. The ambitious adaptation policies by the Indonesian government may turn out to be symbolic with limited impacts and could even disadvantage the most vulnerable.

In the post-Paris Agreement, the parties are responsible for conforming to global adaptation norms and following the UNFCCC mandates. Sovacool and Linnér (2016) identify this process as enclosure. Adaptation actions that formerly belonged to national authorities are mandated by the UNFCCC and Indonesia has adopted adaptation some of these norms. Indonesia ratified the 2015 Paris Agreement and like most countries submitted Intended Nationally Determined Contributions (INDCs), which brought consequences and responsibilities related to CCA policies nationally.

The Paris Agreement has become the main driver of adaptation diffusion among the UNFCCC Parties. Falkner (2016) mentions that the international treaty obligations under the Paris Agreement generate pressure on the Parties in two ways. First, the review process under the Paris Agreement has created peer pressure among states. The review processes through annual COP meetings, INDC submissions, NDC submissions, and global stocktake taking place every five years enable the UNFCCC to deploy naming and shaming strategies against countries that fall short of meeting their climate pledges and targets. Second, the Paris Agreement also relies on naming and shaming by civil society at the domestic level. Climate adaptation remains an internationally driven concern for many developing countries, such as in Brazil (Milhorance et al. 2022). It seems that the main driver of Indonesia's ambitious adaptation commitments and policies is international pressure rather than domestic. Civil society in Indonesia is more concerned with climate mitigation issues, such as phasing out coal-fired power plants, reducing deforestation, and accelerating renewable energy.

The naming and shaming mechanism as a part of the UNFCCC climate negotiations has put pressure on Indonesia to set ambitious adaptation commitments in its INDC and NDC documents. The Indonesian Government has to conform to global adaptation norms and set ambitious adaptation commitments to limit international shaming and secure free trade agreements. At the same time, the Indonesian Government can use the ambitious adaptation commitments as an instrument to put the pressure back on the developed countries to fulfill their elusive US\$ 100 billion climate finance pledge and deliver more adaptation finance to developing countries (Pauw et al. 2022).

The conflict between North and South has always been central to the politics of global warming and the unresolved dispute over climate finance (Paterson 1996, 157). Indonesia is not just a norm receiver in international climate negotiations but is also a norm shaper in global adaptation norms establishment. Chapter 3 discusses this theme further by using the concept of norm diffusion developed by Finnemore (1996). Adaptation negotiations and North-South conflict are inseparable issues in international climate negotiations. There are two different perspectives in viewing adaptation. Indonesia and other developing countries are more concerned about adaptation and pursue an agenda to get compensation for loss and damage caused by climate change effects. By contrast, developed countries attempt to circumvent their historical responsibility. Latour (2017, 18) views that the globalist ruling classes in countries such as the United States have decided to abandon the solidarity burden to save the lower classes. Indonesia has an agenda to push the developed countries

to fulfil their climate finance and increase the adaptation finance and also loss and damage compensation distributed to developing countries.

By setting ambitious adaptation pledges, the Indonesian Government can kill two birds with one stone. They can be used to evade the naming and shaming at the international level and push the developed countries to increase adaptation financing. However, the ambitious commitments proclaimed internationally require tailored national adaptation policies as the consequences. Here is when the problems begin. Indonesia has, among other measures, created the RAN-API under the BAPPENAS' authority. However, this adaptation planning policy is not the only planning policy. Another adaptation planning document developed by the MoEF also exists to achieve the NDC targets. The document is the NDC Adaptation Roadmap. The discrepancy does not stop there. Other discrepancies between the BAPPENAS and the MoEF can also be found in other adaptation agendas. They lead to two rival national adaptation strategies into existence in Indonesia.

Two Rival National Adaptation Strategies

This thesis is the first study to highlight national contestation over climate adaptation agendas in Indonesia based on a systematic analysis of the fragmentation between the BAPPENAS and the MoEF. Both ministries are attempting to claim ownership of the climate change adaptation strategy at the national level. Interministerial competition over climate adaptation agendas is commonplace in developing countries (see Table 1.1), but this thesis is the first to systematically compare rival national adaptation strategies in Indonesia through documents analysis and semi-structured interviews. This systematic examination of national contestation between the BAPPENAS and the MoEF over national climate agendas is the first original contribution of this thesis.

Table 1.1 Comparison of National Adaptation Governance in Seven Developing Countries

Countries	Ministries with Responsibility for Climate Change Adaptation			Pattern	Authors	
Nepal	The Ministry of Population and Environment to the Ministry of Environment (2010-2012)		Ministry of Environment/Ministry of Science, Technology and Environment (MoSTE) (2013-2017)	The lack of clear authority at the national scale, competition for authority over adaptation programmes at the local level	Nightingale 2017	
Malawi	Ministry of Development Planning and Cooperation (Department of Economic Planning and Development) (2009-2012)	Ministry of Environment and Climate Change Management (2012-2014)	Ministry of Natural Resources, Energy and Mining (Environmental Affairs Department and Department of Climate Change and Meteorological Services (2014-2018)	Authority Shifting from one ministry to another ministry	Pardoe et al. 2020	
Tanzania	Division of Environment (DoE), Vice President's Office (2012-2018)			One authority yet lacking a dedicated climate change policy, and DoE is not a powerful department	Pardoe et al. 2020	
Zambia	Ministry of Natural Resources, Environment and Tourism (2009-2010)	Ministry of Local Government, Housing, Early Education and Environmental Protection (2011)	Ministry of Land, Natural Resources and Environmental Protection (2012-2015)	Ministry of National Development Planning (2016-2018) Ministry of Water Development, Sanitation and Environmental Protection (2016-2018) Ministry of Lands and Natural Resources (2016-2018)	Frequent shifting, overlapping claims over climate change agenda between three ministries (2016 to 2018)	Pardoe et al. 2020
Bangladesh	Ministry of Environment, Forest, and Climate Change			Elite-pluralism, dominance of few sectoral leading organisations (national)	Ishtiaque et al. 2021	
Brazil	Ministry of Foreign Affairs; Ministry of Science and Technology (1990s – Early 2000s)		Ministry of Environment (Early 2000s – 2022)	Authority Shifting from one ministry to another ministry, sector-based priorities prevailed	Milhorance et al. 2022	
Indonesia	National Climate Change Council (2008-2015)	The Ministry of National Development Planning (2015-present) The Ministry of Environment and Forestry (2015-present)		Two dominant competing ministries, national contestation over climate adaptation agendas, fragmentation	This Thesis	

Table 1.1 shows seven developing countries where climate adaptation has become an agenda that is highly contested at the national level, with shifting institutional control over climate adaptation and competing interests between ministries. Nightingale (2017), Pardoe et al. (2020), Ishtiaque et al. (2021), and Milhorance et al. (2022) are leading scholars in CCA studies who examine the adoption of global climate agendas into national adaptation policies and highlight the adaptation governance problems that follow. For example, Nightingale (2017) demonstrates that in Nepal, adaptation programmes run in highly politicised contexts from national down to village levels.

The same set of global climate adaptation norms and policies are adopted by each of the recipient countries in Table 1.1, but with a variety of different outcomes. Bangladesh and Tanzania can be grouped together because each country has a central ministry that is responsible for climate change adaptation policy. Brazil, Indonesia, Malawi, Nepal, and Zambia form a second group because they experience authority shifting from one ministry to another ministry. In all cases there are coordination challenges, competing agendas and power asymmetries that arise during the various stages of CCA implementation. Zambia and Indonesia experience further governance problems where interministerial competition and overlapping mandates occur at the national level. Zambia is one of the most challenging cases because there are three ministries laying claim to the national climate adaptation agenda, which cause further complications in adaptation governance (Pardoe et al. 2020). Like Indonesia, Zambia's Ministry of National Development Planning plays a leading role in climate adaptation, which raises a potential conflict of interest given that this ministry prioritises economic growth. And like Indonesia, there are environmentally aligned ministries and agencies in Zambia that are producing rival climate adaptation strategies and policies (Pardoe et al. 2020). The general pattern is one of contestation between ministries over adaptation programmes in developing countries. In this context, this thesis is the first to examine national contestation between ministries over adaptation programmes in Indonesia. My research contributes to the climate adaptation debate by exploring contestation over adaptation planning (Chapter 4), financing (Chapter 4), vulnerability assessments (Chapter 5), and multilevel adaptation programmes (Chapters 6 and 7).

The UNFCCC urged developing countries to formulate and implement national adaptation plans at the COP 16 in 2010. Indonesia accepted this adaptation norm and published the National Action Plan on Climate Change Adaptation (RAN-API) in 2014 during the final year of President Susilo Bambang Yudhoyono's term in office. RAN-API is a national action plan to adapt to climate change with integrated coordination among stakeholders,

including government, civil society organisations, public and private actors (BAPPENAS 2014a). RAN-API was jointly established by the Ministry of National Development Planning, the Ministry of Environment and Forestry, and the Meteorology, Climatology and Geophysics Agency in collaboration with international development agencies, non-governmental organisations (NGOs), think tanks, and academia. The international development agencies involved were the Japan International Cooperation Agency (JICA), the Asian Development Bank (ADB), and the German Gesellschaft für Internationale Zusammenarbeit (GIZ). They funded several pilot projects. RAN-API projects mainly use the state budget supported by funding from the province budget, private investors, and Corporate Social Responsibility (CSR) (BAPPENAS 2014a). The implementation, monitoring and evaluation of RAN-API are under the supervision of BAPPENAS.

Even though RAN-API was the leading national adaptation plan, the Ministry of Environment and Forestry was appointed as the national focal point for the UNFCCC and was granted the authority to take part in shaping the architecture of national adaptation planning and policies. The launch of the NDC Adaptation Roadmap by the MoEF in 2020 denoted that adaptation planning did not belong to the BAPPENAS exclusively. Each ministry translates global adaptation norms under the UNFCCC Regime into several ministerial policies that sometimes overlap with other ministries. The norm diffusion of adaptation has created a polycentric governance structure at the national level. Hence, fragmentation and contestation over adaptation policies between ministries at the national level becomes inevitable. Chapter 4 provides a deeper analysis of national fragmentation and contestation over adaptation programmes.

Vulnerability Assessment Divergences

The contestation between the BAPPENAS and the MoEF over climate adaptation agendas at the national level has led to divergent vulnerability assessments. The classification 'vulnerable' can be used as a basis to allocate resources or project funds at the local level. There is no consensus as to what vulnerability is or how it is best defined. Who is vulnerable and which communities should be prioritised become obscure after rival mapping exercises are completed based on different methodologies and perspectives. There are often mismatches between vulnerability mapping and the decisions to select pilot project or adaptation project locations. From my observations the decisions are often political rather than evidence-based or needs-based. The decisions are political since they are shaped by two competing interests of two ministries, exclusion process in the assessments, funding from

two different donor agencies, and contrasting interests between national and local actors. Chapter 5 provides the evidence and further elaboration on these political processes.

The BAPPENAS and the MoEF have different framings of vulnerability within the CCA framework. This is made even more complicated by the fact that coordinating agencies and stakeholders using their preferred scientific models may recommend different adaptation interventions to those recommended by stakeholders who use a human security framing (Taylor 2014). Vulnerability is ambiguous because of the absence of consensus among lead agencies and adaptation stakeholders (Adger 1996). Socio-economic factors such as poverty, health, unemployment, and education have been marginalised by researchers and practitioners in assessing vulnerability (Mikulewicz 2018). Biophysical factors such as droughts, floods, and rising sea levels are not the only factors that affect people's vulnerability, and there is a need to move away from hazard-centre approaches. However, incorporating socio-economic factors is not enough to understand vulnerability. The most important question that needs to be asked is why vulnerability exists and how power and politics shape vulnerability (Ribot 2014; Mikulewicz 2018).

Each ministry uses different definitions and models to assess vulnerability to climate change. Donor agencies and NGOs also have different approaches to assessing vulnerability. Moreover, the local implementing agencies in Indonesia have their justification to determine where the adaptation projects should be distributed. Those decisions are often not based on the vulnerability mapping developed by the BAPPENAS or the MoEF. Local communities might also have different perspectives in viewing vulnerability to climate change. The ministries, donor agencies, NGOs, and local implementing agencies can label particular groups as vulnerable, but they might not consider themselves so. In this situation, we can see power asymmetries between climate adaptation actors. Those who are labelled vulnerable are determined to be so by actors who possess dominant power. Therefore, there is a need to understand how power and politics shape vulnerability in Indonesia.

The Political Economy of Climate Change Adaptation

The Indonesian Government has run high level climate adaptation projects such as Jakarta's Great Garuda Sea Wall as well as myriad adaptation programmes at the village level. Each relevant ministry or agency has a flagship adaptation programme at the village level. The BAPPENAS has been delivering adaptation programmes under the Indonesia Climate Change Trust Fund (ICCTF) mechanism. The MoEF runs the Climate Village Programme, which is also promoted in the UNFCCC fora. The ICCTF adaptation programmes and the Climate Village

Programmes are completely separate programmes. The ICCTF adaptation programmes have specific programmes for each village and the Climate Village Programmes are one programme implemented nationally with a specific template. The Ministry of Agriculture promotes a climate-smart agriculture programme to farmers nationwide. The Ministry of Agriculture claims that the Climate Smart Agriculture is an approach recommended by Food Agriculture Organization to adapt to climate change and build climate resilience (BBP2TP 2021). An abundance of adaptation programmes nationwide supports the narrative that Indonesia is adapting well to climate change. For instance, the idea of establishing 20,000 climate villages across the country sounds like an ambitious programme to help Indonesia achieve adaptation targets. However, the actual adaptation measures in many of these so-called climate villages are substandard or unsustainable. There are some discrepancies between what the Indonesian government claims at the Conference of the Parties (COP) and the adaptation outcomes at the village level. It is important to acknowledge stories of maladaptation (Phillips 2021, 189) and to learn from past climate interventions that distribute benefits unevenly among local communities.

It is difficult to build national resilience to climate impacts as adaptation is a cross-cutting issue. CCA is not merely about the technical issue of what measures are needed to improve the adaptive capacity of vulnerable people, but it involves political and economic aspects. Scientists already have adaptation project designs to cope with climate change, such as altering infrastructure and changing cropping patterns, but why are millions of Indonesian farmers still vulnerable to climate change impacts? It is apparent that those initiatives have to deal with political issues such as decisions by the central government being implemented by local governments that have their own agendas and priorities, or incoherence caused by overlapping climate mitigation and adaptation projects. The exclusion of non-state actors in the decision-making process at the national level during policy formulation or at the local level during adaptation programme planning is still happening. It can result in the inaccurate distribution of adaptation resources and the widening of social inequality. Poor planning in adaptation programmes might only benefit a particular group in society at the expense of others. Multilevel CCA initiatives are not merely technical but political, creating both winners and losers in the process of adaptation. The political economy approach can be a powerful tool to explain why there are winners and losers in climate adaptation.

Theories of political economy help us understand the dynamics of global responses to climate change. For instance, the political economy approach helps explain global climate change governance, which is more fragmented and complex due to overlapping initiatives

and agreements. Moreover, actors have varied interests and incentives in climate change (Paterson and P-Laberge 2018). Climate change has arguably been of marginal concern to theorists, creating a blindspot in the study of international political economy in terms of 'what we focus on' (Paterson 2020, 395). In that case, CCA has been experiencing double marginalisation since CCA remains neglected by most political economy scholars who tend to focus on climate mitigation topics, such as carbon markets, decarbonisation, and energy transitions. The exceptions are Sovacool, Linnér, and Goodsite (2015), Sovacool and Linnér (2016), Chu (2016), and Lomax et al. (2021). Using the implementation of global adaptation initiatives in Indonesia as a case study, this thesis contributes by advancing the study of the political economy of CCA.

There are various ways to use the political economy approach in climate change studies. Ruhl (2012) uses the political economy approach to examine how the harms and benefits of climate change are distributed unevenly among societies, creating winners and losers. Climate change policy often becomes a trade-off between winners and losers with conflicting interests. Besides climate change policy, climate adaptation projects can also create winners and losers through the uneven distribution of gains and losses (Lomax et al. 2021). Ruhl (2012) defines the winners as people or businesses who enjoy benefits because of climate change, while the losers are the opposite. Both studies understand that the structure of winners and losers might change. Hence, they are not static. Mdee et al. (2021) present a political economy analysis of agricultural policy in Malawi, Tanzania, and Zambia to understand the patterns of exploitation of rural farmers by political elites. Agricultural policies and subsidies are merely rhetoric and can be part of electoral strategies to win rural votes. In this case, generally speaking, political elites can be considered winners at the expense of small-scale agricultural development.

Newell and Mulvaney (2013) explore climate justice and energy justice issues by considering uneven power relations between global elites and the world's poorest people. They raise key political economy questions such as 'who wins, who loses, how and why' in energy distribution. The uneven distribution of power in the world economy, exacerbated by climate change problems, has always been a core element of the political economy approach (O'Hara 2009). Harmeling and Kaloga (2011) use the political economy approach to unveil how the unequal distribution of power between developed and developing countries influences the use of adaptation funds in ways that often do not represent developing countries' interests. Theories of political economy can also be used to assess vulnerability for climate adaptation by considering the socio-economic conditions influencing vulnerability

(Downing and Patwardhan 2005; Fussel 2007; Basset and Fogelman 2013). Overall, the political economy approach is used in my thesis to explain unequal power relations, uneven distribution of gains and losses, and different degrees of vulnerability to help understand how climate change or CCA programmes create winners and losers.

Although many scholars have used the political economy approach to analyse climate change problems, Paterson (2020) argues that the failure to engage with social transformation and the potential collapse of human civilisation, two fundamental shifts in climate politics, is another blindspot in international political economy regarding climate change. Using the analytical tools developed by Sovacool, Linnér, and Goodsite (2015) to understand the political economy of CCA, this thesis contributes to the transformation and collapse debate by providing empirical evidence of transformation in climate adaptation and collapse of rural farmers production in Indonesia. Sovacool, Linnér, and Goodsite (2015) have developed a typology of political economy processes in CCA to investigate exclusion (political), enclosure (economic), entrenchment (social), and encroachment (ecology) processes within adaptation interventions. This thesis provides additional evidence that four political economy processes of climate adaptation also reoccur in Indonesia.

This thesis also contributes by expanding the existing typology by adding a cultural dimension. When applying the political economy framework of Sovacool, Linnér, and Goodsite (2015) to cases of climate adaptation in eight Indonesian villages, I found that this framework has a limitation in analysing the interaction of climate interventions with existing cultural practices or local adaptation knowledge. Hence, this thesis incorporates a cultural dimension in the political economy of climate change adaptation. This thesis is not the first study to analyse the role of cultural values in political economy or climate adaptation strategies (see Neef et al. 2018; Singh 2020). However, this thesis is the first study incorporating cultural dimension into the political economy framework coined by Sovacool, Linnér, and Goodsite (2015) to understand the nature of CCA in developing countries like Indonesia. The details of the political economy of CCA with the additional cultural dimension can be found in Chapter 2.

According to Eagleton (2016, 1), culture can mean the values, beliefs, and symbolic practices that conduct how we live. It is what we have done and what our ancestors have done millions time over. We should practice the same to validate our existence (Eagleton 2016, 2). Many village communities in developing countries still rely on cultural heritage practices to adapt to climate change challenges. It is important to understand the links between culture and political economy, yet they have often been marginalised by political

economy scholars (Singh 2020, 4). This thesis' empirical findings in Chapter 6 and Chapter 7 provide additional evidence to show the importance of cultural values in political economy analysis.

Research Design and Methods: Adapting to COVID-19 Uncertainty

Case Study Design

This thesis employs a case study design as a research strategy for conducting political research on CCA under the Paris Regime in the global south. This thesis uses a qualitative approach with a multiple-case study design where all cases are located in a single country. This design allows the researcher to conduct direct replications of research design to other sites (Yin 2014, 48) and a cross-case analysis to draw generaliseable conclusions from fieldwork data obtained from several sites (Yin 2014, 16).

The case study design also allows for triangulation by collecting data from multiple sources of evidence through several case studies (Yin 2014). This thesis reviews the adaptation project reports published by the Indonesian government, donor agencies and NGOs, and gathers data from key sources such as elite interviews and local interviews with farmers and villagers. For example, in preparation for field research in a village in Gunung Kidul, this thesis began with a general analysis of adaptation project reports published by the Ministry of National Development Planning (BAPPENAS). Triangulation was then needed to ensure that the information provided in the report was valid and accurately explained the nature of CCA and vulnerability in the villages. This thesis uses information from elite interviews with the BAPPENAS and the MoEF, which is crosschecked with testimony from NGOs and villagers involved in climate change adaptation programmes to test the accuracy and validity of adaptation project reports and government narratives. For example, interviews with a village head and five farmers conducted in a village in Gunung Kidul provides the author with rich data and candid findings. It replicates the triangulation process for analysing adaptation projects in other sites. By using multiple sources of data, the case study design of this thesis offers a higher quality of analysis than using only a single source of information. The purpose of selecting multiple cases is to show different perspectives on an issue (Creswell 2018), and this thesis aims to obtain different perspectives on the political economy of CCA initiatives and vulnerability through fieldwork in eight villages located in four provinces in Indonesia to gain in-depth knowledge of adaptation at the local level.

The Eight Case Studies

This thesis compares and contrasts the implementation of adaptation projects in eight villages located in four provinces as case studies (see Figure 1.1). Before selecting the eight villages, this thesis selects four provinces that are appropriate for fieldwork locations. Three provinces with similar characteristics are selected from 15 pilot project locations listed in the 2014 National Action Plan on Climate Change Adaptation (RAN-API) to analyse the design and implementation of adaptation projects. To test these findings, one province was selected that is not listed in the RAN-API but that still receives adaptation projects. This helps the author to investigate the contestation over the selection of project locations and the distribution of resources to these locations. It is useful to analyse why a location that is not formally listed as pilot project or included in the BAPPENAS or the MoEF plans still receives adaptation projects from the government. The inclusion of these four provinces also aims to see whether the empirical findings from three RAN-API listed provinces can still occur within a different context (Yin 2014).

Figure 1.1 The Map of Fieldwork Locations



Source: Geospatial Information Agency (2022)

The key criteria used to select three RAN-API approved provinces for fieldwork are:

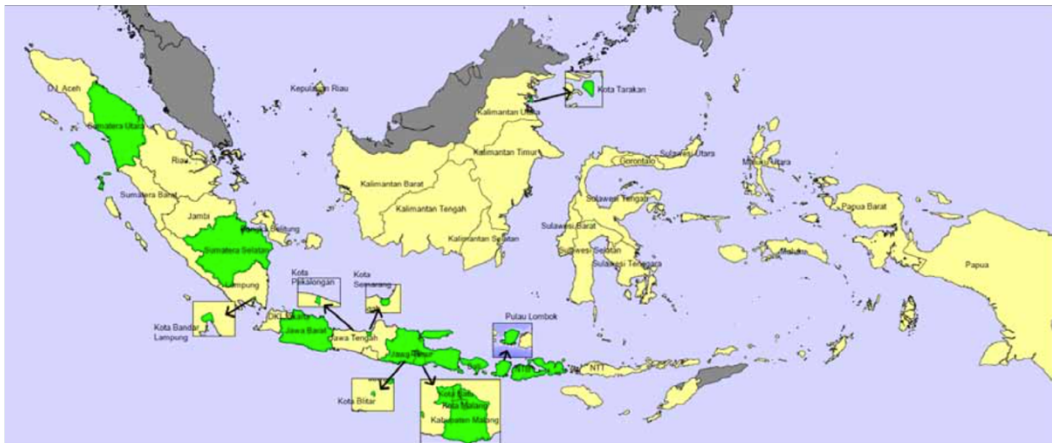
1. **The province is listed as pilot project locations in the RAN-API (see Figure 1.2).**

The RAN-API document published in 2014 used a specific vulnerability assessment by considering several indicators, such as population density, adaptive capacity, ecology sensitivity, and infrastructure to identify vulnerable regions in Indonesia. The Ministry of National Development Planning used the vulnerability assessment to determine pilot project locations for adaptation, which then raised questions about accuracy and validity since the Ministry of Environment and Forestry also published an adaptation roadmap that had vulnerability mapping at a different scale.

2. **The province experiences at least 50 intense natural disasters annually (see Figure 1.3).** The number of natural disasters that are recorded in a given year are an indicator of the relative vulnerability of provinces to climate change, and the level of adaptation assistance needed. According to the National Disaster Mitigation Agency (BNPB 2021), provinces that experience 50 or more natural disaster per year are considered vulnerable, with with red and dark red colours depicting this on the map.
3. **The province received adaptation programmes and funding from the Ministry of National Development Planning (see Figure 1.4).** This criterion corresponds with the first criterion. This thesis aims to investigate the implementation of adaptation projects in pilot project locations.

Applying the first criterion, this thesis has narrowed the options into six provinces. The RAN-API document only lists six provinces as pilot project locations: North Sumatra, South Sumatra, West Java, East Java, Bali, and West Nusa Tenggara. The other locations are either cities, regencies or islands that are contained within provinces. For example, Malang and Blitar are cities located in East Java Province, and Lombok Island is located in West Nusa Tenggara Province.

Figure 1.2 RAN-API Pilot Project Locations



15 pilot project locations:

North Sumatra Province
 South Sumatra Province
 West Java Province
 East Java Province
 Bali Province

West Nusa Tenggara Province
 Bandar Lampung City
 Pekalongan City
 Semarang City
 Tarakan City

Blitar City
 Malang City
 Batu City
 Malang Regency
 Lombok Island

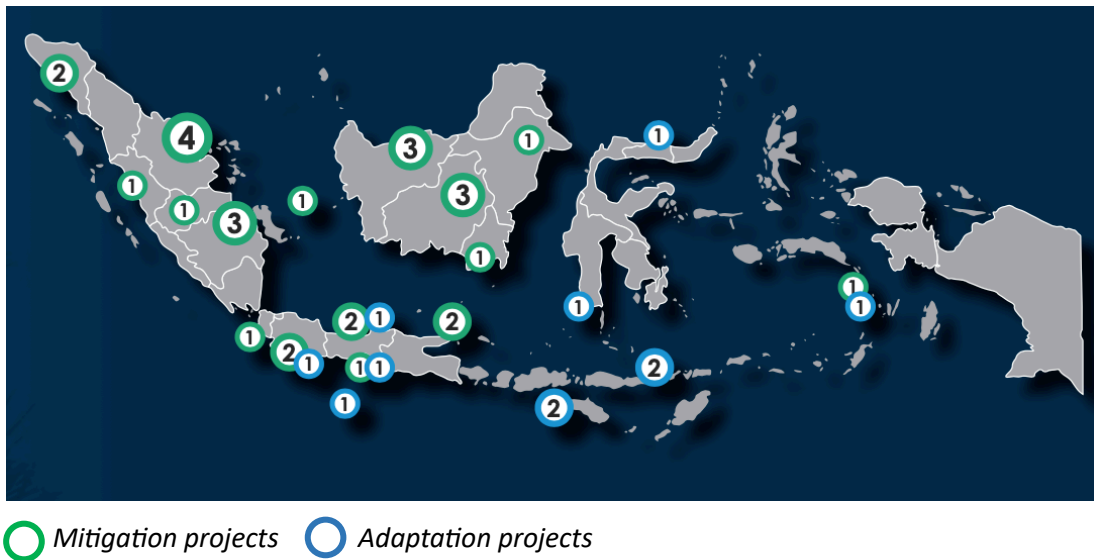
Source: RAN-API (BAPPENAS 2014a)

Figure 1.3 Natural Disasters in Indonesia in 2020



Source: BNPB (2021)

Figure 1.4 The Distribution of Adaptation Programme Locations under the ICCTF (Blue Circles)

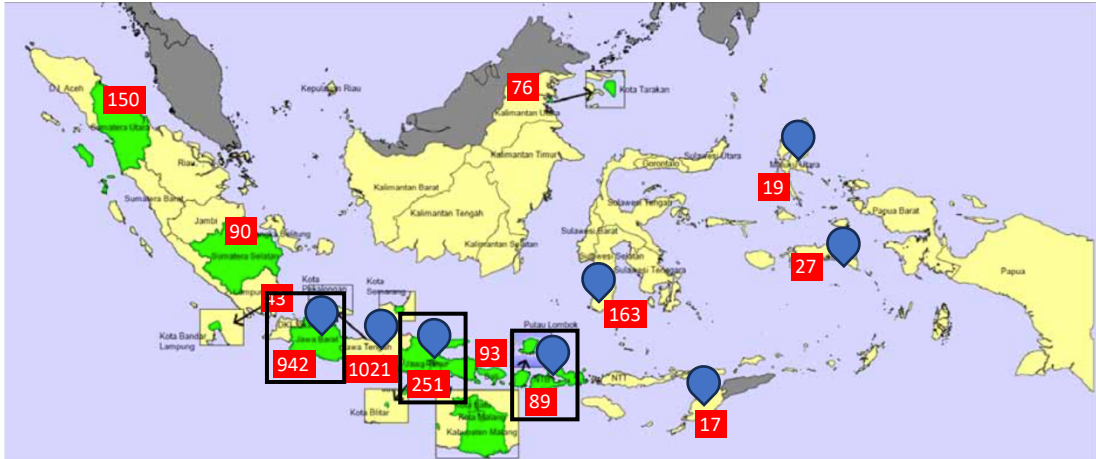


Source: ICCTF (2018)

Using the second criterion, all six provinces experienced intense natural disasters which were above 50 events in 2020. According to the National Disaster Mitigation Agency (BNPB 2021), West Java was the province with the highest natural disasters with 942 events, and followed by East Java (251), North Sumatra (150), Bali (93), South Sumatra (90), and West Nusa Tenggara (89) (see Figure 1.3). The third criterion helps to narrow the options into three locations only, since not all six provinces receive adaptation projects by BAPPENAS under the ICCTF scheme. Only West Java, East Java, West Nusa Tenggara have received adaptation programmes from the ICCTF. Hence, these three provinces meet all the criteria

for appropriate fieldwork locations, having similar characteristics that enable comparisons to be drawn and some significant conclusions to be drawn (see Figure 1.5 and Table 1.2).

Figure 1.5 Three Provinces Meeting Three Criteria for Fieldwork Locations



Source: RAN-API (BAPPENAS 2014a); ICCTF (2018); and BNPB (2021)

The Yogyakarta Special Region as the fourth province in my study is an outlier that is not listed as a RAN-API pilot project location and experienced less than 50 natural disasters in 2020. Receiving adaptation programmes from the BAPPENAS is the only characteristic that links the four provinces together.

After several considerations, including COVID-19 situation in Indonesia and public activity restrictions, the Yogyakarta Special Region was selected as the fourth province for my study. Unlike the RAN-API eligible provinces of West Java, East Java and West Nusa Tenggara, Yogyakarta was not listed by the BAPPENAS as a pilot project location, so this is an outlier that allows me to investigate the nature climate change adaptation in a densely populated and strategically important province that has vulnerabilities but was excluded from 2014 National Action Plan on Climate Change Adaptation.

This thesis selects two villages in each province to study the nature of adaptation projects under the BAPPENAS and the MoEF. Thus, the study consists of eight villages in total (see Table 1.2). Four of the villages are the beneficiaries of adaptation projects under the BAPPENAS through the ICCTF financing scheme, while the other four villages are the beneficiaries of Climate Village Programmes under the MoEF.

Table 1.2 Eight Fieldwork Locations in Four Provinces

Provinces	Project Locations	Implementing Agencies	Ministries
West Java	Pranggong Village	Anthropology Research Centre, Universitas Indonesia	BAPPENAS
	Tinumpuk Village	Indramayu Environment Agency	MoEF
East Java	Wonokerto Village	DAI (funded by USAID APIK)	BAPPENAS
	RW 05, Arjowinangun Village	Malang Environment Agency	MoEF
West Nusa Tenggara	Salut Village	Yayasan Rumah Energi	BAPPENAS
	<i>Dusun</i> Joben, Pesanggrahan Village	East Lombok Environment Agency	MoEF
Yogyakarta Special Region	<i>Dusun</i> Temon, Giripurwo Village	Yakkum Emergency Unit	BAPPENAS
	<i>Dusun</i> Kedung Poh Lor, Kedung Poh Village	Gunung Kidul Environment Agency	MoEF

In selecting a sample of villages that received adaptation programmes under the BAPPENAS coordination in each province, the options were already limited. There were only 12 adaptation projects delivered to eight provinces. This thesis referred to the ICCTF annual report published in 2018 since this is the most recent annual report available. In West Java Province, there were three adaptation projects organised by the Anthropology Research Centre, Universitas Indonesia; the Climate Change Centre, Institut Teknologi Bandung; and the Department of Geophysics and Meteorology, Institut Pertanian Bogor. This thesis selected adaptation projects delivered by the Anthropology Research Centre, Universitas Indonesia in Pranggong Village, Indramayu Regency, since this was the longest running programme.

In East Java, this thesis selected an adaptation project conducted in Wonokerto Village which was funded by USAID APIK (Adaptasi Perubahan Iklim dan Ketangguhan). The adaptation programme in Wonokerto was a unique case because the funding was not distributed through the ICCTF but directly under USAID APIK in coordination with the BAPPENAS and the ICCTF. In West Nusa Tenggara Province, there was only one adaptation project delivered in Salut Village by Yayasan Rumah Energi (YEU) or the Home Energy Foundation under the ICCTF scheme. Hence, Salut Village became the third fieldwork location. The Yogyakarta Special Region (province level) also only had one adaptation project

delivered by Yakkum Emergency Unit (YEU) in *Dusun* Temon, Giripurwo Village.¹ Therefore, Temon was selected as the fourth fieldwork location.

In selecting the Climate Village Programme locations under the MoEF coordination, this thesis targeted climate villages that were in the same region with the adaptation projects under the BAPPENAS. The author managed to interview officials from two local environment agencies in Indramayu, West Java Province and Malang, East Java Province before the start of the fieldwork. The officials recommended two locations for fieldwork that were considered the best climate villages assisted by the local environment agencies and that had indeed already won several awards. The official in Gunung Kidul Regency recommended Kedung Poh Village because it represented Gunung Kidul Regency in a climate villages competition at the province level (interview EP25).² The official in Malang recommended RW (*Rukun Warga/Community Unit*) 05 in Arjowinangun Village since this climate village received an award from the MoEF and represented Malang in a climate villages competition at the national level (interview EP23).

During COVID-19 pandemic, not all local environment agencies opened as usual, hence they were difficult to reach. To manage the uncertainty in selecting the fieldwork locations in Indramayu and East Lombok Regencies approaching the fieldwork schedule, a decision had been made to target climate villages that were acknowledged by Indramayu and East Lombok Regency Governments on their website. The climate villages in Tinumpuk and Pesanggrahan Villages appeared as two potential climate villages since they won some awards and represented their region in climate villages competition. For example, the MoEF acknowledged the success of Tinumpuk climate village in achieving zero waste community and the zero waste management programme also brought an award for the Indramayu Regent (Disnaker 2018). The climate village in Pesanggrahan was popular for the success of eco park establishment. It also received a national award from the MoEF (Wahab 2020).

Data Collection

The AREA FREC Committee has granted research ethics approval for data collection of this thesis with reference AREA 19-163. The data collection procedures of this thesis included collecting information through semi-structured interviews, observations, documents, and audio-visual materials (Creswell 2018, 262). This thesis' main source of data was collected through semi-structured interviews by conducting in-depth interviews with elite participants

¹ *Dusun* or hamlet is an administration under a village administration.

² Detailed interview schedule and research participants list can be found in Appendix I.

who were involved in the adaptation projects decision-making process, and village participants and farmers who were the beneficiaries of adaptation projects. The interviews were almost always recorded and allowed this thesis to obtain valuable first-hand data directly from interviewees.

Semi-structured interview with an interview guide or a list of questions was used as a tool during the interview process to limit interviewer or interviewee bias. Other advantages of this type of interview are flexibility and the chance of receiving high-quality information. However, it lacks comparability because the flexibility in asking questions might result in different answers from one interviewee to another (Brancati 2018). The semi-structured interviews were the most appropriate procedure to explore a similar phenomenon like the implementation of climate adaptation projects in several sites with an interview guide, but at the same time, the procedures gave opportunities to explore variation of CCA in each site which had different characteristics, such as the vulnerability level or the funding sources.

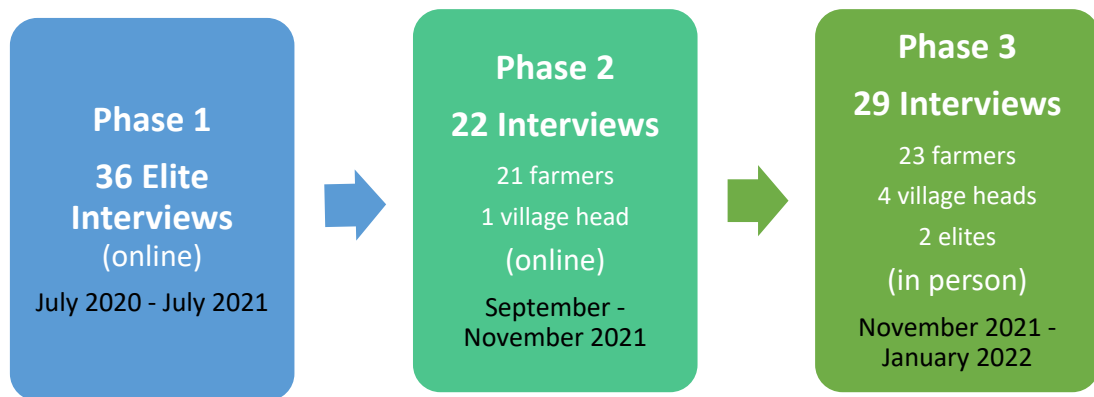
The initial plan of interview data collection was individual face-to-face, in-depth interviews. However, there were restrictions to conducting fieldwork due to social distancing and safety reasons during the COVID-19 pandemic in 2020 and 2021. Those restrictions posed challenges for data collection. Hence, the data collection of this thesis needed to adapt to those challenges. This thesis conducted virtual interviews for elite participants using Teams Video Conferencing platform. Keen, Lomeli-Rodriguez, and Joffe (2022) consider video interviewing as an opportunity for future methodological development. Using the virtual interviewing technique, this thesis experienced some advantages such as more flexible scheduling, instant messaging options to share documents, no travel expense, reduced carbon footprint, greater geographic access and, most importantly, preventing the spread of COVID-19 (Keen, Lomeli-Rodriguez, and Joffe 2022).

The virtual interview was an efficient technique for elite interviews. However, it did not work optimally for villager and farmer interviews due to limitations such as potential home distractions from kids or motorcycle noise and confidentiality challenges (Keen, Lomeli-Rodriguez, and Joffe 2022). Based on the experience of this thesis, virtual interviewing technique also had other limitations. It could not reach areas with poor internet signals, such as villages in North Lombok and Malang. The video call quality was poor and unreliable. The digital divide between Leeds and rural Indonesia hindered my data collection. Many of the rural interviewees were not familiar with Teams, hence an operator was needed to assist them. Arranging virtual interviews for farmer participants living in villages was not as simple

as setting up a meeting with colleagues who were familiar with Teams, Skype, or Zoom, and had 24 hours access to stable internet connection.

Despite these limitations during the COVID-19 pandemic, a total of 38 elite participants, five village heads, and 44 farmers were interviewed in three phases of data collection conducted from July 2020 to January 2022 (see Figure 1.6). Phases one and two were interviews conducted virtually, while phase three interviews were conducted in person. The details of research participants, including the initials, locations, dates, and positions, are available in Appendix I.

Figure 1.6 Three Phases of In-depth Interviews



In the first phase, this thesis obtained information from 36 elite interviews conducted virtually from July 2020 to July 2021. This research relied on ‘elite’ interviewing using an in-depth interview technique to gather primary data from the respondents (Vromen, 2010, 258). Elite interviewing is a type of interview that explores the research questions with people who have power and are prominent in their field, such as political leaders, senior executives, activists, or commentators in the public sphere (Vromen, 2010, 258; Scally et al., 2021). Interviews with elite participants focused on garnering information on several key themes, including how the Paris Agreement influenced Indonesia’s national adaptation, how contestation over adaptation policies between adaptation stakeholders shaped adaptation governance in Indonesia, how elite participants defined vulnerability to climate change and how they viewed the implementation of adaptation intervention at the local level.

In addition to elite interviews, this thesis interviewed farmers involved in CCA programmes to identify the nature of CCA at the local level, the local contestation of adaptation projects, and the uneven distribution of adaptation programme benefits between

communities at the village level using the political economy lens. Moreover, the villager and farmer interviews were crucial for triangulation process to check claims made by the elites who worked for the Indonesian government or the implementing agencies of adaptation programmes.

In the second phase of interviews between September to November 2021, this thesis managed to interview one village head and four farmers from Pesanggrahan Village, ten farmers from Salut Village, and seven farmers from Wonokerto Village. However, the information gathered was suboptimal since most farmers only shared general information or normative answers. For example, they only shared good stories and benefits gained from adaptation projects in their village. They generally hesitated to discuss the problems or challenges they experienced, and only a few respondents were willing to recount stories of failed or weak adaptation interventions in their village. This phase of interviews was halted after COVID-19 restrictions were lifted. The in-country fieldwork or the third phase of interviews could finally be conducted from November 2021 to January 2022. The information given by respondents during face-to-face interviews differed significantly. There was an unevenness in responses between the virtual and in person interviews, especially when it came to villagers and farmers, who were more open to giving information when they met the author in person.

In the third phase of data collection through fieldwork, this thesis managed to conduct face-to-face interviews with 23 farmers from eight villages, four village heads, and two agricultural instructors in Gunung Kidul Regency. The farmer participants were selected through snowball sampling since there was no detailed data on CCA programme participants in the programme reports published by the government institutions, donor agencies, or local implementing agencies. Therefore, snowball sampling enabled the researcher to recruit respondents through first contact, their contacts' contacts, and their contacts' contacts' contact and so forth (Brancati 2018). The first contact person for each location was recommended by elite participants who conducted adaptation programmes in eight villages.

Besides relying on the interview data, this thesis also collected multiple data sources such as documents, observations, and audio-visual materials. Documents collected were official documents published by the UNFCCC, the Indonesian Government, the BAPPENAS, the MoEF, donor agencies, NGOs, and Think Tanks. General observations were made by following international climate negotiations such as the Climate Ambition Summit in 2020, the Climate Adaptation Summit in 2021, and the Conference of the Parties (COP 26) in Glasgow. More specific observations were made during fieldwork through visiting adaptation

project locations in eight villages. Audio-visual materials, such as the speeches of President Joko Widodo, were collected from the official YouTube channel of the UNFCCC and Indonesian Government Institutions such as the President Secretariat.

The author is an Indonesian academic who does not work for the government nor has any personal connection with research participants, hence his role as an outsider in this research (Ospina et al. 2001). The degree of commonality between the researcher and the participants was low (Rowe 2014). Even though the researcher did not have any affiliation with the participants, several years of interactions with the small-scale farmers in Riau, West Java, and West Nusa Tenggara while conducting previous research had shaped his knowledge. The knowledge influenced the researcher's critical stance to question the CCA programme that often caused unintended detrimental impacts and maladaptation to the most vulnerable groups. The author speaks Indonesian and Javanese languages, helping him to communicate well and clearly with research participants.

Data Analysis

The data analysis procedure of this thesis consists of four steps. First, this thesis analysed the UNFCCC agreements, IPCC documents, one INDC and three NDCs documents submitted by the Indonesian Government. This first step helped identify the adoption of global adaptation norms and the development of national adaptation policies under the UNFCCC (international level). This thesis also used video materials such as President Joko Widodo's speeches at the UNFCCC events and interview data from government officials for triangulation.

Second, this thesis analysed national adaptation policies and published government reports to identify the architecture of adaptation governance in Indonesia and the nature of contestation over adaptation policies (national level). It assessed discrepancies between adaptation policy documents published by the BAPPENAS and the MoEF, the two dominant actors who produced Indonesia's national adaptation policies. This thesis analysed at least 20 adaptation policy documents to reveal the contestation between the BAPPENAS and the MoEF over national adaptation policies. The list of adaptation documents is available in Appendix II. Multiple data sources were used for triangulation, such as elite interview data.

Third, this thesis analysed villager and farmer interview data to examine the nature of CCA programmes implemented at the village level whether they improved the adaptive capacity of local communities or resulted in negative unintended impacts (local level). The uneven distribution of adaptation project benefits was analysed using the political economy

approach developed by Sovacool, Linnér, and Goodsite (2015). The analysis was also focused on the theme of vulnerability to investigate the variety of representations and experiences of vulnerability based on village community perspectives.

Lastly, this thesis conducted a cross-case analysis to investigate the nature of CCA in eight villages. This thesis analysed findings in one village and then investigated whether the findings that occurred in the first village also reoccurred in other villages. This cross-case analysis enabled this thesis to reveal the nature of CCA at the village level. For instance, this thesis finds that the Climate Village Programme was designed to secure 'easy wins' in many cases by selecting villages with established track records and proclaiming them as 'climate villages'. This is a form of pernicious gaming that is misleading. After analysing the interview data from the first and second village, a similar pattern was observed in the third village, fourth village and so forth. By replicating the research design and comparing findings from each village, this thesis is able to reveal the nature of CCA at the village level with a good level of confidence, and with some generalisable findings.

This thesis used NVivo for data analysis. Key policy documents, speeches, adaptation programme reports, elite interviews, and farmer interviews data were coded and categorised using NVivo. The data ranged from a word to a full paragraph. Each unit of data was assigned a unique code. This step helped find repetitive patterns (Saldaña 2013). The outcomes of coding and categorisation analysis were related to several political economy and CCA themes (Saldaña 2013, 14). Those themes are the adoption of global adaptation norms, contestation and fragmentation of CCA policies, the ambiguities of vulnerability, and the political economy of climate change adaptation.

Profile of Fieldwork Sites in Indonesia

West Java Province

West Java Province is located near Jakarta, the special capital region. The population of West Java Province is the largest among other provinces in Indonesia. This province is very densely populated, with a poverty rate of around 7.45%. The population was projected at approximately 50 million in 2020 (BPS Provinsi Jawa Barat n.d.). This province was the second-largest rice producer in Indonesia after East Java Province, with a total production of 9,539,330 tons in 2018 (BPS n.d. a). It places West Java Province as one of the rice barns (*lumbung padi*) of Indonesia, supplying rice as a staple food. However, this province is prone to climate disasters such as floods, droughts, and hurricanes. There were 47 floods, 105 hurricanes, and five droughts in 2019 (BNPB n.d.). As mentioned, the fieldwork in West Java

Province was conducted in Tinumpuk Village that was a climate village and Pranggong Village, a beneficiary of the adaptation programme funded by the ICCTF.

East Java Province

East Java Province is the top rice producer in Indonesia. It produced 10,537,922 tons in 2018 (BPS n.d.). This province also has the highest number of paddy farmers in Indonesia. This province experienced 99 floods, 26 droughts (the highest nationally), and 267 hurricanes in 2019 (BNPB 2020). The fieldwork in East Java Province took place in Wonokerto Village, Malang Regency and *Kelurahan* Arjowinangun, Malang City.³ Both sites are located in the south of East Java Province. Malang was categorised as the second most vulnerable area in East Java or the ninth in Indonesia on disaster vulnerability (DAI 2019). Malang is experiencing a land-use change problem. Agricultural land in Malang city was 1,300 hectares in 2011, but only 821 hectares remained in 2018 (Cahyono 2018). The number of farmers has also decreased significantly. According to national statistics, the number of farming households dropped from 16,905 in 2003 to 6,058 in 2013 (Arifin 2018). The number will continue to decrease due to the pressure from climate change effects as well as career choices, making farming less profitable and less attractive. The fieldwork took place in Arjowinangun Village that was a climate village and Wonokerto Village that received an adaptation project funded by USAID.

West Nusa Tenggara Province

West Nusa Tenggara experienced 19 floods, 22 tornados, nine droughts, and four forest fires in 2019 (BNPB 2023b). West Nusa Tenggara province was a beneficiary of CCA programmes from the ICCTF under the BAPPENAS. Several adaptation programmes have been conducted in collaboration with non-state actors such as Yayasan Rumah Energi (YRE). Like the other two provinces, West Nusa Tenggara has to deal with poverty. There were 751,230 poor people in West Nusa Tenggara. The poverty rate in West Nusa Tenggara is above the national average, for example calculated at 13.5 % in 2023 compared to the national poverty rate of 9.36% in March 2023 (BPS Provinsi Nusa Tenggara Barat 2023; BPS n.d. b). The number of poor people in 2023 in Lombok Timur Regency was 1,391,382 (14.2%). It was the highest number among other regencies and cities in Nusa Tenggara. The 2023 poverty rate in Lombok Utara Regency

³ *Kelurahan* and Village are in the same administrative level. However, they have different authority. For instance, the head of village is elected by the people through direct election, while the head of Kelurahan is a civil servant appointed by the district head or Camat,

was approximately 23.3%, the highest rate among other regions (BPS Nusa Tenggara Barat 2020). Poverty is not the only indicator to measure vulnerability, but it certainly affects the adaptive capacity of the people there. Fieldwork in West Nusa Tenggara Province was conducted in Pesanggrahan Village that was the beneficiary of Climate Village Programme and Salut Village that had an adaptation project funded by the ICCTF.

Special Region of Yogyakarta Province

The Special Region of Yogyakarta Province was not listed as pilot project location in the original 2014 National Action Plan on Climate Change Adaptation (RAN-API). However, this province received some adaptation programmes under the ICCTF scheme. The adaptation programme implementation in this province is an intriguing case. The BAPPENAS was the ministry that designed the pilot project locations but the funding, managed by ICCTF under the BAPPENAS supervision, did not follow the grand design of adaptation plan created by the BAPPENAS (see Chapter 7 for further analysis). The Yogyakarta Special Region experienced eight floods, six landslides, 16 tornados, and two droughts in 2019. The fieldwork took place in Gunung Kidul Regency where drought was the main climate change impact that put pressure on agricultural activities. It impacted 105,234 people in Gunung Kidul Regency (BNPB 2023b). Fieldwork in the Yogyakarta Special Region was conducted in Kedung Poh and Giripurwo villages. Kedung Poh Village had an existing Climate Village Programme and Giripurwo Village received adaptation financing from the ICCTF.

Structure of Thesis

This thesis makes several noteworthy contributions to advance our knowledge of CCA. First, it reveals a contestation between two dominant ministries, the BAPPENAS and the MoEF, over national adaptation agendas in Indonesia. Second, the empirical findings of this thesis provide evidence of the variety of representations and experiences of vulnerability observed in eight villages in four provinces. It highlights the discrepancies of vulnerability assessments between adaptation stakeholders that jeopardise the implementation of national adaptation plans. Third, it contributes to extending the dimensions of the political economy of CCA typology by incorporating the cultural dimension to help understand the implementation of adaptation programmes in the global south.

This thesis consists of eight chapters. Chapter 1 has highlighted the importance of political economy analysis of CCA to understand the distribution of gains and losses in local

contexts. Unintended negative impacts and maladaptation occurring at the local level are not merely due to technical problems. They often result from exclusion, contestation, and fragmentation existing at the national or international level. Hence adaptation interventions are political, benefitting a select few interest groups at the cost of vulnerable communities at the local level.

Chapter 2 – *The Political Economy of Climate Change Adaptation in the Global South* – explores existing literature on CCA studies using the political economy approach. This chapter also provides the theoretical framework used to build the arguments of this thesis. This thesis utilises the political economy of CCA framework coined by Sovacool and Linnér (2016) as the main framework to analyse CCA implementation in Indonesia. This thesis proposes to add a cultural dimension to the framework to analyse the political economy of adaptation in developing countries where cultural heritage practices are still being implemented in the everyday life of local communities. It is one of the original contributions of this thesis. This thesis also draws upon the multilevel governance theory developed by Hooghe and Marks (2021) since this thesis analyses adaptation governance at three levels. The exploration of vulnerability as an ambiguous concept departs from Adger's (1996) work on vulnerability to climate change.

Chapter 3 – *From Paris to Jakarta: Climate Change Adaptation Norms and Policies* – examines the adoption of global adaptation norms shaped by the UNFCCC to Indonesia's national policies. This chapter then links back to the type of changes that the Indonesian Government has made in the post-Paris Agreement. Moreover, this chapter also reveals that Indonesia is not a passive recipient of adaptation norms. Indonesia could utilise adaptation as an instrument to achieve concrete effects beyond climate adaptation.

Chapter 4 – *National Contestation and Fragmentation* – turns the attention to national-level political dynamics of adaptation. It investigates the adaptation mainstreaming agenda at the national level, where two dominant actors, the BAPPENAS and the MoEF, have shaped the architecture of adaptation governance in Indonesia. Both ministries have shaped two branches of adaptation governance with two paths of adaptation planning, vulnerability assessment, adaptation financing, and action programmes.

Chapter 5 – *Vulnerability Assessment Divergence* – examines the ambiguity of vulnerability as a concept, and contestation over vulnerability assessments. This chapter discusses the variety of representations and experiences of vulnerability observed in eight Indonesian villages. It offers empirical evidence of how different actors use different vulnerability assessments at the cost of unequal adaptation distribution for vulnerable

communities. Hence, the distribution of adaptation resources is often strategic and politically motivated. This chapter reveals how multilevel actors decide to deliver adaptation assistance to eight villages.

Chapter 6 – *Climate Village Programme and the Claim Chain Politics in Indonesia* – shifts the political economy analysis at the local level. It investigates political economy processes at the village level that lead to maladaptation and uneven distribution of gains and losses within local communities. This chapter finds a pattern where the Climate Village Programme establishment in four villages under the MoEF is a process of rebranding existing adaptation programmes or claiming adaptation activities initiated by local communities. The Climate Village Programme is just a template using the top-down approach. The central government sets the adaptation activities of local communities.

Chapter 7 – *The Uneven Distribution of Adaptation Project Benefits Under the ICCTF* – investigates adaptation interventions in four villages funded by the ICCTF and USAID. This chapter identifies political economy processes that exacerbate the vulnerability condition of local communities. Evidence of maladaptation is presented in this chapter. It proposes to add a cultural dimension to the political economy analysis of CCA in developing countries like Indonesia.

Chapter 8 – *Conclusion* – synthesises each of the previous chapters and connects the findings of each chapter to answer the research questions and substantiate the claims made. Learning from the political economy of CCA at international (Chapter 3), national (Chapters 4 and 5), and local levels (Chapters 6 and 7), this concluding chapter offers a new perspective on the nature of climate change adaptation in Indonesia in the post-Paris Agreement era.

CHAPTER 2

The Political Economy of Climate Change Adaptation in the Global South

“We know the truth that many nations have contributed little to climate change but will be the first to feel its most destructive effects. For some, particularly island nations, whose leaders I’ll meet with tomorrow, climate change is a threat to their very existence” (Obama 2015).

This chapter consists of the review of literature and theoretical framework. First, it reviews existing research that is relevant to this thesis. The literature review focuses on several relevant topics, such as the political economy of CCA, climate change multilevel governance, and vulnerability to climate change. Second, it then provides the theoretical framework that is used for the analysis in Chapters 3 to 7. This thesis uses the political economy of CCA coined by Sovacool, Linnér, and Goodsite (2015) as the main analysis framework. This framework is important because it provides the most comprehensive analytical tool to understand political economy of climate change adaptation by considering political, economic, ecological, and social dimensions. However, this framework has some limitation to analyse particular cases or phenomena that are immediately related to the CCA implementation in Indonesia. For example, the framework has limitation to explain why the national governments adopts the Paris Agreement and its global adaptation norms. Therefore, this thesis incorporates the norm diffusion concept developed by Finnemore (1996) to investigate how the UNFCCC shapes the behaviour of the Indonesian government towards CCA agenda. This thesis also incorporates multilevel governance (Hooghe and Marks 2004) to investigate the CCA governance in the same level or across levels. Moreover, this thesis includes polycentric governance (Skelcher 2005; Ostrom 2010a) and policy network (Bulkeley 2000; Rhodes 2008) to examine the fragmentation of national adaptation policies between the BAPPENAS and the MoEF.

Literature Review

This section begins with reviewing existing literature on the political economy of climate change adaptation as the central discussion of this thesis. It is then followed by literature review on climate change multilevel governance topic since the analysis of this thesis involves

three levels of analysis and aims to investigate interactions of adaptation actors across levels. The literature review section reviews literature on vulnerability to climate change because vulnerability and adaptation are inseparable concepts. Therefore, to understand the political economy of climate change adaptation, it is crucial to also review existing literature on vulnerability to climate change.

The Political Economy of Climate Change Adaptation in the Global South

There is a significant body of literature on the political economy of climate change adaptation. However, research on the political economy of CCA is still rarely conducted in-depth. The works of Sovacool, Linnér, and Goodsite (2015), Sovacool and Linnér (2016), Chu (2016), Sovacool et al. (2017), Pardoe et al. (2020), and Lomax et al. (2021) are the exceptions. The existing literature covers several key issues such as adaptation finance (Harmeling and Kaloga 2011), urban planning (Chu 2016), development aid (Lomax et al. 2021), adaptation policy (Pardoe et al. 2020), and adaptation projects implementation (Sovacool, Linnér, and Goodsite 2015). Studying the winners and losers of climate change adaptation is a common approach used by political economy scholars to understand the nature of climate change adaptation (Ruhl 2012; Sovacool, Linnér, and Goodsite 2015; Pardoe et al. 2020). However, the research that focuses on explaining the process of adaptation and assessing the outcomes of adaptation remains limited due to the empirical challenges of studying processes that are labelled as adaptation (Barnett 2020).

The work of Sovacool, Linnér, and Goodsite (2015) proposes the most systematic framework of the political economy of climate change adaptation. They develop the typology of the political economy of climate change adaptation that consists of four political economy processes: exclusion, enclosure, entrenchment, and encroachment. This typology is also known as the '4E' method (van Zyl-Bulitta et al. 2024). Most literature has covered exclusion (political) and enclosure (economic) processes, while the entrenchment (social) and encroachment (ecological) processes remain underexplored.

Harmeling and Kaloga (2011) use political economy approach to understand how power relationships between the governments and non-governmental actors across levels influence the distribution of adaptation funds and the implementation of adaptation projects at the international and national levels. At the international level, the decisions of Adaptation Fund Board members often do not represent vulnerable countries, as acknowledged in the 2007 Bali Action Plan. At the national level, the decision-making process and the

implementation of adaptation projects often exclude non-governmental stakeholders, such as in Georgia, Madagascar, and Honduras, which neglected the stakeholders consultation process in their adaptation project proposals submitted to the Adaptation Fund Board. Using the typology coined by Sovacool, Linnér, and Goodsite (2015), the exclusion process can be identified in the negotiation process of the Adaptation Fund Board.

Chu (2016) examines the political economy processes of urban climate adaptation and development planning in Surat, India. Chu (2016) finds that the urban climate adaptation planning in Surat is dictated by the local government and private capitalists (economic). The decision-making processes have excluded regular citizens due to limited public exposure to the adaptation planning (political). The adaptation planning in Surat also neglects the social dimension, such as communal divisions of religions and castes. The political economy analysis of Chu (2016) has captured political, economic, and social dimensions. Chu (2016) includes private actors who play a significant role in CCA and development planning in Surat. However, his analysis only focuses on government and private actors relations and the analysis only focuses on municipal or sub-national levels without any cross-level analysis. Other stakeholders in CCA governance such as central government, international development agencies, and NGOs do not get enough attention in this literature. This thesis will address the gap of cross-level analysis that is often neglected in studying climate change adaptation using the political economy approach.

The work of Lomax et al. (2021) that examines the implementation of solar mini-grid projects in Turkana, Kenya, applies the 4E method and analyses the four dimensions of political economy processes. The 4E method helps to analyse how the solar mini-grid projects create the winners and losers of adaptation. Exclusion occurs when community committee members who were also business owners in Turkana did not pass the information about the new applications for mini-grids to the private mini-grid operators. The enclosure happened when the energy producers could acquire land permits in any particular site in the name of providing electricity for the communities. The enclosure process also caused entrenchment where women in Turkana were rarely involved in the land management processes. The expansion of solar mini-grid projects destroyed natural resources in Turkana and could be categorised as an encroachment process (Lomax et al. 2021).

Even though the 4E typology has offered a systematic framework to analyse the political economy of climate change adaptation, Sovacool, Linnér, and Goodsite (2015) realise that this typology is still nascent. Hence more testing through additional case studies and evidence are needed for further development. This thesis contributes to providing additional

case studies to test the typology coined by Sovacool, Linnér, and Goodsite (2015). This thesis advances the knowledge of the political economy of climate change adaptation in two ways. First, it presents empirical findings of adaptation projects implementation at the micro level or village level. The existing literature focuses on assessing national adaptation projects or local adaptation projects at the county level like the case in Turkana, Kenya or at the city level like in Surat, India. This thesis does not limit the analysis to the national or local level but also extends the analysis to the micro or village level to test whether the 4E typology remains relevant in these contexts. Second, this thesis extends the 4E typology by adding the cultural dimension as the fifth 'E'. As mentioned in Chapter 1, to understand the political economy of climate change adaptation in the global south, the cultural dimension needs to be considered because the adaptation practices of village communities in the global south are often influenced by cultural practices. This thesis introduces erosion as the fifth 'E' to strengthen the 4E typology. The cultural dimension and erosion are explained later in the theoretical framework section (page 45).

Multi-level Governance of Climate Change Adaptation

This section reviews existing climate change governance and CCA research. Based on the literature review, this thesis argues that there is a need to incorporate multilevel governance theory to the political economy of CCA approach. Most of the recent research on CCA, such as Di Gregorio et al. (2019) and Turner-Walker (2021), focus on the governance issue, which mostly discuss the political domain on how coordination and collaboration work among stakeholders. The multilevel governance is an approach commonly used to investigate CCA governance, but most of the recent research focus on the relations between international and national governance. Research on CCA governance that investigate how multilevel governance work from international to sub-national level has rarely examined in depth. The outcomes of CCA interventions are influenced by both political and economic factors since both are interrelated. Thus, a study of the political economy of CCA is significance to advance further knowledge about CCA governance, which considers political and economic aspects.

There have been several studies identifying problems in the CCA governance in Indonesia (see Figure 2.1). Yoseph-Paulus and Hindmarsh (2018) have found some evidence showing that there are some sectoral coordination and capacity building problems in Indonesia. They categorise sectoral coordination into two types, namely horizontal and vertical coordination. The horizontal coordination refers to inter-ministerial or inter-agency coordination, while vertical coordination is considered as coordination between central,

regional, or local government levels (Yoseph-Paulus and Hindmarsh 2018). The horizontal coordination is weak because of the limited budget for CCA mainstreaming, the reliance on the Ministry of Environment and Forestry financing, and the absence of mandates, bureaucratic rules and procedures (Yoseph-Paulus and Hindmarsh 2018). The decentralisation policy hampers the vertical coordination. In addition to the problems of both types of coordination, the other stakeholders' representatives are not involved adequately in the government meetings (Yoseph-Paulus and Hindmarsh 2018). The study of Yoseph-Paulus and Hindmarsh (2018) is interesting because it includes horizontal coordination as one of the crucial variables. However, this study only focuses on the role of the policymaking actors and is state centric. The information regarding CCA implementation will not complete without involving local community perspectives about CCA.

Table 2.1 Existing Literature on CCA Governance in Indonesia

Authors	Issue	Domain		Level			Method
		Pol	Eco	I	N	L	
Di Gregorio et al. (2015)	Competition between agencies, tensions between international donors and national government, vertical policy integration challenges	√	X	X	√	√	Policy documents analysis
Di Gregorio et al. (2019)	Multilevel governance of CCA, adaptation agenda is marginalised by national actors	√	X	X	√	√	Survey: 121 organisations
Yoseph-Paulus and Hindmarsh (2018)	Sectoral coordination problems (vertical and horizontal), decentralisation problem	√	X	X	√	√	In-depth interview: 17 respondents (mostly government officials)
Djalante and Thomalla (2012)	The integration of CCA with disaster risk reduction (DRR) actions, adaptation agenda is marginalised by the central authority	√	X	X	√	√	Document analysis and interview 26 stakeholders (Government and NGOs)
Rahman (2017)	Systematic research on the implementation of RAN-API at the local level (Semarang City), exclusion of national and local actors by the central government	√	X	X	√	√	In-depth interview of government officials, development agencies, NGOs, communities
Turner-Walker (2021)	Local response towards adaptation interventions funded by international aids in Haruku Island, Central Maluku and Kulon Progo Regency	√	√	X	X	√	Comparative case studies in two locations focus group discussion, semi-structured interview of householders, and elite interviews, and participant observation.

Pol: Political Eco: Economic I: International N: National L: Local

Research on the integration of mitigation and adaptation policy conducted by the Sustainability Research Institute, University of Leeds, also identified a coordination problem among the stakeholders. Di Gregorio et al. (2015) found that climate change governance during the President Susilo Bambang Yudhoyono presidency (2004–2014) did not work well in integrating vertical policy as there was competition between different agencies as to who should lead the climate change policy development. Moreover, the conflicting vision of climate change governance between international donors and national bureaucratic actors made vertical policy integration ineffective (Di Gregorio et al. 2015). This study utilises a document analysis as the research design. This research design can be applied to understand to what extent the government has worked on CCA through policies. Nevertheless, it is only limited to understanding CCA governance from the government's perspective.

Djalante and Thomalla (2012) examine the integration of CCA with disaster risk reduction (DRR) actions which already existed before CCA. They highlight similar issues about decentralisation related to governance as those discussed by Yoseph-Paulus and Hindmarsh (2018). On the one hand, decentralisation enables local government to capture greater allocations of revenue, resource, and targeted development results. On the other hand, local governments still lack capacity in human and financial resources. This condition results in different CCA progress in each location (Djalante and Thomalla 2012). There are unequal responses from the central government regarding climate change policies where mitigation actions get more attention through a project like Reducing Emissions from Deforestation and Forest Degradation (REDD+) (Djalante and Thomalla 2012, 170). Regarding the governance issue, international donors and NGOs play a significant role in mainstreaming CCA in Indonesia, including an initiative to integrate it with DRR (Djalante and Thomalla 2012).

Di Gregorio et al. (2019) analyse multilevel governance in climate change policies which covers national and sub-national relations by comparing case studies in Brazil and Indonesia. For the case study in Indonesia, this research selects West Kalimantan Province and Kapuas District in West Kalimantan Province as case studies. Survey are used to obtain responses from policy actors actively involved in national and sub-national level related to land use and climate change policies (Di Gregorio et al. 2019). This research reveals some interesting findings about mitigation and adaptation governance. First, adaptation becomes the priority of local-level actors, while mitigation becomes the priority of national-level actors. Therefore, adaptation agendas do not get adequate attention compared to mitigation agendas (Di Gregorio et al. 2019). This finding reconfirms the finding from Djalante and Tomalla (2012) about adaptation agendas which get less attention from central authority.

Second, jurisdictional boundaries hinder cross-level interactions and lead to mismatched policies between national actors and local actors. Thirdly, both Indonesia and Brazil still depend on foreign aid through bilateral or multilateral mechanisms (Di Gregorio et al. 2019). The data gained through survey method is only aimed at organisations involved in climate change policies and actions. Information from governmental or non-governmental organisations are crucial. However, information from the beneficiaries of the CCA projects should be included to gain a more precise understanding of the political economy of CCA.

The research summarised in Table 2.1 does not specifically discuss the National Action Plan on Climate Change Adaptation (RAN-API) in Indonesia. Rahman's (2017) work is the first and the most systematic research about RAN-API. Rahman (2017, 157) identifies that CCA is a form of top-down governance which excludes several national-level stakeholders and local government. He argues that the lack of effective national-local consultation results in a weak ownership and weak understanding of RAN-API, and enforcement difficulties, but Rahman (2017) does not explain the exclusion of local governments and seems mainly concerned with the formulation process of RAN-API, national-local coordination, financing, and strategy. A gap that has not been covered yet is answering why several stakeholders are excluded from RAN-API formulation including the vulnerable groups. Multilevel governance theory per se cannot explain this phenomenon, but the political economy approach can offer a framework to analyse the exclusion of other stakeholders in CCA governance. Rahman (2017) has not covered the power relations explanation between actors involved in CCA.

Turner-Walker (2021) is another scholar who considers the RAN-API policy in analysing the CCA governance in Indonesia. Her doctoral research investigates the local response towards the adaptation interventions under the RAN-API and funded by international donor agencies. Turner-Walker (2021, 211) presents experiences from programme implementers and village communities in two adaptation projects conducted in Haruku Island, Maluku and Kulon Progo Regency. Her research finds a pattern where the development experts operated and enacted adaptation projects in two sites. The limitation of this pattern is that it overlooks the context of each site and the power relations within local communities. Instead of improving the adaptive capacity of local communities, adaptation projects undermine the self-determination and the agency of local communities in governing local adaptation resources (Turner-Walker 2021, 212). Turner-Walker's (2021) study presents international, national, and local dimensions in the analysis. She considers adaptation interventions experienced by local communities as the translation of international adaptation policy (international) and the RAN-API policy as a national adaptation strategy influencing the

implementation of adaptation projects in two sites (national). However, Turner-Walker's (2021) primary investigation takes place at the local level by analysing the interventions of international donor agencies in Central Maluku and Kulon Progo. The analysis has not problematised the RAN-API and adaptation as part of broader international climate change commitments. My thesis addresses the gaps by investigating contestation and fragmentation between ministries in determining national adaptation strategies because the RAN-API policy is not the only national adaptation strategy implemented by ministries. Moreover, this thesis uses multilevel governance theory to reveal how international climate negotiations in the UNFCCC affect local adaptation governance.

Most studies in the field of CCA in Indonesia utilise multilevel governance theory to analyse climate change governance. The lack of coordination of national-local government related to decentralisation is a general problem undermining the effectiveness of CCA policies (Djalante and Thomalla 2012; Yoseph-Paulus and Hindmarsh 2018; Di Gregorio et al. 2019). The exclusion of several stakeholders during the policy-making process is another problem highlighted in CCA governance in Indonesia (Rahman 2017), yet multilevel governance finds difficulties in explaining why some stakeholders are excluded during the policy-making process or why CCA governance marginalises vulnerable groups. The political economy approach helps to understand the exclusion process happening in adaptation policy-making processes. This thesis addresses this gap by incorporating political economy approach in a multilevel governance research and this will be a theoretical contribution of this thesis.

In contrast with Rahman's (2017) work, this thesis will contribute to understanding power relations situated in the RAN-API scheme and introducing three levels of analysis. First, this thesis will use a political economy framework proposed by Sovacool, Linnér, and Goodsite (2015) and the anthropological / developmental concept of the 'will to improve' by Li (2007) as pillars of my analysis. Sovacool, Linnér, and Goodsite (2015) proposes four processes, including enclosure, exclusion, encroachment, and entrenchment. Second, this thesis will use multilevel governance theory to analyse global-national-local contestation in CCA governance. This thesis uses the multi-level governance approach because the RAN-API improvement scheme is situated in a more complex power relations situation beyond the national boundary of Indonesia.

Vulnerability and Adaptation

Vulnerability research is usually polarised into two mainstream approaches focusing on biophysical factors and social factors. A dichotomy between natural and social sciences also arises in vulnerability research. Adger (2006) argues that the evolution of vulnerability research originated in both natural and social sciences. Scholars use different terms to describe this dichotomy. Ribot (2014) categorises vulnerability research into hazard-risk and social constructivist frameworks. Other scholars such as Soares and Gagnon (2012) and Ford et al. (2018) classify vulnerability approaches into biophysical approach and social approach or hazard risk and social-vulnerability approaches. Fussel (2007), who focuses on identifying biophysical and socioeconomic factors of vulnerability, has classified vulnerability approaches as risk-hazard approach and political economy approach.

The risk-hazard approach conceptualises vulnerability by focusing on how the system responds to the adverse effects of exogenous hazards (Fussel and Klein, 2006). This approach tends to focus on the source of risk or hazard to determine the level of vulnerability (Turner et al. 2003, Eakin and Luers 2006, as cited in Soares and Gagnon 2012). Vulnerability becomes the “endpoint” while doing an assessment. Vulnerability is a result from climate change impacts minus adaptation (O’Brien et al. 2007 as cited in Soares and Gagnon 2012). The risk-hazard approach is dominant in conducting climate impact assessments and vulnerability research. It privileges the climatic factors over the social context or non-climatic factors (Ford et al. 2018). CCA research, which only uses this approach, will fail to draw a comprehensive analysis of human-environment relations.

The political economy approach regards (social) vulnerability as a household or community condition determined by socio-economic and political factors. These conditions alter the abilities of communities to cope with and to adapt to climate change impacts. Vulnerability, in this second approach, corresponds closely to non-climatic factors (Brooke 2002, as cited in Fussel and Klein 2006). This approach focuses its analysis on people by asking who is most vulnerable and why as two fundamental questions (Fussel 2007). In contrast with the risk-hazard approach, which looks at vulnerability as an endpoint, this approach considers vulnerability as a starting point because vulnerability involves the inherited conditions in a social system (Soares and Gagnon 2012). In other words, socioeconomic conditions such as poverty, inequality, and unemployment, which are inherited in a social system, might cause vulnerability to climate change. These non-climatic factors are independent of a climate hazard or impact, yet it is crucial to also consider socio-economic factors because they can enhance the potential for harm (Preston et al. 2009).

There are other approaches developed in vulnerability research. Fussel (2007) has classified five classical approaches to vulnerability research, including risk-hazard, political economy, pressure-and-release (PAR), integrated, and resilience approaches. The risk-hazard approach and the political economy approach are more commonly used in vulnerability research, while an integrated approach combines both approaches (Fussel 2007). The integrated framework considers the external dimension, which means the exposure of the system to climate variations, and the internal dimension, which regards sensitivity and adaptive capacity of the system (Brooke 2002 as cited in Fussel and Klein 2006).

Ford et al. (2018) find that vulnerability research privileges climatic factors over social or non-climatic factors. In conducting vulnerability assessments, the Indonesian government also privileges climatic factors. The Indonesian government tends to use the risk-hazard approach by focusing on the exposure level of climate change impacts towards systems, and is mainly concerned about internal biophysical factors such as topography and land use. Therefore, Jakarta as a coastal city facing the threat of rising sea-levels and having a high population density is considered as the most vulnerable region in the RAN-API, even though the people have relatively high adaptive capacity. This example shows that the risk-hazard approach remains central to CCA decision making which privileges the climatic factors over socioeconomic factors.

This thesis considers three fundamental elements in conducting vulnerability assessment which are exposure, sensitivity, and adaptive capacity. The IPCC recommends the use of these three elements in assessing vulnerability. The BAPPENAS and the MoEF in Indonesia also refer to these three fundamental elements in conducting vulnerability assessments in their adaptation policy documents. Exposure considers climatic factors or measures natural hazards (Kelly and Adger 2000), while sensitivity and adaptive capacity considers non-climatic factors inherited in a social system. A general definition of exposure is “the degree, duration, and/or extent in which the system is in contact with, or subject to, the perturbation” (Adger 2006 and Kaspersen et al., 2005 as cited in Gallopin 2006, 296). Sensitivity can be defined as “the degree to which a system will respond to a change in climatic conditions (e.g., the extent of change in ecosystem composition, structure, and functioning, including primary productivity, resulting from a given change in temperature or precipitation)” (Watson, Zinyowera, and Moss 1996, 5). According to the second generation of vulnerability assessment, adaptive capacity is “the ability of a system to adjust to climate change (including climate variability and extremes) to moderate potential damages, to take advantage of opportunities, or to cope with the consequences” (Fussel and Klein 2006, 319).

Despite referring to the IPCC as their primary cited source, the BAPPENAS and the MoEF have different vulnerability mapping. The question remains as to why the vulnerability assessment discrepancies exist between the BAPPENAS and the MoEF. This thesis scrutinises this vulnerability assessment discrepancy theme beyond the technicality of whether the ministries use climatic or non-climatic factors or the integrated approaches. It argues that the divergence in vulnerability assessment is not merely technical but also political.

Several studies have been conducted to assess vulnerability to climate change in Indonesia. The IPCC's definition of vulnerability to climate change seems to be the primary reference for scholars. Climate change research in Indonesia tends to consider three significant vulnerability components according to the IPCC, including exposure, sensitivity, and adaptive capacity, which have covered both biophysical and socioeconomic factors (Rahman 2017; Murniati, Mulyo and Hartono 2017; Takama et al. 2017; Sucianti, Estiningtyas, and Rahman 2020; Estiningtyas et al. 2021). These studies utilise different indicators for assessing each component. For instance, in assessing the adaptive capacity as one of the vulnerability components, these studies use different indicators. Murniati, Mulyo and Hartono (2017) utilise three indicators to assess the adaptive capacity of two farmer communities in Tanggamus Region, Lampung province, including food or rice consumption, education, and income. Estiningtyas et al. (2021) utilise six adaptive capacity indicators — school enrolment rate, road length, the number of agriculture instructors, the number of farmer communities, the different types of agricultural machinery, and the value of food consumption — to assess the adaptive capacity of food farming system in five provinces in Java Island. Brigita and Sihaloho (2019) assess farmers' vulnerability in Kertamulya village, Karawang Regency, using three indicators: the frequency of farmer groups gathering, the ownership of reserve savings, and capital loans. This shows the different indicators used to measure vulnerability, and the lack of consensus amongst scholars.

One way to resolve this ambiguity is to focus on the technicality of vulnerability assessment using biophysical and socioeconomic indicators. The political dimensions of vulnerability cannot be ignored, however, because vulnerability is not simply an inherited condition, but rather is a matter of complex and unequal power relations (Eriksen et al. 2011; Tschakert et al. 2013; Ribot 2014; Mikulewicz 2018; Barnett 2020). Adaptation programmes are delivered to vulnerable groups through a complex process involving actors with unequal powers and various interests. The unequal power relations can drive vulnerability or reproduce the pre-existing vulnerability by marginalising the adaptation decision-making process (Tschakert et al. 2013; Frerks, Warner, and Weijs 2011). As an initial phase of

adaptation interventions to identify vulnerable groups or areas, vulnerability assessments are also embedded in unequal power relations. The complex and unequal power relations have contributed to discrepancies in vulnerability assessments in Indonesia.

Theoretical Framework

This thesis uses the political economy of climate change adaptation framework coined by Sovacool, Linnér, and Goodsite (2015) as the main framework to understand the nature of climate change adaptation in Indonesia. Although this framework offers a systematic way to analyse the political economy of climate change adaptation using the 4E method, there are some limitations in understanding power relations and interactions between adaptation stakeholders and the outcomes of adaptation interventions. For example, this framework has limitations in explaining why Indonesia sets ambitious adaptation commitments in the UNFCCC, how local adaptation interventions are shaped by national and international actors, and why cultural practices in adaptation are often overlooked by the governments, donor agencies, or NGOs. Considering the limitations, this thesis applies other theories and concepts to complement the 4E typology in analysing the nature of climate change adaptation. Further explanation of the theoretical framework of this thesis is found in Figure 2.1 below.

Figure 2.1 Political Economy of CCA Theoretical Framework

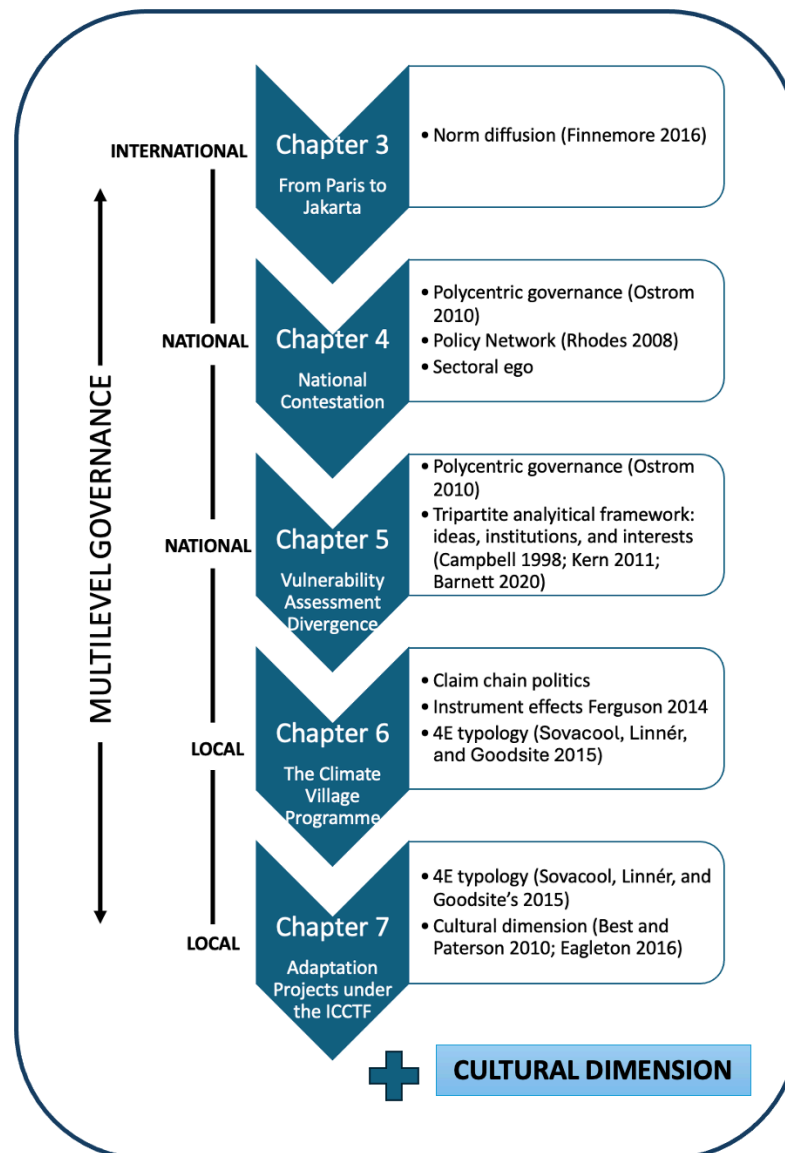


Figure 2.1 illustrates the operationalisation of theories and concepts in this thesis. The political economy of CCA coined by Sovacool, Linnér, and Goodsite (2015) is the main framework, and the 4E typology is used for the overall analysis of this thesis. This thesis conducts a three-level analysis to understand the interactions between adaptation actors at the same level and across levels, hence incorporating multilevel governance theory in the analysis. Chapter 3 investigates why Indonesia ratified the Paris Agreement and adopted global adaptation norm. The 4E typology per se could not explain the adoption of adaptation norms. Hence, this thesis draws upon Finnemore's (2016) norm diffusion theory. Chapters 4 and 5 examine the governance of climate change adaptation at the national level. Chapter 4 analyses the contestation and fragmentation between the BAPPENAS and MoEF, while

Chapter 5 examines the vulnerability assessment divergence. Both chapters use polycentric governance theory to understand whether polycentric structure helps or hinders adaptation governance in Indonesia. Chapter 4 also builds on policy network analysis to understand the interactions of multilevel adaptation actors at the national level and identify dominant policy networks in adaptation governance. Chapter 5 also uses the tripartite analytical framework by identifying ideas, institutions, and interests in vulnerability assessments in Indonesia. Chapter 6 introduces the claim chain politics model to explain the pattern of implementation of ambitious climate village programmes at the village level. This chapter uses the instrument-effect concept by Ferguson (2014) to understand how governments use adaptation projects to gain concrete effects. Chapter 7 broadens the 4E typology by adding a cultural dimension to the analysis of adaptation projects implementation by the Indonesia Climate Change Trust Fund (ICCTF). The following section elaborates upon each theory and concept used in this thesis.

The Five Dimension of Political Economy of CCA

The term political economy is broadly understood as the interaction between state and private actors, or “the market” (Gilpin 1987 as cited in Sovacool and Linner 2016), and then civil society appears as the third sphere outside state and market in the modern world (Jessen 2017). Civil society participation plays a crucial role in development programs and the empowerment of vulnerable groups, challenging the centralisation of top-down policies by the state (Stokke and Mohan 2001).

The analysis of political economy considers the distribution of wealth by questioning “who gets what, why, and with what consequences?” (Castree 2010, as cited in Sovacool and Linnér 2016, 18). Oatley (2011) describes political economy as the political battle between the winners and losers of global economic change. Similarly, Wolff and Resnick (1987 as cited in Sovacool and Linner 2016) describe political economy as a study or a process where some actors benefit (winners) from particular systems or processes at the exclusion of others (losers). The political economy approach in CCA helps reveal who benefits from the process of CCA at the exclusion of others, and the consequences of it. This approach is applied to reveal the political and economic factors that impede CCA efforts in the Indonesian agricultural sector.

Sovacool, Linnér, and Goodsite (2015) proposed a political economy of adaptation framework for the first time, proposing a new typology to understand how the political

economy of adaptation is happening globally. The new typology includes enclosure (economic), exclusion (political), encroachment (ecological), and entrenchment (social).

- Enclosure refers to the economic domain. Enclosure is “the process that transfers a public asset into private hands or enhances the role of a private actor into the public sphere” (Sovacool, Linnér, and Goodsite 2015, 616). This concept is relevant as a tool of analysis with respect to the issue of greenwashing as one of the problems highlighted in this thesis.
- Exclusion refers to the political domain. Exclusion is the process that marginalises a particular group, for instance restricting access to resources or involvement in the decision-making process in respect with CCA projects. This concept corresponds with the exclusion concept utilised in this thesis to unveil the marginalisation processes of the vulnerable groups in CCA projects.
- Encroachment concept refers to the ecological dimension. It is the process of interventions brought by CCA projects that causes environmental degradation.
- Finally, entrenchment refers to the social domain. Entrenchment is the process by which adaptation initiatives exacerbate political and socioeconomic inequalities, and cause the disempowerment of vulnerable groups (Sovacool, Linnér, and Goodsite (2015). The encroachment and entrenchment concepts are pertinent to maladaptation issue explored in this thesis.

The work of Sovacool et. al (2017) is the more recent research that covers the political economy aspects in CCA in depth. This research selects five countries as case studies, including Bangladesh, Bhutan, Cambodia, Maldives, and Vanuatu and uses semi-structured interview techniques to obtain data. There is an intervention opportunity through the Least Developed Climate Fund (LDCF), which facilitates enclosure by interfering in the domestic decision-making process, which tends to be the policy domain of government. In this sense, the intervention is related with the political domain since the LDCF can be used to interfere with the sovereignty of countries (Sovacool et al. 2017). Furthermore, this research reveals that to a large extent the international negotiation process within the LDCF excludes vulnerable developing countries. As a result, industrialised countries such as the United States and industrialising countries such as Brazil, China, and India dominate the negotiations (Sovacool et al. 2017). This research covers high-level political and economic aspects of CCA but lacks a detailed explanation of what happens at the national and sub-national level. This thesis addresses this gap by conducting analysis in three levels because what happens at the

sub-national level (province and district) is also influenced by agreements at the international level.

The analysis of this thesis draws from the political economy of CCA by Sovacool, Linnér, and Goodsite (2015). Sovacool and Linnér (2016) developed the political economy framework further but focused on exposing several new case studies. Their approach offers a systematic framework to analyse four political economy processes in four dimensions of development. Each process can be used to analyse the CCA challenges in each development dimension, including economic, political, ecological, and social. The typology of Sovacool, Linnér, and Goodsite's (2015) political economy of CCA framework can be seen in Table 2.2.

Table 2.2 The Typology of Political Economy of Climate Change Adaptation

Concept	Description	Dimension
Enclosure	Capturing resources into private hands or authority or expanding the role and authority of private actor into a formerly public sphere	Economic
Exclusion	Excluding stakeholders or limiting their access to adaptation resources	Political
Encroachment	Degrading the environment, interfering with ecosystem provision, or intruding upon biodiversity conservation zone	Ecological
Entrenchment	Worsening inequality gap, or aggravating the disempowerment of women or minorities	Social
Encumbrance*	Placing economic burdens or hidden costs that the local communities have to shoulder.	Economic
Evasion*	Avoiding possible better alternatives of climate change adaptation interventions to be included in the project and retain existing adaptation practices or procedures.	Political
Erosion*	Disrupting cultural heritage practices and socio-economic relations between local community groups	Cultural

**These concepts are additional concepts proposed by this thesis to understand the political economy of CCA at the local level in developing world, particularly in Indonesia.*

The framework helps to expose how CCA programmes delivered in many villages in Indonesia can negatively impact the local communities economic, political, ecological and social conditions. The process of **enclosure** happens when the adaptation fund from the ICCTF was channelled to a particular group of people in the form of infrastructure or tools, and those people had full ownership of them. The process of **exclusion** occurs in the decision-making process of CCA projects planning and implementation, raising questions such as: where should the adaptation resources be distributed? Who would be the beneficiaries? How are the adaptation resources distributed? What kind of interventions are

needed? The process of **encroachment** appears when CCA projects cause new environmental problems in the villages, such as threatening biodiversity. The process of **entrenchment** occurs when the CCA projects did not consider the gender balance of the participants, hence being dominated by male participants. The CCA projects also excluded a particular group of people. Only a few people gained more skills for CCA and left the others to do their routine agricultural activities, which is not sufficient to adapt to climate change impacts. Further detailed analyses are presented in the main sections of this thesis by scrutinising the CCA projects in eight villages. However, the political economy of CCA developed by Sovacool, Linnér, and Goodsite (2015) has some limitations in exposing the political and economic outcomes of CCA projects in eight villages.

The political economy of CCA developed by Sovacool, Linnér, and Goodsite (2015) has some limitations in exposing the political and economic outcomes of CCA projects at the village level in Indonesia. Sovacool, Linnér, and Goodsite (2015) develop one concept for each dimension (see Table 2.2). The enclosure concept does not capture the economic impacts of CCA projects in detail, while the exclusion concept that has limitations in examining the political process of CCA project planning and implementation. The enclosure concept is unable to expose a process where the CCA projects place economic burdens or hidden costs that the local communities have to shoulder. Given these limitations, this chapter introduces the **encumbrance** concept to enable us to identify who experiences economic gains. This encumbrance concept allows us to analyse who has suffered economic losses due to flaws in the planning and execution of CCA projects. Then, the enclosure and encumbrance concepts could be jointly utilised to expose who are the winners and losers in CCA project planning and implementation.

The exclusion concept allows us to understand the process of how the CCA policies were made by excluding particular stakeholders, such as local communities who are usually voiceless and powerless, or NGOs who are vocal critics of the government. The exclusion process might be intentional or unintentional. Either case, it will cause negative unintended impacts in the project delivery. The political dimension of CCA is not limited to the exclusion process only. There is another factor beyond exclusion that might undermine the CCA projects and bring negative impacts to the local communities. In the implementation of the CCA projects in four Indonesian provinces, for example, the implementing agencies hired experts and scholars who understand that a development project must be inclusive. Stakeholder engagement activities, such as focus group discussions and public consultations can be conducted as initiation rites to fulfil the inclusivity principle before the CCA projects

implementation. Based on interviews with the implementing agency officials (see Chapters 6 and 7), many claim that they implemented the projects through inclusive and participatory processes by gathering the aspirations of local communities and involving them in the project planning. However, the CCA projects observed in four Indonesian provinces selected in my thesis failed to improve “the collective adaptive capacity” of local communities (Eakin et al. 2016). There must be another deeper political process causing the failure of CCA projects beside exclusion.

Chapter 2 proposes the **evasion** concept to capture the otherwise invisible process causing the failure of CCA projects in four Indonesian provinces. The evasion refers to a process where the implementing agencies of CCA projects avoid possible better alternatives of CCA interventions to be included in the project and retain existing adaptation practices or procedures. The implementing agencies tend to choose the smoother and easier path to secure project funding and to have a better success percentage in the project implementation, at the risk of overlooking more vulnerable communities who urgently need the adaptation resources or intervention alternatives benefitting the local communities. The idea of the evasion process comes from the path dependency concept. In the adaptation context, Barnett et al. (2015) contend that current decisions are shaped by history, and alternatives for adaptation are impeded because they work against existing governance institutions. The path dependency is construed as resistance to changing existing adaptation practices, even if existing practices cause maladaptation. It is also construed as resistance to adopting alternatives that have never been done before or to improving deficient practices in CCA (Barnett et al. 2015). The evasion concept can be used to analyse the process of how the implementing agencies resist changing the existing practices by avoiding available alternatives to improving the adaptive capacity of local communities. The evasion is a deeper political process than exclusion that cause limits to adaptation. Exclusion may be one of the instruments to perpetuate path dependency in CCA projects, but evasion is an even deeper political process.

In addition to proposing three concepts to complement the political economy framework established by Sovacool, Linnér, and Goodsite (2015), this chapter also proposes a cultural dimension to be included in the analysis. The cultural dimension should be considered in analysing the political economy of CCA in developing countries since the influence of culture over daily economic activities remains strong. This thesis is not the first research that emphasises the importance of cultural dimension in political economy research (see Best and Paterson 2010; Singh 2020). Best and Paterson (2010, 2) have introduced

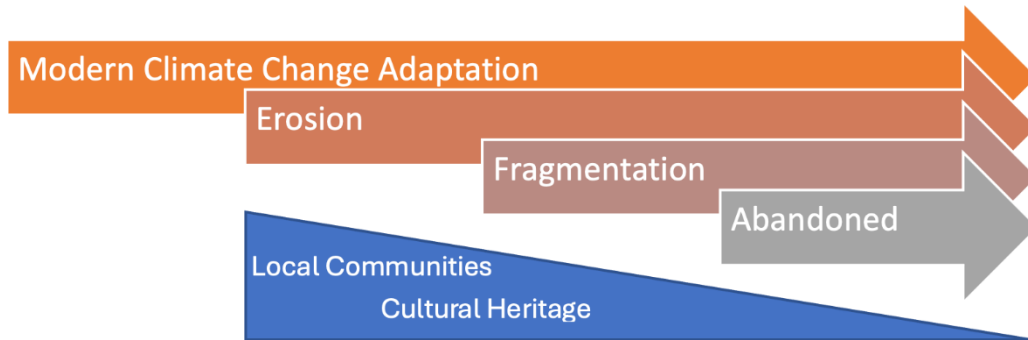
cultural political economy as an analytical approach that incorporates the cultural dimension in political economy research. The cultural components are important because they can advance debates about the daily practices of people who inhabit and produce cultures that are closely related with economic practices (Best and Paterson 2010, 3). Hence, the cultural dimension should not be overlooked in understanding how the everyday economic practices and the everyday politics works in climate adaptation.

Culture is a complex term and used in many disciplines. Best and Paterson (2010, 5) identify culture as a polysemic term which has many meanings. Eagleton (2016, 1) describes culture as a multifaceted concept. Culture can be understood as ideas, norms, identity, routines, rituals, or everyday activities (Best and Paterson 2010, 5-10). Eagleton (2018, 1) proposes four major senses of culture: “It can mean (1) a body of artistic and intellectual work; (2) a process of spiritual and intellectual development; (3) the values, customs, beliefs and symbolic practices by which men and women live; or (4) a whole way of life”. The literature above has a similarity in understanding culture as everyday activities. Best and Paterson (2010, 9) understand culture as “everyday activities through which we live our lives”. It can be sedimented in routines, rituals, and living practices. Eagleton (2018) describes culture as a way of life. Culture in this sense is a question of habit, what you have done, or what your ancestors have done from generation to generation. Your conduct of life should be in line with the practices of your ancestors in order to be considered valid (Eagleton 2018, 2). This thesis understands culture as everyday activities and a way of life because culture in these senses helps to understand climate adaptation phenomena at the grassroots level as everyday activities and practices inherited from ancestry. Culture is embedded in the climate adaptation activities of village communities and should not be overlooked by political economy scholars. Therefore, including cultural dimensions in the existing political economy framework will enrich debates on the political economy of climate change adaptation in the global south.

Village communities in the global south often rely on local adaptation knowledge to guide their adaptation actions. Local adaptation knowledge is part of the cultural dimension. Based on my fieldwork experience, the CCA implementing agencies at the village level sometimes import sophisticated knowledge formulated from a distance with no alteration to accommodate cultural values at the local level. The gap between what has been proposed by the implementing agencies and local culture can create limits to adaptation or even result in maladaptive projects. This gap has been identified by the United Nations Environment Programme (UNEP) in the 2014 Adaptation Gap Reports (UNEP 2014). The UNEP identifies

three types of knowledge gap in adaptation, and one of them is a gap due to the limited transfer and uptake of existing knowledge made by decision-makers at different levels who influence adaptation actions (UNEP 2014, 56).

Figure 2.2 Cultural Dimension in the Political Economy of Climate Change Adaptation



Source: This illustration is created by the author based on the erosion concept.

This thesis proposes the **erosion** concept to reveal the process of how modern CCA knowledge is diffused to local communities by implementing agencies and how that disrupts longstanding cultural heritage practices (see figure 2.3). The disruption might fail to improve the adaptive capacity of vulnerable groups. First, the adaptation techniques might be too sophisticated, hence hard to follow or practice. Second, they might face resistance from the local communities who opt to maintain cultural heritage practices passed from generation to generation, for instance, how to plant rice seeds in Gunung Kidul, which is different from other regions in Indonesia. Third, the resistance against the new ways to adapt to climate change impacts by some groups might fragment the local community into sub-communities. They are usually divided into two groups. One group will be the proponent of new adaptation techniques, while the other group refuses the new ideas and continues with business as usual. In my four fieldwork locations, short-term CCA projects tended to disrupt the socio-economic relations of the local communities and were often abandoned. The projects were like water that erodes the soil, causing disruption, and then draining away.

Multilevel Governance in Climate Change Adaptation

CCA governance is a complex phenomenon involving more than just one governance level. Meaningful implementation needs to take place at the local level. However, the local adaptation interventions are often determined by negotiations at the international level and

policy-making processes at the national level. Multilevel governance theory helps to understand the complexity of global adaptation initiatives implementation at the local level.

Multilevel governance theory as understood by Hooghe and Marks (2001) was initially used to analyse the governance of the European Union. This theory helps to understand the division of authority under the European Union where the European Commission holds executive power, and the national governments are no longer actors who can monopolise policy implementation at the national level. Moreover, subnational actors in each member states also have particular territorial and group interests to defend (Hooghe and Marks 2001, 24). The national governments of the European Union member states lose their power in monopolising policy implementation because they have to transfer their power to supranational and also subnational institutions. Hooghe and Marks (2010) then divide the type of governance into two forms, Type I where the jurisdictions are limited and fixed like in federalism system and Type II where the jurisdictions are flexible across a large number of levels (poly-centred governance). These two types of governance are the ideal types of governance, however the features from both types can be found in many contexts at the same time (Di Gregorio et al. 2019; Ishtiaque 2021). The implementation of global adaptation commitments in Indonesia is an example. The implementation of national adaptation policies by the central and local governments is Type I governance, but it is also embedded in higher level governance under the UNFCCC regime (Type II).

The use of multilevel governance theory has evolved and is not limited to the analysis of cases within the European Union (Ishtiaque 2021). It is a powerful tool to analyse the complexity of multilevel adaptation governance. Ishtiaque (2021) identifies three research trends in climate adaptation using multilevel governance theory: structure and process, power interplay, and barriers in adaptation governance. In general, CCA research uses multilevel governance theory to examine the structure and process of multilevel networks of actors in adaptation management (Di Gregorio et al. 2019). Power interplay among adaptation actors is the second theme which emphasises the analysis of power struggles, power inequality, and power sharing that influence the outcomes of adaptation governance (Ishtiaque 2021). For instance, Ishtiaque et al. (2021) find unequal power relations among adaptation actors in Bangladesh where a few actors, such as the Ministry of Environment, Forest and Climate Change and the Ministry of Planning, dominate adaptation governance processes and weaken the collaboration between actors. Barriers to adaptation is the third theme, which focuses on analysing the challenges that hinder adaptation governance processes, such as adaptation planning, implementation, evaluation, and monitoring

(Ishtiaque 2021). For instance, Juhola (2016) identifies multilevel barriers in adaptation governance in Finland due to lack of authority and guidance, diverging policy goals, and policy instruments. This thesis does not restrict the analysis to focus on one theme only. Instead, it attempts to use a holistic approach to analyse the three themes of adaptation governance since they can overlap and are not exclusive of one another.

Adaptation governance is part of broader climate change governance. Climate change governance itself is not a new concept but includes other parallels to existing governance approaches (Frohlich and Knieling 2013). The rise of global climate change governance in the late 1980s occurred when countries attempted to coordinate international action to tackle climate change (Stevenson and Dryzek 2014, 1). Huq (2020, ix) refers to climate change governance as the relationships among actors that are not limited to the government actors but also markets and civil societies in governing a set of issues around climate change. Barua, Narain, and Vij (2020, 2) define climate change governance as “the totality of interactions among actors involved in the steering of efforts at the regional, national, and local levels to deal with the impacts of climate change”. Using climate change governance definitions provided by Huq (2020), and Barua, Narain, and Vij (2020), this thesis refers to adaptation governance as the interactions among state and non-state actors across levels (international, national, and local) in governing climate change adaptation actions to improve adaptive capacity and strengthen the resilience of vulnerable communities.

The Earth Summit in 1992 marked the UNFCCC’s birth. The UNFCCC is the main game in global climate change governance, including adaptation governance (Stevenson and Dryzek 2014, 2). The Paris Agreement emphasises the importance of adaptation actions as a global commitment and provides a pathway for developed countries to assist developing countries in adapting to climate change impacts (United Nations 2015). Barack Obama (2015), the 44th president of the United States, highlighted the unequal effects of climate change-related disasters which harms developing countries more than developed ones, in a context where the rich countries contribute much more to climate change. These remarks by former president Obama about climate change injustice were delivered at the COP 21 in Paris. Indonesia, as a developing country and an archipelagic country, experiences severe destructive effects of climate change. President Joko Widodo (2015), also known as Jokowi, took the occasion at the same event to deliver his thoughts about climate change challenges and Indonesia’s current conditions. President Jokowi (2015) mentioned that Indonesia’s geographical features were prone to climate change, where 80% of disasters were climate change-related disasters. Developing countries like Indonesia urgently need to accelerate

CCA actions. CCA is constructed internationally by many actors such as the UNFCCC, the IPCC, international donors, NGOs, and scholars. CCA is negotiated through international conferences, adopted nationally, and implemented locally, but does CCA really improve the situation of vulnerable people? Or might it lead to unforeseen or perverse outcomes such as maladaptation?

At COP 21 in Paris, nearly 200 countries agreed to take mitigation actions by reducing greenhouse gas emissions globally and to take adaptation actions by enhancing the adaptive capacity of countries. Mitigation and adaptation are complementary actions which should be implemented collectively, but countries often prioritise mitigation over adaptation actions. The COP21 leadership focused more on mitigation actions with adaptation getting less financing compared to mitigation financing. According to the Strategic Climate Fund (as cited by Global Commission on Adaptation 2018), adaptation only gets a minor share of bilateral and multilateral climate finance, estimated between 21 – 29% of budgets. There is a possibility that governments marginalise adaptation agendas at national and sub-national level, which might cause worse conditions for vulnerable groups.

Adaptation is not only marginalised in existing political economy literature, but also by world political leaders. This thesis contributes to advance knowledge of the implementation of CCA policies at the national level using Indonesia as a case study. There should not be a dichotomy between mitigation and adaptation. Mitigation is often considered as a global and a national agenda, while adaptation is considered as a local agenda (Persson 2019). This dichotomy makes adaptation becoming just an additional agenda besides mitigation, whereas the impacts of climate change-related disasters have harmed many vulnerable people.

The dichotomy between mitigation and adaptation has often positioned adaptation as a local agenda. Hence, not many CCA scholars consider the international domain of adaptation projects implemented at the local level in their analysis. Most adaptation research remains focusing on local or national-local contestation of adaptation policies or interventions. This thesis argues that the nature of CCA, even though they are implemented at the village level, cannot be isolated from climate change negotiations happening at the international level. The Paris Agreement has shaped national adaptation policies of the Parties and adaptation interventions implemented locally.

Prior to the Paris Agreement, there was a growing number of studies on CCA but these rarely explored the political processes within national and local contexts (Dodman and Mitlin, 2015; Eriksen, Nightingale, & Eakin, 2015). Most adaptation research focuses on

technical solutions (Mikulewicz, 2018), overlooking the political dimensions of adaptation implementation at national and local levels in developing countries (Dodman & Mitlin, 2015; Mikulewicz, 2018; Struthers, 2020). In the post-Paris Agreement era, a number of adaptation studies focused on the political domains of adaptation in developing countries like Nepal (Nightingale 2017), Zambia (Funder, Mweemba, & Nyambe 2018), Chile (Struthers 2020), and Brazil (Milhorance, Sabourin, Checi, and Mendes 2022). These works have scrutinised the national and local politics of CCA somewhat in isolation. The political dimensions of CCA and their links to the international agenda remain underexplored.

The Paris Agreement has become a landmark that provides frameworks for all nations to enhance their long-term adaptation actions (United Nations n.d.). The COP has become a political arena for contestation between actors over competing interests such as adaptation funding (Falkner, Stephan, and Vogler 2010; Bäckstrand, Kuyper, and Nasiritousi 2021). In this arena, the orchestration of global adaptation actions happens, shaping adaptation actions at the regional, national and local levels (Chan and Amling 2019; Persson 2019). The Paris Accord has set global goals on adaptation to reduce vulnerability, enhance adaptive capacity and strengthen resilience. It has influenced all Parties to engage in adaptation planning and implementation through national adaptation plans, vulnerability assessments, and transparency of actions (United Nations 2015). Therefore, the analysis of adaptation interventions rendered at the national and local levels cannot be done in isolation because they are inseparably linked with the global political process (Persson 2019). Meanwhile, the adaptation actions implemented at the village level might be determined by policies formulated in the global arena.

The Paris Agreement, arguably as a breakthrough after the Kyoto Protocol failure, offers a new framework for adaptation actions that has been ratified by almost all of the parties. The parties set their contributions voluntarily according to their capabilities and resources. The parties make pledges through nationally determined contributions submitted to the UNFCCC. The Paris Agreement has shaped the interest of the parties to become more concerned about CCA. Adaptation was not the top priority of Indonesia's national interest prior to the Paris Agreement era. However, now Indonesia has a national adaptation plan and submits it to the UNFCCC as a pledge in the NDC documents. This phenomenon shows that CCA is coordinated at multi-levels of governance – negotiated internationally, adopted nationally, and then implemented at sub-national level. What is agreed in Paris might alter the condition of vulnerable groups at village level.

Adaptation is an internationally shared norm that is adopted in Indonesia through the Paris Agreement. Norms are diffused through the international system by international organisations which shape state behaviour (Finnemore 1996). The UNFCCC, as the leading international organisation concerning climate change, has redefined Indonesia's national interest. CCA becomes Indonesia's concern, then the Indonesian government follows it up with RAN-API, NDC Adaptation Roadmap and other adaptation policies implemented nationally to conform to the Global Goal on Adaptation agendas.

In Indonesia, the BAPPENAS and the MoEF are two ministries that largely control the production of national adaptation policies, for instance, both ministries have mandates to produce national adaptation planning documents. The BAPPENAS published the National Action Plan on Climate Change Adaptation (Rencana Aksi Nasional Adaptasi Perubahan Iklim, hereafter RAN-API) in 2014, while the MoEF launched the NDC Adaptation Roadmap in 2020. The BAPPENAS and the MoEF are also two ministries frequently mentioned during elite interviews. The BAPPENAS is the ministry that has the mandate to make the National Long-Term Development Plan (Rencana Pembangunan Jangka Panjang, RPJP), the National Medium-Term Development Plan (Rencana Pembangunan Jangka Menengah, RPJMN), and the Government Annual Plan (Rencana Kerja Pemerintah, RKP). As a national planning agency, the BAPPENAS governs all policies related to national planning, including the formulation of RAN-API. The MoEF is the national focal point of the Indonesian Government for the United Nations Framework Convention on Climate Change (UNFCCC). It has roles to represent Indonesia in the UNFCCC fora and communicate agreed points with local climate change stakeholders in Indonesia (DGCC, n.d.). The BAPPENAS and the MoEF have mandates that enable them to become leaders in adaptation governance.

The two competing mandates result in a polycentric structure in adaptation governance. Polycentric structure means that there are many centres of decision-making where each centre is independent to another (Ostrom 2010a). The Polycentricity concept helps to understand the complexity of adaptation governance with multiple decision-making centres which are not limited to one level, but rather exist at multiple levels (Marquardt, 2017; Carlisle and Gruby 2019). The CCA governance has evolved into a complex polycentric structure that extends from the global to national, province, municipality, regency, district, and village levels (Gregorio et al., 2019). Polycentric institutions across national, regional, and local levels can provide backup for slow global climate change solutions negotiated internationally (Ostrom 2010b). The existing debate on polycentric governance focuses on the effectiveness of polycentric institutions, whether they hinder or help tackle particular

problems, such as emission reductions, and achieving more effective, equitable, and sustainable outcomes (Ostrom 2010a; Dorsch and Flachslund 2017). Carlisle and Gruby (2019) identify a lack of research focusing on the features necessary for achieving optimal polycentric governance. They set three enabling conditions for polycentric governance to bring advantages. Those enabling conditions are adaptive capacity (capable of adapting to social and ecological changes), institutional fit (congruence between institutions and problems), and mitigation of risk through redundancy (Carlisle and Gruby 2019).

In Chapter 4, this thesis argues that the polycentric governance structure in Indonesia is ineffective due to sectoral ego between ministries that hinders overall CCA governance. Sectoral ego or silo is the culprit of contestation and fragmentation between two dominant ministries, the BAPPENAS and the MoEF. Sectoral ego can be defined as “a feeling of pride in one’s own institution. This has often led institution staff to prioritize their organizational interests and to reject collaboration if it was perceived to jeopardize the institution’s priorities” (Novyanza et al. 2020, 7).

This thesis scrutinises the interactions of multilevel actors occurring at the national level and situated in complex adaptation governance arrangements. Those interactions have built policy network communities. Chapter 4 also builds on policy network analysis to understand the interactions of multilevel actors at the national level (Bulkeley, 2000; Rhodes, 2008). The policy network approach considers the relational dimension of close-knit network communities. A policy emerges from the interactions between governmental and other actors. If we look at the adaptation policy documents and the meeting records, we could trace the interactions between governmental and other actors. Many policy documents enclose a list of participants involved in the policy documents formulation. However, the outcomes of the policy do not necessarily reflect those interactions. The policies often reflect a top-down and technocratic approach where most of the decisions are from the central government or ministries. This pattern hinders multilevel adaptation governance.

Multilevel governance includes the patterns of interaction and coordination systems within and between different levels (Frohlich and Knieling 2013). This thesis considers the interaction and the coordination systems within and between the international level (Indonesia and the UN Climate Change regime), the national level (Indonesia), and the local level (provinces, cities, or villages). This thesis considers that the interactions between actors at those three levels are situated in the field of power and unequal power relations. This thesis focuses on examining the power relations between actors who are involved in RAN-API as one of the improvement schemes to empower vulnerable people.

An anthropological study about the rationale of improvement schemes at the local level in Indonesia has been conducted by Li (2007) in Sulawesi. Her research focuses on so-called improvement programmes for the villagers around the Lore Lindu National Park in Central Sulawesi. This type of programme was designed and funded by the ADB and USAID. Transnational organisations such as UNESCO, the International Union for the Conservation Nature, Birdlife International, the World-Wild life Fund, the Nature Conservancy (TNC) and CARE International were also involved in the improvement program around the park. Most of the villagers are cacao farmers in Central Sulawesi highlands. Li (2007) has identified different stages of developmental 'improvement' programmes, starting with the Dutch colonial era, the New Order regime (1966–1998), and the post-1998 neoliberal reform era which is paternalistic. She finds that trustees' intervention through improvement schemes which have the same objectives, for example empowering society or enhancing capacity for action, tend to produce contradictory or even perverse effects (Li 2007, 18). In her study, Li (2007, 79) gives an illustration of a program brought by the Indonesian Department of Social Affairs to normalise and to socialise "estranged people". In the 1970s, Department of Social Affairs moved six hundred families who lived in the rugged hills of east and west Palu to upland valleys in Palolo. The resettlement program failed because people who used to live in the hills faced many problems such as malaria, crop failure caused by floods, and communal tensions as newcomers interacted with locals from Palolo.

The paternalistic pattern of the improvement schemes observed by Li (2007) forms boundaries between trustees and the community. This pattern positions the trustees as the expert party knowing what is good or bad for the people, what they need, and how they should live. It seems like they have full rights to diagnose and to correct the life of the people. As a matter of fact, the community understands better about what they need, has their own will and owns the power to criticise, to reject, to disagree, or not to carry out the improvement measures prescribed by the trustees. Li (2007) also finds that the improvement schemes focus on rendering technical support. This kind of intervention excludes structural sources of inequalities and leaves political-economic inequalities unaddressed. Li (2007) explains that the empowerment efforts are a relationship of power between the trustees and the targeted communities. The trustees include former colonial officials and missionaries, and contemporary politicians and bureaucrats, central and local government officials, international development agencies, specialists, and NGOs. In the context of CCA projects implementation in Indonesia, the trustees include the the BAPPENAS, the MoEF, donor agencies, local governments, NGOs, and universities. The same pattern, where the trustees

focus on technicalities and overlook political-economic inequalities, reoccurs in the implementation of CCA projects in four provinces.

Norm Diffusion

Building on the norm diffusion concept by Finnemore (1996), this thesis considers that adaptation improvement becomes a norm diffused to many states, including Indonesia, through the international system by the UNFCCC. This norm diffusion is also situated in the field of power. Therefore, the power relations situated at international level also matters in shaping the improvement schemes delivered in Indonesia.

Chapter 3 brings a social-structural approach developed by Finnemore (1996) to understanding state interests and state behaviour. Her approach is utilised to scrutinise international structure, given that state preferences cannot be understood without understanding the international social structure that states are a part of. Her approach does not take states or agents as a starting point of analysis, and she focuses on beginning the analysis by looking at how the international system, which is in the form of international organisations, changes and reconstitutes states (Finnemore 1996).

Finnemore's (1996) approach considers social structures as causal variables in which interactions that take place at the international level facilitated by the international organisation can shape state preferences. The source of state preferences are not usually inherent in the states, and state preferences may come from international organisations. For example, she presents a case study in which states create science bureaucracies as a part of their domestic policy concurrently influenced by UNESCO. Tracing the source of state preferences is a key step to begin the constructive analysis. Finnemore (1996) focuses her analysis on international organisations which are the source of state preferences. International organisations also play a role as an active "teacher" who is setting agendas, defining tasks, and shaping interests of states (Finnemore 1996, 12).

Norms are one of the pivotal elements of a social structure that become the focus of Finnemore's (1996) study. Norms are defined "as shared expectations about appropriate behaviour held by a community of actors" (Finnemore 1996, 22). These expectations of appropriate behaviour should be followed by states, hence norms can change and shape state behaviour. International norms are usually formulated by agents through leading international organisations such as the United Nations, International Monetary Fund, World Trade Organization, and World Bank, then they are diffused at the domestic level and affect

domestic institutional change. This process can be understood as a process of norm diffusion (Finnemore 1996; Risse and Sikkink 1999).

Vulnerability to Climate Change: Who is Vulnerable and Why?

Vulnerability is one of the central concepts in this thesis. There is a need to understand who are vulnerable to climate change and why, yet there is no consensus in defining what vulnerability is. This concept is used by many fields of study such as environmental, geography, development, and political economy. Each of the fields uses different approaches in assessing vulnerability, hence vulnerability becomes a vague concept. Taylor (2017, 74) defines vulnerability to climate change as “the degree to which a system is susceptible to, and unable to cope with, adverse effects of climate change”. System is a broad term, and it can refer to an economic sector, a geographical region, or a population group. This definition is relatively more general compared to the definition used by Kelly and Adger (1999), which focuses on the socio-economic domain pertaining specifically to individual and social groups. Vulnerability according to Kelly and Adger (1999, 254) is closely related with “the state of individuals, groups, or communities defined in terms of their ability to cope with and adapt to any external stress placed on their livelihoods and well-being”.

The IPCC is a United Nations body with a mandate to provide scientific views of climate change. IPCC definitions of vulnerability evolve over time. In the Third Assessment Report published in 2001, vulnerability is defined as “the degree to which a system is susceptible to, or unable to cope with, adverse effects of climate change, including climate variability and extremes. Vulnerability is a function of the character, magnitude, and rate of climate variation to which a system is exposed, its sensitivity, and its adaptive capacity” (McCarthy et al. 2001, 6). The Fourth Assessment Report published in 2007 mentions specific systems and defines vulnerability as “the degree to which geophysical, biological and socio-economic systems are susceptible to, and unable to cope with, adverse impacts of climate change.” (Schneider et al. 2007, 783). Vulnerability can include coastal cities (geophysical), forest areas (biological), and farmer communities (socio-economic). In the Fifth Assessment Report of the IPCC Working Group 2 published in 2014, vulnerability is defined as “the propensity or predisposition to be adversely affected. Vulnerability encompasses a variety of concepts and elements including sensitivity or susceptibility to harm and lack of capacity to cope and adapt.” (Field and Barros 2014, 5).

The Indonesian government, through its national adaptation plan, refer to the IPCC’s conceptual framework in defining what vulnerability is. The national adaptation plan refers

to the vulnerability definition in the Third Assessment Report from 2001. There is no alteration of the vulnerability definition to adjust to Indonesia's conditions. It just imitates and translates the definition of vulnerability from the IPCC in the Indonesian language. Based on that definition and considering Indonesia's geographical characteristic as an archipelagic country, the national adaptation plan determines small islands, coastal areas, and cities as 'special' regions which need resilience most and thus become the focus of their projects (BAPPENAS 2014, XII). This policy categorises the capital city Jakarta and other major cities such as Bandung, Surabaya, Bekasi, and Bogor as the top five vulnerable areas.

This decision seems to contradict another statement in the national adaptation plan document stating that people in Jakarta have a high level of adaptive capacity (BAPPENAS 2014, 29). Downing and Patwardhan (2005) define vulnerable communities as a group of people who experience high exposure to climate change impacts and have low adaptive capacity. High exposure and low adaptive capacity are two essential criteria to define who vulnerable communities are. Indeed, Jakarta experiences high exposure to climate change impacts, mostly floods, but the people in Jakarta have high adaptive capacity. Therefore, the decision to categorise Jakarta and other major cities in the densely populated island of Java as the most vulnerable areas needs to be questioned. It is vital to define who qualify as vulnerable accurately before implementing CCA projects. The inaccuracy of defining who qualifies as vulnerable might cause the most vulnerable groups to be further marginalised, hence increasing the gap between the haves and the have nots. Resources from the government, the international development agencies, the NGOs, and other stakeholders should be delivered to the systems which experience high exposure of climate change impacts, have low adaptive capacity, and need the assistance most. Perhaps the decision of the Government of Indonesia is not wrong. It depends on what approach is used to define vulnerability is.

The political economy approach is a classical approach, and it is not a new approach for climate change research (Fussler 2007). Nevertheless, many climate policies in developed and developing countries tend to use risk-based analysis which focuses on the physical impacts of climate change towards exposure units. The risk-based approach is commonly used because it offers probability estimations of climate change impacts that can be used to formulate climate change policies by governments. In other words, the governments make climate policies by using top-down approaches because they neglect the factors that cause the vulnerability conditions facing of local people (Dessai and Hulme 2004).

Chapter 5 employs the tripartite analytical framework drawing from ideas, institutions, and interests to examine vulnerability assessment discrepancies (Campbell 1998; Kern 2011; Barnett 2020). This framework is widely used in analysing political economy phenomena to examine policy divergence in vulnerability assessment (Kern 2011; Barnett 2020). Vulnerability assessment ideas can be used to construct vulnerable locations that need to be prioritised, which is one way to legitimise climate adaptation interventions. The idea of vulnerability assessments can be used to manipulate and inform adaptation solutions (Barnett 2020). Vulnerability is an ambiguous concept. A system, area or community considered vulnerable using a certain criterion might be challenged when applying different criteria or interpretations of vulnerability.

Institutions in this thesis refer to entities that regulate the behaviours of actors by using vulnerability assessment policies, determining what actors should and should not do (Barnett 2020). The BAPPENAS and the MoEF are the main institutions that have the authority to influence climate adaptation governance. For example, the BAPPENAS created the Indonesian Climate Change Trust Fund (ICCTF), while the MoEF established the Directorate General of Climate Change (DGCC). The interests of rival institutions such as these can be realised through the propagation of ideas and the creation of regulations (Barnett 2020). I argue in this thesis that that vulnerability assessment divergence at the national level occurs because each public actor has divergent interests, hence divergent ideas and institutions for assessing vulnerability.

Unequal Power Relations in Climate Change Adaptation

Power is a relational concept. This concept discusses the influence of an actor towards another (Baldwin 2016). The relational concept of power emphasises how an actor employs power resources such as financial resources, organisational strength and lobbying skills to achieve their political interests by influencing the decisions of others even if it is against their will (Falkner 2009). Attempts rendered by an actor to influence another actor will result in some effects. Power sometimes is not visible, but those relational effects can help to recognise power. Allen (2003, 95) describes that, "it is only through the effects of such relations that it is possible to know and experience what it means to be on the receiving and of an act of power." Gestures by a bureaucratic manager that pose awkward moments, deception attempts that manipulate advertising to induce the consumers, and monopoly practices that erode consumer choice can illustrate that power's presence can be recognised and become visible (Allen 2003).

This thesis examines local contestation over national climate adaptation policy implementation at the local level and investigates the patterns of what Li (2007) calls improvement schemes which re-emerge in different settings of adaptation project locations. Li (2007) brings the idea from Gramsci and Foucault in her analysis to examine how power works. Both Gramsci and Foucault focus on examining how power is lived, but they assess it differently. Gramsci's critical politics allows us to analyse how insights become collective and how they are used to contest their oppression. Critical insights are one of the inadvertent impacts of developmental improvement programs. The practices of international development agencies, NGOs, activists, or experts might offer insights into the lives of vulnerable groups. Gramsci's idea can be used to analyse the position of deficient subjects. Foucault does not elaborate on collective insights, yet he establishes theorisation on how "power shapes the conditions in which lives are lived" (cited in Li 2007, 25). This theorisation allows us to examine the position of trustee, something that is not elaborated by Gramsci.

Li recognises that the idea of Gramsci and Foucault complement each other as a tool to examine power relations between trustees and deficient subjects and to explore their positionings. This thesis utilises Li's (2007) framework to analyse the power relations between trustees or actors who render the CCA programs and deficient subjects or vulnerable groups as the recipient of the programs.

The presence of power in CCA governance can be felt through the ministries' adaptation policies and various actors' adaptation interventions. They likely affect other stakeholders at the same or different levels. The exercise of power can also pose reactions that render power visible. The conscious reactions can be in the form of resistance, accommodation, or consent (Li 2007, 25). Combining ideas from Baldwin (2016), Allen (2003) and Li (2007), this thesis attempts to examine the power relations in CCA governance by analysing the effects as well as the reactions posed by the government's adaptation policies and adaptation programs.

In contrast with Li's (2007) work, this thesis examines the power relations situated in the RAN-API scheme and examine the power relations using the multi-level governance approach which is more complex than power relations at local level itself. In the case of CCA mainstreaming in Indonesia through the RAN-API scheme, the redefinition of Indonesia's interest in CCA is shaped by the UNFCCC and also interactions between states at this international arena where norm diffusion originates (Finnemore 1996). Then, the will to improve adaptive capacity is adopted by Indonesia, but there are ambiguities such as the ambiguity of vulnerability.

Defining Community

Community is a concept that is used frequently in this thesis. The concept of community has numerous definitions, and scholars have different perspectives of community depending on their field of study. Some definitions are field-specific, such as ecology community. Stroud et al. (2015, 4759) define community as “a group of interacting species populations occurring together in space”. They provide a lowland forest community as an example. Using this definition, a community can consist of not only humans but also includes plants and animals. In a different field such as development studies, Bradshaw (2008) describes a community as a group of people that can be built based on profession (farmers community), religion (Muslim community), sexual preference (LGBTQ+ community), or interests (cycling community). A dominant perspective of community usually equates community with place. Hence, a community can also be built based on a geographical area, such as a rural small-town community (Bradshaw 2008). This thesis uses Wilson’s (2012) intermediary position, which is neither too broad nor too narrow, to define community by focusing the discussion on geographically-bounded communities (urban, rural or village communities). Wilson (2012, 1219) defines community as “the totality of social system interactions (i.e. an affective unit of belonging and identity and a network of relations) usually (but not exclusively) within a defined geographical space.” Using this definition, this thesis refers to a community as a village community and limits the analysis of CCA programmes implementation conducted at the village level. However, this thesis opposes a simplistic view that only considers community based on a place or a geographical area. There is a need to critically understand community because a village community is not a single entity. A village community comprises elites, farmer communities, and individuals with different interests and power. Hence, this thesis considers several key elements in the analysis, such as the social context, power relations, elite capture, and changing traditional terms (Buggy and McNamara 2016).

Conclusion

This chapter has reviewed existing literature on the political economy of CCA, the multilevel adaptation governance, and the vulnerability assessment. It has identified three gaps. First, CCA has been a marginal concern to political economy scholars and the cultural domain is often neglected in political economy analysis. Cultural heritage practices are inseparably components of CCA in the global south. Hence, this thesis considers extending the political

economy analysis to include the cultural dimension. Second, the political economy approach has been marginalised in vulnerability assessment and the risk-hazard approach is still the dominant approach in vulnerability assessment. There is a need to problematise vulnerability assessments conducted by the government and non-governmental actors because the decisions to select which assessment methods to use are political and under-explored. Third, the national contestation over CCA policies in Indonesia is largely unexplored. This thesis is the first study to investigate national contestation and fragmentation between the BAPPENAS and the MoEF over national adaptation policy. This chapter has provided the theoretical framework for next chapters' analysis. The next chapter begins the analysis by focusing on the international level analysis and bringing in global-national nexus analysis.

CHAPTER 3

From Paris to Jakarta: Climate Change Adaptation Norms and Policies

“The international system can change what states want. It is constitutive and generative, creating new interests and values for actors. It changes state action, not by constraining states with a given set of preferences from acting, but by changing their preferences (Finnemore 1996, 5-6).”

Chapter 3 investigates the implications of the adoption of global adaptation norms shaped by the UNFCCC into Indonesia’s national adaptation policies. It contributes to develop answer for the first research question of this thesis: Why did Indonesia ratify the Paris Agreement and what are the implications of the Paris Agreement ratification towards Indonesia’s national adaptation policies? It begins the analysis by scrutinising why the Indonesian Government ratified the Paris Agreement and adopted global adaptation norms by using Finnemore’s idea of norm diffusion process. Next, the discussion of this chapter includes several topics, such as the contestation of adaptation norms at the international level, the adaptation politics in Indonesia, the global-national nexus of climate adaptation and the implications of the Paris Agreement towards Indonesia’s national adaptation policies.

Climate change as a political issue was not a major concern of states prior to 1988. Global warming got political attention in the 1980s and developed gradually in the mid-1980s. The freak weather conditions globally, such as severe droughts in the US in 1988, had built a momentum for global warming to gain more attention from world political leaders (Paterson 1996, 32). Climate change gained more attention from international society in the 1990s when it became the front-page news, whereas the estimation of global warming caused by coal-burning had been predicted by Svante Arrhenius, a Swedish scientist, in the late of 19th century (Revkin 2018). It took a century before climate change, and global warming became not only states’ concern but also wider public’s concern internationally.

States cooperation in combating climate change through mitigation and adaptation efforts had been institutionalised into an international environmental treaty at the United Nations Conference on Environment and Development in 1992. This summit is acknowledged as the Rio Earth Summit held in Brazil (UNFCCC n.d.a). The UNFCCC provides the legal framework and represents the international community to govern the climate change which impacts beyond sovereign jurisdiction (Vogler 2016). The formulation of the United Nations Framework Convention on Climate Change (UNFCCC), as an international treaty, marked the beginning of the UNFCCC bureaucracy which consists of 197 Parties. Under the UNFCCC

bureaucracy, there were several agreements considered as milestones in global climate change actions such as the Kyoto Protocol (1997), Bali Action Plan (2007), Cancun Agreement (2010), and the Paris Agreement (2015).

Since the beginning of the UNFCCC bureaucracy, discussion on climate change adaptation has been overshadowed by climate change mitigation. When the UNFCCC entered into force in 1994, climate change discourse developing within this UN body was focusing on greenhouse gas mitigation (UN Climate Change Secretariat 2019). During the Kyoto Protocol era, leaders' discussion and media coverage related to climate change were concentrated on the carbon trading issue, which was one of the mitigation measures. States had more interest in climate change mitigation since it was closely related to material wealth issues such as fossil fuel energy consumption, forest protection, foreign aid assistances, and carbon reduction.

COP 16 in Cancun and COP 21 in Paris were the impetus for the climate change adaptation agenda to move forward. The Cancun Adaptation Network enhanced international cooperation on adaptation to support the implementation of adaptation actions in developing countries for reducing vulnerability and building resilience. The Adaptation Committee considers COP 16 as a milestone where the Parties moved towards comprehensive adaptation with the establishment of Adaptation Committee, National Action Plan (NAP) process, Loss & Damage, and the establishment of the Green Climate Fund (the Adaptation Committee (2019). Although, large decisions on adaptation were made at Cancun, those comprehensive achievements were back by the global south states and NGO allies, such as climate negotiations at Marrakesh (COP 7), Nairobi (COP 11), and Bali (COP 13). The Paris Agreement encourages states to set their pledges on adaptation actions through the Intended Nationally Determined Contributions (INDCs). Adaptation now has become one of the state preferences adopted from the agreement under the UNFCCC's bureaucracy.

There is a positive shifting in state preferences from not recognising climate change adaptation as a major concern towards considering it as one of their preferences. This shifting raises a question, why there is a convergence of state preferences almost all over the world to include climate change adaptation into their national agenda. Is the shifting driven by demand from national domestic pressure? Each state may have their motive to ratify the Paris Agreement, or there may be a collective power from non-governmental actors at the national level who demand better climate change governance. The shifting may be driven by actors outside the national boundaries who create climate change adaptation norms and supply them to the states. Indonesia is one of the developing countries, which has also

developed a preference in climate change issue lately. Indonesia has ratified the Paris Agreement and submitted the INDCs, albeit this policy may impact on the extra allocation of the state budget to climate change project spending.

Constructivism, State Preferences, and International System

This chapter suggests national level analysis by examining the preferences of the Indonesian Government towards CCA agenda. The arguments of this chapter draws from document analysis and elite interviews. Documents published by the UNFCCC, the IPCC, and the Indonesian government were the main sources for document analysis. This chapter also used elite interviews data from the MoEF, the BAPPENAS, the Ministry of Foreign Affairs, and NGO respondents. This section use Finnemore's idea to understand the shifting of states preferences to concern more on adaptation agendas.

States usually have preferences that drive them to formulate their national and foreign policies, but where do state preferences come from? Finnemore (1996) raises this question to examine the source of state preferences. There is no single answer for this kind of question since it has remained contested. The answers will vary and depend on what perspective we use for the analysis. Neorealism and neoliberalism as mainstream perspectives in international relations study might lead scholars towards some answers like preferences come from demands by domestic groups or threats from external actors. However, the state preferences may come neither from domestic groups demands nor external threats. Either perspective cannot explain why this anomaly happens.

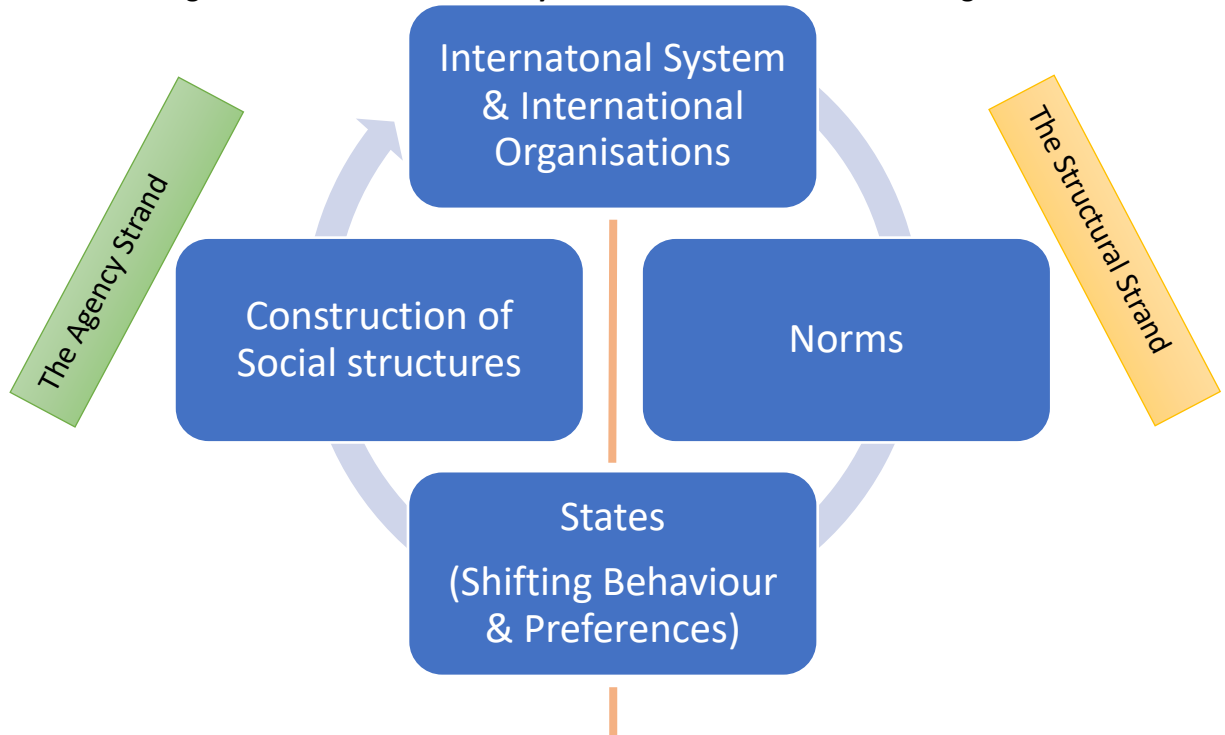
Climate change actions may not be in the interest of developing countries which depend on natural extraction to boost their economic growth, but 195 Parties out of 198 Parties have ratified the Paris Agreement as of when this thesis is written. State preferences shifting on the Climate Change issue in the Paris Agreement case is an example of an anomaly that cannot be explained either utilising neorealism or neoliberalism. First, it is unlikely that the demand to ratify climate change agreements arises from the majority in domestic groups in developing countries. Second, there is no external threat, for instance, from a hegemon or sanction by the United Nations that forces developing countries to shift their preferences about ratifying the Paris Agreement. This thesis assumes that developing countries ratified the Paris Agreement and voluntarily contributes to climate change actions because they think that actions considered as appropriate actions. The logic of appropriateness is more relevant here than the logic of consequences. This logic describes that actors are embedded in a social structure with its normative structure. The actors are induced to accept norms by doing the

right thing and following the rules because they consider those as appropriate actions (Finnemore and Goldstein 2013).

Constructivism equips scholars with a framework to investigate where state preferences come from by analysing international structure shaping those preferences. States usually know what their preferences are. Neoliberalists and neorealists regard preferences as an unproblematic issue. They assume that states have already known their preferences including power, security, and wealth and the combination of these material issues. However, Finnemore argues that “states may not always know what they want or how to use their resources (Finnemore 1996, 2)” and this leaves a gap that cannot be explained with the neorealists and the neoliberalists assumption. States preferences may be constructed by the international system and shaped by International Organisations. Constructivism allows scholars to scrutinise how the international system shapes state preferences, how states establish an international system by creating international organisations, for example, and how complex interplay between them works.

Constructivist research design developed by Finnemore is not only analysing social structure as the causal factors, and she brings back agency in the analysis to understand how agents construct the social structures. Fundamental questions she raises are “who created them and how they became embedded in the organisations that disseminated them?” (Finnemore 1996, 24). This research design allows scholars to examine the interplay between structure and agents (see Figure 3.1). However, the structural strand is the starting point in conducting a constructivist research design. This approach is criticised because it lacks a theory of agency in over-emphasising the role of social structures and norms in the analysis, whereas agents also play a role in constructing social structures and norms (Checkel 1998). Acharya (2018) also emphasises agency to analyse change in global order which is built by ideas and norms. Developing countries are not only passive acceptance of those ideas and norms by Western actors. The spread of ideas and norms will be incomplete without consent and participation of developing countries. Similar with Finnemore, Acharya questions who makes global order and how.

Figure 3.1 Two Strands of Analysis in Constructivist Research Design⁴



Jinnah (2017) and Genovese (2020) has given examples how emerging economies and weak states are able to challenge norms framed by the developed countries or strong states. Jinnah (2017) investigates how China, as an emerging economy, plays role as norm makers and shapers that influences the UNFCCC political outcome on Common but Differentiated Responsibilities (CBDR) norm. By presenting China position on CBDR, she highlights that emerging economies are not only norm takers, but they can be norm makers, shakers, and shapers. China succeeded in containing the United States influences to differentiate emerging economies mitigation responsibilities in the post-2020 period. China was also able to secure strong commitment from developed countries to help developing countries conducting mitigation and adaptation with financial assistance. Genovese (2020) demonstrates how weak states able to benchmark numbers for adaptation funds. Fiji, as the co-host of COP 23 with Germany, had succeeded to press the forum to increase adaptation projects after 2017.

The study of norms emergence, the role of norms in shaping states behaviour, and how they are contested are widely discussed in the global environmental governance literature. For instance, some of the norms discussed are sustainable development, sustainable forest management, common but differentiated responsibility (CBDR), environmental stewardship, endangered species protection, and anti-whaling (Epstein 2006;

⁴ The chart is designed by author based on the idea of Finnemore (1996).

Epstein 2008 ; Bernstein 2013; Jinnah 2017; Falkner and Buzan 2019; Alger and Dauvergne 2020, Genovese 2020). The study of norms remains less examined in the field of climate change adaptation. The works of Moore (2012) and Benzie and Person (2019) are two exceptions.

Moore (2012) elucidates that there is a contestation of adaptation norm framed by developed and developing countries. The former group frames “adaptation as development”, while the latter group frames “adaptation as restitution”. These two norms will impact differently towards adaptation fund governance. Developed countries frame adaptation as development to include adaptation projects as extension of existing development practices, for instance, adaptation fund will be channelled through development agencies. Developing countries frame it differently, by contrast, they see that adaptation fund is obligatory. Tuvalu, as small island developing country, during the COP 15 in Copenhagen demands the restitution of environmental degradation caused by developed countries’ pollution in the past. Tuvalu, together with other developing countries, demand that adaptation fund should be governed by recipient countries.

Benzie and Persson (2019) focuses on a contestation of territorial framing of adaptation versus collective adaptation considering borderless climate risks. They contend that the adaptation framing as a territorial issue has been largely influenced by an epistemic community of adaptation scholars and planners within IPCC forum, then the UNFCCC, as a pivotal arena for adaptation norm-setting, has institutionalised the norm of adaptation as local or national concern and responsibility since the beginning of international climate negotiations in 1992.

Their work has demonstrated the agency strand analysis (see Figure 3.1). States as agents can construct the social structure and challenge dominant norms. Norms contestation is not dominated by developed countries. Small island developing countries such as Fiji and Tuvalu can shape adaptation norms and challenge the developed countries dominance in the UNFCCC (Moore 2012; Genovese 2020). Indonesia as one of emerging economies also involved in shaping adaptation norms through international negotiations. The COP 13 hosted by Indonesia in Bali had resulted in several agreements on adaptation that are beneficial to developing countries such as allowing developing countries to have direct access to the fund without through the intermediary agencies such as UNEP, UNDP, and World Bank (Spence et. al. 2008).

This thesis sheds light on norms emergence, diffusion, and contestation in the field of climate change adaptation which remains largely unexplored by bringing in adaptation

norms diffusion to Indonesia as a case study. This chapter focuses on elaborating on the questions of why Indonesia ratified the 2015 Paris Agreement, and what are the implications to Indonesia's national adaptation policies. The former question focuses on the structural strand analysis to investigate where Indonesian preference on climate change adaptation comes from and how. The latter question aims to understanding the influence of climate change adaptation, as a global norm, towards domestic institutional changes in Indonesia.

Indonesian preference on climate change adaptation has also been socialised by the UNFCCC through the Conference of the Parties since the first COP meeting in Berlin, in 1995. In contrast to Finnemore's approach, which begins the analysis by emphasising structural strand analysis, this thesis starts the analysis by investigating the construction of climate change adaptation norms instead. The focus of this chapter is investigating the changes in Indonesian behaviour as a case study. It would make more sense to understand where and how climate change adaptation norms come from, so then the discussion is followed by more detailed analysis of how the norms influence Indonesia's behaviour.

According to Finnemore, states might not always know what they want. In the Indonesian case, it can be agreed that Indonesia did not know what they wanted with climate change issue prior to the UNFCCC era. The UNFCCC has been teaching Indonesia with climate change norms since 1994 and afterwards Indonesia began to consider climate change adaptation as one of the national interests. Nevertheless, it did not mean that Indonesia had no other interests apart from climate change adaptation when the government decided to adopt this norm. States are not a passive receiver. They always calculate what costs and benefits they will get before finalising their decision. This process usually takes place at the national level. Finnemore neglects another motive or a "side interest" of states behind the decision to adopt norms socialised by International Organisations. This thesis assumes that the changes in Indonesia behaviour to be more concern about climate change adaptation is followed by side interests which might not be directly related to climate change adaptation. This chapter will reveal this side interests that drive the ratification of the Paris Agreement by Indonesia.

This chapter also discusses the involvement of Indonesia in the adaptation negotiations in the UNFCCC forum. Indonesia is not only a norms taker but also a norm shaper. The decision of the Indonesian Government to host the COP 13 in Bali showed that Indonesia wanted to be actively involved in the climate change negotiation process. That decision also indicates that Indonesia, one of the emerging economies in the world, is not a passive recipient of adaptation norms. Indonesia plays a role as norm shapers that

contributes to the contestation of adaptation norms between developed and developing countries. Indonesia has an interest in getting access to adaptation fund as compensation of injury caused by the accumulation of greenhouse gases pollution from developed countries. The interests and the motives of the Indonesian Government to ratify the Paris Agreement can be traced through Indonesia's position during the adaptation negotiations.

Finnemore and Sikkink (2001) realise that research focusing on one direction of causality in which norms and social understandings influence states behaviour has a deficiency in explaining different reaction of states. A generalisation is challenging to formulate since each state has different reactions to the same international norms disseminated by the International Organisations, hence making domestic political analysis relevant here. Checkel (1998) finds that the norm diffusion process in each state is also different. One prominent critique, addressed to Finnemore, is the neglect of domestic politics. Understanding how the domestic process works during norms adoption is needed to understand the effect of the norms towards state behaviours. Norm diffusion is not just a wholesale adoption of foreign norms by local actors, since there are already existing local norms in each state. Local societies are not passive recipients of international norms (Acharya 2018).

Critiques of constructivists that have overlooked domestic politics by Hensengerth (2015) also confirm the need to bring in domestic political analysis to understand state-society relations in internalising norms. He argues that global norms may be utilised by local actors, for example government in developing countries, to construct development policies and justify their claims. For example, a case of hydropower development in Cambodia shows environmental norms contestation between the Cambodian government as the hydropower proponent and NGOs who were against the hydropower project of the Kamchay Dam. The government uses sustainable development norms recommended by the World Bank to justify hydropower establishment for national-level development and attract foreign investors (Hensengerth 2015).

This chapter brings domestic politics analysis happening in Indonesia to investigate the influence of global climate change adaptation norms at the domestic level. The Paris Agreement has been evidence of how climate change adaptation, as set of global norms, can influence domestic institutional change. The submission of the 2015 INDCs shows that Indonesia has tailored national climate policies to meet the Paris Agreement requirements. Besides, the submission of the INDCs by the parties also has been evidence that the reactions of states to climate change adaptation diffused by the UNFCCC are different from each other.

Indonesia has a different target with the other parties. Each party has set different targets of climate change adaptation in their INDCs. Some of them set ambitious goals in the INDCs, while the rest only set unambitious targets by which it is just a formality to meet the Paris Agreement requirements. Indonesia's commitment to emissions reduction, one of the mitigation actions, is being criticised by environmental groups such as Greenpeace and World Resource Institute because it might not be ambitious enough for one of the largest emitters of greenhouse gasses (Aqil 2020). For the climate change adaptation agenda, it is difficult to assess whether Indonesia has ambitious targets or not because climate change adaptation actions are difficult to measure (interview EP07).

The internalisation process of adaptation norms in Indonesia is different from the internalisation process of sustainable development norms in Cambodia. There is no palpable friction between the government and NGOs in Indonesia about the internalisation of adaptation norms at the local level. This phenomenon is an intriguing case study to be investigated. How can adaptation norms be internalised at the national level to the local level through the development of adaptation policies and projects by the government without any significant challenges from local actors such as NGOs or epistemic communities? This thesis assumes that adaptation norms is not genuinely new and do not change significantly existing norms at the national and the local level. Farmers in Indonesia have already had their best practices to cope with climate change impacts. For instance, farmers in Java island have knowledge about a cropping calendar to schedule the rice-growing season. They usually call it as *Pratanamangsa* (Subagyono and Surmaini 2007). They are, perhaps, not familiar with adaptation term, but they have indigenous knowledge about how to adapt to and to cope with climate change impacts.

The Emergence and Contestation of Climate Change Adaptation Norms in the UNFCCC

The idea of adaptation struggles to gain legitimacy alongside mitigation. When the UNFCCC entered into force in 1994, adaptation was not the main discussion in the climate negotiations. The parties' primary focus was on mitigation actions (UNFCCC Secretariat 2019). The idea of adaptation was marginalised because adaptation was considered as national or local concern and responsibility. This territorial framing does still exist until now (Benzie and Persson 2019). Besides that, adaptation is not the main interest of developed countries since developed countries are wealthier, and the people relatively have higher adaptive capacity compared to the people in the developing world.

An analogy between the Netherlands and Tuvalu in facing the climate change impacts might give a clearer picture of the previous point. The Netherlands and Tuvalu face a similar challenge of sea-level rise as an impact of climate change. The Netherlands, with its economic resources and high-tech engineering in water management, is able to adapt well by building storm surge barriers like the Delta Works, which is the biggest in the world. Another interesting fact is that climate change becomes a business in the Netherlands. Dutch firms dominate high-tech engineering and water management in the global market (Kimmelman 2017). Meanwhile, Tuvalu, as one of the least developed countries, has no privileges like what the Netherlands and other developed countries have. Tuvalu is not able to build storm surge barrier by using their resources like the one which is built by the Netherlands and consequently, Tuvalu is way more vulnerable with lower adaptive capacity to climate change risks.

The IPCC is a key norm maker of adaptation. An epistemic community of adaptation scholars are assembled in the IPCC forum. They are involved in the emergence of adaptation norms as a norm maker. The IPCC has taught countries adaptation norms through their assessment reports that are adopted by countries to formulate their national adaptation policies. For instance, Indonesia has adopted adaptation definition from the Fifth IPCC assessment report to its national action plan on climate change adaptation (RAN-API). The only difference is that it is translated into Indonesian language. The detail can be seen in Table 3.1.

Table 3.1 The Comparison of Adaptation Definition between the IPCC and the RAN-API

AR 5 Definition of Adaptation	RAN-API Definition of Adaptation
<p>“The process of adjustment to actual or expected climate and its effects. In human systems, adaptation seeks to moderate harm or exploit beneficial opportunities. In natural systems, human intervention may facilitate adjustment to expected climate and its effects...” (Noble et al. 2014, 838)</p>	<p>“Penyesuaian dalam sistem alam atau sistem buatan manusia untuk menjawab rangsangan atau pengaruh iklim, baik yang bersifat aktual ataupun perkiraan, dengan tujuan mengontrol bahaya yang ditimbulkan atau memberikan kesempatan yang menguntungkan. Adaptasi dapat juga didefinisikan sebagai usaha alam atau manusia menyesuaikan diri untuk mengurangi dampak perubahan iklim yang sudah atau mungkin terjadi” (BAPPENAS 2014a, XXI).</p>

This example shows that IPCC, as the norm maker of adaptation, can diffuse adaptation norm through their assessment reports to Indonesia and Indonesia becomes the norm taker. From the definition adopted by Indonesia, there is no contestation of adaptation norm between the IPCC and the Indonesian Government. The Indonesian Government does

not challenge the idea of adaptation from the IPCC, neither intends to modify it. The similarity also appears in the vulnerability context. The Indonesian Government adopted vulnerability idea to the RAN-API just as formulated by the IPCC through the third assessment report (see Table 3.2).

Table 3.2 The Comparison of Vulnerability Definition between IPCC and RAN-API

AR3 Definition of Vulnerability	RAN-API Definition of Vulnerability
<p>“Vulnerability is the degree to which a system is susceptible to, or unable to cope with, adverse effects of climate change, including climate variability and extremes. Vulnerability is a function of the character, magnitude, and rate of climate change and variation to which a system is exposed, its sensitivity, and its adaptive capacity” (McCarthy et al. 2001, 6).</p>	<p>“Suatu derajat dimana sebuah sistem sensitif terhadap, atau tidak dapat menghadapi, pengaruh buruk perubahan iklim, seperti variabilitas iklim dan iklim ekstrem. Kerentanan merupakan fungsi dari sifat, skala/derajat, dan tingkat variasi iklim yang menunjukkan sensitivitas dan kemampuan adaptasi suatu sistem” (BAPPENAS 2014a, XII).</p>

Adaptation norm is not static because it always changes along the climate negotiation process. Under the UNFCCC bureaucracy, the idea of adaptation appeared first time in the IPCC first assessment report. This report was adopted as the basis for negotiators and policymakers in the UNFCCC to formulate outcomes of the initial conventions. Unfortunately, adaptation had not got enough attention in the first two assessment reports and the initial conventions.

Adaptation planning and implementation had begun in earnest since the COP 7 in Marrakech in 2001. This outcome was influenced by the third assessment report of the IPCC affirming that mitigation actions alone would not be sufficient, and adaptation was a necessary strategy at all scales to complement mitigation actions (UNFCCC Secretariat 2019; McCarthy et al. 2001). The third assessment report had created “adaptation as a necessity” norm. Then this norm was institutionalised under the UNFCCC into national adaptation programmes of action (NAPAs), and the establishment of adaptation institution such as the Least Developed Countries Expert Group (LEG), Least Developed Countries Fund (LDCF), Special Climate Change Fund (SCCF), and Adaptation Fund.

The IPCC published the fourth assessment report in November 2007 approaching the COP 13 held in Bali in December 2007. According to the fourth assessment report, adaptation is necessary because “Past emissions are estimated to involve some unavoidable warming (about a further 0.6°C by the end of the century relative to 1980-1999) even if atmospheric greenhouse gas concentrations remain at 2000 levels (see Working Group I Fourth Assessment). There are some impacts for which adaptation is the only available and

appropriate response” (Parry et al. 2007, 19). This fourth assessment report reaffirms that adaptation is necessary as a result of unavoidable global warming caused by past emissions. The parties in the COP 13 responded this finding through Bali Action Plan which decided to enhance action on adaptation such as supporting the urgent implementation of adaptation actions through international cooperation, providing incentives for developing country Parties, and assisting developing country Parties with funding, financial, and technical support (UNFCCC 2007).

Besides the IPCC, the UNFCCC also plays a role as a norm maker of CCA. The IPCC did not discuss national adaptation plans (NAPs) in the fourth assessment report. The idea of NAPs was established during the negotiation process of the Parties at the COP 16 (2010) in Cancun. Then it became norm which was institutionalised through the Cancun Agreement and the Cancun Adaptation Framework. According to the paragraph 15 and 16 of the Cancun Agreement, the Parties decided “to hereby establish a process to enable least developing country Parties to formulate and implement national adaptation plans, ...” (UNFCCC 2010, 5). The Cancun Agreement requires the least developing countries (LDCs) and other developing countries that have interests in adaptation to formulate and implement national adaptation plans. The necessity of national adaptation plans as a norm is accepted by Indonesia which had formulated RAN-API in 2014.

Adaptation actions need transparency to ensure that all of the Parties commit to implement sustainable adaptation actions. The UNFCCC had established “transparency of adaptation actions” norm through a negotiation process at the COP 21 (2015) in Paris. As stated in article 5, paragraph 10 and 11 of the Paris Agreement, “Each party should submit and update their adaptation communication periodically, which includes priorities, implementations and support needs, plans and actions. Those communications should be in consonance with other communication documents, including a national adaptation plan and a nationally determined contribution” (UNFCCC 2015). By April 2016, Indonesia and other 189 Parties had communicated their NDCs (UNFCCC n.d.b). It means that there is a near-consensus on transparency norm since it has been accepted by 97% of all parties of the UNFCCC through their NDCs submission.

There are some areas of consensus and controversy following the emergence of adaptation norms. Moore (2012) has identified several of them in the adaptation negotiations. She identifies three consensuses in the adaptation negotiations including the existence of an inverse relationship between vulnerability and development, prioritising adaptation funding to the most vulnerable populations, and developed countries as

responsible Parties providing international adaptation finance. In the area of controversy, she highlights the contestation of normative framings between developed countries which bring “adaptation as development” norm and developing countries which propose “adaptation as restitution” norm to govern adaptation financing.

This thesis identifies that there are several new norms in the post-Paris Agreement, including the necessity of national adaptation plans and transparency of adaptation actions. Even though the developing country Parties have agreed on these norms in the Paris Agreement, not all of the developing country Parties implement the agreement. By 21 January 2020, there were only 20 developing country Parties had submitted their NAPs. On the INDC submission portal website accessed in November 2020, there were only 165 submissions found (UNFCCC n.d.c). Each state responded to the same agreement differently. Some of them conformed, and others did not. All of the documents submitted are unique. There are no similar documents found between their documents because each state has different NAPs and INDCs. This evidence confirms the argument made by Finnemore and Sikkink (2001) about the different reactions of each state to the same international norms disseminated by the International Organisations.

Indonesia responded to the Paris Agreement by formulating and implementing RAN-API and INDCs, which are exclusively dedicated to addressing climate change impacts, vulnerability, and adaptation actions in Indonesia. The RAN-API document was published in 2014, and the INDCs document had been submitted on 24 September 2015. Both responses denote that Indonesia has adopted and institutionalised adaptation norms. Indonesia’s acceptance on transparency norm on adaptation actions can be traced through a statement by Indonesia at the joint closing plenary of COP 24 (2018) in Katowice. The representative of the Indonesian Government stated that “We welcome decision on adaptation communication and further works as the follow up of AC Report. Support to developing countries in preparing and submitting adaptation communication is needed. Adequate support is also necessary to implement adaptation plan and action to improve resilience” (Nurbaya 2018, par. 5). However, Indonesia has not submitted NAPs document to the UNFCCC yet as of March 2024. This peculiarity raises some questions, why has not Indonesia submitted its existing NAPs document to the UNFCCC? Are there any political considerations, or is it merely administrative negligence made by the Indonesian Government?

In the area of controversy, adaptation financing always becomes a hot debate in the adaptation negotiations between developed and developing country Parties. Indonesia, as a developing country Party, has a preference for accessing adaptation financing from

developed countries. Indonesia is actively involved in the adaptation negotiations. Indonesia is not just a passive norm taker and plays a role as a norm shaper of adaptation norms as well. Indonesia's position is evidently supporting "adaptation as restitution" framing. This position is in consonance with other developing country Parties. The involvement of the Indonesian government in framing adaptation financing can be traced from a statement by Rachmat Witoelar, special envoy of the President of the Republic of Indonesia for Climate Change, at the COP 16 (2012) in Cancun. In paragraph six, he stated that:

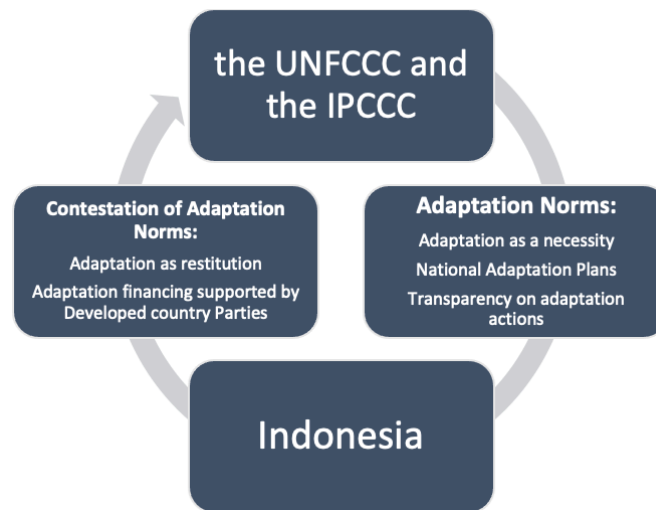
"Given the Global and over-arching nature of climate change, strong leadership is needed in order to address it. Thus, it is in our view that developed countries, must take the lead and committed to an ambitious, economy wide, quantified emission reduction target as well as the provision of technology, capacity building and financial resources to developing countries. In this respect, we urge developed countries to materialise their financial pledges for both adaptation and mitigation actions" (Witoelar 2010, par. 6).

Indonesia's position supporting "adaptation as restitution" norm and interest in adaptation funding also can be ascertained from President Joko Widodo statement at the leader's event of COP 21 (2015) in Paris. President Joko Widodo stated that:

"To reach Paris Agreement, all parties, I repeat, all parties must contribute more, in mitigation and adaptation efforts, in particular developed countries, through mobilisation of USD 100 billion climate finance by 2020, to be increased over the years, as well as transfer of environmentally sound technologies and capacity building" (President Joko Widodo 2015, 3).

From the President's statement, it can be highlighted that the President Joko Widodo mentioned "in particular developed countries" to emphasise obligatory compensation of developed countries to provide mitigation and adaptation finance. The President also mentioned the exact number of climate financing for USD 100 billion that should be mobilised by developed countries by 2020. This statement further shows that the Indonesian government sees adaptation financing as obligatory compensation and not voluntary like what has been framed by developed countries by using norms of development.

Figure 3.2 Adaptation Norms Emergence and Contestation Involving Indonesia



From the figure above, it can be seen that Indonesia accepts adaptation norms such as adaptation as a necessity, national adaptation plans, and transparency on adaptation actions. The Indonesian government accepts those norms and institutionalises them into their national policies because Indonesia considers it as appropriate actions to do. The normative structure in the UNFCCC induces the Indonesia government to accept those norms like what other developing country Parties do. Indonesian acceptance on adaptation norms diffused by the UNFCCC and the IPCC marks Indonesia as a norm taker. However, in the adaptation norms contestation, Indonesia is also actively involved in the debate taking place at the COP. Adaptation financing concerns the Indonesian Government the most.

Understanding Adaptation Politics in Indonesia

Indonesian preference for adaptation comes from the UNFCCC that diffuses adaptation norms to the Parties. This preference is neither influenced by external threats that push Indonesia to accept adaptation norms, nor demands from domestic groups. The Paris Agreement is a hybrid of legally binding and nonbinding provisions. However, there will be no sanctions if Indonesia does not implement adaptation actions nationally because climate change actions within the INDCs framework are voluntary basis. The RAN-API Document was formulated and published in 2014. This document becomes a piece of evidence that the UNFCCC influenced the Indonesian preference for adaptation through the Cancun Agreement. Indonesian preference on adaptation transparency by submitting INDCs and NDCs also comes from the UNFCCC through the Paris Agreement.

Neither external threats and demands from domestic groups existed during the signing and ratification process of the Paris Agreement, and the logic of appropriateness is relevant

to explain why Indonesia ratifies the Paris Agreement. There were 86 Parties that had ratified the Paris Agreement prior to Indonesia's ratification (United Nations 2020). From those 86 countries, 16 countries are LDCs such as Lao's People Democratic Republic, Rwanda, Somalia, Tuvalu, Uganda, and Vanuatu.⁵ The UNFCCC has established a normative structure that is able to induce Indonesian preference through tremendous peer pressure from other Parties. Signing and ratifying the Paris Agreement seemed to be appropriate actions to do, considering that 86 countries, including 16 LDCs, had ratified it before Indonesia. Indonesia, as an emerging economy and a middle-income country, would not do "inappropriate" actions by not signing and ratifying the Paris Agreement while 16 LDC had ratified it first. That actions would be execrable for Indonesia's reputation internationally.

This thesis assumes that the changes in Indonesia behaviour to be more concern about climate change adaptation is initially influenced by the UNFCCC through adaptation norms diffusion process. Then, those changes are followed by side interests which might not be directly related to climate change adaptation. Following the adaptation contestation happening at the international level, Indonesia is involved most in adaptation financing issue. Accessing adaptation financing is a palpable interest of Indonesia. Furthermore, Indonesia also has another side interest that is actually not directly related to climate change adaptation. The side interest is related to the Vision of President Joko Widodo on Global Maritime Fulcrum (*Poros Maritim Dunia*).

The Indonesian Government interest in adaptation financing can be seen from the statement made by Indonesia's representatives and President Joko Widodo during the COP.⁶ EP05, a director from the MoEF, explained that Indonesia had four main interests. First, Indonesia and G77 countries concerned with how to balance assistances for adaptation in facilitating the means of implementation (finance, transfer of technology, and capacity building) for developing and least developed countries. Second, they had the interest to ensure the developed countries actualising the means of implementation. Third, Indonesia had an interest to propose fifty-fifty climate financing, because foreign assistances usually funded mitigation projects so far. Adaptation actions were considered as the national interests of each country. Lastly, Indonesia proposed a new equal distribution concept where

⁵ There are 47 least developed countries based on the LDC list of United Nations. Bangladesh, Central African Republic, Guinea, Kiribati, Lao's Democratic Republic, Madagascar, Mali, Nepal, Niger, Rwanda, Senegal, Solomon Island, Somalia, Tuvalu, Uganda and Vanuatu are LDCs that ratified the Paris Agreement before Indonesia. The list of LDC is available at <https://www.un.org/development/desa/dpad/least-developed-country-category/lDCs-at-a-glance.html>

⁶ See page 39.

Indonesia as a bigger country geographically and the fourth largest population in the world should get more significant or more proportional financing than small island developing countries. However, the idea to distribute the adaptation financing proportionally was rejected (interview EP05). From this information, it can be identified that accessing more adaptation financing is a priority interest of Indonesia. Indonesia attempts to shape adaptation financing norm through fifty-fifty financing of mitigation and adaptation idea to get more funding on adaptation and oppose the idea of existing equal distribution of adaptation financing.

President Joko Widodo has an overarching vision for Indonesia's maritime sector development. The President conveyed Global Maritime Fulcrum concept for the first time during his candidacy for President in 2014 (Darmawan 2014). The Global Maritime Fulcrum vision was launched formally by the President during the ninth Asia Summit in Nay Pyi Taw in November 2014 (Luhulima 2019). This concept placed the maritime sector as a top priority of the national development agenda for the first time (Supriyanto 2017). The Global Maritime Fulcrum is not merely a concept that influences maritime sector development, yet this has become a grand strategy that encompasses economic, foreign policy, and security statecraft (Bharat 2019). Moreover, the Global Maritime Fulcrum also encompasses Indonesia's climate change adaptation plan within the Paris Agreement framework.

Indonesia brings in the Global Maritime Fulcrum vision into the adaptation negotiations in the COP. The Ministry of Foreign Affairs should integrate national ocean policy into Indonesia's Foreign Policy through maritime diplomacy (Cassidy et al. 2016). Indonesia has an interest to actualise the Global Maritime Fulcrum vision in all occasions at the International events, including the COP negotiations. For instance, Indonesia delivered their interest in the role of the ocean in climate adaptation at the High-Level Segment of COP 25. Indonesia stated that there is a need to promote sustainable management, conservation, and restoration of coastal and marine ecosystems. One of the efforts in this regard is through ecosystem-based adaptation (Statement by Indonesia 2019). Indonesia also supported Fiji at the COP 23 in Bonn to strengthen the role of the ocean in tackling climate change (Statement by Indonesia 2017). EP05, a MoEF official, reaffirmed that Indonesia had an interest to raise ocean issue at the COP. She said that Indonesia became one of the pioneers to raise ocean issue at the COP negotiations considering that Indonesia was an archipelagic country with high population and vulnerable to sea-level rise (interview EP05). This finding explains that the Indonesian negotiator utilises adaptation negotiation forum to achieve the more fundamental interest of the Indonesian Government, which is actualising Global Maritime

Fulcrum vision of the President Joko Widodo. This thesis argues this interest as a side interest that is not directly related to climate change adaptation.

Global-National Relations in Climate Change Adaptation Governance

Climate change adaptation governance in Indonesia is not merely determined by national – local interactions. Stakeholders at the international level also have influence in shaping the climate change adaptation governance within national boundary of states. National adaptation policies formulated in Jakarta is influenced by the Paris regime. Multilevel system of climate change adaptation governance within the Paris Agreement involves multilevel stakeholders including government, business, and civil society. Climate change adaptation mainstreaming within the Paris Agreement framework begins at the international level and then diffused to narrower level at the region, national, province or state, city, and village levels (Jänicke 2017). It is important to understand the architecture of climate change adaptation governance at the international level and the interactions of multi-stakeholders across levels. This part discusses the architecture of climate change adaptation governance at the international level to understand the interactions of multi-stakeholders across international and national level. Other level of governance will be discussed further in the following chapters.

The global climate change adaptation governance is influenced by several dominant actors from government actors such as the UNFCCC, the IPCC, the Adaptation Committee, the Global Environment Facility (GEF), the Adaptation Fund (AF), and the Green Climate Fund (GCF). They determine the direction of global climate change adaptation governance. The UNFCCC plays a role as a global policy arena and a catalyst (Jänicke 2017). The UNFCCC has provided negotiation forums for multilevel stakeholders since the first COP in Berlin. For instance, during the 25th COP held in Spain (2019), there were 196 Parties, one observer state, 1,176 observer organizations, and 84 media with total participants reached 22,354 people (UNFCCC 2019). The UNFCCC plays a role as a catalyst through international agreements from the Cancun Agreement and the Paris Agreement that encourages states to implement adaptation actions. The IPCC, as the United Nations body for assessing the science related to climate change, has determined the state of knowledge on climate change through the assessment reports. The IPCC plays a crucial role supplying inputs into the international negotiations (IPCC n.d.) and has become an important forum for an epistemic community of adaptation scholars since the 1990s (Benzie and Persson 2019). The Adaptation Committee was established as part of the Cancun Agreement Framework. It is a principal body under the

UNFCCC and the UN system. It has a main objective to mainstream adaptation actions through promoting enhanced action on adaptation, raising the profile of adaptation and inducing the Parties and other actors to increase their adaptation ambition (UNFCCC Secretariat 2019).

The GEF, the Adaptation Fund, and the GCF are pivotal actors in managing adaptation financing. The GEF was established in 1992 as one of the outcomes of the Rio Summit to tackle environmental problems by distributing grants and mobilising co-financing fund. In global climate change adaptation governance, the GEF operates fund from the Least Developed Countries Fund (LDCF), and Special Climate Change Fund (SCCF). However, the GEF is not an institution body that is exclusively attached to the UNFCCC for tackling adaptation funding, since it serves other four conventions (GEF n.d.).⁷ The Adaptation Fund is the institution body that serves exclusively to the UNFCCC for managing adaptation financing. It was established under the Kyoto Protocol of the UNFCCC in 2010 (Adaptation Fund n.d.). The GCF was set up in the same year under the UNFCCC and now serves the Paris Agreement to channel climate finance to developing countries (GCF n.d.).

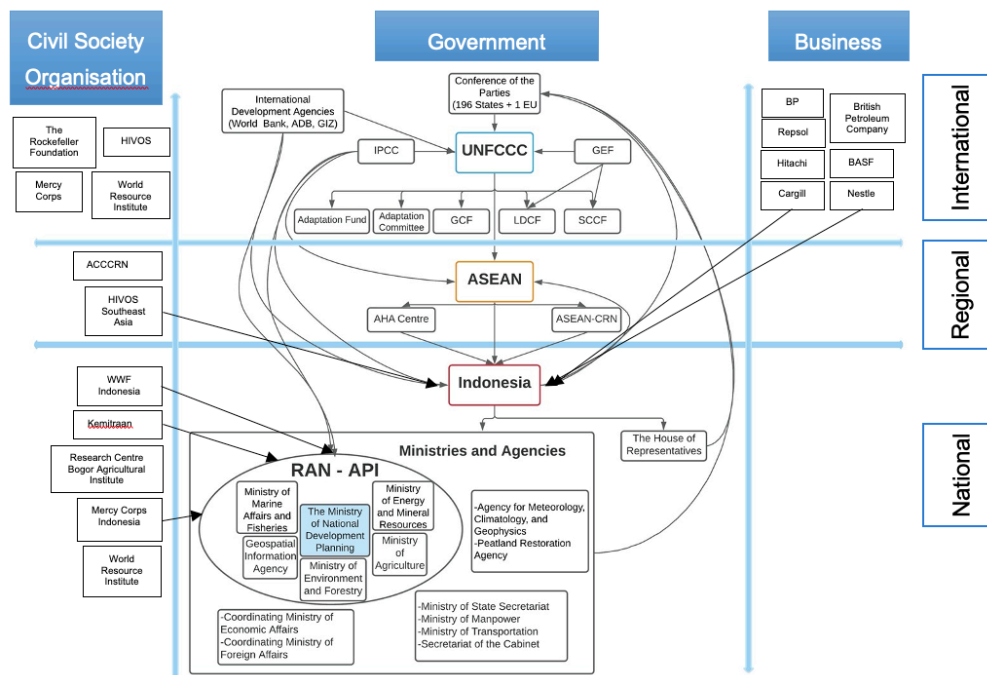
There are vast civil society and business actors involved in the climate change governance at the international level. Based on the list of participants in the COP 25 (2019), there were 1,049 non-governmental organizations participating in the conference plus 844 media (UNFCCC 2019). Some of business actors involved in the governance under the UNFCCC are BP, British Petroleum Company, Repsol, BASF, Hitachi, Cargill, and Nestlé. The last two corporations mentioned are involved in climate change adaptation governance in Indonesia (DAI 2019). Several Multinational Corporations, even though not involved directly to the adaptation governance under the UNFCCC, also operate in Indonesia and provide adaptation assistances such as Aeon Co. Ltd., and Syngenta (Subagyo 2019; DAI 2019). Some of the civil society organisations involved in CCA governance at the international level under the UNFCCC and operating in Indonesia are Stichting Hivos (Humanistisch Instituut voor Ontwikkelingssamenwerking), Mercy Crops, the World Wild Fund for Nature (WWF), OXFAM, and World Resource Institute (BAPPENAS 2014a).

Below the international level, another governance exists at the region level (see Figure 3.3). ASEAN is the key player of climate change adaptation governance in the Southeast Asian region. ASEAN has established the ASEAN Climate Resilience Network, a platform for regional exchange, aimed to ensure adaptation of the agricultural sector to

⁷ The GEF also serves Convention on Biological Diversity (CBD), Stockholm Convention on Persistent Organic Pollutants (POPs), UN Convention to Combat Desertification (UNCCD), and Minamata Convention on Mercury (GEF n.d.).

climate change (ASEAN-CRN n.d.). Besides, there is ASEAN Coordinating Centre for Humanitarian Assistance on disaster management (AHA CENTRE) which facilitates climate change adaptation coordination among ASEAN member states. From civil society actor, there is Asian Cities Climate Change Resilience Network (ACCCRN) and HIVOS Southeast Asia.⁸ Within the adaptation governance at the Southeast Asian region, Indonesia is not considered as one of the pioneers of the adaptation in this region. Instead, the Philippines and Vietnam are the pioneers of climate change adaptation in this region. Vietnam, which is included in the CLMV group, had institutional framework for adaptation earlier than Indonesia through its National Strategy on Climate Change 2012. Indonesia, based on adaptation readiness assessment, is positioned at the second tier as an emerging champion of adaptation together with Cambodia and Myanmar (Salamanca and Nguyen 2016).⁹ Reflecting on these findings of adaptation readiness in ASEAN, a question then arises as will Indonesia be able to contribute more at the global level if Indonesian leadership on adaptation is being questioned at the region level.

Figure 3.3 Indonesia and the Global Climate Change Adaptation Governance under the UNFCCC



Source: the COP 25 List of Participants (UNFCCC 2019)¹⁰

⁸ ACCCRN operates Indonesia, Bangladesh, Thailand, and Vietnam.

⁹ CLMV term refers to a group of new member countries in ASEAN. This term is often used in the ASEAN integration process. The idea to make this grouping is to ensure that the new members are not left behind.

¹⁰ This diagram is compiled and designed by the author based on the data from the COP 25 participants list. The model for this diagram is inspired by the Rio model of Multilevel and multi-stakeholder

From national level actors in Indonesia, there are several ministries, agencies, the house of representatives, and civil society organisations involved directly to the CCA governance under the UNFCCC regime. At least, there are 15 ministries and agencies including the Ministry of National Development Planning (BAPPENAS), the Ministry of Foreign Affairs, the Ministry of Environment and Forestry, the Ministry of Marine Affairs and Fisheries, the Ministry of Agriculture, the Ministry of Manpower, the Ministry of Transportation, the Ministry of State Secretariat, the Ministry of Energy and Mineral Resources, Coordinating Ministry of Maritime Affairs, Coordinating Ministry of Economic Affairs, the Geospatial Information Agency, the Agency for Meteorology, Climatology and Geophysics, the Peatland Restoration Agency. From civil society organisation actors, there are Mercy Corps (Indonesia), Partnership for Governance Reform (Kemitraan), and Center for Climate Risk and Opportunity Management Bogor Agriculture University. There are no representatives from national or local business actors who are involved directly in CCA governance under the UNFCCC. They have not participated in the COP.

The Implications of the Paris Agreement for Indonesia

The Paris Agreement had been ratified by the House of Representatives on 19 October 2016 (BBC News Indonesia 2016a), and President Joko Widodo signed it as law number 16/2016 on 24 October 2016 (Basorie 2016). There was no rejection from 10 political factions during the plenary meeting. They decided to endorse the Paris Agreement bill unanimously (Sapiie 2016). By looking the political responses of the executive and legislative actors, the adaptation norms under the Paris Agreement were adopted smoothly into Indonesia's national policy without any rejection from any political parties. Despite of this positive responses from the Indonesian Government towards the adoption of climate change adaptation norms, climate adaptation governance in Indonesia is facing challenges in the implementation and the realisation of Indonesia's commitment to improve the adaptive capacity of vulnerable communities at the grassroot level.

There are some significant implications of the ratification of the Paris Agreement for Indonesian national policies on adaptation. First, Indonesia has to implement the National Adaptation Plans (RAN-API) which had been done in 2014 through adaptation projects in 15 locations selected as pilot projects. Second, Indonesia has to allocate adaptation budget to

governance established by Jänicke (2017). This diagram does not represent a detail global adaptation governance consisting of all actors involved in it. Several CSO and Business actors mentioned in the diagram were selected for illustration purpose instead.

implement RAN-API nationally. Third, almost all ministries and agencies should include climate change adaptation agenda into their ministerial strategic plans to support adaptation mainstreaming nationally. Fourth, Indonesia needs to share best practices within south-south cooperation framework in conducting adaptation actions (Ministry of Foreign Affairs of the Republic of Indonesia 2019a). Lastly, the provincial governments also take part in mainstreaming climate change adaptation through the Regional Adaptation Actions on Climate Change Adaptation (Rencana Aksi Daerah Adaptasi Perubahan Iklim, RAD-API), but not all provincial governments already have the so-called RAD-API.

These are the detail of the implications. First, the RAN-API framework has been led by the BAPPENAS as the ministry that has a mandate to plan Indonesia's national development. During the formulation of RAN-API, not all of ministries and agencies participated in the COP were involved in the formulation process. Based on the RAN-API document, ministries and agencies involved in both the COP and the RAN-API formulation were the Ministry of Environment and Forestry, the Ministry of Agriculture, the Ministry of Marine Affairs and Fisheries, the Ministry of Energy, and Mineral Resources, and the Geospatial Information Agency. Eight other ministries and agencies were not involved in formulating the RAN-API document in 2014 (see Figure 3.3.). The RAN-API document becomes guidelines for ministries and agencies involved in adaptation actions in determining sectoral and cross sectoral priority in mainstreaming climate change adaptation actions. When some of the ministries and the agencies were not involved in the formulation, yet they have to implement the RAN-API, there will be a big gap between what has been designed and what will be executed. Coordination among ministries and agencies is a fundamental challenge in the RAN-API implementation.

Second, Indonesia, a developing country beset with poverty, is unlikely to spend a large amount of national budget for climate change actions like what developed countries spend. Even though Indonesia had ratified the Paris Agreement and submitted the INDCs, the budget for climate actions is not increased significantly. The Ministry of Environment and Forestry as the national focal point for climate actions was not in the top ten ministries with the biggest budget in 2020. The allocation for environmental protection was only 1.1% or 18.4 trillion rupiah (Herlinda 2020). Indonesia has allocated budget for adaptation actions, yet the amount is far below the mitigation budget. For comparison, based on the mitigation and adaptation budget in 2018, mitigation budget was 60,415.7 billion rupiah, while adaptation budget was only 37,497.2 billion rupiah. Most of the adaptation budget, 95% of the total adaptation budget, were allocated for the Public Works and Housing Ministry and

spent on infrastructure projects (Fiscal Policy Agency 2019). This fact is not surprising, considering that the infrastructure was the priority of President Joko Widodo during his first term administration. Infrastructure development was part of the so-called Nawacita vision for Indonesia's development.¹¹ His preference for infrastructure policy was always criticised by his political rival, Prabowo Subianto, who now joins the coalition as the Minister of Defence.

In his first term administration, the President Jokowi pledged to build 5,000 km of railways, 2,600 km of roads; 1,000 km of toll roads; 49 dams, 24 seaports, and power plants with a combined capacity of 35,000 megawatts (BAPPENAS as cited in Salim and Negara 2018). The President Joko Widodo administration needed vast amount of fund from the state budget to finance infrastructure projects. Considering the fact that adaptation budget was spent 95% for infrastructure projects in 2018 (Fiscal Policy Agency 2019), it was evident that adaptation fund was spent to support the achievement of infrastructure targets in the name of adaptation. There is no doubt that infrastructure development is needed to adapt to climate change, but not all climate impacts can be reduced by simply building infrastructure.

Third, the Paris Agreement has induced ministries and agencies in Indonesia to mainstream climate change adaptation actions. Almost all of ministries and agencies involves in mainstreaming climate change adaptation through rendering adaptation projects. However, not all of the projects are rendered based on the RAN-API framework. Each ministry and agency have their strategic plan document, it seems that the projects rendered are likely based on each strategic plan of ministries and agencies. For instance, the Ministry of Environment and Forestry has formulated a so-called *Climate Village Programme (Program Kampung Iklim)* program or Climate Village Program as its strategic program. There are several locations of *Climate Village Programme* such as Riau, West Sumatera, Jambi, West Kalimantan, Yogyakarta Special Region, South Sulawesi, and the Special Capital Region of Jakarta (Albar et al. 2017). Those locations are not selected as pilot project locations in the RAN-API document. The Ministry of Environment and Forestry, which is involved in the formulation of the RAN-API document, renders adaptation projects outside the RAN-API framework. How about other ministries and agencies that are not involved in the decision-making process of RAN-API? It seems that ministerial strategic plan is more influential in determining adaptation projects of each ministry and agency. If that is the case, the

¹¹ Nawacita is taken from a Sanskrit for nine programs authored by President Joko Widodo, Vice President Jusuf Kalla, Chair of the Indonesian Democratic Party of Struggle, Megawati Soekarnoputri, and a team of academic and professionals (Aritonang and Witular 2014). Nawacita was conveyed first during the 2014 president election. President Joko Widodo continues this vision for his second term.

adaptation projects become scattered and rendered sporadically by each ministry and agency with lack of coordination among them.

Fourth, the Paris Agreement also influences Indonesia's foreign policy. Indonesia has delivered adaptation assistance to the LDCs through the south-south cooperation framework. Pacific Island Countries are some of the beneficiaries. Indonesia has delivered foreign assistance to Pacific Island countries such as Fiji, Solomon Island, Nauru, Tuvalu, and Kiribati through the so-called Indonesian AID which was launched in 2019 (Tri 2019). Climate change concerns Indonesia and the Pacific Island Countries which are the signatories of the Paris Agreement. Enhancing climate cooperation becomes the interest of both parties within the Paris Agreement framework (Ministry of Foreign Affairs of the Republic of Indonesia 2019b). However, achieving the goals of the Paris Agreement through south-south cooperation is not the only interest of Indonesia. Assistance delivered by Indonesia to tackle climate change is also driven by a national interest to muffle the noise from some of the Pacific Island Countries that support United Liberation Movement for West Papua (ULMWP) and Free Papua Movement (BBC News 2016b).

Finally, the provincial government also adopts the idea of adaptation plan from the UNFCCC through the RAD-API which is the incarnation of the RAN-API but specifically formulated for CCA implementation at the sub-national level. The RAD-API has begun another centre of CCA governance at the sub-national level led by the Development Planning Board of each province. The RAD-API formulation at the sub-national level is late behind the formulation of similar document on mitigation. The guidelines to formulate the Regional Action Plan for Reducing Greenhouse Gas Emissions (RAD-GRK) was launched in 2011 while the guidelines to formulate the RAD-API was launched five years later. It is evident that adaptation is overlooked both at the national and the sub-national level. The involvement of sub-national government like the Development Planning Board in CCA is evidence that climate change governance has evolved into a complex polycentric structure (Di Gregorio et al. 2018). The structure becomes more complex since non-governmental actors also form CCA governance outside the RAN-API authority.

Whose Will to Improve

The will to improve by Li (2007, p. 2) inspires the author to analyse improvement programmes in Indonesia through several adaptation programmes initiated by various actors, such as the ministries, local governments, donor agencies, NGOs, and universities. The government, donor agencies, and NGOs usually pictures their adaptation projects in their project report

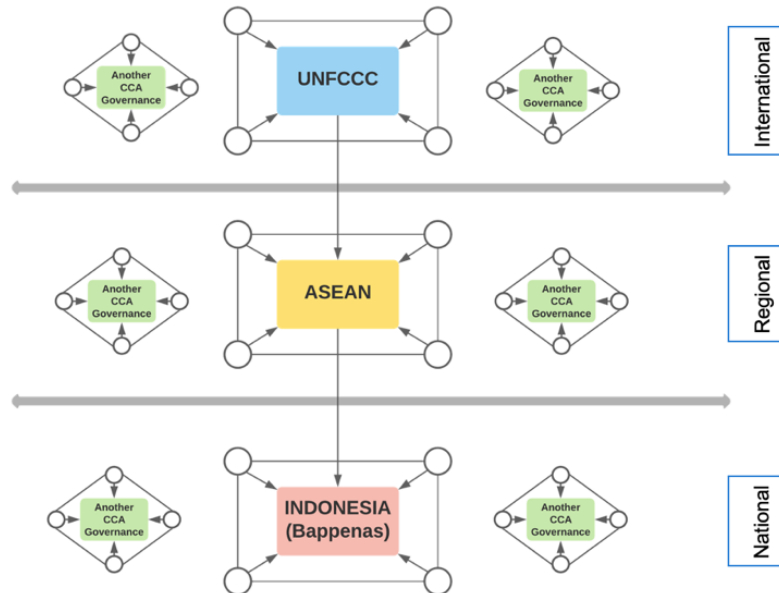
as successful projects and brings benefits for the vulnerable communities. Bleak stories of adaptation projects rarely could be found in the official reports published by the government. The will to improve by Li (2007) allows to analyse “the inevitable gap between what is attempted and what is accomplished”. Her approach focuses on exploring the positioning of trustees and deficient subjects or vulnerable groups who are the target of improvement programs (Li 2007). It enables this thesis to establish a critical political view of CCA improvement programs in Indonesia to understand how a practice of contestation over CCA impacts on vulnerable groups. These two approaches allow to analyse the targeted improvement schemes for officially designated vulnerable communities and areas in Indonesia that were first conceived of in 2014 and implemented in 15 pilot project sites. Three sites, including West Java, East Java, and West Nusa Tenggara, were selected as case studies for more depth analysis. This thesis contributes to examine the local power relations and conflicts that arise not only during the formulation but also during the implementation of RAN-API.

The Paris Agreement does not only induce the government actors to mainstream climate change adaptation. Civil society organisation (CSOs) and business actors are also induced to render adaptation projects to improve adaptive capacity of vulnerable societies. CSOs usually partners with international development agencies who have the adaptation financing, but sometimes some of them also partners with the government actors. Corporations usually render the adaptation projects through corporate social responsibility (CSR) projects. These phenomena have formed new adaptation governance outside the CCA governance under the UNFCCC or under the RAN-API framework by the Indonesian Government. CCA governance becomes a complex system of governance with polycentricity form. Polycentricity means that there is more than one centre of decision-making structure, and each centre is separated with other centre as an independent decision-making structure (Ostrom et al. as cited in Hooghe and Marks 2004). New form of CCA governance centres might exist outside the dominant CCA governance centres.

Polycentric governance of climate change adaptation spans from the global to village level. Each level of governance usually has dominant governance centre. Initially, the global CCA governance are centred under the UNFCCC authority. Then at the regional level CCA governance is led by ASEAN. Next, the CCA governance at the national level are centred under the BAPPENAS authority through RAN-API framework. Other CCA governance centres might exist outside those governance centres (see figure 3.4.). For instance, Nahdlatul Ulama's Disaster Mitigation and Climate Change Agency (LPBI NU), a religious organisation, renders

adaptation projects outside the RAN-API framework.¹² It has many branches nationally rendering CCA projects independently outside the decision-making process of CCA governance under the BAPPENAS (interview EP02). CCA governance led by the LPBI NU appears as a green square at the national level in Figure 3.4 below.

Figure 3.4 Polycentric Governance of Climate Change Adaptation



Climate Change Adaptation programme, as an intervention to improve people's capacity and to shape human conduct, is traversed by the will to improve (Li 2007). Within a complex polycentric structure of CCA governance, there are many stakeholders involved and many centres of governance. Li uses term trustee to define parties that have the will to improve and claim to know how others should live, to know what is best for them, and to know what they need (Li 2007). All trustees in CCA governance share the same goals to enhance adaptive capacity of the vulnerable people and reduce the climate change impacts. However, trustees have different level of power within this complex polycentric CCA governance. It depends on the extent to which they are involved in the decision-making process and can access the adaptation resources.

Ministries and Agencies are trustees at the same level in horizontal governance hierarchy. Yet, some ministries might have bigger power in implementing and shaping CCA programs. The Public Works and Housing Ministry, for example, was involved in the RAN-API formulation. This ministry can influence the national plan of CCA programmes. The biggest share of adaptation financing from the state budget goes to this ministry. With its influence

¹² Nahdlatul Ulama is the largest mass Muslim Organization in Indonesia. It has around 100 million members (LPBI NU n.d.).

in the decision-making process and exceptional funding from the state budget, the Public Works and Housing Ministry has bigger power than other ministries and agencies to render intervention program to improve adaptation capacity. Building massive adaptation infrastructure might not be the will of all CCA trustees, but the Public Works and Housing Ministry has the budget and a mandate directly from the President to boost infrastructure development. This peculiarity raises a question, whose will to improve is this massive adaptation infrastructure? Is this the Public Works and Housing Ministry's will? Or is it the will to improve of the President to achieve campaign promises to win the election? How much adaptation resources from the state budget that are actually delivered to the vulnerable people?

The local stakeholders, such as the local governments were often not involved in the RAN-API formulation. They had no influence to decide whether their province or cities would be eligible as one of pilot project locations and got the adaptation funding from the state budget. Some of them were powerless because as a result of exclusion in the decision-making process and the adaptation resources distribution. They rely on their regional budgets, funding from international development agencies, or cooperating with ministries that render adaptation projects outside the RAN-API framework such as the Ministry of Environment and Forestry.

USAID is an international actor who also play a role at the national and the sub-national level. USAID has the adaptation resources and can implement intervention program outside the RAN-API framework. USAID has established the so-called *Adaptasi Perubahan Iklim dan Ketangguhan (APIK)* programme to improve the ability of Indonesians to manage climate and disaster risk. APIK has three working areas including East Java, Southeast Sulawesi, and Maluku (APIK n.d.). Southeast Sulawesi and Maluku are not selected as pilot project locations in RAN-API. USAID and the central government have the same will to improve, yet they target different locations for rendering the CCA programmes. Whose "will to improve" will determine in which direction the adaptation resources will be distributed.

Conclusion

Indonesia ratified the Paris Agreement because the UNFCCC had shaped Indonesian preference for climate actions. Initially, the Indonesian Government had no preferences for mitigation and adaptation. The UNFCCC diffused adaptation norm and then it is adopted by the Indonesian Government. Even though Indonesia has no preferences for climate actions at the first, Indonesia attempts to get benefits from the ratification. This thesis finds that

Indonesia has other side interests behind the ratification of the Paris Agreement. Those interests are getting access to adaptation financing, which is the most palpable motive, and realising the Global Maritime Fulcrum. The Paris Agreement ratification brings several implications towards Indonesia's national policies. First, Indonesia must develop and implement the RAN-API. Second, the state budget should allocate funding for adaptation projects, but most of the budget is allocated for infrastructure instead of capacity building projects. Third, ministries and agencies are induced to mainstream adaptation actions, but the implementation is lack of coordination and some of them work outside the RAN-API framework developed by the BAPPENAS. Fourth, the Paris Agreement also influences Indonesia's foreign policy to deliver adaptation assistances to LDCs, but again there is another agenda behind the foreign assistances such as muffling the noise from some the Pacific Island Countries which support separatism in Indonesia. Lastly, the provincial governments are also encouraged to implement the RAD-API. This decision is evident that the CCA governance is a complex governance structure with polycentricity form. Even, there are other centres of governance outside the RAN-API authority. Each stakeholder or trustees involved in CCA governance has the same will to improve the adaptive capacity of the vulnerable group, yet they have different intervention programmes and different targets of beneficiaries. The ambiguity of adaptation and vulnerability concept is one of the causes of this complexity. Trustees with stronger power will determine the direction of adaptation resources distribution. The next chapter discusses the contestation and fragmentation between the BAPPENAS and the MoEF, the two dominant actors in adaptation governance at the national level.

CHAPTER 4

National Contestation and Fragmentation

This chapter addresses the second research question of this thesis: To what extent has a rivalry between the BAPPENAS and the MoEF undermined the implementation of global adaptation agendas under the Paris Agreement framework in Indonesia? The goal of this chapter is to respond to the second objective of this thesis. This chapter aims to scrutinise the nature of CCA at the national level, which is characterised by competition between ministries, particularly the BAPPENAS and the MoEF. The national level becomes the focus of this chapter. This chapter scrutinises the central role of ministries and agencies and interactions between multilevel actors in shaping CCA governance at the national level. It explores tensions between adaptation policy produced by government institutions and multilevel stakeholders involved in CCA governance at the national level. This chapter also meets the primary objective of this thesis to examine the nature of CCA in Indonesia in the post-Paris Agreement.

The arguments of this chapter draw on interview data from 36 participants gathered in 2020 and 2021 through online interviews. The participants are involved in the CCA governance at the national level from various ministries, agencies, NGOs, academia, and international donor agencies. The nature of climate change adaptation (CCA) governance in Indonesia is top-down. Specifically, the central government makes and orchestrates adaptation policies and programme implementation. The ministries and agencies are government institutions that produce national adaptation policies that are in line with global standards and expectations. The formulation of adaptation policy documents usually gets funding and technical assistance from international donor agencies such as the Japan International Cooperation Agency (JICA), the Asian Development Bank (ADB), the German Gesellschaft für Internationale Zusammenarbeit GmbH (GIZ), and the United States Agency for International Development (USAID). Academics from reputable universities based in Jakarta and its surroundings are hired to assist the government in formulating the adaptation policy documents. The adaptation policy documents often mention NGOs to claim that the formulation process has been inclusive or participatory.

This chapter offers two main arguments. The first is that Indonesia's polycentric structure of adaptation governance is detrimental to adaptation actions. The fragmentation and contestation between the BAPPENAS and the MoEF over adaptation policies have created two branches of CCA governance that cause overlapping policies in adaptation

planning, finance, actions, and vulnerability assessment. The second is that the fragmentation and contestation over national adaptation policies results in unintended negative consequences that distribute gains and losses unevenly among CCA stakeholders through exclusion, enclosure, entrenchment, and evasion processes (Sovacool, Linnér, and Goodsite 2015).

The chapter is structured as follows. It begins by examining five levels of multilevel climate change adaptation governance in Indonesia. The next subsection examines the contestation and fragmentation of national CCA policies. It then explores sectoral ego as a classic coordination problem and the political processes behind it. The following subsection examines the political economy of national adaptation policies, including exclusion, evasion, enclosure, and entrenchment processes that cause the suboptimal implementation of national adaptation plans. The final subsection concludes by drawing implications of contestation and fragmentation of climate adaptation policies at the national level for CCA implementation at the local level.

Political Economy of Multilevel Adaptation Governance in Indonesia

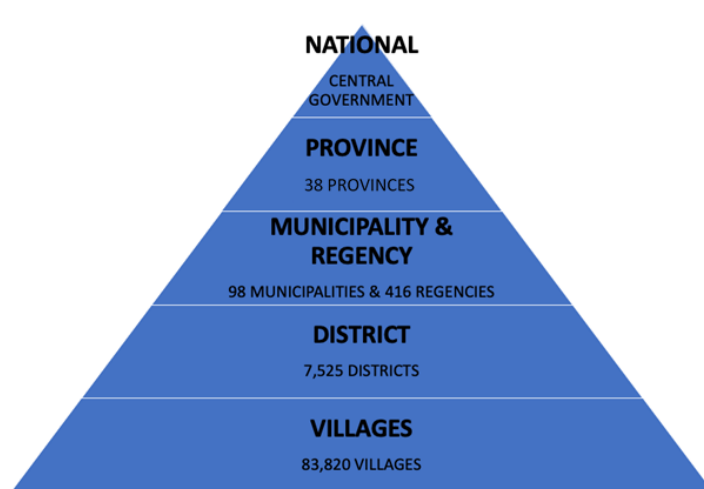
Climate change governance has evolved into a complex polycentric structure that extends from the global to national, province, municipality, regency, district, and village levels (Gregorio et al. 2019). This chapter scrutinises the interactions of multilevel actors at the national level, situated in complex CCA governance arrangements. It builds on a framework by Di Gregorio et al. (2019) that combines concepts of multilevel governance (Hooghe and Marks 2004), polycentric (Skelcher 2005; Ostrom 2010a), and policy networks (Bulkeley 2000; Rhodes 2008).

There are two types of multilevel governance, Type I and Type II. Type I is usually federalism where power sharing occurring at limited levels, and the memberships are not intersecting (Hooghe and Marks 2004, 17). The level of polycentricity is higher in Type II (Di Gregorio et al. 2019). In the context of Indonesia, both characteristics are present. There are some adaptation governances at the national and local level led by the central government, yet there are also many decision-making centres at the local level that the central government cannot fully control. This thesis considers the CCA governance in Indonesia under the climate regime as Type II multilevel governance. It meets the four criteria to be considered as Type II multilevel governance: task-specific jurisdictions, intersecting memberships, many jurisdictional levels, and flexible design (Hooghe and Marks 2004, 20-21). Village communities in Indonesia are served by different public service industries in

adapting to climate change, for instance, the agricultural industry, the fishery industry, the environment industry, the forestry industry, the welfare industry, and the water industry (task-specific jurisdictions). Actors in CCA usually cross borders and the jurisdictions become partly overlap. For example, donor agencies are international actor, but can also operate at the national, and even at the local levels (intersecting memberships). CCA governance is organised across multi layered levels. It is not neatly divided into several levels such as international, national, and local, but sometimes it also forms “multi” and “poly” centred governance (many jurisdictional levels). The design of CCA governance is flexible. It means that adaptation actors can leave or join collective units at different jurisdictions and levels (flexible design) (Hooghe and Marks 2004, 20-21). Multilevel governance is a powerful approach in examining policy performance, connections and interactions to identify the success or failure of environmental policies (Wälti 2010, 418).

Polycentric structure means that there are many independent centres of decision making (Ostrom 2010a), and decision-making processes at multiple levels (Marquardt 2017). Indonesia has five government administrative levels, and each level has decision-making process related to CCA (see Figure 4.1). The policy network approach considers the relational dimension of close-knit network communities. A policy emerges from the interactions between governmental and other actors (Rhodes 2008, 426). The framework of Di Gregorio et al. (2019) helps to examine how power relations between multilevel actors facilitate or hamper interactions in multilevel governance systems. In multilevel governance structure, powerful network communities operating at one level will contain other network communities at different levels of governance (Di Gregorio et al. 2019).

Figure 4.1 Multilevel Governance in Indonesia



The interactions between state and private actors occur across levels, resulting in complex governance arrangements for climate change adaptation in Indonesia (Wälti 2010, 418). Adaptation actors can build coalitions and adaptation policy networks (Bulkeley 2000; Ylä-Anttila et al. 2018). In the Indonesian case of CCA governance, power relations between multilevel actors have created a polycentric structure with two dominant ministries shaping CCA governance with their own network communities (Bulkeley 2000). As stated previously, these are the BAPPENAS and the MoEF. A polycentric structure might help or hinder the effectiveness of climate project outcomes at multiple scales (Ostrom 2010b). Overlapping jurisdictions is one of main features of polycentric governance (McGinnis 2015). Overlapping jurisdictions among adaptation actors often lead to redundancy in adaptation actions.

Redundancy is embedded in the polycentric governance approach. It is one of the advantages of polycentric governance (Ostrom 2012; Carlisle and Gruby 2017). Ostrom (2012) provides an example of redundant design teams that attempt to find the best combination of rules to manage common pool resources in a particular region. Redundancy helps to reduce the probability of failures in managing the natural resources. However, redundancy also has some limitations to mitigate the failure of adaptation initiatives and adaptation resource loss. For instance, the analysis in this chapter shows that uncoordinated redundancy can cause a concentration of adaptation resources in a particular area, such as Java Island, and cause an adaptation gap between regions in Indonesia. Redundancy in adaptation actions needs to be done collectively. Effective coordination is a key to forming collective action that can contribute to polycentricity success (McGinnis 2016). In addition to this point, Gillard et al. (2017), using evidence from the development of polycentric governance in the United Kingdom, highlight the importance of strong central government leadership in developing polycentric governance. The central government can play an important role in building collaboration with private and civic sectors. Analysis in this chapter identifies that the polycentric structure of adaptation governance in Indonesia tends to hinder the effectiveness of adaptation outcomes due to coordination failures that lead to uncoordinated overlapping adaptation initiatives and exclusion of local actors and vulnerable communities.

This chapter incorporates the political economy of climate change adaptation frameworks of Sovacool, Linnér, and Goodsite (2015) and Di Gregorio et al. (2019) in the analysis of CCA governance in Indonesia. The political economy framework examines power relations between multilevel actors and the interactions between CCA stakeholders across different levels. Sovacool, Linnér, and Goodsite's (2015) framework identifies four political

economy processes including enclosure, exclusion, encroachment, and entrenchment (see Chapter 2). From my evidence and analysis, we can find enclosure, exclusion and entrenchment in multilevel stakeholders' interactions at the national level. In Chapter 6 and Chapter 7 we find processes of encroachment in climate adaptation interventions at the village level. This thesis argues that the process of evasion is an additional concept of significance in the political economy of climate adaptation. Evasion is a process where the government avoids what might be better alternatives for CCA actions and retains existing adaptation practices or procedures. The alternatives for adaptation are ruled out because they might work against existing governance institutions (Barnett et al. 2015). For example, an NGO official recommended the Indonesian government to decide priority sectors in adaptation collectively (interview EP17). However, the BAPPENAS and the MoEF did not consider this recommendation. The priority sectors remain unclear. The BAPPENAS and the MoEF have different priority sectors in adaptation.

CCA governance is more complex than climate change mitigation (CCM) governance. An Indonesian representative in the IPCC who was involved in formulating the country's national adaptation plan states that adaptation governance is more complex because it involves more ministries and agencies (interview EP7). The first national action plan on reducing greenhouse gas emissions (RAN-GRK) published in 2011 involved nine ministries, while the national adaptation plan (RAN-API) published in 2014 involved at least 17 ministries and agencies (see Table 4.1). Sectoral ministries and agencies were involved in these complex processes, and each of the actors has a different degree of power that can shape the pattern of relations among CCA actors, control the distribution of adaptation resources, influence the adaptation policies, and determine the implementation of adaptation projects at the national and local levels.

Polycentric Structure of CCA Governance in Indonesia

The climate adaptation agenda is overshadowed by mitigation in terms of scope, breadth and funding, and its progress remains underdeveloped (Di Gregorio 2021, 60). Mitigation agenda usually gets more funding than adaptation and the number of ministries involved in mitigation agenda are less than adaptation agenda. Table 4.1 shows that ministries involved in climate change mitigation (CCM) governance are nine ministries, whereas CCA governance that usually gets less funding involves 19 ministries. The higher number of ministries involved in CCA governance than in CCM governance shows that climate change adaptation gains more attention from the Indonesian Government. Climate change adaptation is not merely a

local agenda but also a national agenda. This trend can mean a positive thing but also can mean a bigger challenge to orchestrate 19 ministries with different interests in conducting national adaptation actions.

Table 4.1 Ministries and Agencies Involved in CCM and CCA

	CCM*	CCA**
1.	The National Development Planning Agency,	The National Development Planning Agency
2.	The Ministry of Public Works	The Ministry of Forestry
3.	The Ministry of Energy and Mineral Resources	National Council on Climate Change (DNPI),
4.	The Ministry of Forestry	The Meteorology, Climatology and Geophysics Agency,
5.	The Ministry of Environment	The Ministry of Agriculture,
6.	The Ministry of Agriculture	The Ministry of Forestry,
7.	The Ministry of Transportation	The Ministry of Public Works, the Ministry of Energy and Mineral Resources
8.	The Ministry of Industry	The Ministry of Industry
9.	The Ministry of Finance	The Ministry of Marine and Fisheries
10.		The Ministry of Health
11.		The Ministry of Housing
12.		The Ministry of Technology and Research
13.		Coordinating Ministry of People's Welfare
14.		The National Land Agency
15.		The Geospatial Information Agency
16.		National Disaster Mitigation Agency
17.		The National Population and Family Planning Board
18.		The Assessment and Application of Technology Agency
19.		The Indonesian Institute of Sciences

**The list is gathered from RAN-GRK document published 2011*

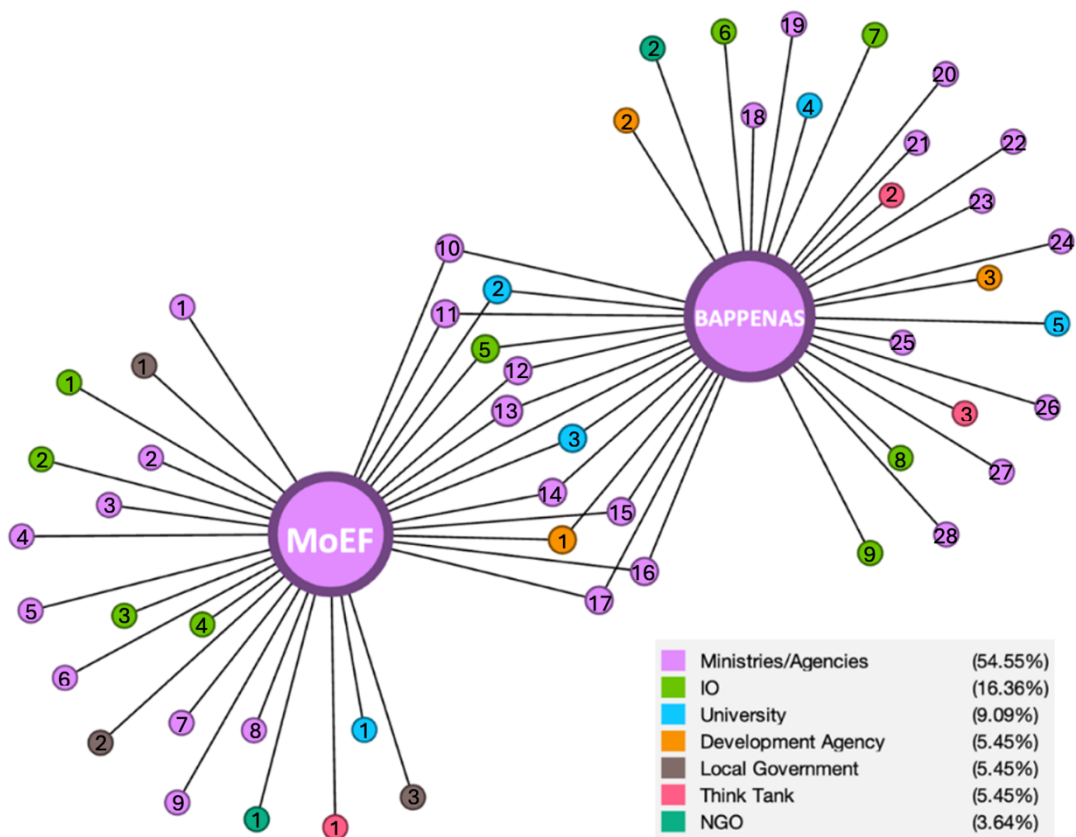
***The list is gathered from RAN-API document published 2014*

The MoEF is the national focal point appointed to represent Indonesia at the international climate change negotiations in the United Nations Framework Convention on Climate Change (UNFCCC) and communicate with local climate change stakeholders in Indonesia (DGCC n.d. a). The BAPPENAS is the ministry that has the mandate to make the National Long-Term Development Plan (RPJP), the National Medium-Term Development Plan (RPJMN), and the Government Annual Plan (RKP). The BAPPENAS is mandated to make the national action plan for reducing greenhouse gas emissions (RAN-GRK) and climate change adaptation (RAN-API).

International actors such as the GIZ were involved in formulating the RAN-API at the national level and assisted local actors in assessing vulnerability for adaptation in South Sumatera Province, Malang City, and Tarakan City (Ministry of Environment 2012). In another case, Partnership for Governance Reform (Kemitraan) is a non-profit civil organisation rendering adaptation projects and is involved in the policymaking process at the national level. However, it is also involved in the COP negotiations at the international level and renders adaptation projects at Pekalongan city. Public-private partnerships are found in CCA governance in Indonesia, even though the business actors involved in CCA governance are limited. Corporations such as PT. Multi Bintang and Cargill are involved in CCA governance in East Java Province by rendering technical assistance to farmers at the village level in collaboration with USAID APIK.

The relations of these multilevel actors create several close-knit network communities at different levels that shape the polycentric structure of CCA governance (Di Gregorio et al. 2019). Figure 4.2 illustrates the polycentric governance structure of climate change adaptation at the national level in Indonesia.

Figure 4.2 Polycentric Governance of Climate Adaptation Planning in Indonesia



Source: Designed by author using Gephi software and based on RAN-API and NDC Adaptation Roadmap documents

List of adaptation actors:

1	The Ministry of Home Affairs	15	The Ministry of Health
2	The Ministry of Social Affairs	16	The Geospatial Information Agency
3	The Ministry of Women Empowerment and Child Protection	17	The National Disaster Management Agency
4	The Meteorology, and Geophysics Agency	18	The Ministry of Environment
5	The Statistics Indonesia	19	The Meteorology, Climatology and Geophysics Agency
6	The Geospatial Information Agency	20	The National Council on Climate Change
7	The Agency for the Assessment and Application of Technology	21	The Ministry of Forestry
8	The Ministry of Public Works and Public Housing	22	The Ministry of Industry
9	The National Institute of Aeronautics and Space	23	The Ministry of Public Housing
10	The Ministry of Finance	24	The Ministry of Research and Technology
11	The Ministry of Agriculture	25	The Coordinating Ministry of Social Welfare Affairs
12	The Ministry of Energy and Mineral Resources	26	The National Land Agency
13	The Indonesian Institute of Sciences	27	The Ministry of Public Works
14	The Ministry of Maritime Affairs and Fisheries	28	The National Population and Family Planning Board

1	ICLEI	6	Plan Indonesia
2	UNDP	7	UN-Habitat
3	OXFAM	8	UN-Women
4	WHO	9	WWF
5	Mercy Corps		

1	ICLEI	1	GIZ
2	UNDP	2	ADB
3	OXFAM	3	JICA
4	WHO	1	PI AREA
5	Mercy Corps		

1	The Environment Agency of Jakarta Province	1	Lembaga Kajian Nawacita
2	The Environment Agency of Bogor City	2	CIFOR
3	The Environment Agency of Tangerang City	3	Ikatan Ahli Perencana

Whereas the governance of adaptation planning is dominated by ministries and agencies (54.5%), there are also involves multilevel actors, such as international organisations, non-governmental organisations, development agencies, think tanks, universities, and local governments that are involved (see Figure 4.2). The policy networks of BAPPENAS and MoEF involve international actors such as UN WOMEN, the World Wildlife Fund, the Japan International Cooperation Agency (JICA), Asian Development Bank (ADB), and the Deutsche Gesellschaft für Internationale Zusammenarbeit GmbH (GIZ). They also involve national actors such as Universitas Indonesia, Institut Pertanian Bogor, Institut Teknologi Bandung, and the Indonesian Association of Urban and Regional Planners (Ikatan Ahli Perencanaan Indonesia, IAP). However, only the MoEF involves local actors such as the Environmental Agencies of Jakarta, Tangerang, and Bogor in the adaptation planning policymaking.

Figure 4.2 illustrates a polycentric structure of adaptation governance at the national level in Indonesia. It shows that the BAPPENAS and the MoEF become two centres in adaptation planning governance with two different close-knit network communities. They are not entirely independent of one another because they share several actors (in the middle)

that work with both in formulating the RAN-API and NDC adaptation documents. Moreover, a line connects the BAPPENAS and the MoEF in Figure 4.2 since they involve each other in formulating adaptation planning. The BAPPENAS appears in the NDC Adaptation Roadmap and the MoEF also occurs in the RAN-API document.

However, the appearance of BAPPENAS in the MoEF's adaptation policy documents does not necessarily mean that the BAPPENAS is involved in the decision-making process under the MoEF authority and vice versa. Figure 4.2 also demonstrates that the BAPPENAS and the MoEF have independent close-knit network communities behind them in making the adaptation planning. The MoEF does not involve many actors aligned with the BAPPENAS in adaptation planning, and vice versa. Both ministries received funding and technical assistance from different donor agencies. They hired experts from different universities using different approaches in adaptation planning and vulnerability assessments. The BAPPENAS and the MoEF have different close-knit network communities because both network communities have different concerns. The BAPPENAS network is primarily concerned with the performance of national economy and development. The MoEF network is primarily concerned with forestry and environment agendas.

The type of polycentric structure I have identified in Indonesia tends to hinder the effectiveness of adaptation outcomes due to overlapping agendas, lack of coordination, and exclusion. Winters and Cawvey (2015) provide an instructive example of how an overlapping governance structure in the renewable energy sector confuses international investors. They find that the investors face difficulties to calculate the prospect of profit due to confusing and overlapping governance structure in the renewable energy sector. For example, an investor must deal with a state-owned electricity company, the Ministry of Energy and Mineral Resources, the Ministry of Finance, province governments, and local governments to begin a renewable energy project (Winters and Cawvey 2015). The BAPPENAS and the MoEF appear to include other network communities in the planning and implementation process of adaptation policies. In reality, however, some inclusion processes are just a formality and do not accommodate the interests of other network communities within the same level or different levels. Other network communities also exist and work independently outside the BAPPENAS and MoEF's formal governance structures. These include NGOs such as LPBI NU and WALHI that have adaptation projects but work outside the government's adaptation framework. To summarise, while polycentric governance is not limited to rivalry at the centre between the BAPPENAS and the MoEF, this chapter focuses on power relations between these two dominant ministries in Indonesia and how the contestations over CCA policies

hamper adaptation actions. The following subsection examines the complexity of CCA governance at the national level by focusing on Indonesia's national adaptation policies under the Paris Regime.

Indonesia's National Adaptation Policies in the post-Paris Agreement

Indonesia's climate adaptation policies pre-date the Paris Agreement. Adaptation policies have however been evolving rapidly since the Paris Agreement. They can be traced from four NDC documents submitted to the UNFCCC. This subsection analyses the evolution of Indonesia's national adaptation policies by analysing Indonesia's commitment in the NDC documents submitted to the UNFCCC. Table 4.2 charts Indonesia's adaptation commitments disseminated internationally from September 2015 to October 2022. The BAPPENAS officials recount that climate adaptation was included in the National Medium-Term Development Plan (RPJMN) during President Yudhoyono's first term from 2004 to 2009 (interview EP31).

Table 4.2 Indonesia's CCA Commitments

CCA National Policies	Institutions	INDC	1 st NDC	Updated NDC	ENDC
National Action Plan on Climate Change Adaptation (RAN-API)	BAPPENAS	✓	✓	✓	✓
The inclusion of adaptation into the national development planning policies: the National Medium-Term Development Planning (RPJMN) 2020-2024	BAPPENAS	✓	✓	✓	✓
Climate Vulnerability Index Data Information System (SIDIK)	MoEF	X	✓	✓	✓
Guideline for Development of National Adaptation Plan (2016)	MoEF	X	✓	✓	✓
Climate Village Programme (Climate Village Programme)	MoEF	X	✓	✓	✓
National Registry System (SRN)	MoEF	X	✓	✓	✓
The Long-Term Strategy on Low Carbon and Climate Resilience (LTS-LCCR) 2050	MoEF	X	X	✓	✓
The inclusion of adaptation into Indonesian Vision 2045	BAPPENAS	X	X	✓	✓
Indonesian Environment Fund (BPD LH)	MoEF, MOF, and CMOEA	X	X	✓	✓
Guideline for Assessing Vulnerability, Risk, and Impact of Climate Change (2018)	MoEF	X	X	X	✓
The NDC Adaptation Roadmap	MoEF	X	X	X	✓
Targeting 20,000 Climate Village Programme locations in 2024	MoEF	X	X	X	✓

INDC: Intended NDC submitted September 2015

1st NDC: submitted November 2016

Updated NDC: submitted July 2021

ENDC: Enhanced NDC submitted October 2022

CMoEA: Coordinating Ministry of Economic Affairs

Documentary analysis shows the 2015 INDC document only lists two adaptation commitments, including developing and implementing the National Action Plan on Climate Change Adaptation (RAN-API) and incorporating adaptation into the National Medium-Term Development Plan, known as RPJMN 2020–2024. The 2016 NDC document provides more adaptation commitments. It shows five new commitments with respect to adaptation. They are developing a nationwide Climate Vulnerability Index Data Information System (Sistem Informasi Data Indeks Kerentanan, SIDIK), providing a guideline for the development of a National Adaptation Plan to help sub-national government formulating adaptation planning, establishing Climate Village Programme and developing a National Registry System (Sistem Registri Nasional/SRN). By adding five new commitments, the 2016 NDC document shows some enhancements, but they still lack detailed explanations and clear targets as mitigation commitments. In the 2016 NDC document, mitigation commitments are followed by clear and measurable targets such as setting an unconditional emission reduction target of 29% and a conditional target of 41%, and setting new and renewable energy targets of at least 31% of the total energy mix by 2050. In contrast, the adaptation targets in the 2016 NDC appears too general, such as reducing risks in all development sectors, hence the commitments are difficult to measure.

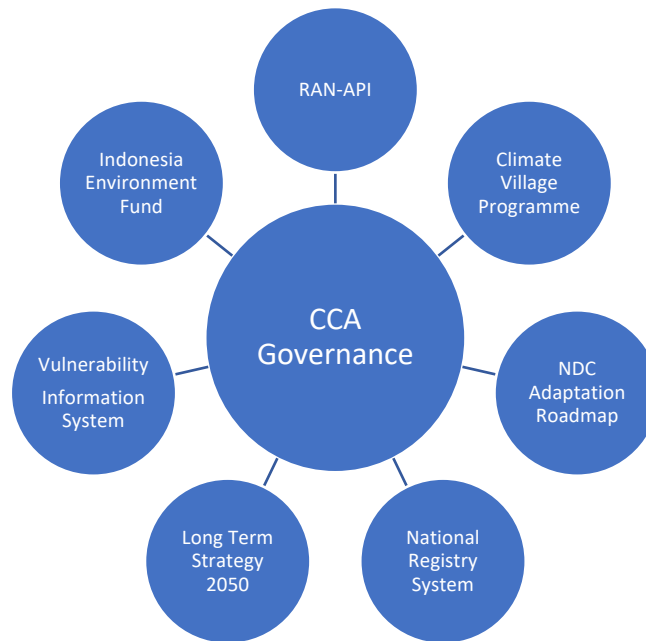
The updated NDC submitted in 2021 includes improvements and additional information on the government's policies and actions. The updated 2021 NDC brings in three new commitments related to adaptation. It adds the Long-term Low Carbon and Climate Resilience Development Strategy, the inclusion of adaptation into Indonesian Vision 2045, and the Indonesian Environment Fund (Badan Pengelolaan Dana Lingkungan Hidup, BPD LH) as new adaptation commitments. Moreover, adaptation gets more attention and comes with an annex providing detailed information on the adaptation strategies and actions. The updated 2021 NDC is supposed to follow up on the 2016 NDC document, but it does not elaborate on the Climate Village Programme and RAN-API, even with Annex 2 focused on adaptation the information is still lacking.

In 2022 the Indonesian Government established the Enhanced Nationally Determined Contributions (ENDC). Despite the name, there is no significant enhancement from the previous NDC, but there are four new paragraphs claiming that Indonesia's policies have conformed to global adaptation principles. The new ENDC suggests that the Indonesian Climate Vulnerability Index Data Information System (SIDIK) is consistent with the global adaptation principle of enhancing adaptive capacity, strengthening resilience, and reducing vulnerability to climate change. Ministerial Regulation No P.7/2018 on Guidelines for

Assessing Vulnerability, Risk, and Impact of Climate Change has been implemented to support SIDIK, and Indonesian government announced an NDC Adaptation Road Map to further the climate agenda, in procedural terms at least (Republic of Indonesia 2022). The new ENDC suggests that Indonesia has adopted the Paris mandate and Glasgow Climate Pact concerning non-party stakeholders' engagement by proclaiming that 20,000 'climate villages' will be established by 2024. These bureaucratic initiatives show that the Indonesian government has gone some way to adopting global adaptation norms through the NDC commitments made and the documents submitted to the UNFCCC.

Indonesia has made a range of national adaptation commitments to demonstrate its contingent acceptance of global adaptation principles. In technical terms, the government is committed to enhancing adaptive capacity, strengthening resilience, reducing vulnerability, increasing transparency, raising climate adaptation finance, and engaging with non-party and non-governmental stakeholders. Indonesia has made at least 12 adaptation commitments since the COP 21 in Paris in 2015. Seven of which are the main pillars of CCA governance in Indonesia (see Figure 4.3). These commitments have instrumental effects (Ferguson 1994) that the Indonesian government can use at the climate negotiation table. The combination of adaptation and mitigation commitments can be a bulwark against pressure from ambitious UNFCCC parties. Indonesia can make commitments without necessarily doing something significant in the implementation. The pressure from ambitious developed countries like the European Union can be in the form of banning Indonesian strategic export products such as palm oil, coffee bean, soya bean, cacao, rubber, and timber due to deforestation issues (Mada, 2023). Being isolated from climate negotiations is another pressure experienced by Indonesia. Approaching COP 26, the UN, United Kingdom, and France hosted the Climate Ambition Summit 2020 and invited countries that had ambitious climate commitments. Some countries were not invited as a symbol that they were excluded from the ambitious group. Indonesia was not invited because Indonesia did not improve its mitigation target since 2016 and got a red report for climate ambition (Simanjuntak 2021a).

Figure 4.3 Seven Pillars of CCA Governance in Indonesia



As a fundamental national adaptation policy, the National Action Plan on Climate Change Adaptation (RAN-API) was established in 2014 under the Cancun Adaptation Framework. All the Indonesian NDC documents mention RAN-API as one of the most significant efforts made by the Indonesian government under the authority of the BAPPENAS. However, since 2014 there has been no updated RAN-API document. The BAPPENAS only made the RAN-API review document in 2018. The policy has in effect been discontinued. The BAPPENAS has instead launched the Climate Resilience Development Policy 2020-2045 (Pembangunan Berketahanan Iklim, PBI), claiming this new policy is more comprehensive (interview EP31). The Climate Resilience Development Policy 2020-2045 consists of key themes covering the list of project locations, institutionalisation of climate resilience, non-governmental actors' role, finance, monitoring, assessment, and reporting.

Documentary analysis shows the new BAPPENAS Climate Resilience Development Policy 2020-2045 is more comprehensive but also more exclusive, with limited connection to other adaptation policies produced by the MoEF. For instance, the BAPPENAS Climate Resilience Development Policy 2020-2045 and the MoEF Climate Vulnerability Index Data Information System (SIDIK) have contrasting vulnerability mapping because they utilise different methods in assessing vulnerability (see Chapter 5). The exclusivity between the BAPPENAS and the MoEF is consistent with a polycentric structure of adaptation governance where each centre is independent of each other (Ostrom 2010a).

The 2014 National Action Plan on Climate Change Adaptation (RAN-API) has been superseded by the BAPPENAS Climate Resilience Development Policy 2020-2045 as well as the MoEF NDC Adaptation Roadmap as a national climate adaptation guideline. The roadmap aims to be used as a guideline for governmental and non-governmental stakeholders in implementing adaptation programmes and actions to achieve comprehensive NDC targets whereby the MoEF acts as the national focal point of the implementation. The roadmap also aims to bridge the gap between RAN-API and NDC targets (MoEF 2020, 6). In formulating this document, the MoEF receives assistances from the German GIZ.

In addition to the NDC Adaptation Roadmap, the MoEF has launched the Long-Term Strategy for Low Carbon and Climate Resilience 2050. The MoEF submitted this strategy to the UNFCCC in July 2021, making Indonesia the 31st country to do so. In accordance with the Paris Agreement Article Four, Paragraph 19, all parties should strive and communicate their Long-Term Strategy for Low Carbon and Climate Resilience by considering the Common but Differentiated Responsibilities principle and their national circumstances (United Nations 2015). The Long-Term Strategy should have been submitted by 2020, but Indonesia was late with the submission, as were many of the parties (UNFCCC n.d.d). The Long-Term Strategy and NDC Adaptation Roadmap documents are the reference points for other ministries in formulating their strategic plan as well as implementing adaptation projects. However, the implementation remains suboptimal and the engagement of these documents with other ministries is still minimal.

The MoEF Climate Vulnerability Index Data Information System (SIDIK) is a national vulnerability assessment system developed by the MoEF to allow public access to online vulnerability data from all villages, including an adaptive capacity index, exposure and sensitivity index, drought risks, and flood risks. The data is also useful for development consultants hired by the ministries or development agencies, for instance, to diagnose the vulnerability level of each of the villages. SIDIK is claimed by the Indonesian Government as the backbone to support the transparency framework along with the National Registry System that gathers data on mitigation and adaptation projects. There are some drawbacks to these systems, however, as vulnerability assessment processes do not involve stakeholders from the local level who might understand the local situation better. Three local environment agency officials disclosed that they were not involved in the data collection process to build the Climate Vulnerability Index Data Information System, and they do not use these vulnerability assessments as a basis to select Climate Village Programme locations (interviews EP23, EP25 and EP26).

The Climate Village Programme is promoted to be a leading programme for adaptation under the MoEF authority. Three NDC documents mention the Climate Village Programme as one of Indonesia's key adaptation actions. In 2021, President Jokowi (2021a) stated, "Indonesia has updated our NDC to increase resilience and adaptability. We must mobilise all community potentials. Indonesia has engaged its community to mitigate climate change through the Climate Village Program to cover 20,000 villages by 2024." The quote from President Jokowi is convoluted because he uses "mitigate climate change" terms when he is referring to adaptation actions. Mitigating climate change here perhaps refer to disaster mitigation or disaster risk reduction. The main point from that quote is that President Jokowi claims that the 20,000 climate villages target will increase local communities climate resilience and adaptive capacity. Achieving 20,000 'climate village' proclamations within three years is an ambitious target. It is almost a quarter of the total villages in Indonesia. This target is supposed to be included in the annex of adaptation since the President mentioned it in the 2021 Climate Adaptation Summit. This target is not mentioned as an enhancement of adaptation targets in the updated NDC submitted in July 2021. It also shows that there is a missing link between President's team and the MoEF team that formulate the updated NDC. The 20,000 Climate Village Programme target appeared later in the ENDC document submitted in October 2022. This delay shows either poor coordination between the President's staff and the MoEF or a strategy not to play Indonesia's best hand in a long game of climate negotiations.

In the financial sector, the establishment of the Indonesian Environment Fund (BPD LH) is claimed by the government as a breakthrough to strengthen climate financing. The Indonesian Environment Fund was not part of the 2016 NDC, but rather was launched in October 2019 as a non-echelon unit. It was established through a collaboration between the Ministry of Finance, the MoEF, and the Coordinating Ministry of Economic Affairs, excluding the BAPPENAS. The Indonesian Environment Fund is structurally operationalised under the Ministry of Finance, and it has the strategic authority to manage and mobilise funds for environmental programmes (BPD LH 2020). Climate finance can be mobilised from multiple sources, including national, international, public, and private sources within bilateral and multilateral cooperation (MoEF 2021). In addition to the establishment of the Indonesian Environment Fund, the Ministry of Finance also has a budget tagging policy to tag and identify climate budgets nationally, which in theory enables them to control and monitor climate change spending by all ministries and agencies (BPD LH 2020). The budget tagging policy

encourages the ministries and agencies to tag their climate mitigation and adaptation spending.

The BAPPENAS may have been excluded from the Indonesian Environment Fund but it retains a strategic position in CCA governance. It has the power to create adaptation planning that all ministries and agencies should refer to. However, several adaptation achievements by the BAPPENAS are excluded from the NDC documents. Prior to the establishment of the Indonesian Environment Fund, the BAPPENAS ran the Indonesia Climate Change Trust Fund (ICCTF) in 2009 to finance mitigation and adaptation actions, but this was not mentioned in the NDC documents. As mentioned, the BAPPENAS most recently launched the Climate Resilience Development Policy 2020-2045 in April 2021, yet the MoEF did not include this policy in the updated NDC and ENDC documents. The MoEF only mentioned the Long-Term Strategy for Low Carbon and Climate Resilience 2050 in the NDC documents. The peculiarity of this fragmentation raises the question of why there is a contestation over CCA policies between two dominant ministries in CCA governance. This question will be addressed shortly.

Despite the ongoing BAPPENAS-MoEF rivalry, the fact that there is some adaptation policy coordination by ministries marks a significant milestone in adaptation mainstreaming efforts in Indonesia. This includes sectoral ministries such as the Ministry of Public Works and Housing, the Ministry of Women Empowerment and Child Protection, the Ministry of Agriculture, and the Ministry of Transportation. There are differences in approach, however, as the Ministry of Public Works and Housing seeks to integrate mitigation and adaptation into one policy document. The Ministry of Agriculture and the Ministry of Women Empowerment and Child Protection, by contrast, produce separate guidelines for CCA and mitigation. The Ministry of Transportation has a specific policy addressing green aviation in Indonesia that includes mitigation and adaptation.

Overall, this subsection shows adaptation commitments in the NDC documents from INDC to ENDC. It reveals the polycentric governance structure in adaptation by identifying that adaptation policies made by the BAPPENAS and the MoEF work independently. The examination of adaptation commitments also reveals contestation over CCA policies between the BAPPENAS and the MoEF. The next subsection elaborates further on contestation over CCA policies.

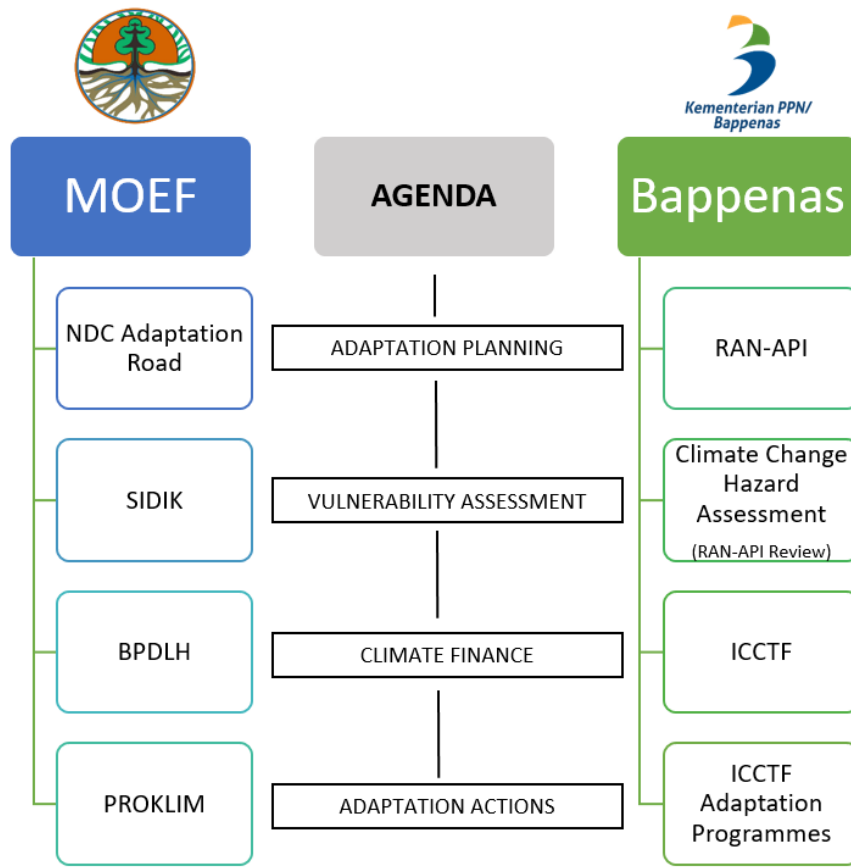
Two Branches of CCA Governance

Fragmentation between ministries in Indonesia has been observed in many sectors. For example, Medrilzam, Dargusch, and Herbohn (2011) found that the Ministry of Forestry used to manage forest areas exclusively according to the Indonesia Forestry Law of 1999. They also mentioned that the Ministry of Environment and the BAPPENAS published the National Action Plan on Climate Change Mitigation and Adaptation and the Yellow Book as key climate change policies in 2007.¹³ However, other ministries did not support both policy packages (Medrilzam, Dargusch, and Herbohn 2011). With the merger of the ministries of environment and forestry in 2014, a new rivalry was created with the BAPPENAS. Data from 16 interviews highlights the rivalry between the BAPPENAS and the MoEF. Thus, this section focuses on the contestation and fragmentation between the BAPPENAS and the MoEF over CCA policies. This subsection examines power relations between dominant government institutions within the CCA context. The National Development Planning Agency is more influential, and its primary objective is economic development and growth. Each ministry has its exclusive CCA mainstreaming agenda. It results in the fragmentation of adaptation policies and suboptimal implementation of the national adaptation plan. A rivalry between the BAPPENAS and the MoEF leads to considerable contestation over CCA policies. It exacerbates the coordination problem in CCA governance and produces two exclusive branches of adaptation governance rooted down to the grassroots level.

In addition to 16 interviews, this thesis has evaluated 20 relevant adaptation policy documents (see Appendix II) to gain an understanding of national adaptation policies made by the BAPPENAS and the MoEF. Several overlapping national policies have been found through the document analysis process. Figure 4.4 illustrates two contentious branches of CCA national policies under the BAPPENAS and the MoEF authority in every adaptation agenda, including adaptation planning, vulnerability assessment, climate finance, and adaptation actions. The national adaptation planning becomes ambiguous. It is opaque whether it is national or just ministerial adaptation planning. Vulnerability assessment remains contentious with two models of assessment. Two brokers of climate finance continue to exist under the BAPPENAS and the MoEF. Finally, there are no concerted adaptation actions. Concerted actions only exist within a chain of command of each ministry.

¹³ In 2007 the BAPPENAS published a book 'The National Development Plan: Indonesia's Response to Climate Change' which is then referred to as the Yellow Book (Indrarto 2012).

Figure 4.4 Two Branches of CCA Governance



Rhodes (2008, 426) mentions that within a policy network, public and private actors are interdependent, and policy emerges from their interactions. The previous subsection reveals that the BAPPENAS and the MoEF produce different adaptation policies despite their frequent interaction and collaboration. However, their interactions lead them to different paths of adaptation policies. It raises a question: what disrupts the interactions between the BAPPENAS and the MoEF, causing policy divergence? To answer this question, this chapter uses a policy network framework for analysis (Di Gregorio 2019), as well as evidence from elite participants who have been asked which organisations they regularly exchange information with and collaborate with.

There is mutual recognition and acknowledgment between both key ministries that can be traced back to policy documents and statements. The BAPPENAS mentions the MoEF in its National Adaptation Plan, just as the MoEF cites the BAPPENAS in its NDC Adaptation Roadmap. Respondents from both ministries claim that they regularly cooperate and collaborate, inviting each other to join in the policy formulation processes (interviews EP4 and EP31). A policy network analysis would consider them as actors in a close-knit network community with frequent interactions, although beyond the surface there is fragmentation and contestation over adaptation policies between the BAPPENAS and the MoEF. Policy

network theory does not fully account for this level of fragmentation and contestation over adaptation policies, even when the BAPPENAS and the MoEF have frequent interactions. This thesis focuses on the political economy approach to explain this fragmentation and contestation.

Both the BAPPENAS and the MoEF have developed adaptation policies and programmes. Bringing in Li's (2007) idea on how to render power visible, the reactions of each ministry to the other's policy and programme packages render power relations and contestation visible. Sometimes they accommodate each other policies, and sometimes they refuse other policies. As an illustration, the MoEF accommodated the RAN-API made by the BAPPENAS and included it in all NDC documents. A resistance reaction was shown when the MoEF did not include the 2009 Indonesia Climate Change Trust Fund or the Climate Resilience Development Policy 2020–2045 developed by the BAPPENAS in the NDC documents. Rather, the MoEF listed its own Indonesian Environment Fund and Long-Term Strategy for Low Carbon and Climate Resilience 2050 in the NDC documents. The exclusion of several BAPPENAS adaptation policies could mean two things. The MoEF does not acknowledge those policies for particular reasons such as the BAPPENAS policies not following the Paris Agreement timeline, or the MoEF attempts to avoid adaptation policy duplications appearing in NDC documents. This preferential approach could confuse adaptation stakeholders in understanding the architecture of adaptation governance in Indonesia. Adaptation stakeholders that refer to the NDC documents could misunderstand that Indonesia only has the Indonesian Environment Fund (BPD LH) as the only climate finance agency. At the same time, there is also the Indonesia Climate Change Trust Fund under the BAPPENAS.

Interviews with the BAPPENAS and the MoEF officials revealed a cordial relationship between the two ministries. Sources from both sides claimed that there was no contestation or rivalry between them during my fieldwork. The MoEF coordinated with the BAPPENAS related to RAN-API implementation and revision to align with the IPCC guidelines. A director from the MoEF dropped a name from BAPPENAS during the interview to show that they communicated with each other (interview EP05). A BAPPENAS official also denied a contestation between the BAPPENAS and the MoEF (interview EP31). This official was aware of the perception that there was a contestation between the BAPPENAS and MoEF: "I understand that people do not follow the process and think there is a dichotomy between BAPPENAS and the MoEF. I am sometimes confused with this perception developing in many parties" (interview EP31).

However, the information I gathered from 36 elite interviews clearly indicates the opposite. Many of the elite participants believe that there is a contestation over CCA policies between the BAPPENAS and the MoEF. The contestation might not be visible, but they can feel the presence of power contestation from observing the dynamics of the meeting and the result of adaptation policies. It causes contentious national adaptation planning at the national level. Sixteen out of 36 elite participants raise the contestation notion. Most of them mentioned a rivalry between the BAPPENAS and the MoEF. A scholar hired as a consultant in two ministries revealed that the contestation existed between the BAPPENAS and MoEF, and found that the policies between the two were not synchronised (interview EP08). The same source specifically mentioned the RAN-API and NDC Adaptation Roadmap as unsynchronised national adaptation policies (interview EP08). An NGO official involved in climate adaptation claimed that there was a contestation between the BAPPENAS and the MoEF, and added that the problem went beyond coordination (interview EP11). Even though the BAPPENAS always invite the MoEF representatives for adaptation meetings, and vice versa, there was no agreement between the two in dividing the roles. Both consider themselves as a coordinator for adaptation and mitigation issues (interview EP11). An official from the Ministry of Finance suggests that the relationship between the BAPPENAS and the MoEF appears fine on the surface, but he senses that something is wrong:

Perhaps the relationship looks fine with the naked eye, but it lacks synergy between them in practice. That is what I can capture. I do not dare to talk further. I am afraid to say something wrong. Public will know what really happens. You can try to map "products" made by the BAPPENAS or the MoEF. Could you spot any product that is misplaced? (interview EP33).

Many informants seem to agree that even though power is intangible, they can sense the power contestation between the BAPPENAS and the MoEF. Following the admission by interviewee EP33, this thesis has identified and compared the "products" or policies made by both ministries including adaptation planning, vulnerability assessment, climate finance, and adaptation actions (Figure 4.4). To place these claims into context, the next section explores policy documents released by both ministries and analyse interviewees' responses with respect to policy outcomes and contestation theme.

Sectoral Ego and Contestation Quartet

When the interviewees shared their thoughts on contestation between the BAPPENAS and the MoEF, sectoral ego was a key theme. The discussion of sectoral ego and contestation became inextricably linked with four agendas.

Sectoral Ego: The classic mantra for poor coordination problem

CCA Governance in Indonesia is beset with sectoral ego and coordination issues among the ministries and agencies at the national level. Sectoral ego and coordination are usually used as an answer template for all questions about governance problems. Almost all elite participants in my thesis listed sectoral ego and coordination as answers to CCA governance problem. The most common response at the start of interviews was “it’s a classic problem” before elaborating on sectoral ego and coordination. These answers might seem banal, but the crucial fact is that they experienced sectoral ego and coordination problems in their daily routine. Problems of sectoral ego and coordination have existed in one form or another since the Republic’s independence. This thesis finds that sectoral ego is one cause of coordination breakdown between government institutions in Indonesia.

‘Ego sektoral’ or sectoral ego has become a common term used by many Indonesian Government officials, political leaders, scholars, and NGO activists to explain competition and fragmentation between ministries or agencies in Indonesia. President Jokowi, in several speech occasions, also addressed sectoral ego as a fundamental obstacle for ministries and agencies to collaborate. For example, during a plenary cabinet meeting in December 2023, President Jokowi highlighted the global economic situation that was not in a good state due to financial and food crises. The President stated, “The key, once again, lies in the collaboration among ministries and agencies. We must avoid sectoral ego” (Widodo 2022).

Many literatures that analyse coordination problems between government institutions also often use sectoral ego to explain competition, lack coordination and overlapping policies between ministries or agencies in Indonesia (Mulyani and Jepson 2013; Junita 2015; Mulyani and Jepson 2016; Budiman and Smits 2019; Novyanza et al. 2020; Susanto et al. 2020; Afriansyah et al. 2023; Prasetyo, Surtiari, and Nawawi 2023). However, studies that offer in-depth insight into sectoral ego theme remain underexplored (but see Pangaribuan 2022). This article offers some important insights to advance the understanding of sectoral ego drawing from the experience of elite respondents involved in national adaptation governance.

Some literature has offered some definitions to understand sectoral ego. Mulyani and Jepson (2016, p.14) defines sectoral ego as a condition, “where policy actors put the interest of their ministries.” Novyanza et al. (2020, 7) also provides similar explanation and refer sectoral ego as, “a feeling of pride in one’s own institution. This has often led institution staff to prioritize their organizational interests and to reject collaboration if it was perceived to jeopardize the institution’s priorities.” Budiman and Smits (2019, 11) focus on cooperation problem and explains institutional or sectoral ego as, “the selfish attitude of an institution that avoids cooperation.” Pangaribuan (2022, 1) has included several key ideas mentioned earlier and describes sectoral ego as a phenomenon where governmental actors prioritise their institutional interests and refuse to cooperate in attaining a common purpose. Pangaribuan (2022) finds that there is a typical narrative built by the Indonesian governmental elites to describe sectoral ego. They see that in order to reduce sectoral ego, government institutions must build cooperation. Sectoral ego and cooperation have always been used in tandem in explaining coordination problems between government institutions. Overall, there are several key terms used by those four literatures to define sectoral ego, such as interests, pride, priorities, selfish, rejecting collaboration, and avoiding cooperation.

Elite respondents also mentioned those key terms during interviews and presented other key terms to advance the understanding of sectoral ego or silo. An NGO official with experience in the CCA governance said there was no cohesive paradigm and policy direction in this area. Everything was based on a sectoral issue where each ministry and agency officials put its ego first. For instance, it is possible to incorporate disaster management and climate change in a governance structure, but this does not happen in Indonesia because of competition and ego (interview EP02). Another NGO official recounted that the CCA agenda features in both the BAPPENAS Long Term National Development Planning 2005–2025 and the MoEF Long-Term Strategy on Low Carbon and Climate Resilience 2050, which means development partners and donor agencies are unsure who they should seek support from (interview EP13). Both long-term plans have different planning periods.

The MoEF, as a sectoral ministry, has a mandate as a national focal point that should bridge the communication between the Indonesian government and other Parties (interview EP17). The logic is that the MoEF must consolidate all sectoral ministries and agencies to achieve NDC targets. However, it was not the case that the MoEF could coordinate all ministries and agencies. The fact was that the national focal point mandate was delegated to the Directorate General of Climate Change (DGCC). Transferring the CCA coordination

mandate to the Directorate General level would be inadequate to coordinate other more powerful or highly ranked ministries and agencies (interview EP17).

Some government officials also acknowledge the presence of sectoral ego or silo in CCA governance. All government officials interviewed admitted that sectoral ego becomes a major obstacle in CCA governance that affects the coordination among ministries and agencies. An official from the MoEF said that the main challenge of CCA governance was the sectoral ego problem. According to her, sectoral ego referred to a condition where each of the ministries and agencies assumed adaptation is not their tasks and functions, so the staff did not have a sense of belonging to the adaptation agenda (interview EP05). Sectoral ego discussion also occurred during elite interviews with the Ministry of Finance and the Ministry of Agriculture officials, but they explained it slightly differently. The Ministry of Finance official viewed sectoral ego as a situation where each ministry had its respective mandate. They always prioritised their mandate, which sometimes hindered them from supporting other ministries (interview EP33). The Ministry of Agriculture official described sectoral ego as a condition where there was no integration among ministries because each ministry had its respective realms and should not step on another's foot (interview EP27).

The information from elite participants has provided new perspectives on understanding sectoral ego among ministries and agencies in Indonesia. Sectoral ego is not merely about the pride and interest of each ministry. It is also about how the ministries and agencies are reluctant to get involved in other ministries' agendas and are very strict on tasks and functions. The inflexibility of tasks and functions hinders coordination among ministries. The elite interviews provide insights into sectoral ego and several key terms related to sectoral ego have been identified, including sector, tasks and functions, mandate, pride, reluctance, interest, inflexibility, and partition. Table 4.3 provides an elaboration of each term:

Table 4.3 Key Terms Related to Sectoral Ego Theme

Key Terms	Explanation
Sector	This term appears repeatedly in almost all interviews. Sector refers to one particular affair in which ministries or agencies focus their activities. The division of affairs is regulated by Law No. 39/2008 on state ministries. Article 5 divides ministries into three main groups based on their specific affairs. Group one comprises ministries focusing on foreign, home, and defence affairs. The nomenclatures of the three ministries are highlighted in the 1945 Constitution of the Republic of Indonesia (UUD 1945). Group two covers ministries focusing on particular areas mentioned in the 1945 Constitution. Forestry, finance, and energy affairs are some examples of this group. The MoEF is categorised into this group. Group three includes

Key Terms	Explanation
	<p>ministries with specific affairs to sharpen, coordinate, and synchronise government programmes such as the BAPPENAS that coordinates national development planning. A consultant who used to work for the BAPPENAS mentioned that climate change was a cross-sectoral issue, but ministries usually worked based on their own sector and did not cross to another sector (interview EP12).</p>
<p>Tasks and functions (Tupoksi)</p>	<p>Elite respondents usually use “<i>tupoksi</i>”, the abbreviation for “<i>tugas pokok dan fungsi</i>”, to refer to tasks and functions of each ministry or agency. Each ministry has specific tasks regulated by Article 7 of Law No. 39/2008 to support the President in running the government. The tasks have been divided into several affairs based on the division found in Article 5. The functions of each ministry are regulated by Article 8. Each ministry has specific functions. For instance, ministries in group two have functions to conduct technical mentoring, supervise the programme’s implementation at the local level, and implement technical activities nationally. Climate Village Programme is an example of technical activities in the environment sector under the MoEF. An NGO activist stated that the ministries’ bureaucracies were trapped in their tasks and functions. For instance, the MoEF might improve emission reduction policies by making a moratorium policy to reduce deforestation. However, the MoEF could not influence the Ministry of Energy and Mineral Resources to change their energy policies (interview EP20).</p>
<p>Mandate</p>	<p>This term is distinct from tasks and functions. It is an authority that is transferred to the ministries or directorates to perform specific actions for the government. For instance, President Joko Widodo has given the Directorate General of Climate Change the authority to perform as the National Focal Point of the Indonesian Government for the UNFCCC under Presidential Decree No. 16/2015. It has functions to facilitate programmes and processes with respect to climate change actions implemented by various government sectors and stakeholders (DGCC, 2017). This specific mandate is not regulated by Law No. 39/2008. A scholar involved in the formulation of RAN-API mentioned that the BAPPENAS and the MoEF have different mandates and different, sometimes competing, interests (interview EP08).</p>
<p>Partition</p>	<p>Inflexibility in implementing tasks and functions has built partitions that divide ministries (interview EP17). Partitions hinder coordination and collaboration between ministries because they perform in separate “tasks and functions bubbles”.</p>
<p>Pride</p>	<p>Each ministry usually feels more capable than the others and likes to fly their own flags (Anindya, 2019; Novyanza, 2020). A ministry official gave a smart climate agriculture programme as an example. It was a flagship programme under the Ministry of Agriculture. However, they implemented it as their own ministry’s programme, not as a collaborative programme with other ministries involved in CCA (interview EP04).</p>
<p>Interest</p>	<p>Each ministry has interests in implementing their tasks and functions first, performing activities in their sector and achieving a good performance</p>

Key Terms	Explanation
	evaluation. The interests and adaptation actions of each ministry are driven by the strategic planning (<i>Rencana Strategis/RENSTRA</i>) of respective ministries (interview EP12). An NGO chairman working on CCA mentioned that many ministries had competing interests over climate change projects and there was no higher institution above the ministries that could manage those competing interests (interview EP02).
Inflexibility	Some elite participants mentioned that ministries were inflexible with their tasks and functions (interview EP02; interview EP17). The ministries were too focused on their tasks and functions. Hence, they tended to be reluctant to get involved in other ministries' programmes.
Reluctance	Sometimes ministries are reluctant to collaborate or support other ministries' programmes because they are not related to their tasks and functions or mandates (interview EP13; interview EP20). An official from the Ministry of Finance pointed out that it was difficult for ministries to work collectively for the same purpose as tackling climate change (interview EP33).

Figure 4.5 The Origin of Sectoral Ego in CCA

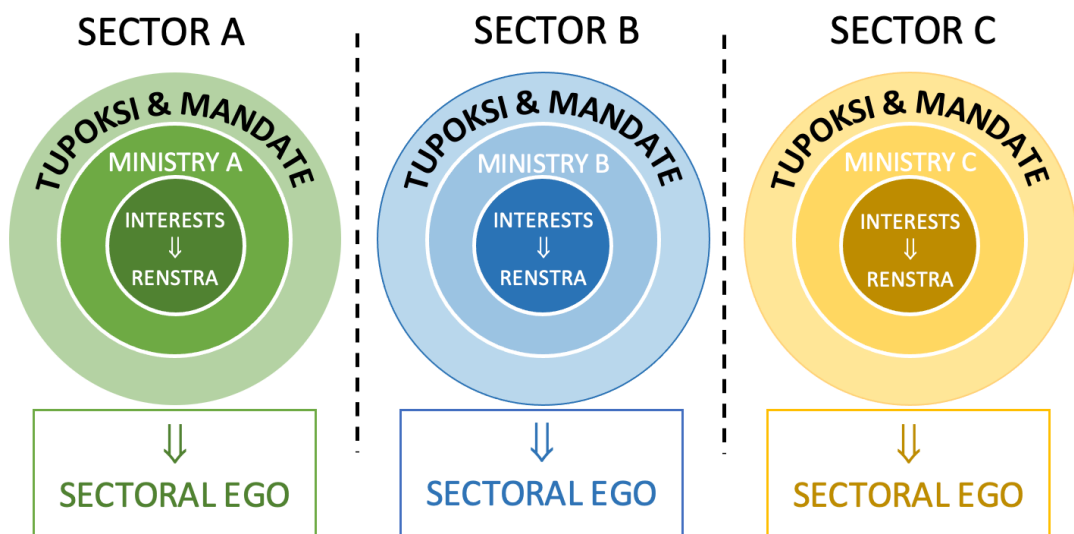


Figure 4.5 illustrates the origin of sectoral ego based on the elite participants' information. The biggest circle shows tasks and functions and mandates boundaries that limit the activities and programmes of each ministry from the beginning. The tasks and functions and mandate guide the ministries to perform in a particular sector. Three big circles become tasks and functions and mandate bubbles for ministries, which are separate from each other, then these bubbles have built partitions (dash lines) and hindered collaboration between ministries. The ministries tend to be reluctant to support other ministries' programmes due

to existing partitions between ministries. The implementation of ministries' programmes with respect to adaptation seems inflexible and more based on each strategic planning priority (RENSTRA) than on the RAN-API or NDC adaptation roadmap.

A feeling of pride in one's institution can limit coordination between ministries and often trigger contestation among ministries. Ministerial pride sometimes becomes a sensitive issue. For instance, a mandate transferred to the Directorate General of Climate Change (DGCC), which operates at the directorate level, to coordinate overall climate change coordination can offend other ministries' pride. Many elite participants questioned the mandate given to an institution at the directorate level. The limited National Registry System data obtained by the MoEF and the negligence of several ministries in referring to the NDC adaptation roadmap and Climate Vulnerability Index Data Information System (SIDIK) have confirmed some elite participants' doubts. Figure 4.5 shows that sectoral ego is not a given condition. It explains how several political processes have shaped sectoral ego to come into existence and cause contestation among ministries.

Contestation quartet

This thesis finds contestation between the BAPPENAS and the MoEF in planning, vulnerability assessment, finance, and climate change adaptation actions. The eight terms from Table 4.3 elaborated on previously occur in the discussion of these four agendas.

Planning

The BAPPENAS and the MoEF have the power to lead CCA governance nationally. They have mandates that enable them to play central roles in adaptation planning. Development planning is undoubtedly the primary mandate of BAPPENAS, and formulating RAN-API becomes one of the BAPPENAS tasks and functions. Hence, the BAPPENAS is expected to be the coordinator of national adaptation since the RAN-API is under the BAPPENAS. It should be less complicated if only one coordinator in CCA governance exists. However, the MoEF, as a sectoral ministry focusing on the environment and forestry sectors, is also mandated to coordinate climate change adaptation because it is part of the environment and forestry sectors. Under Presidential Regulation No. 16/2015, the MoEF has a mandate to coordinate climate change actions, and the Directorate General of Climate Change (DGCC) receives a mandate as a national focal point for the UNFCCC (President of the Indonesian Republic 2015). This mandate enables the MoEF to develop an adaptation roadmap. One of the MoEF's tasks and functions is producing an NDC adaptation roadmap document. The BAPPENAS and

the MoEF have the mandates, tasks and functions that position them as coordinators with two adaptation planning documents.

Moreover, they have resources and a dedicated secretariat or directorate for adaptation. They likely play the same role as the coordinator of CCA governance. The BAPPENAS has the RAN-API secretariat to coordinate the implementation of RAN-API, and so does the MoEF, which has the DGCC to coordinate the implementation of the NDC Adaptation Roadmap. Elites who interact with them can feel the presence of contestation between them. A donor agency official pointed out that she was confused about which of the three official CCA documents to refer to: the National Medium-Term Development Plan (RPJMN), the 2014 National Action Plan on Climate Change Adaptation (RAN-API), or the 2020 NDC adaptation roadmap (interview EP13). Based on her experience of interacting with the MoEF officials, the donor official assumed that the NDC, as an international commitment, should be implemented at the national level based on national documents. However, the RPJMN and RAN-API predate the formulation of the NDC in 2016 and the NDC adaptation roadmap in 2021 (interview EP13). The MoEF then claims the NDC adaptation roadmap as a document that bridges the NDC and RAN-API. Besides, the document also aims to monitor the RAN-API target, so the contribution from RAN-API to the NDC can be traced (DGCC 2020, 6). This claim elevates the NDC and NDC adaptation roadmap to a higher position than RAN-API.

An official from BAPPENAS opposes the point of view above, stating "if we just make policy documents, such as NDC, without adopting it into RPJMN, will the documents work? Climate change programmes should be included into RPJMN, they cannot work independently because there are no other mechanisms" (interview EP31). This statement conveys that NDC and NDC adaptation roadmap should refer to the 2020-2024 National Medium-Term Development Plan (RPJMN) as the primary source of development planning policies. Moreover, RAN-API is already included in the RPJMN.

There are substantial data, method, institutional arrangement, and priority locations discrepancies between the BAPPENAS' and MoEF's adaptation planning documents. The following are some discrepancy examples. Both documents have differences in calculating a potential loss caused by climate change. The Climate Resilience Development document published by the BAPPENAS calculate potential economic loss in four sectors: maritime and coastal, water, agricultural, and health sectors (BAPPENAS 2021a). In contrast, the NDC Adaptation Roadmap calculates potential economic loss based on basic needs for health, food, water, and energy. The NDC adaptation roadmap also calculates the damages of ecosystem service and climate disasters that can reach IDR 4,328.38 trillion (MoEF 2020).

Hence, the potential economic loss in the NDC Adaptation Roadmap is higher than in the Climate Resilience Development document. Then there is a discrepancy in the method for assessing vulnerability. The BAPPENAS and the MoEF also have a different institutional arrangement for adaptation implementation for each priority sector. For example, the BAPPENAS only mentions the Ministry of Health with three Directorate General Units, while the MoEF mentions 12 Ministries/Agencies involved in health sector. Lastly, the RAN-API and NDC Adaptation Roadmap have different priority locations for adaptation intervention. In general, both documents lack coherence. The discrepancies in adaptation planning documents also show reluctance by the BAPPENAS and the MoEF to collaborate and align adaptation planning.

Vulnerability

Several contentions can also be found in vulnerability assessment documents published by the BAPPENAS and the MoEF. As mentioned earlier, the MoEF has developed the Climate Vulnerability Index Data Information System (SIDIK) for vulnerability assessment, to be used as a tool for the adaptation planning process. The MoEF in the Enhanced NDC document claims that "SIDIK helps integrate climate change adaptation into development planning so that it is oriented towards increasing adaptive capacity and resilience and reducing vulnerability" (the Republic of Indonesia 2022). Adaptation and development planning thus cannot be separated from the BAPPENAS, which has a mandate for national planning. The BAPPENAS should be one of the users of SIDIK in formulating adaptation planning.

In fact, the BAPPENAS does not refer to the vulnerability model built by the MoEF. Instead, BAPPENAS adopted a different method to assess vulnerability in the scientific base study for the RAN-API document review in 2018. A BAPPENAS official criticised the Climate Vulnerability Index Data Information System (SIDIK) for using obsolete data of insufficient quality to accurately identify vulnerability (interview EP31). This case reveals once again the reluctance of the BAPPENAS to utilise a policy outcome from the MoEF. With two different vulnerability assessments, the distribution of limited adaptation resources is scattered and can fail to reach the most vulnerable communities. Chapter 5 elaborates further on vulnerability assessment divergence.

Finance

CCA discrepancies also occur in the measurement of loss posed by climate disasters. The BAPPENAS and the MoEF utilise different methods to measure loss and damage, hence

different data is presented in the the Climate Resilience Development document and the NDC adaptation roadmap. A development agency official involved in CCA also pointed out a discrepancy in calculating loss. The Climate Resilience Development document mentions that Indonesia experiences potential economic loss approximately IDR 102.36 trillion (2020), IDR 105.72 trillion (2021), IDR 109.03 trillion (2022), and IDR 112.29 trillion (2023) (BAPPENAS 2021a). Those potential economic losses are 0.66%, 0.62%, 0.56%, and 0.54% of 2020, 2021, 2022, and 2023 GDP respectively. The percentage trend of potential economic loss is decreasing from 2020 to 2023 based on the Climate Resilience Development document published by the BAPPENAS. In contrast, the NDC Adaptation Roadmap calculates 0.66% to 3.45% potential loss of GDP, which is higher than the BAPPENAS calculation (MoEF 2020). Considering the trend of climate disasters that always increase significantly, the calculation of NDC Adaptation Roadmap seems to be more accurate because it shows the increase of potential economic loss percentage. The differences in calculating potential economic loss can make confusion in determining priority sectors for adaptation budget allocation. The Climate Resilience Development document identifies that maritime and coastal sector suffer the biggest economic loss among other sectors. The NDC Adaptation Roadmap puts health as the main priority sector because it is influenced by food, water, and energy sectors.

The existence of two climate finance institutions is another contestation over climate financing governance between the BAPPENAS and the MoEF. Apart from the Indonesian Environment Fund (BPDH), the BAPPENAS established Indonesia Climate Change Trust Fund (ICCTF) in 2009 to manage and mobilise funds for climate change projects. According to the BAPPENAS Ministerial Regulation No 11/2020, the BAPPENAS has a special task as the chair of ICCTF Board of Trustees (The BAPPENAS Minister 2020). The ICCTF has disbursed the climate fund for mitigation and adaptation projects since 2014, whereas the BPDH is a Public Service Agency that can disburse funds to beneficiaries and intermediaries. Funds can flow back to the Indonesian Environment Fund (BPDH) as revenue. This mechanism is known as a revolving fund mechanism (Mafira, Mecca, and Muluk 2020), and shows the partition in Indonesian climate finance management.

The presence of two institutions that can manage and disburse climate funds sparks a hot debate among CCA stakeholders. It shows another example of contestation and fragmentation between the BAPPENAS and the MoEF in managing climate funds. Both ministries are at the same level but have different tasks and functions as well as authorities. Both ministries can broker international climate funds. The unresolved question is who will be the leading ministry to coordinate the climate fund for a better distribution of the

adaptation resources. As mentioned earlier, the BAPPENAS is not listed as a ministry that initiated the Indonesian Environment Fund. Undoubtedly, the exclusion of BAPPENAS triggers a suspicion that another contestation or rivalry also occurs in climate financing. A BAPPENAS official denied that accusation, claiming that he also contributed to the establishment of the Indonesian Environment Fund (BPDH) by participating in a series of meetings and giving some insights.

We try to develop various financing instruments, so do not limit it to only one. Why should it be only one? If we can create five or ten, it will not be a problem. It means that we create flexibility with a reason. For instance, other countries plan to contribute to Indonesia through international financing. They might prefer or not prefer the ICCTF scheme. If they do not like it, there is another alternative, BPDH. If they like it, please channel your funding through BPDH and vice versa (interview EP31).

Some disagree with the idea that Indonesia should only have one climate fund agency (interview EP13). This statement shows that merging two agencies is not an option from an official BAPPENAS perspective. The Indonesia Climate Change Trust Fund and the Indonesian Environment Fund will continue to co-exist. Both funds are symbols of pride for the Ministry of Finance, the MoEF and the BAPPENAS to display that their ministries have performed well in the climate finance agenda.

Actions

In rendering climate adaptation actions, both ministries also have set different paths. The MoEF manages the Climate Village Programme, and the BAPPENAS manages the Indonesia Climate Change Trust Fund adaptation programmes that are also distributed at the village level. The MoEF has local environment agencies, while the BAPPENAS has local development planning agencies (BAPPEDA) that spearhead each initiative at the local level in collaboration with donor agencies, companies, and NGOs. The MoEF claims in the NDC documents that the Indonesian government has built a National Registry System to record all mitigation and adaptation initiatives conducted in Indonesia. However, the registration data does not demonstrate if it reflects adaptation actions by multilevel stakeholders nationally. The National Registry System mainly records the MoEF adaptation initiatives, excluding most of the BAPPENAS adaptation programmes. Some of the BAPPENAS-managed programmes under the Indonesia Climate Change Trust Fund in East Java Province are registered, but those programmes are initiated by the USAID Climate Change Adaptation and Resilience programme (Adaptasi Perubahan Iklim dan Ketangguhan, APIK). This case demonstrates the reluctance of the BAPPENAS to be involved in the National Registry System programme

initiated by the MoEF, and the reciprocal reluctance of the MoEF to be involved in adaptation programmes initiated by the BAPPENAS through the Indonesia Climate Change Trust Fund.

There are also significant discrepancies in the selection of programme locations. The BAPPENAS and the MoEF have different justifications for mapping the most vulnerable locations. Hence, they target different locations for adaptation actions. They do not necessarily need to have the same targeted locations. However, each ministerial planning or roadmap document determines the selection of programme locations. Hence, there is no sole guidance to deliver adaptation actions, and the risk of overlap is high. An illustration of this overlap is the concentration of adaptation actions delivered in the densely populated provinces of Java by both the BAPPENAS and the MoEF. The discrepancies between the BAPPENAS and the MoEF in targeting vulnerable locations are elaborated in Chapter 5.

The BAPPENAS and the MoEF have their own strategic reasons for building separate CCA portfolios. Successful Climate Village Programme outcomes will be associated with the MoEF, while successful Climate Change Trust Fund programmes will be counted towards the annual performance indicators for the BAPPENAS. For example, the BAPPENAS can use their portfolio and track record to attract more international donors through the Indonesian Climate Change Trust Fund, while the MoEF can use the Climate Village Programme portfolio to enhance Indonesia's credibility at the level of the UNFCCC in the hope of accessing more adaptation funding.

Analysis shows that redundancy of policies conducted by the BAPPENAS and the MoEF can be found in planning, vulnerability assessment, finance, and climate change adaptation actions. Redundancy can be one of the advantages of polycentric governance (Ostrom 2012). However, two enabling conditions are needed to obtain this redundancy advantage. The first one is the existence of multiple decision-making centres at different levels and across jurisdictions. Second, those decision-making centres produce diverse institutions in a governance domain (Carlisle and Gruby 2017). At the national level, there are multiple decision-making centres led by sectoral ministries such as the Ministry of Public Works, the Ministry of Agriculture, and the Ministry of Energy and Mineral Resources. However, this chapter has identified that there are only two dominant ministries in adaptation governance under the UNFCCC regime. Redundancies of adaptation initiatives by two dominant ministries are not strong enough to reduce the probability of failures in conducting adaptation initiatives. Moreover, the duplication of policies by the BAPPENAS and the MoEF does not complement each other. McGinnis (2016) points out that a polycentric governance

system needs an immense amount of successful collective action to ensure the continuity of the system's operation. The discrepancy in selecting priority locations for adaptation actions is an example of coordination failure between the BAPPENAS and the MoEF.

The Political Economy of National Adaptation Policies

This chapter has exposed fragmentation and contestation over national adaptation policies between the BAPPENAS and the MoEF, resulting in two branches of CCA governance in Indonesia. Some intriguing political economy processes are behind the fragmentation and contestation over national adaptation policies. Those processes have distributed gains and losses among CCA stakeholders. The political economy typology developed by Sovacool, Linnér, and Goodsite (2015) helps expose the macro-level exclusion (political), enclosure (economic), and entrenchment (social) factors that contribute to the BAPPENAS-MoEF fragmentation and contestation.

Exclusion

Exclusion refers to a process when the adaptation project marginalises some stakeholders and limits their access to adaptation decision-making processes (Sovacool and Linnér 2016, 3). The rivalry between the BAPPENAS and the MoEF shows that both actors have excluded each other in high-level adaptation decision-making processes. At first glance, some stakeholders thought that relations between the BAPPENAS and the MoEF were fine. One development agency official stated that the BAPPENAS and the MoEF did not appear to exclude each other, and indeed they usually invited each other and sent their representatives to participate in meetings and events (interview EP13). However, the adaptation policy documents published by both ministries suggest otherwise. There are many contradictions of data and methods used to assess the same climate agenda, such as vulnerability. Inclusion is not merely about inviting other stakeholders to a series of meetings. An inclusion process needs to adopt and incorporate other stakeholders' input. Both parties believe their methods and approaches to be superior. Hence, they stick to their exclusive plans in developing adaptation policies.

Both the BAPPENAS and the MoEF officials claim that they involve as many stakeholders as possible in key meetings and decision-making processes that lead to the formulation of national CCA policies (interviews EP05 and EP31). Central governmental actors routinely engage with academia, NGOs, think tanks, international donor agencies, and local governments. Identifying the exclusion that occurs in the BAPPENAS and the MoEF is as

challenging as identifying fragmentation and contestation between the BAPPENAS and the MoEF. Their decision-making processes seem to be inclusive on the surface. The adaptation policy documents, such as RAN-API and NDC adaptation roadmap, have a long list of stakeholders involved in the process. An NGO official admitted that in a series of a meeting she participated in, she witnessed the BAPPENAS and the MoEF inviting many stakeholders to meet inclusiveness requirements (interview EP11). The donor agencies such as USAID, World Bank, or ADB usually encourages the ministries or implementing agency to consider inclusivity in implementing development programmes. For example, USAID APIK encourages the implementation of adaptation programmes in Indonesia to consider gender balance and inclusivity (DAI 2016). Moreover, the UNFCCC also urges states to accelerate inclusive climate action in achieving the Paris Agreement goals (UNFCCC 2023).

Inviting all relevant CCA stakeholders does not mean that the BAPPENAS and the MoEF have inclusive or participatory decision-making processes. The BAPPENAS and the MoEF include external stakeholders in policy formulation and public consultation meetings, but some elite participants felt that they had limited access. One source mentioned that the public participation concept should be questioned. Sometimes the government invited stakeholders only once or twice and asked for their signatures, and then claimed that these signatures confirmed the involvement of CCA stakeholders in the process (interview EP11). Another NGO official recounted the experience of being invited to a policy formulation meeting only to learn that the ministry team had already completed the work when he arrived (interview EP17). He still gave comments and feedback on policy proposals but had no idea if his input was used, and assumed that he was only invited as a stakeholder to satisfy consultation and inclusivity requirements (interview EP17). Moreover, the consultation processes organised by the BAPPENAS and the MoEF were more like socialisation than a public consultation. The discussion process was minimal and dominated by speakers from the ministries. The contents of the policy documents were formulated by the consultants hired by the ministries (interview EP20).

Local actors are also excluded from in the decision-making processes. The BAPPENAS and the MoEF usually hire experts from public universities near the centre of power in Jakarta and limit another alternative to involving local academia that might better understand climate change challenges at the local level. For instance, the BAPPENAS hired 19 experts to formulate the RAN-API document, all of whom were based in Universitas Indonesia (Jakarta), Bogor Agricultural University (West Java), and Bandung Institute of Technology (West Java).

A similar pattern happened in the NDC adaptation roadmap formulation, where the MoEF hired six experts from the same public university in Bogor.

The MoEF also excluded local government officials from assessing vulnerability. Local communities experience climate change impacts unequally. It is crucial to involve local actors to identify vulnerability and adaptation challenges at the local level. The MoEF has local environment agencies in all provinces. They can be the extension of MoEF to assess vulnerability more precisely. However, the local environment officials are not involved in this vulnerability assessment process (interviews EP23, EP25 and EP26).

Enclosure

Enclosure is the process of capturing resources or authority (Sovacool and Linnér 2016, 3). Sovacool and Linnér (2016, 119) give an example of enclosure by the UNFCCC when it captures the government's authority by commandeering decision-making roles that formerly belonged to the governments. The nationally determined contribution pledges are the examples of how the UNFCCC commands the states to make climate pledges to achieve the Paris Agreement goals, but the burdens and costs are shouldered by the states. This action has created a long and complicated process for eligible countries to access the Least Developed Countries Fund (LDCF).

Enclosure processes occur in the implementation of some climate adaptation policies in Indonesia. The BAPPENAS and the MoEF have captured authorities that belong to other ministries which cause suboptimal adaptation actions. The BAPPENAS has captured some of the Ministry of Finance authority to coordinate and harmonise climate finance from domestic and international sources. Contestations over CCA create opportunities for ministries to extend the scope of their authority. A Ministry of Finance official confirmed that his ministry manages the state budget, but in CCA governance there is competition, and some (unnamed) ministries seem to create their own policies and 'products' that need financing (interview EP33). The BAPPENAS is likely to be the ministry referred to here because it has gone beyond its main tasks and functions as a national planning unit by establishing the Indonesia Climate Change Trust Fund to manage climate finance from domestic and international sources. Another Ministry of Finance official who was less coy added that it was peculiar that the BAPPENAS, which should only have tasks and functions in the planning phases, executed a trust fund project (interview EP36). Moreover, the Fiscal Policy Agency also criticised the management of ICCTF in its report on public funding for climate change published in 2019. The report criticised the placement of ICCTF as an independent institution under the

BAPPENAS. It makes the authority of ICCTF becomes limited and the role of ICCTF in mitigation and adaptation becomes suboptimal. The ICCTF could not assist ministries or agencies and local government directly. It could only finance proponent of climate programme at the local level such as NGOs or research centre in universities (Fiscal Policy Agency 2019, 32-33).

Moreover, the BAPPENAS, through the Indonesian Climate Change Trust Fund, can leverage and channel climate finance into projects (ICCTF n.d.a). Some projects give technical mentoring to farmers, which overlaps with the tasks and functions of the Ministry of Agriculture. The BAPPENAS running climate smart agriculture also shows the extension of competition between ministries. It might be a good thing that the BAPPENAS helps the Ministry of Agriculture to accelerate climate smart agriculture programmes. However, the agriculture programmes are often distributed without coordination between the BAPPENAS and the Ministry of Agriculture. During my fieldwork in Gunung Kidul Regency in January 2022, I interviewed agricultural instructors, and they did not know that the ICCTF had an agricultural programme in their area. This case is an example that the ICCTF programmes are not intended to help the Ministry of Agriculture. Two ministries running similar programmes could be a good thing, like the acceleration of climate smart agriculture programmes nationally. However, it might also result in potential negative impacts without a good coordination such as overlapping programmes or many programmes are concentrated in the same region like what happens in Java Island.

The Indonesian Climate Change Trust Fund also conducts adaptation projects in the energy sector that overlap with the authority of the Ministry of Energy and Mineral Resources. The Indonesian Climate Change Trust Fund has distributed around one billion rupiah to fund the Indonesia Domestic Biogas Programme.¹⁴ The programme was initially run by the Ministry of Energy and Mineral Resources in collaboration with Hivos and Home Energy Foundation (Yayasan Rumah Energi). A Ministry of Energy and Mineral Resources explained that the programme was aimed for mitigation actions. It aimed to provide renewable and cleaner energy for village communities (interview EP27). The programme was later continued under the BAPPENAS authority and funded by the ICCTF. The programme was similar, but it was then labelled as an adaptation programme. This inaccurate programme labelling is counterproductive because it can hinder the realisation of 50:50 balance of mitigation and adaptation actions as agreed in Glasgow Climate Pact (UNFCCC 2022).

¹⁴ IDR one billion is equivalent to GBP 50,612 as of 7 February 2024.

The enclosure process could also be found in the implementation of the Climate Village Programme under the MoEF. The MoEF commands how local communities should conduct adaptation actions by providing a Climate Village Programme template for all villages in Indonesia. The Climate Village Programme requires village communities to meet the adaptation list prepared by the MoEF. This programme is a perfect example of how the Indonesian government uses a top-down approach in implementing climate adaptation policies. By commanding village communities on how to conduct climate change adaptation actions, the MoEF captures the authorities of local communities in deciding adaptation actions that are suitable for their village. Chapter 6 provides further discussion of the Climate Village Programme implementation. It questions whether the template for climate adaptation action provided by the Climate Village Programme is considered legitimate by local communities, and whether communities are likely to benefit given that villages experience differential climate change impacts and unequal access to resources.

Encroachment

As an archipelagic country, Indonesia faces sea-level rise that can submerge its coastal areas and displace millions of people. Jakarta, the capital city of Indonesia, cannot escape from this global climate change impact. This megacity is the fastest sinking city in the world and predicted to sink by 2050. Heri Andreas, a researcher from the Bandung Institute of Technology, said that 95% of the North Jakarta area will sink by 2050 (Lin and Hidayat 2018). The population of North Jakarta was approximately 1.793.550 people in 2022 (BPS Kota Jakarta Utara 2024). The Indonesian Government has an ambitious plan to adapt to this challenge by building the Jakarta Giant Seawall, initially known as the 'Great Garuda' Project. An outer seawall for 35 km will be built as a sea wall (Esteban et al. 2020). The seawall will form a Garuda shape, a mythical bird of Indonesia, to protect the northern area of Jakarta from sinking. Many political leaders are supporting this multi-trillion rupiah project, such as Defense Minister and President-elect Prabowo Subianto, Coordinating Economic Minister Airlangga Hartarto, National Development Planning Minister Suharso Monoarfa, and President Joko Widodo (Pebrianto 2023; CNN Indonesia 2024). The cost of building the giant sea wall is approximately USD 40 billion over 30 years (Salim, Bettinger, and Fisher 2019).

The Indonesian government can claim this mega project as part of Indonesia's adaptation actions and showcase Indonesia's achievement in building infrastructure to the world. The Regional Action Plan on Climate Change Adaptation (Rencana Aksi Daerah Adaptasi Perubahan Iklim, RAD API) in the Special Capital of Jakarta published in 2016

mentioned that the development of Giant Sea Wall was one of the strategies for adaptation (Boer et al. 2016, 42). However, many environmental groups, such as WALHI, criticise the development of Jakarta giant sea wall as a fake solution for climate crisis. It causes environmental destruction and threatens biodiversity in Java's northern coastal area, which used to be the area for traditional fishers catching fish. The loss of fishers is estimated at around IDR 100 million (GBP 4,885 as of March 2024) per person in a year (WALHI 2024). It is evident that the reclamation processes that have been done are causing environmental degradation and socioeconomic problems. A study by Salim, Bettinger, and Fisher (2019) also show that the Great Garuda project ended up increasing the vulnerability of Jakarta in the future which can be called maladaptation. They mention at least two negative impacts of this Great Garuda project on the environment: the increase of greenhouse gas footprint from mega construction work and the increase of sedimentation in the enclosed bay areas that exacerbate flood problems (Salim, Bettinger, and Fisher 2019).

Entrenchement

The sectoral ego and contestation quartet section has briefly discussed the potential risk of overlapping programme implementation between the BAPPENAS and the MoEF. This thesis has limited data to argue that the contestation between the BAPPENAS and the MoEF over adaptation planning has worsened inequality nationally. However, this thesis has found a pattern where many adaptation programmes designed based on the ministries' adaptation planning and roadmap are distributed on Java Island, the most developed island in Indonesia. Provinces on Java Island are more developed than provinces outside this island (Kurniawan, Groot, and Mulder 2019). Albeit Java Island only covered 7% of the land areas of Indonesia, provinces in Java Island contributed 58.89% of the national GDP in 2019 (Soseco, Olivia, and Oxley 2023). This trend shows how development is concentrated in Java. It also reoccurs in adaptation programmes distribution nationwide. The MoEF has gathered adaptation programmes distributed nationwide in the National Registry System. From a total of 35 adaptation programmes distributed nationally until June 2023, only 17 were distributed outside Java Island, while 18 programmes were in Java Island (DGCC n.d. b). This pattern poses a potential risk of worsening development inequality in Indonesia in the future. Communities in Java Island likely have better adaptive capacity and resilience to climate change than communities outside Java.

Conclusion

This chapter sets out to investigate the rivalry between the BAPPENAS and the MoEF over national adaptation policies and its impacts towards the implementation of global adaptation initiatives in Indonesia. Having more than one governance centre does not always hamper the planning and implementation of adaptation programmes. The polycentric structure is not always detrimental to adaptation actions (Ostrom 2010a). In this structure, many ministries run adaptation programmes that can bring positive impacts for adaptation mainstreaming initiatives. The polycentric structure might be a more efficient model if each centre renders specific tasks that complement each other. In the Indonesian case, it does not happen because fragmentation and contestation between the BAPPENAS and the MoEF cause redundancy for some adaptation policy, such as redundancy in adaptation planning and vulnerability assessment. Besides, there is no political will from each ministry and no institution above the ministerial level that can bring the BAPPENAS, the MoEF, the Ministry of Agriculture, the Ministry of Finance, and the Ministry of Energy and Mineral Resources together. Indonesia once had a National Climate Change Council that had a mandate to bring all ministries together in conducting climate actions under President Yudhoyono administration. Unfortunately, the National Climate Change Council was merged to the MoEF for efficiency reasons under President Jokowi administration. The National Climate Change Council was merged in order to simplify bureaucracy. The absence of National Climate Change Council makes the efforts to bring all ministries together becoming more challenging. Ministries work independently and often compete each other in running adaptation programmes. Two rival adaptation strategies are serious consequences that might hinder optimal implementation of adaptation programmes.

The BAPPENAS and the MoEF are two dominant centres of CCA governance with different paths of adaptation policies that are apparent in adaptation planning, vulnerability assessment, climate finance, and adaptation actions. The sectoral ego or silo partially explains the contestation and fragmentation between the BAPPENAS and the MoEF. The contestation and fragmentation between the BAPPENAS and the MoEF have undermined the implementation of the Paris Agreement adaptation framework. The existence of two national adaptation planning means that Indonesia has no national adaptation planning, but ministerial adaptation planning. It results in a convoluted direction of adaptation planning in Indonesia. The discrepancies in vulnerability assessments obscure the identification of vulnerability communities. It can cause inaccuracy in distributing limited adaptation resources at the local level. Two climate finance agencies exist and cause suboptimal climate

finance management as criticised by the Fiscal Policy Agency. The BAPPENAS and the MoEF run two adaptation programmes separately. The risk of overlapping in distributing adaptation programmes are high with minimum coordination between the BAPPENAS and the MoEF.

Four political economy processes have beset the fragmentation and contestation between the BAPPENAS and the MoEF. This chapter has found exclusion, enclosure, encroachment, and entrenchment at the national level. Exclusion process is often intangible. The BAPPENAS and the MoEF always invite each other in formulating adaptation policy documents. However, they produce two different adaptation policies and often implement them independently of the others. Moreover, the BAPPENAS and the MoEF have involved many stakeholders, including non-governmental actors in some consultation processes. However, the consultation processes are merely the socialisation of adaptation planning. The BAPPENAS and the MoEF has avoided possible better alternatives to CCA actions proposed by the NGOs. The enclosure process emerges in adaptation financing, where the BAPPENAS and the MoEF become two climate finance brokers by establishing the ICCTF and BPDH. Both ministries often capture the authority of other ministries, such as the authority of Ministry of Finance, in managing climate finance. The encroachment process could be found in the Great Garuda megaproject where the reclamation has negatively affected the biodiversity of Jakarta coastal area, increased sedimentation in the enclosed bay area, and exacerbated flood problem. The entrenchment process in national adaptation planning still needs further elaboration and evidence. Still, a pattern of uneven adaptation resources distribution nationwide and the potential risk of worsening inequality in Indonesia can be identified at this point.

CHAPTER 5

Vulnerability Assessments Divergence

This chapter focuses on the divergence of vulnerability assessments conducted by the BAPPENAS, the MoEF, USAID, and local implementing agencies. It contributes to address the third research question: Why are there discrepancies between the BAPPENAS and the MoEF assessments of vulnerability to climate change, and to what extent do these discrepancies undermine Indonesia's national adaptation strategy? This chapter covers several key discussions, including types of vulnerability assessment discrepancies, the politicisation of vulnerability assessment, mismatches between the vulnerability mapping and actual distribution of adaptation projects, local adaptation strategies and interests in CCA, and national-local contestation over vulnerability mapping.

Three Types of Vulnerability Assessment Discrepancy

Vulnerability assessment is an initial and key component of the whole climate change adaptation process. It can supply public and private actors with essential information for adaptation planning, implementation, monitoring, and evaluation. There is widespread agreement that climate change impacts are unevenly distributed, and CCA programme implementation needs to be supported by accurate vulnerability assessments to help policymakers identify vulnerable groups who most urgently need adaptation resources (Downing and Patwardhan 2005; Rahman 2017; Murniati, Mulyo and Hartono 2017; Takama et al. 2017; Sucianti, Estiningtyas, and Rahman 2020; Estiningtyas et al. 2021). Comprehensive and targeted vulnerability assessments can be powerful tools for adaptation decision-makers, allowing them to map and target the most vulnerable communities, and distribute resources accordingly (Apresian 2023).

Vulnerability can be an ambiguous concept, and stakeholders often have different interpretation of vulnerability, using different methods and indicators in their vulnerability assessments. This process can reveal or obscure the most vulnerable groups and their locations. There are three main types of discrepancy in vulnerability assessments in Indonesia. The first is institutional, resulting from competing approaches used by the two dominant ministries involved in CCA, the BAPPENAS and the MoEF (as discussed in Chapter 4). The second is organisational, with discrepancies in assessing vulnerability emerging between national and local level actors due to different interests, ideas and methods. The

third is social, with mismatches between the vulnerability mapping conducted by the central government and the actual lived experiences and perceptions of local people based in areas targeted for adaptation interventions and programmes.

The multi-level and polycentric structure of CCA governance causes divergence in vulnerability assessment. No single vulnerability assessment method is agreed upon by all public and private actors in CCA governance in Indonesia. The different methods and data used by the BAPPENAS and the MoEF in their vulnerability assessment causes some discrepancies in the mapping of vulnerable areas. Even if these ministries used the same vulnerability assessment method they might produce different results (Preston, Yuen, and Westaway 2011). It is expected that the BAPPENAS and the MoEF have a contrasting vulnerability mapping with different national priority areas for adaptation actions resulting from different methods, unequal power relations, and interest divergence.

The discrepancies in vulnerability assessment appear at the national level between ministries, and at subnational levels between ministries and adaptation stakeholders. This thesis finds that some local stakeholders have been found to ignore or modify the vulnerability assessment tools designed by the central government. This chapter shows that some local environment agency officials and programme managers have different approaches to selecting the beneficiaries of adaptation programmes. This chapter contributes to answering the third question of this thesis: Why are there discrepancies between the BAPPENAS and the MoEF assessments of vulnerability to climate change, and to what extent do these discrepancies undermine Indonesia's national adaptation strategy? It aims to reveal political economy processes behind vulnerability assessment discrepancies and investigate how they hamper adaptation resource distribution that causes maladaptation.

This chapter has found three leading causes of discrepancies at the national level. First, sectoral ego creates divisions between the BAPPENAS and the MoEF, which partially explains their selection of different vulnerability assessment methods and data. Second, many actors use vulnerability assessments as an instrument to serve different interests. Since each actor has different interests, they propose different ideas for assessing vulnerability. Each ministry has an interest to access international funding. Vulnerability assessments can be potential programmes that can attract climate funding from international donors. Adaptation policy documents that contain vulnerability assessments are funded by different donor agencies. The RAN API Review 2018 published by the BAPPENAS was funded by USAID, while the NDC Adaptation Roadmap published by the MoEF was funded by GIZ. If there is

only one vulnerability assessment, it means that only one ministry can access the climate funding. Since the BAPPENAS and the MoEF had the same interest to access international funding they did the vulnerability assessments separately. Third, the BAPPENAS and the MoEF create separate institutions with different regulations and procedures to conduct vulnerability assessments. The BAPPENAS has RAN-API Secretariat, while the MoEF has the Directorate General of Climate Change to conduct the vulnerability assessments. These institutions form partnership with different donor agencies, hire experts or scholars with different backgrounds, and thus use different vulnerability approaches.

This chapter also finds discrepancies in vulnerability assessment between the national and local levels resulting from exclusion and evasion processes. The exclusion processes occur when the vulnerability assessments conducted by the BAPPENAS and MoEF exclude local actors and are merely top-down processes (Sovacool, Linnér, and Goodsite 2015). Vulnerable groups are often excluded from decision-making processes, such as assessing vulnerability to determine priority locations (Adger 2006). This means that some of the locations that qualify for CCA project funding and resources may not be in critical need of government interventions, while other vulnerable locations and communities that might be in more urgent need of support are excluded. The evasion processes appear when vulnerability assessments are determined by the strategic decisions and preference for convenience of local stakeholders in selecting programme locations. Glover and Granberg describe this phenomenon as path dependency where policy choices often overlook the availability of other better alternatives (Glover and Granberg 2020, 13). There is a pattern where the implementing agencies at the local level select the locations first based on the potential for a successful programme implementation, and then conduct vulnerability assessments to validate their selection.

Table 5.1 Three Types of Vulnerability Assessment Discrepancy

Discrepancy Types	Entities	Explanation
Discrepancy I	Ministry x Ministry	Discrepancies between the BAPPENAS and MoEF
Discrepancy II	Ministry x Local Implementing Agency	Discrepancies between the Central Government and local implementing agencies
Discrepancy III	Local implementing agencies x village communities	Discrepancies between the Central Government and local actors (implementing agencies and local communities)

The vulnerability assessment discrepancies have brought some unintended negative impacts. There is evidence of a discrepancy between central vulnerability assessments and the reality at the village level. It causes inaccuracy in distributing adaptation resources, widening social inequality through an entrenchment process (Sovacool, Linnér, and Goodsite 2015). Vulnerability is not easy to measure, and it can be differently experienced by the vulnerable themselves (Adger 2006). A relatively less vulnerable location might be selected as a programme beneficiary, while more vulnerable locations are left behind. This pattern will likely widen local communities' adaptation gap (Phillips, 2021). This thesis finds that there are three types of vulnerability assessment discrepancy between ministries, ministries and local implementing agencies, and local implementing agencies and village communities (see Table 5.1). The following section elaborates further on the political dimension of vulnerability assessments.

Politicising Vulnerability Assessments

This chapter uses a political economy approach to examine the complex and unequal power relations between actors within the vulnerability assessment context in Indonesia. This approach helps explain the emergence of the winners and losers of vulnerability assessments for adaptation (Barnett et al. 2015; Mikulewicz 2018; Thomas and Warner 2019).

The tripartite analytical framework helps to identify the underlying political process of vulnerability assessment conducted by the government through ideas propagation and institutional establishment. Nevertheless, the framework is limited in examining the political process of vulnerability assessment conducted by private actors at the local level. These actors have no authority to create regulations but have interests and ideas related to vulnerability assessment and adaptation. These two underlying conditions are more than enough to include private actors in the analysis when problematising the divergence of vulnerability assessment and adaptation interventions. Local private actors are not powerless actors who always comply with government regulations. Sometimes local private actors such as Yakkum Emergency Unit, DAI, and Home Energy Foundation can implement contrasting adaptation interventions that are different from government recommendations. Interventions have a similar purpose as regulations produced by government institutions. They are produced to influence the behaviour of individuals or groups. If the government can attempt to regulate individual and group behaviour through regulations, then local private

actors can attempt to influence individual and group behaviour through adaptation programmes.

The next subsection draws from Sovacool, Linnér, and Goodsite's (2015) political economy framework to reveal political economy processes underlying the vulnerability assessment discrepancy and its unintended negative impacts. This chapter has found exclusion and entrenchment processes in vulnerability assessment programmes by employing this framework. This chapter also finds an evasion process to complement the analysis of vulnerability assessment discrepancy drawing from Sovacool, Linnér, and Goodsite's (2015) framework.

A Divergence of Vulnerability Assessment between Ministries

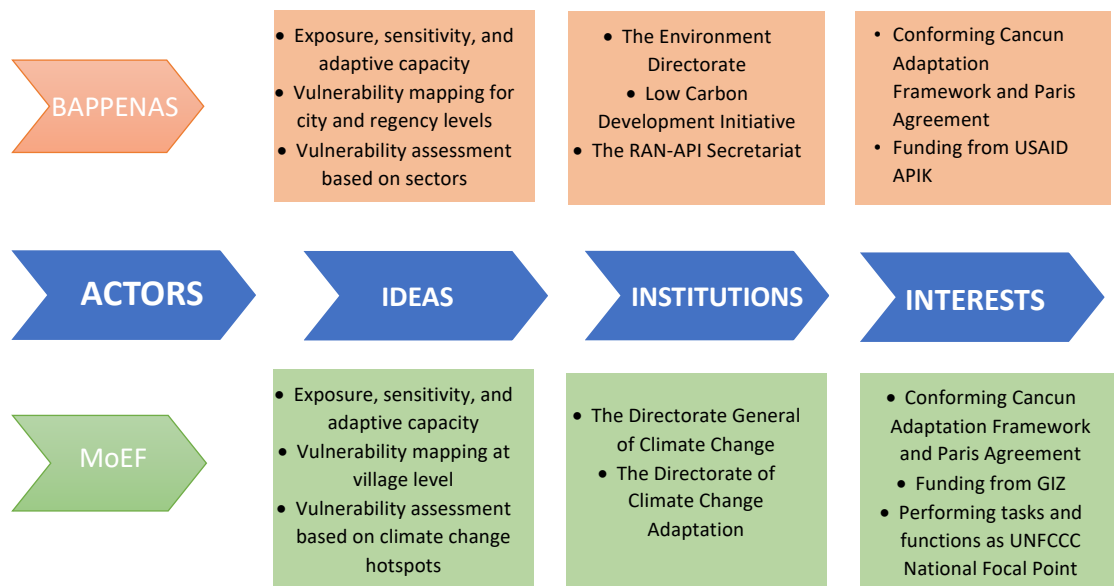
A different framing can result in a different interpretation of vulnerability (O'Brien 2007). As mentioned in Chapter 2, there is no single approach to assess vulnerability to climate change. Fussel (2007) has identified five classical vulnerability research approaches: risk-hazard, political economy, pressure-and-release (PAR), integrated, and resilience approaches. Risk-hazard and political economy approaches are more commonly used in vulnerability research. Frerks, Warner, and Weijs (2011) identify hazard, risk, vulnerability, and resilience approaches in vulnerability assessment. Preston, Yuen and Westaway (2011) also identify four vulnerability assessment models with different classifications: risk hazard, social vulnerability, pressure and release, and expanded vulnerability. Each approach or model utilises different vulnerability indicators. Indeed, two assessments using two approaches produce two different interpretations of climate change vulnerability.

The BAPPENAS and the MoEF also refer to the IPCC in defining and assessing vulnerability. Nevertheless, both ministries have two different vulnerability mappings. For instance, according to the National Action Plan on Climate Change Adaptation (RAN-API), the BAPPENAS identifies the Special Capital Region of Jakarta (DKI Jakarta), the capital of Indonesia, as the most vulnerable area in Indonesia and the whole Southeast Asia region. However, the MoEF has a different vulnerability mapping in the NDC adaptation roadmap document, where most hotspots are located on Sumatra Island (MoEF 2020). The BAPPENAS used a vulnerability assessment published by the Swedish International Development Agency (SIDA) in 2009 (Yusuf and Francisco 2009). The BAPPENAS used it to map vulnerable regions in Indonesia. The Swedish Agency adopted the vulnerability assessment framework provided by the Third Assessment Report of IPCC published in 2001 that considered exposure,

sensitivity, and adaptive capacity components, so this is the origin of the BAPPENAS approach in mapping vulnerable regions in Indonesia. Similarly, the MoEF’s vulnerability assessment used climate change hotspots to identify vulnerable locations, according to the Fifth Assessment Report of IPCC published in 2014.

Both the BAPPENAS and the MoEF use the IPCC reports as their primary source in producing climate adaptation policy documents, and yet they use different methods, indicators and data to assess vulnerability. The cause of this discrepancy goes beyond technicalities, and there are political factors that need to be examined. Figure 5.1 demonstrates that the BAPPENAS and MoEF both accept the Cancun Adaptation Framework and the Paris Agreement, but both have different interests and objectives. For this reason they undertake separate vulnerability assessments and create separate institutions under their authority to regulate the vulnerability assessment process. The internal process of policymaking in each ministry, coupled with sectoral ego and fragmentation, evidently causes the vulnerability divergence between ministries.

Figure 5.1 The Ideas, Institutions and Interests of BAPPENAS and MoEF



At the national level, the sectoral ego hinders the BAPPENAS and the MoEF from coalescing in conducting a vulnerability assessment. Although both sides ostensibly understand the flaws of the other’s vulnerability assessment, they seem willing to ignore these flaws and continue with their own assessment project. The integration of vulnerability assessment does not seem to be an option. There will be many formidable obstacles, such as who will lead the assessment, who will renounce the authority to conduct the assessment,

and who will manage the funding. As a result of this divergence, we have two paths of vulnerability assessment conducted by the BAPPENAS and the MoEF.

Figure 5.1 demonstrates that the BAPPENAS and the MoEF have different ideas of vulnerability assessment. Table 5.2 summarises the vulnerability assessment differences between the BAPPENAS and the MoEF. They also have different institutions to realise their ideas into regulations or policy documents. The BAPPENAS has the Environment Directorate, the Low Carbon Development Initiative (LCDI), and the RAN-API secretariat. The MoEF has the Directorate General of Climate Change and the Directorate of Climate Change Adaptation. As public actors, they have a similar interest in conforming to the UNFCCC recommendations. For instance, the Cancun Adaptation Framework encourages the Parties to conduct vulnerability assessments to strengthen adaptation actions (UNFCCC n.d.e). Both ministries completed vulnerability assessments to conform to this recommendation. However, the sectoral ego remains, and each ministry has sectoral interests, such as performing its tasks and functions as a national planning agency and the national focal point of UNFCCC, resulting in a divergence in vulnerability assessments.

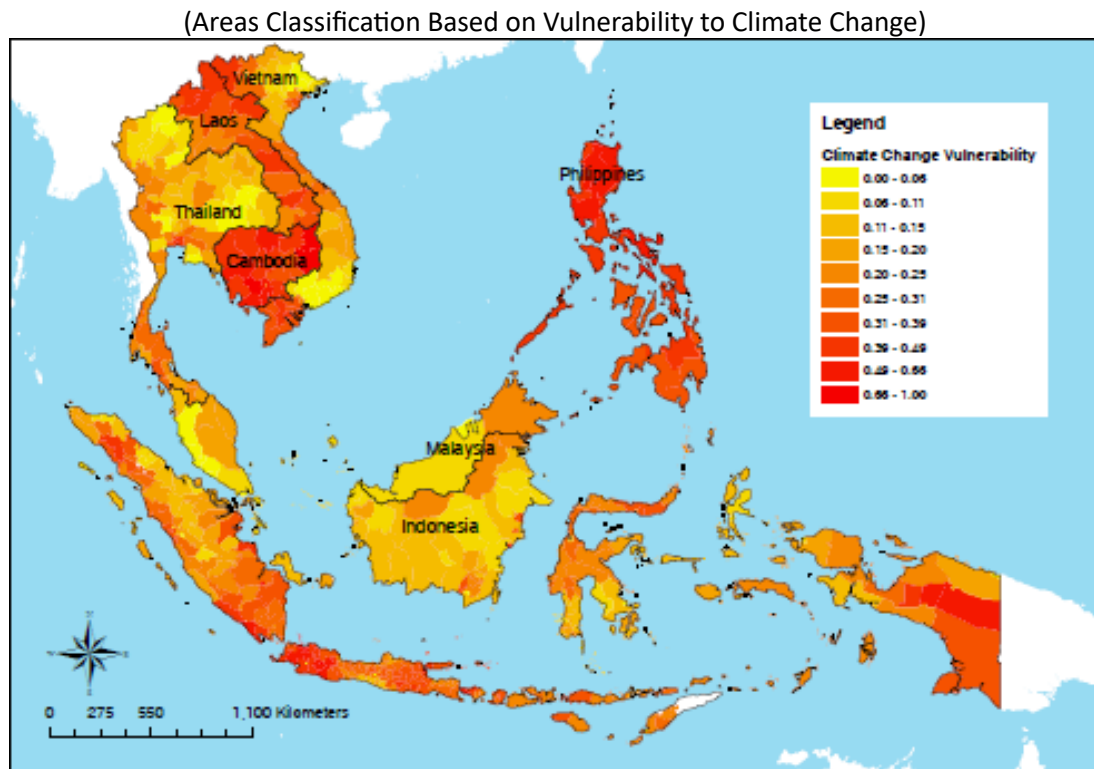
The BAPPENAS and the MoEF have access to different international development funding streams from international donor agencies. In performing vulnerability assessments, the BAPPENAS and the MoEF are supported by two different donor agencies. For instance, in 2018 the BAPPENAS was supported by USAID to develop the RAN-API Review document. Two years later, the MoEF got a Climate Governance Project grant from the GIZ to develop the NDC Adaptation Roadmap in 2020.

Table 5.2 Vulnerability Mapping Divergence between Ministries' Policy Documents

Name of Document	Year	Institution	Method	Source	Vulnerability Mapping
RAN-API	2014	BAPPENAS	Integrated approach Vulnerability: Exposure, Sensitivity, Adaptation Capacity	IPCC Third Assessment Report	West part of Java (Jakarta, Bandung, Bekasi, Bogor, Depok, Tangerang), east part of Java (Surabaya), and east part of Sumatera (Palembang, Lampung) (See Figure 5.3)
SIDIK	2015	MoEF	Integrated approach Vulnerability: Exposure, Sensitivity, Adaptation Capacity	IPCC Fourth Assessment Report	Papua, North Sumatera, South Sumatera, West Kalimantan, West Papua, East Nusa Tenggara, Aceh, Lampung (See Figure 5.5)
RAN-API Review	2018	BAPPENAS	Risk-hazard approach	IPCC Fourth Assessment Report; Handoko and Ruminta 2012	North Kalimantan, Gorontalo, Maluku (See Figure 5.4)
Adaptation NDC Roadmap	2020	MoEF	Risk-hazard approach (Climate Change Hotspots)	IPCC Fifth Assessment Report	West part of Java and east part of Sumatera See Figure 5.6)

Four documents mentioned in the NDC documents (see Table 5.2) have included vulnerability assessment for vulnerable area mapping. The BAPPENAS and the MoEF have two policy documents each. The BAPPENAS published RAN-API in 2014, and the RAN-API review document was launched later in 2018. The vulnerability assessment in the RAN-API review document is entirely different from the preceding RAN-API document. The MoEF developed the Climate Vulnerability Index Data Information System (SIDIK) in 2015, and then the Adaptation NDC Roadmap followed in 2020. This finding shows that inter-ministerial and intra-ministerial discrepancies in vulnerability mapping exist in Indonesia's CCA governance. The Adaptation NDC Roadmap conducted a different vulnerability assessment from SIDIK. However, the authors of the roadmap claim that the assessment complements SIDIK data (interview EP15). The assessment outcome in the Adaptation NDC Roadmap can be overlaid with SIDIK vulnerability mapping to help determine priority locations. This idea might work to identify the most vulnerable area using two vulnerability assessments from SIDIK and Climate Change Hotspots. Indonesia is developing one map policy. The Indonesian Government has been developing an ambitious agenda to accelerate one map policy since 2016 to integrate overlapping spatial data nationally (Geospatial Information Agency 2016). This policy has integrated 158 thematic maps produced by 24 ministries or agencies and categorised them into seven themes (Geospatial Information agency n.d.a). The integration of vulnerability assessment mapping done by the BAPPENAS and the MoEF can be included in the natural resources and environment theme. The Indonesian Government has integrated disaster risk maps, but it has not integrated vulnerability to climate change maps produced by the BAPPENAS and the MoEF.

Figure 5.2 Vulnerability Mapping in the RAN-API document by BAPPENAS

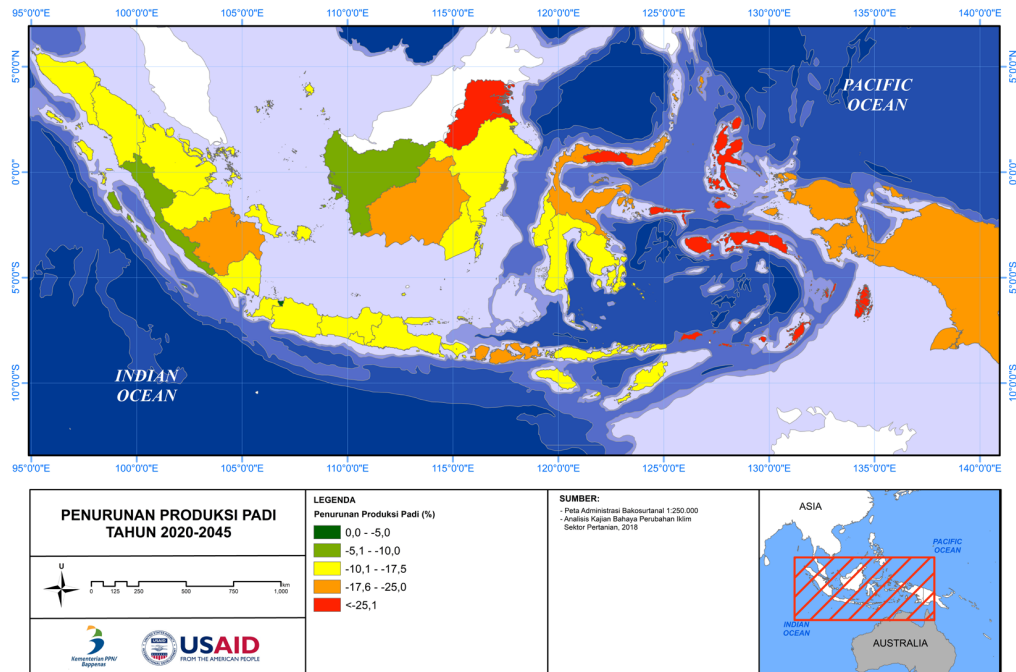


Source: SIDA (2009) as cited in RAN-API (BAPPENAS 2014a)

Figure 5.2 is a vulnerability mapping assessed by the Swedish International Development Agency (SIDA) published in 2009 that the BAPPENAS used to produce their own RAN-API document in 2014. As stated previously, the SIDA's vulnerability assessment refers to the Third Assessment Report of IPCC, in which vulnerability is defined as a function of exposure, sensitivity, and adaptive capacity (White et al. 2001, 21). Using SIDA's vulnerability mapping, the BAPPENAS lists the 50 most vulnerable locations in Indonesia. The top ten vulnerable locations are listed in Table 5.2. The vulnerability mapping in the 2018 RAN-API Review Document changed drastically due to the different vulnerability assessment approaches used. The 2018 RAN API document does not use the IPCC vulnerability assessment model used in the 2014 RAN API document. The 2018 RAN API Document assesses vulnerability to climate change based on five priority sectors. Water, maritime, coastal, agriculture, and health are those five sectors. There is no single vulnerability assessment model applied to all sectors. Each sector uses a different vulnerability assessment model depending on the experts hired to conduct the assessment. Only vulnerability assessment for the coastal sector refers to the fourth IPCC Assessment Report model. For example, the vulnerability assessment for the agriculture sector in the 2018 RAN API document uses a model developed by Handoko (2012), a Professor from Bogor Agricultural

University and an agricultural expert hired by the BAPPENAS. The model focuses on assessing the decrease in paddy production (see Figure 5.3).

Figure 5.3 Vulnerability Mapping for Agriculture Sector in the RAN-API Review Document



Source: RAN-API Review Document (BAPPENAS 2018)

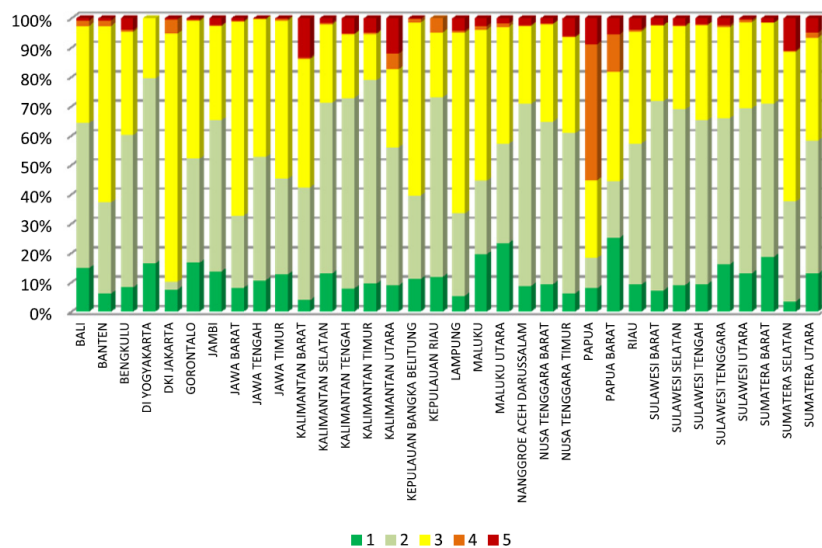
Figure 5.3 displays North Kalimantan, Gorontalo, Maluku, and North Maluku as the most vulnerable locations due to the projected rice paddy production decrease from 2020 to 2045. The method used focuses on assessing biophysical indicators such as temperature rise, rainfall decrease, and rice production. Socioeconomic indicators such as poverty, income inequality, and population density are removed from the vulnerability assessment. Hence, the adaptive capacity of farmers in each region cannot be identified using this model. Despite its limitation in identifying the adaptive capacity of farmers, the vulnerability assessment model for the agricultural sector developed by Indonesian scientists is a breakthrough for CCA knowledge production in Indonesia. The Indonesian scientists do not only follow the adaptation knowledge produced by the IPCC, but they can also play an important role in adaptation knowledge production reflecting on the Indonesian agricultural case.

The vulnerability assessment for the agricultural sector in the 2018 RAN-API Review document limits its focus to rice paddy production because this is Indonesia's staple food. This strategy has advantages and disadvantages. The assessment is relatively easier to complete with detailed information. However, some vulnerable communities in peripheral

areas have a different staple diet. For instance, sago is the staple diet of Mollucans and Papuans. Figure 5.3 will likely be used to select priority areas to distribute adaptation resources. If that is the case, Mollucans and Papuans potentially disappear from the priority locations mapping and other local communities in which rice is not their staple diet. Notwithstanding some limitations of the vulnerability assessment models developed by Indonesian scientists, this multi-sector approach in assessing vulnerability is unique because it is tailored to the Indonesian case where five sectors become the priority for adaptation actions. This multi-sector approach can be a good approach for the Indonesian Government in mapping locations that most urgently need adaptation resources. However, this thesis finds that there is a mismatch between vulnerability mapping and adaptation distributions by the ICCTF. Many adaptation projects focused on agriculture are distributed in Java Island where its vulnerability level is considered moderate (coloured in yellow). Further elaboration on this theme can be found in Chapter 7.

The RAN-API document formulation received sharp criticism from a MoEF official who claimed that RAN-API had not followed the technical guidance for the national adaptation plan process from the IPCC (interview EP05). The MoEF official claimed that the Climate Vulnerability Index Data Information System (Sistem Informasi Data Indeks Kerentanan, SIDIK) had followed the IPCC guidelines for vulnerability assessment (interview EP05). SIDIK considers exposure, adaptive capacity, and sensitivity indexes which are in line with the IPCC vulnerability assessment approach available in the Third IPCC Assessment Report published in 2001 (McCharty et al. 2001, 6; Directorate of Climate Change Adaptation 2015).

Figure 5.4 Vulnerability Mapping of Provinces in SIDIK Document



Source: Directorate of Climate Change Adaptation (2015)

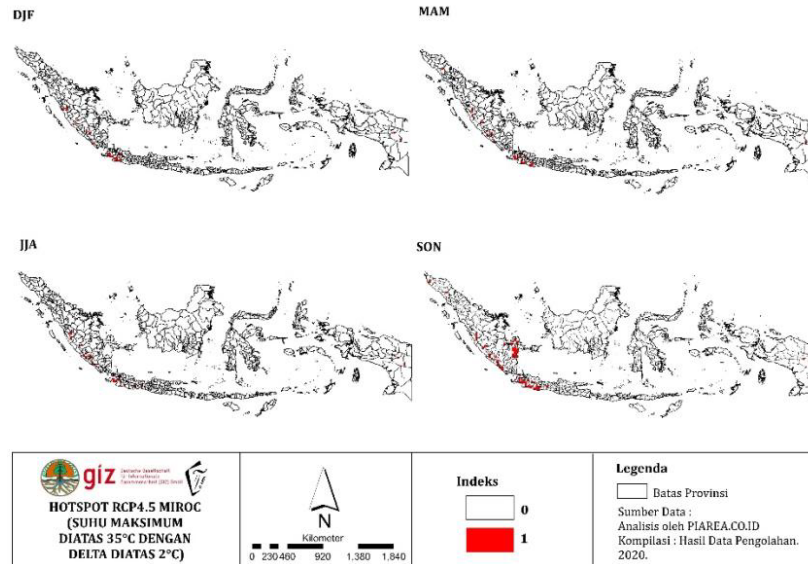
Figure 5.4 is a vulnerability mapping developed by the MoEF for 34 provinces in Indonesia based on vulnerability assessment at the village level. The assessment can be found in the SIDIK book published in 2015. The Y-axis shows the number of villages percentage and X-axis shows provinces. Then the 1 to 5 or green to red scale display the vulnerability levels from not vulnerable, slightly vulnerable, moderate, vulnerable, and highly vulnerable. As mentioned in the Fourth Assessment Report of the IPCC published in 2007, the assessment uses an integrated approach considering exposure, sensitivity, and adaptive capacity. Although the same approach is used in the RAN-API document, there is a considerable discrepancy between the two assessments. Figure 5.4 shows that Papua, North Kalimantan, West Kalimantan, West Papua, and South Sumatera are the most vulnerable provinces in Indonesia, with more than 10% of vulnerable villages.

The RAN-API review document published later in 2018 did not refer to this SIDIK data for assessing vulnerability. The BAPPENAS and appointed experts hired to formulate the document chose to develop another vulnerability assessment. Previously, the MoEF official has criticised the RAN-API that does not follow the IPCC guidance. The SIDIK data also has flaws that attract criticism from a BAPPENAS official. The BAPPENAS official criticised that the SIDIK data only used PODES (village potential) data published by the Statistics Indonesia for vulnerability assessment. He argued that the data was not enough to identify and assess vulnerability (interview EP31). Criticism delivered by both officials to one another emphasises that idea contestation over vulnerability assessment is evident.

The two vulnerability mappings developed by the BAPPENAS and the MoEF have advantages and disadvantages. The 2018 RAN-API Review Document has vulnerability mapping based on five priority sectors. It effectively maps vulnerable provinces based on priority sectors. The distribution of adaptation resources can follow this mapping to target the most vulnerable provinces per sector. For example, the Indonesian Government can focus on distributing adaptation programmes in agriculture to North Kalimantan, Gorontalo, Maluku and North Maluku Provinces. However, adaptation programmes are often distributed at the village level, and the mapping developed by the BAPPENAS cannot provide vulnerability mapping at the village level. SIDIK has developed vulnerability mapping at the village level and could be a more effective tool to help the Indonesian Government or local implementing agencies decide which villages are eligible as the adaptation programme locations. However, the vulnerability information in SIDIK is still general, covering exposure, adaptive capacity, and sensitivity indexes. There is no detailed information related to what sector that needs adaptation interventions. These rival maps and processes end up

complicating the CCA efforts because they cannot help the local implementing agencies to decide adaptation programme locations precisely.

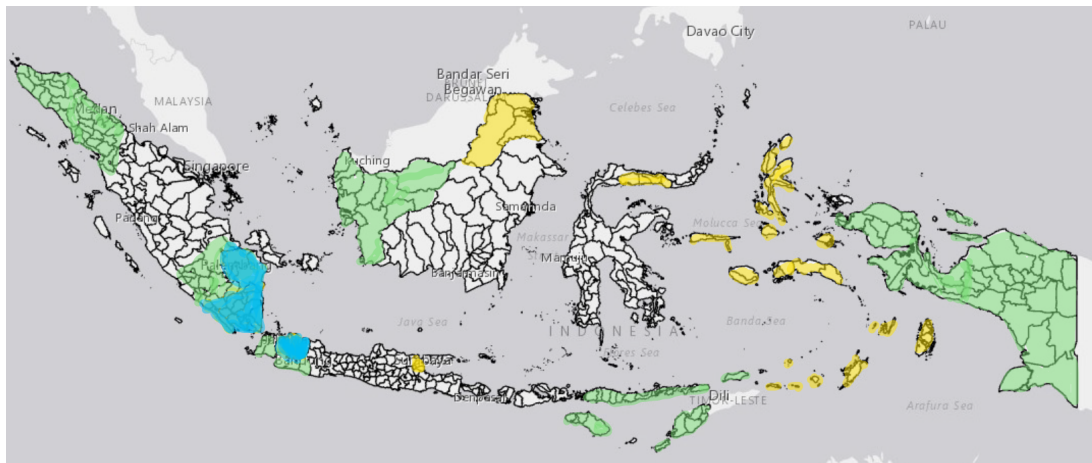
Figure 5.5 Vulnerability Mapping in the NDC adaptation roadmap by MoEF
(Climate Hotspots RCP 4.5 CSIRO MIROC with maximum temperature in the future >35oC dan peningkatan >1,5oC dan >2oC from baseline condition)



Source: Directorate General of Climate Change (2020)

The intra-ministry discrepancy in vulnerability assessment also occurs in the MoEF. In Figure 5.5, the 2020 Adaptation NDC Roadmap shows a different vulnerability assessment using climate hotspots data (risk-hazard approach). Climate hotspots are locations in Indonesia that are vulnerable to temperature rise. The temperatures of these locations are predicted to reach 35 to 38 degrees Celsius if the global temperature rises between 0.75 to 2 degrees Celsius (DGCC 2020). Based on the NDC Adaptation Road, locations that potentially will reach 38 degrees Celsius are considered vulnerable because it will impact on the health of living creatures (DGCC 2020). The authors of this document are aware that there is a discrepancy between the Adaptation NDC roadmap and SIDIK in assessing vulnerability (interview EP15). The vulnerability assessment in the Adaptation NDC roadmap aims to complement the SIDIK data in selecting priority locations for delivering an adaptation programme. It can be overlaid with other vulnerability mappings like SIDIK (the MoEF 2020, 14). However, there is no policy document that attempts to overlay two vulnerability assessments produced by the MoEF until the completion of this thesis.

Figure 5.6 Overlaid Vulnerability Mappings by BAPPENAS and MoEF



Source: The author overlays the vulnerability maps produced by the BAPPENAS and the MoEF on a map obtained from Geospatial Information Agency (n.d.b)

Figure 5.6 overlays vulnerability mapping conducted by the BAPPENAS and the MoEF to explore further discrepancies in vulnerability mappings done by both ministries. These mappings aim at providing CCA stakeholders with information about the most vulnerable areas that need assistance and attempt to regulate CCA stakeholders' behaviour in targeting vulnerable locations. However, it depicts opaque vulnerability mapping that confuses national and local CCA stakeholders who attempt to refer to this mapping to determine adaptation programme locations. The green colour in the Figure 5.6 shows vulnerability areas mapped by the MoEF in the SIDIK and NDC Climate Change Adaptation Roadmap documents based on exposure, adaptive capacity, sensitivity, and climate hotspots indicators. The yellow shows vulnerable areas mapped by the BAPPENAS in RAN-API (2014) using exposure, adaptive capacity, and sensitivity indicators, and RAN-API Review (2018) documents for agricultural sector. The vulnerable areas are scattered across the Indonesian archipelago. The BAPPENAS and the MoEF have contrasting vulnerable locations except for western Java and southern Sumatra (coloured in blue). The blue zone is the only point at which the two vulnerability assessments meet and overlap. It means that the blue zone, where there is consensus, can be identified as priority locations, if the BAPPENAS and the MoEF are willing to integrate their vulnerability maps.

There is, alas, no political will from the BAPPENAS and the MoEF to integrate the vulnerability mapping due to considerable contestation between them, which is reflected in the BAPPENAS and the MoEF officials' criticism towards other's vulnerability assessments (interview EP05; interview EP31). Okamoto, Ali and Watanabe (2023, 18) identify that mapping power in Indonesia has been dispersed to many actors and caused a plurality of

maps made in an uncoordinated way since the fall of Soeharto. It is evident that the mapping problem they portray also occurs in vulnerability mapping in Indonesia where the BAPPENAS and the MoEF pose dominant mapping power at the national level.

National and Local Divergences

Besides discrepancies between ministries, vulnerability assessment discrepancies also occur between national and local stakeholders. There is a missing link between national and local actors in vulnerability assessment. Vulnerability assessments developed by the central government institutions are not always aligned to the criteria used by local environment agency officials, many of whom are unfamiliar with the Climate Vulnerability Index Data Information System (SIDIK), and the NGOs that receive funding from the ICCTF do not adopt RAN-API's vulnerability assessment. The top-down approach of vulnerability assessment means that engagement with local stakeholders is poor, and there is little attempt by the government to encourage local stakeholders to follow the vulnerability assessment process.

One explanation is "isomorphic mimicry" in several vulnerability assessment projects undertaken by the central government. Andrews, Pritchett, and Woolcock (2013, 235) define isomorphic mimicry as "the tendency to introduce reforms that enhance an entity's external legitimacy and support, even when they do not demonstrably improve performance." Mdee et al. (2021) reveal an isomorphic mimicry process occurring in Malawi, Tanzania, and Zambia for agricultural sector. They find a policy-practice gap between agricultural policy frameworks developed and how the things work in practice in three countries. For example, aid distribution in Malawi had minimum impact on capacity improvement to implement the National Agricultural policy and the districts remained relying on NGOs assistance. A similar policy-practice gap also occurs in the vulnerability assessments of BAPPENAS and MoEF. They have the appearance of breakthrough and reform, yet they have neither capability nor capacity to implement extensive change in rendering better adaptation programmes.

The local implementing agencies working on climate adaptation that participated in my study did not refer to the vulnerability assessment criteria listed in the four documents in Table 5.2. They use different assessments to select locations for climate adaptation programmes. For example the environment agency officials in Gunung Kidul Regency and Malang City did not even refer to SIDIK developed by the MoEF in selecting Climate Village Programme locations. The explanation of how they and other implementing agencies selecting adaptation programme locations is discussed in the next section. This section focuses on presenting the discrepancies between the BAPPENAS and the MoEF vulnerability

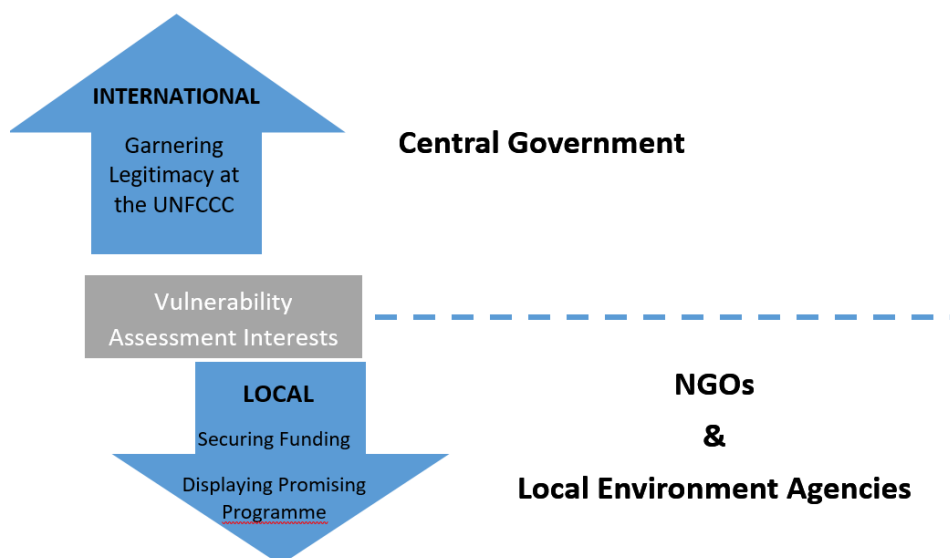
mapping and actual implementation locations at the village level. The fact that subnational agencies operating under the MoEF do not always follow the MoEF's vulnerability mapping is a strong indicator of fragmented governance and the salience of local discretionary authority. Similarly, some NGOs that received funding from the ICCTF, such as Yakkum Emergency Unit and Home Energy Foundation, did not refer to the vulnerability assessment provided in RAN-API (2014) and RAN-API Review Document (2018). In general, local stakeholders have different ideas of vulnerability and use their own assessment through visiting and observing potential locations or justification in selecting adaptation programme locations based on their preference and convenience. They do not follow the vulnerability assessment guidance from the top.

In 2018 the USAID bypassed the BAPPENAS and the MoEF, sponsoring a different vulnerability assessment at the provincial level. USAID hired the global development company DAI to conduct vulnerability assessments for provinces such as East Java, Maluku, and Southeast Sulawesi. As the USAID-appointed vendor, DAI did not follow the Indonesian government's RAN-API vulnerability assessment and conducted its own assessment instead. It uses a dynamic risk analysis method to identify present risks and risks in the next 30 years (risk-based approach). The Vulnerability Assessment and Climate Risks in East Java Province published by DAI (2018, 2) mentions that the assessment is based on vulnerability assessment guidance published by the MoEF and the Indonesian National Disaster Management Agency (BNPB). Hence, the vulnerability assessment differs from RAN-API, which uses an integrated vulnerability assessment model.

As mentioned, in the 2018 RAN-API Review Document, the vulnerability assessment focuses on five sectors: water, marine, coastal, agricultural, and health. The sectors assessed by DAI are complementary but slightly different, with a focus on vulnerability in agriculture (paddy), livestock, fisheries, clean water, and disaster management. The global-national and national-local discrepancies in vulnerability assessment lead to uncertainty in the selection of adaptation programme locations. One example of the confusion caused by multiple vulnerability assessments and overlapping assessments produced internationally, nationally and locally is the climate change adaptation work in Malang Regency, East Java Province. In the BAPPENAS National Action Plan on Climate Change Adaptation (RAN-API), Malang Regency is not listed in the top 50 most vulnerable locations, so it is not a priority area according to this methodology. According to the USAID-DAI, however, a specific village called Wonokerto in Malang Regency is deemed to be sufficiently qualify for CCA project funding from 2015 to 2020 for a Climate Field Shop project.

Vulnerability assessments matter because they determine which policies and locations are prioritised (O'Brien et al. 2007). A combined vulnerability mapping published by DAI (2018) for five sectors (2006 to 2016) showed that Bangkalan, Sampang, Pamekasan, Jember and Bondowoso were the most vulnerable areas in East Java Province. In addition, a combined risk mapping from 2006 to 2014 also did not mention Malang Regency as a location that should be prioritised to get adaptation assistance (DAI 2018). However, an adaptation project was delivered to Wonokerto village located in Malang Regency. The question remains, how do the national and local stakeholders interpret vulnerability mapping and use it? If the selection of priority locations is not based on the vulnerability assessment, what is the point of developing a vulnerability assessment? Two possible answers can explain this vagueness in project location selection. First, there is a divergence of interest between the ministries and local implementing agencies (see Figure 5.7). Second, in local adaptation governance, local implementing agencies can overpower the ministries in selecting adaptation programme locations at the local level. The working area of local implementing agencies is mainly at the local level. They have a contextual understanding relating to local situations. With this local knowledge, local implementing agencies can make justifications and negotiate their choice of locations to the BAPPENAS and the MoEF.

Figure 5.7 Mapping CCA Actors' Interests in Vulnerability Assessment



As discussed previously, it seems that the interests of the central government tend to be more internationally oriented to conform to the UNFCCC recommendations and garner legitimacy at the international climate negotiation forum. In their study of climate change

vulnerability assessments over 25 years, Tschakert et al. (2013) found both achievements and blind spots. One of the blind spots is that conventional vulnerability assessments often overlook the dynamics of vulnerability. They consider most vulnerability assessments to be static because those vulnerability assessments overlook several factors, such as the fluctuating contexts and the multi-scalar and tele-connected process faced by poor and vulnerable communities. The COVID-19 pandemic is an example how a global pandemic can affect the fluctuation of poverty and vulnerability levels of many populations in the world. The static vulnerability assessments fail to capture the dynamics nature of vulnerability. Besides, Tschakert et al. (2013) also find that vulnerability map can lead to premature decision making and give a false sense of achievement and legitimacy right after mapping completion. This blind spot also occurs in Indonesia. The vulnerability assessment process should not stop when the map is done and launched. Disseminating the map to local stakeholders, encouraging them to utilise it and receiving feedback from local stakeholders are some of the subsequent measures the government should take because vulnerability assessments are not static. The BAPPENAS and the MoEF might have done this measure, yet local implementing agencies evidently do not refer to the ministries' vulnerability mapping. However, suppose the goal is to meet the UNFCCC's recommendation to develop a national adaptation plan and vulnerability assessment. In that case, the BAPPENAS and the MoEF have achieved the goal and gained legitimacy at the international level once vulnerability mapping is published and submitted to the UNFCCC even with overlapping vulnerability mapping problem highlighted on Figure 5.6.

The vulnerability assessments by the BAPPENAS and the MoEF might not fulfil their primary purpose to help implementing agencies at national and local levels select vulnerable locations and deliver the right adaptation programmes. However, assessing vulnerability has had an instrumental effect (Ferguson 1994) in gaining the Indonesian Government a degree of legitimacy in the UNFCCC arena. By completing vulnerability assessments, the Indonesian government has displayed its willingness to get something done according to the UNFCCC recommendations. The critique from Mikulewicz (2018) and Taylor (2013) (as cited in Barnett 2020) of how the development industry appropriates vulnerability and adaptation to remain relevant complements Ferguson's (1994) view of the instrument-effect. My fieldwork suggests that the vulnerability assessments conducted by the BAPPENAS and the MoEF have in some instances appropriated vulnerability and utilised it as an instrument to remain relevant in a world where climate change is a vital agenda in international negotiations.

At the local level, there is a pattern whereby local implementing agencies such as environment agencies, universities, and NGOs already have targeted locations for vulnerability assessments. For example, the decision of USAID to distribute adaptation resources in East Java Province is seemingly based on a political arrangement with the Indonesian government, the BAPPENAS and other donor agencies. Two elite participants of this research mentioned that donor agencies operating in Indonesia, including USAID, have negotiated aid distribution with the BAPPENAS to decide particular regions where they can run their development programmes (interview EP12; interview EP22). A DAI official that used to work with USAID revealed that donor agencies operating in Indonesia usually had designated working areas, and in 2018 for example USAID focused on particular areas only, conducting climate vulnerability assessments in East Java, Southeast Sulawesi and Maluku Province (interview EP22). The selection of the remote provinces of Southeast Sulawesi and Maluku Provinces is puzzling because neither province is listed as a priority pilot project location or as one of the most vulnerable locations in the RAN-API. This peculiarity raises questions why USAID only focuses on three provinces and why USAID selects two provinces that are not listed as pilot project locations. The discussion on the decisions made by USAID and other implementing agencies in selecting locations can be found in the next section.

Local environment agencies and NGOs such as Yakkum Emergency Unit and Home Energy Foundation can also select the locations for adaptation programmes based on the previous track record of programmes being conducted in those locations. The immediate benefit for local participants and recipients is access to funding and resources. Anthropology Research Centre, Yakkum Emergency Unit, and Home Energy Foundation received 1 billion rupiah from ICCTF for an adaptation programme with 16 to 24 months duration.¹⁵ Villages that win the Climate Village Programme competition can win grants around 8 million to 12 million rupiah.¹⁶ Problems arise when limited adaptation resources are concentrated in the same locations repeatedly. This pattern can lead to adaptation gaps between village communities. One community might have better adaptive capacity because it receives adaptation programmes continuously and attracts more development programmes to the same village. Meanwhile, there are other vulnerable villages that also need assistance.

Ariefiansyah and Webber (2022) provide an example of how a village in a rainfed agricultural area in East Lombok can build a rainfall observer group, and suddenly, it becomes a famous climate literacy group where the farmers can demonstrate sophisticated technique

¹⁵ IDR 1 billion is equal to GBP 50,363 as of 10 March 2024.

¹⁶ IDR 12 million is equal to GBP £604 as of 10 March 2024.

in measuring rainfall and making rainfall graphs. This village then attracts more development and other development projects. Ariefiansyah and Webber (2022) find a pattern where development projects usually flow to 'sellable' villages. A village in East Lombok with a rainfall observer group fulfils this 'sellable' criteria. Conversely, a marginalised village that is 'not sellable' usually gets little attention from the government. This distribution pattern can be considered an entrenchment process where adaptation programmes can widen inequality between village communities (Sovacool, Linnér, and Goodsite 2015).

There is also exclusion in the process of vulnerability assessment that fits particular international and national agendas, or results in adaptation projects based on convenience or pre-existing donor networks. Adger (2006) criticises vulnerability assessments that are too focused on country-level analysis and rely on comparative statistics because they fail to capture the sub-national spatial and social differentiation of vulnerability and local conditions. The critique of vulnerability assessment by Adger (2006) is valid in the Indonesian context. Some vulnerability assessments by the central government and key ministries rely on biophysical indicators. For instance, the vulnerability assessment in the 2018 RAN-API Review Document utilises risk and hazard indicators, which fails to capture the social differentiation of vulnerability. As will be demonstrated, implementing agencies at the local level, such as donor agencies, NGOs, universities, and local environment agencies, can have different interpretations of vulnerability with the central government because they have direct interactions with local people and understandings of local conditions. Therefore, they do not follow the central government's vulnerability assessment.

The vulnerability assessments conducted by the central government cannot provide a vantage point to map vulnerability at the local level due to discrepancies between them. Likewise, an international development agency such as USAID has a different vulnerability assessment at the provincial level. Vulnerability assessment documents published by public and private actors show a divergence between them. With all these discrepancies, those citizens who are most vulnerable can become obscured nationally and locally, missing out on vital climate adaptation support. When the government and development agencies begin to allocate funding for adaptation programmes, local communities have an incentive to self-identify as vulnerable and compete for projects. When this happens, disagreements occur in determining priority locations for adaptation programmes as consequences of a vulnerability mapping divergence and a proliferation of claims by local actors competing for funds. The selection of priority locations is ostensibly driven by each government and development agency's interests using each vulnerability assessment as described in Figure 5.7. The

following subsection focuses on the discrepancies in determining priority locations for climate adaptation programmes.

Patterns of Adaptation Resource Distribution

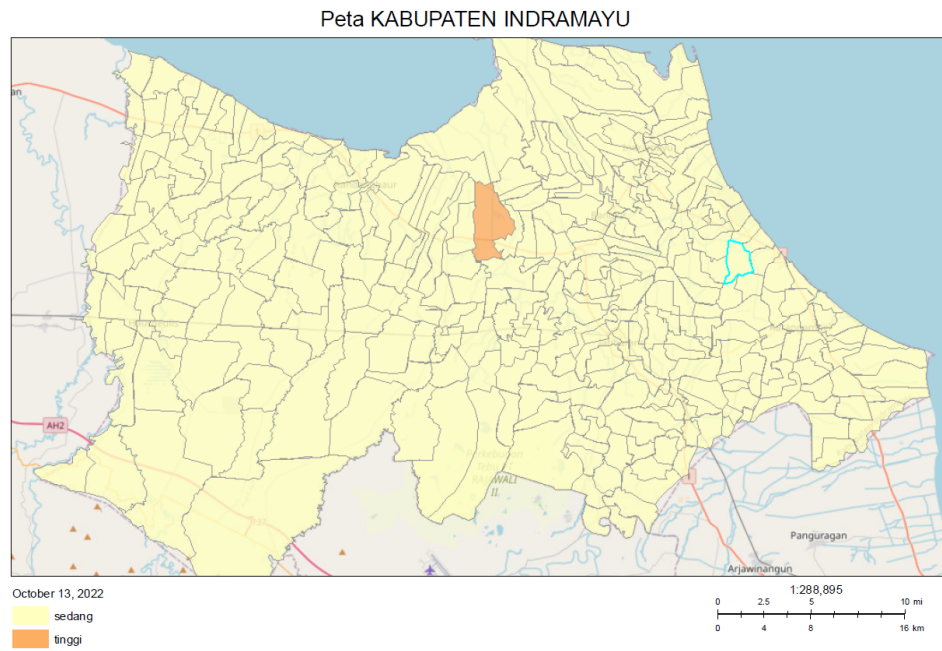
This section investigates whether limited adaptation resources from the MoEF, ICCTF and USAID are distributed to the most vulnerable communities at the village level. Lee and Shon (2024) use distributive and recognition justice concepts to scrutinise the allocation pattern of energy aid distribution in Nigeria, Tanzania, Ethiopia, and the Democratic Republic of Congo. They describe distributive justice as a concept that deals with the unjust distribution of energy assets and where they are concentrated. Recognition justice deals with the delivery of just actions to neglected groups. Recognition justice helps to scrutinise whether regions in need receive benefits from energy aid (Lee and Shon 2024). Distributive and recognition justice concepts used by Lee and Shon (2024) can help to investigate the allocation pattern of adaptation resources in Indonesia. This section focuses on the recognition justice of adaptation programme distribution in Indonesia by analysing the pattern of distribution and whether they are distributed to the most vulnerable communities in need. The question of where adaptation resources are concentrated can be found in Chapters 6 and 7.

The eight adaptation programme cases are distributed at the village level. Therefore, this section uses the Indonesian Climate Vulnerability Index Data Information System (SIDIK) developed by the MoEF to investigate the adaptation resources allocation in eight sites. The MoEF has done vulnerability mapping at the village level, and despite some flaws, it is the most systematic mapping conducted at the village level right now.

Locations Selection under the MoEF

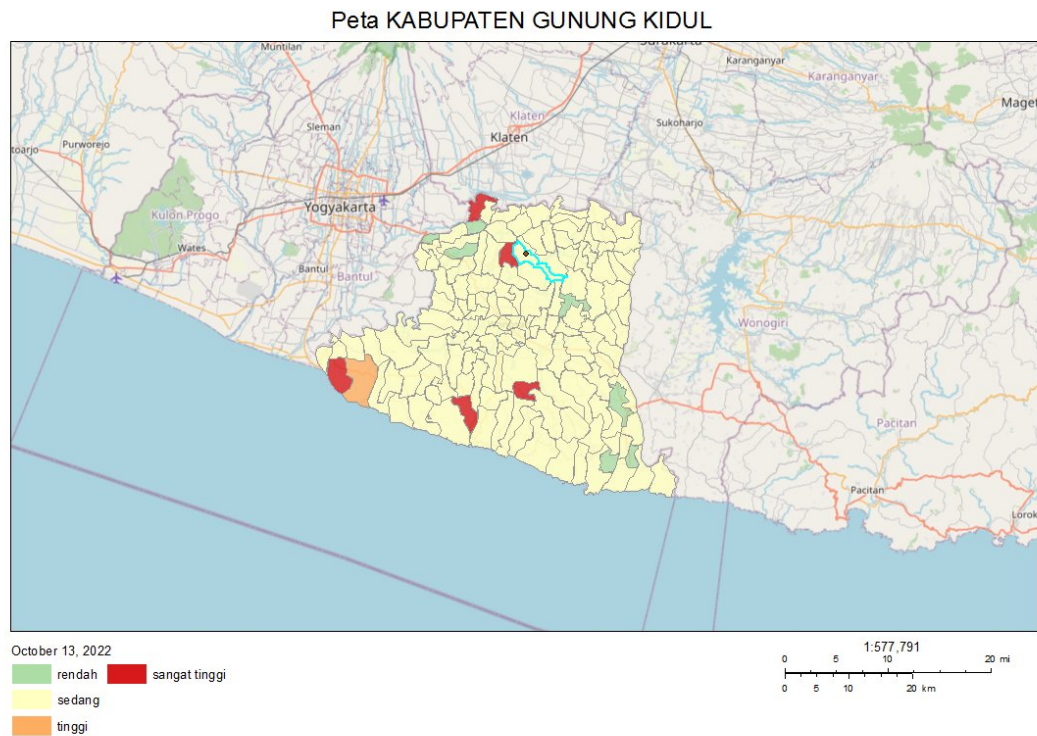
There is a significant discrepancy between priority locations mapping done by the central government and the actual locations selection for adaptation programmes. Figures 5.8 to 5.11 show vulnerability mapping according to the Indonesian Climate Vulnerability Index Data Information System (SIDIK) developed by the MoEF (2018) and the actual locations of Climate Village Programme implementation by the local environment agencies in the case studies of Indramayu, Gunung Kidul, East Lombok Regencies and Malang City. Climate Village Programme locations are marked by a turquoise line while vulnerable or priority locations are marked by either red shading (very high), or orange shading (high).

Figure 5.8 SIDIK Vulnerability Mapping of Indramayu Regency



Source: The MoEF (2018b)¹⁷

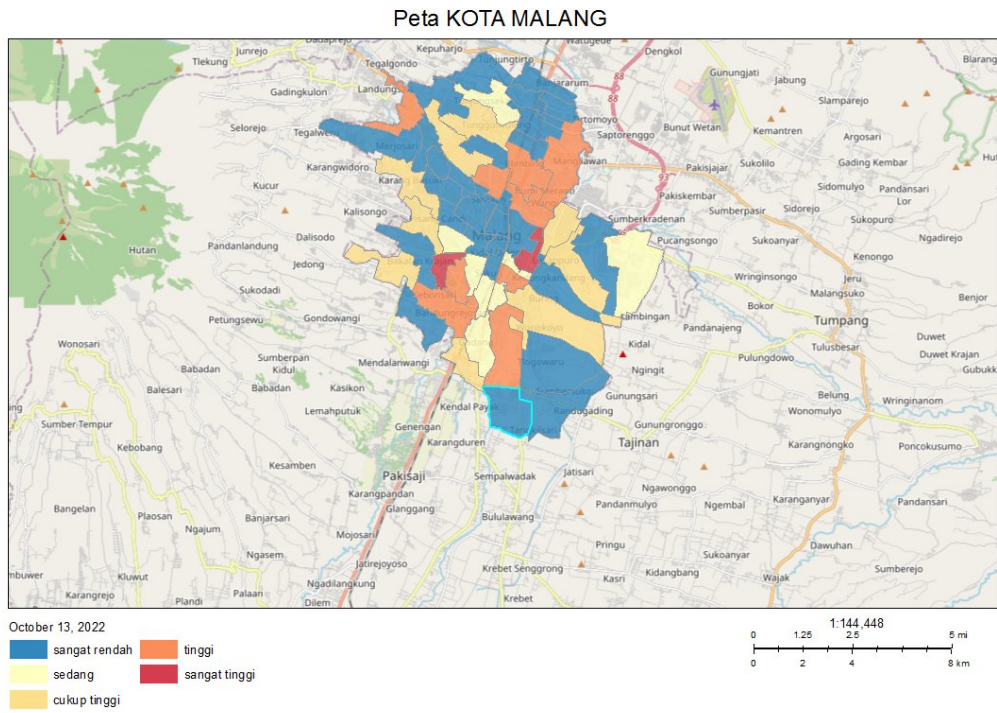
Figure 5.9 SIDIK Vulnerability Mapping of Gunung Kidul Regency



Source: The MoEF (2018b)

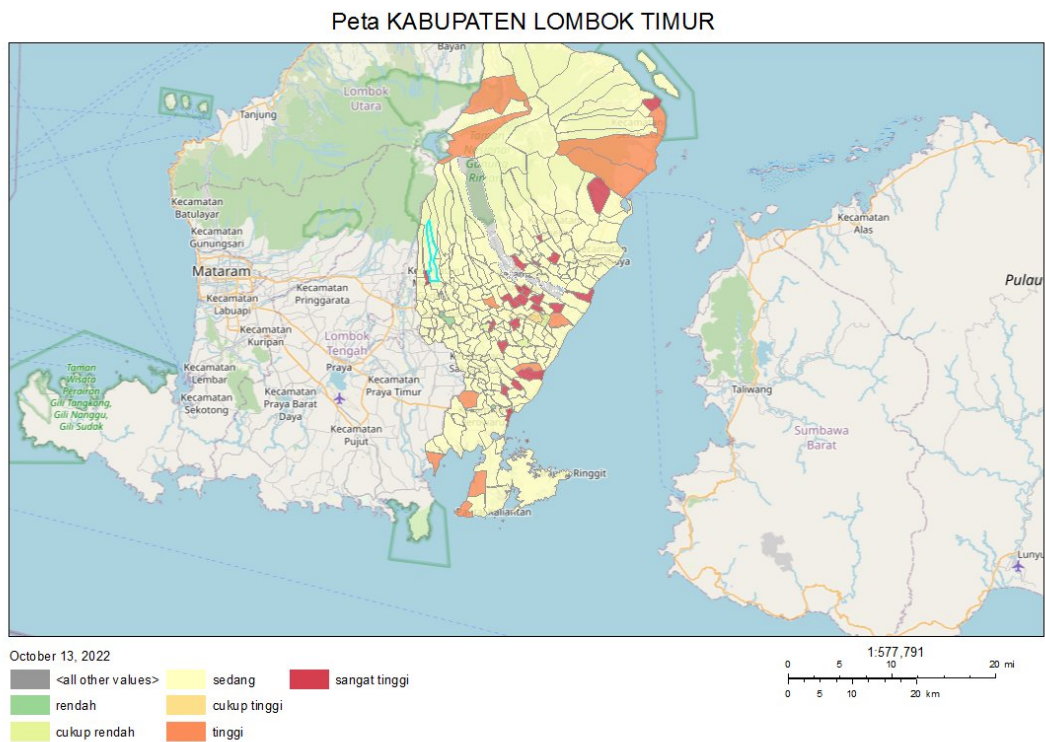
¹⁷ The author modified all vulnerability maps (Figures 5.8 to 5.15) by adding turquoise lines to show the adaptation programme locations.

Figure 5.10 SIDIK Vulnerability Mapping of Malang City



Source: The MoEF (2018b)

Figure 5.11 SIDIK Vulnerability Mapping of East Lombok Regency



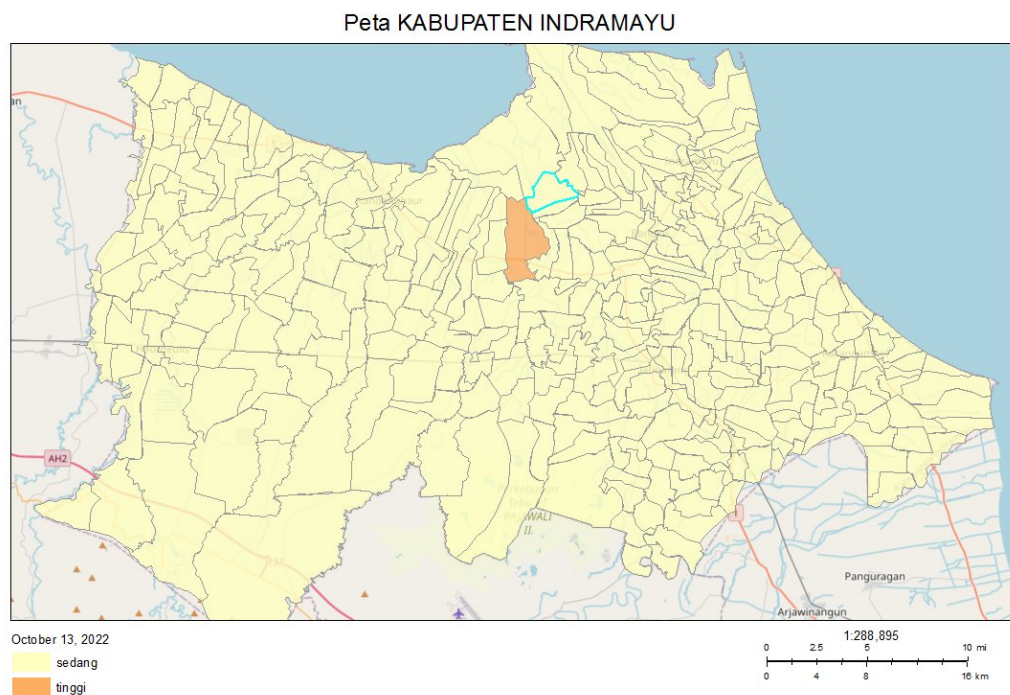
Source: The MoEF (2018b)

From four vulnerability maps, none of the Climate Village Programmes marked by a turquoise line targets areas with high-level vulnerability status (red or orange colour). It is evident that there are discrepancies between vulnerability mapping done by the central government and the actual adaptation programme location targeted by the local environment agencies. Recognition justice is violated because the Climate Village Programmes are not distributed to the most vulnerable villages. The MoEF should recognise the most vulnerable villages and prioritise adaptation resource distribution to those villages in need.

Location Selection under the BAPPENAS

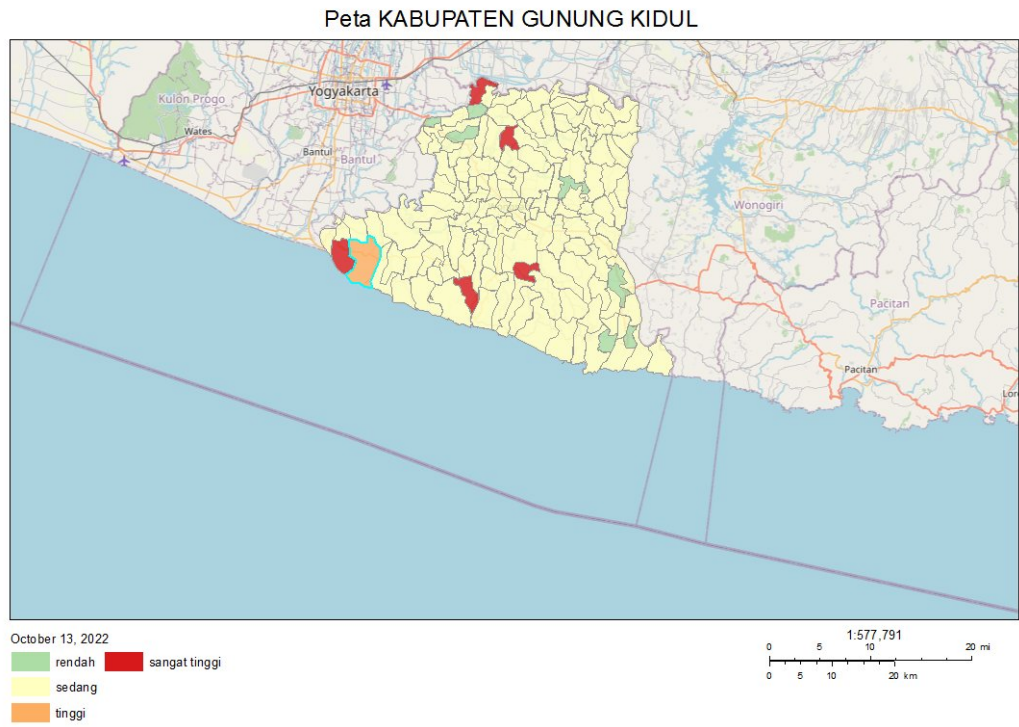
The BAPPENAS has no vulnerability mapping that shows detailed mapping at the village level, like the MoEF's. Therefore, the vulnerability mapping and location selection under the BAPPENAS borrow vulnerability mapping from the MoEF's Indonesian Climate Vulnerability Index Data Information System (SIDIK). Then, discrepancy analysis follows using vulnerability data available in the RAN-API (2014) and RAN-API Review (2018) documents. Turquoise lines mark selected locations for the adaptation programme under the Indonesian Climate Change Trust Fund (ICCTF), and the vulnerable locations are marked by red shading (very high) and orange shading (high).

Figure 5.12 SIDIK Vulnerability Mapping of Indramayu Regency



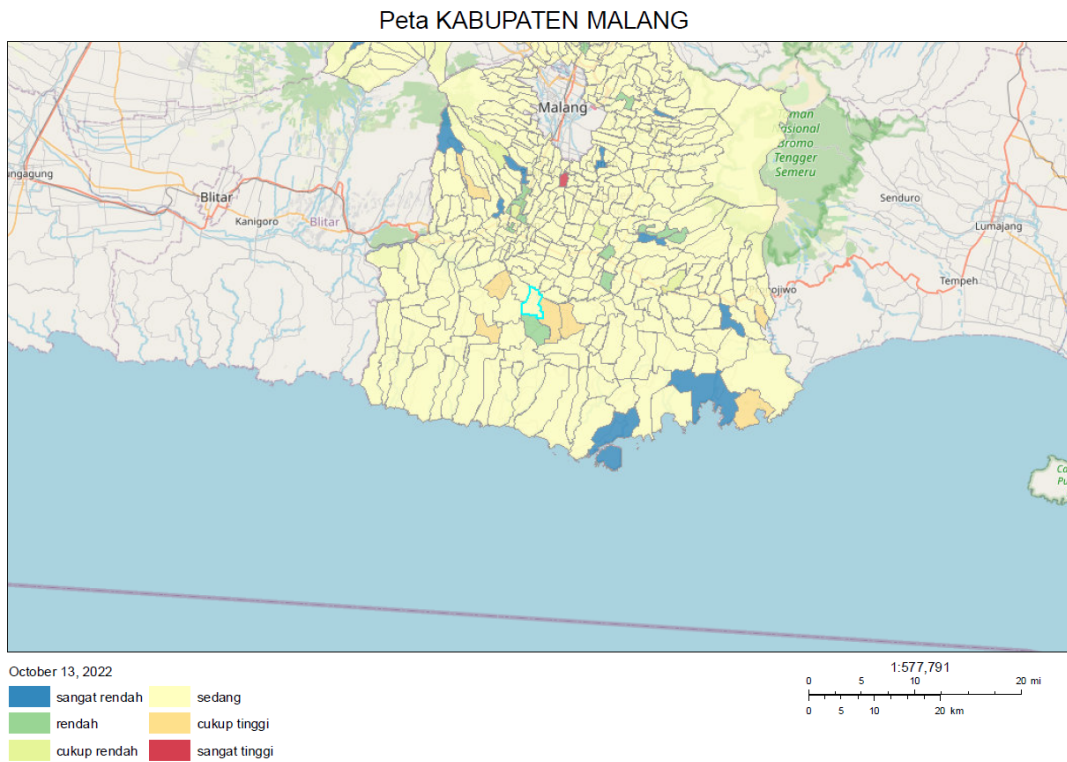
Source: The MoEF (2018b)

Figure 5.13 SIDIK Vulnerability Mapping of Gunung Kidul Regency



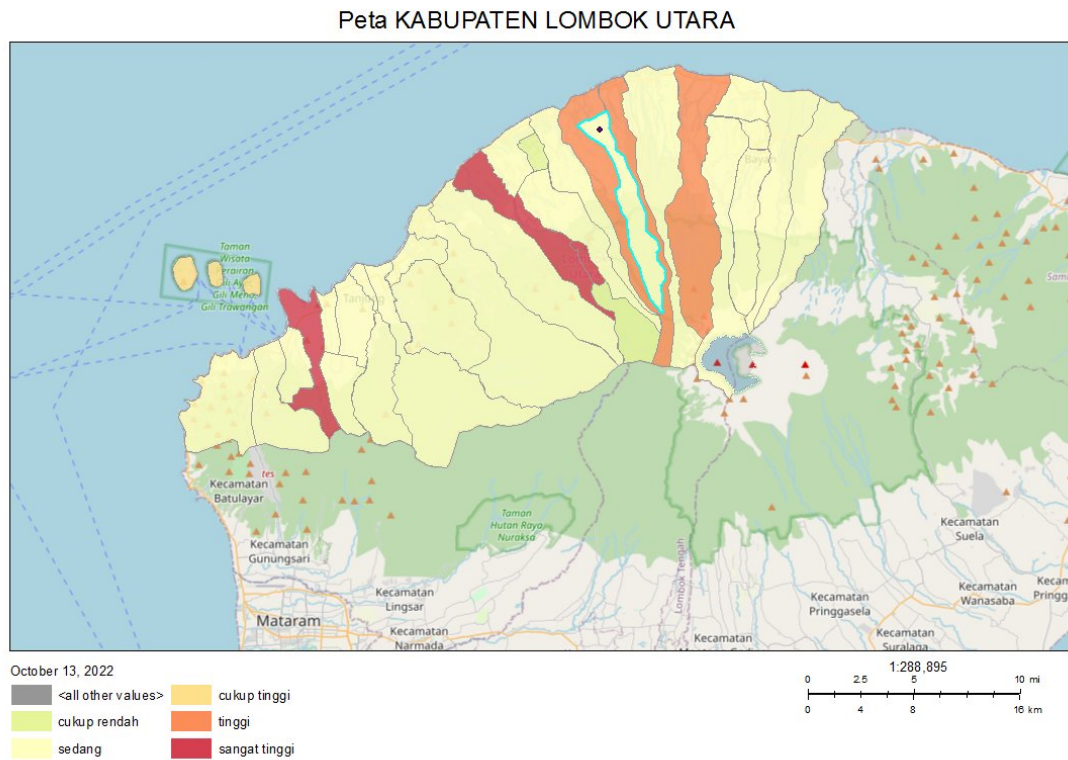
Source: The MoEF (2018b)

Figure 5.14 SIDIK Vulnerability Mapping of Malang Regency



Source: The MoEF (2018b)

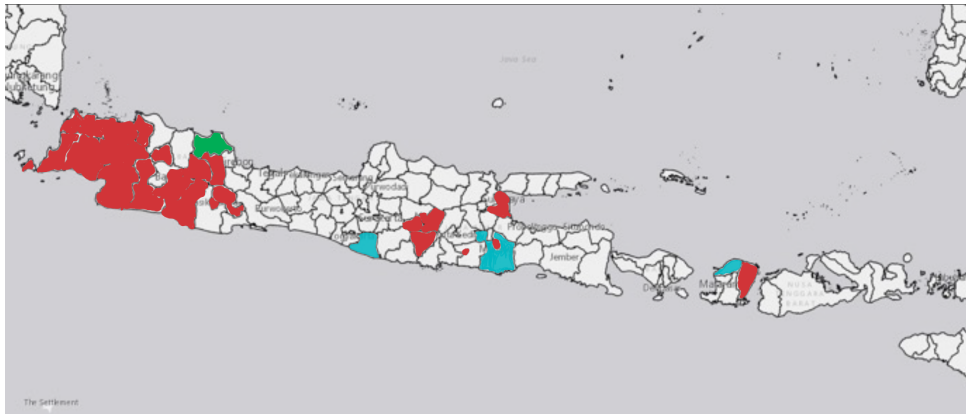
Figure 5.15 SIDIK Vulnerability Mapping of North Lombok Regency



Source: The MoEF (2018b)

All of the figures except for Figure 5.13 depict a similar pattern to the discrepancy found in MoEF programmes. The adaptation programmes funded by the ICCTF are not distributed to the most vulnerable locations according to SIDIK vulnerability mapping. Only Figure 5.13 seems to be the right decision in a technical sense because the adaptation programme is distributed to a location with high-level vulnerability. However, it can be considered an inaccurate distribution decision according to the SIDIK mapping since the next village's vulnerability status is red or has a very high vulnerability level, which is higher than Giripurwo's vulnerability status. Again, recognition justice is violated in the adaptation programmes allocation under ICCTF.

Figure 5.16 Top 50 Vulnerable Areas and the Actual Adaptation Programme Locations



Source: Badan Informasi Geospasial or Geospatial Information Agency (n.d.)

The vulnerability assessment document developed by the BAPPENAS in the RAN-API document reveals that the adaptation programme locations do not match the mapped priority locations. The RAN-API document has mapped Indonesia's top 50 vulnerable locations (coloured in red) based on SIDA's vulnerability assessment. Figure 5.16 shows that most adaptation programme under the ICCTF scheme target different locations that do not correspond with RAN-API mapping (coloured in blue). Only an adaptation programme distributed in Indramayu Regency matches the priority locations mapping (coloured in green). The selection of programme location in Indramayu Regency seems to follow the recommendation of vulnerability mapping in RAN-API, but this decision is seemingly a coincidence rather than a coordinated decision. A scholar involved in the project in Indramayu did not mention the RAN-API document as a reference to select a village in Indramayu for implementing an adaptation programme funded by the ICCTF (interview EP21). Instead, he mentioned that the decision to conduct an adaptation programme in several villages in Indramayu was based on his personal experience and the experience of his institutions in collaborating with Indramayu farmers since 2006, as well as the agroecosystem conditions of the villages whether they depended on irrigation canals, rain-fed agriculture, or a combination of the two (interview EP21).

It makes sense if the location selections of the ICCTF adaptation programmes do not match the MoEF's vulnerability mapping (Figure 5.12 to 5.15) due to the current contestation over climate change adaptation programmes and sectoral ego. However, if the location selections of the ICCTF adaptation programmes do not follow the vulnerability assessment provided by RAN-API documents, we can infer that there are other complex, non-technical factors determining the selection of adaptation programme locations.

In general, there is a mismatch between vulnerability mappings developed by the central government and the actual adaptation programme implementation at the local level. Limited adaptation resources are not distributed to be most vulnerable (as determined by vulnerability assessments and mapping). Resources flow to different locations instead of priority locations mapped by the central government. The central government is often pictured as the most powerful actor in the decision-making process, ostensibly through top-down styles of decision-making in climate change adaptation governance (Few, Brown, and Tompkins 2007; Falzon 2021). In fact, on some occasions, local actors have more power than the central government in the local decision-making process, such as selecting adaptation programme locations. They can abrogate the top-down commands from the central government to target vulnerable locations as mapped in the vulnerability assessment documents. If the selection of adaptation programme locations is not based on the government's instructions, then how do the local actors target the beneficiaries of adaptation programmes, and what are their interests?

Local Adaptation Strategies and Interests in CCA

The problem of adaptation resources distribution by the MoEF through the Climate Village Programme and the BAPPENAS through the ICCTF funding is similar. There is no systematic vulnerability assessment to decide on top-priority locations eligible for adaptation resources. Ideally, the adaptation resource should go to the most vulnerable communities. However, the implementing agencies' decisions to select the location as the beneficiaries of the CCA programmes are deeply political because there are always political interests behind every development and planning discourse (Glover and Granberg 2020, 55). Patterns of resource distribution often neglects the vulnerability and socio-economic conditions during the decision-making process. On top of that, the implementing agencies tend to follow existing practices, policies, or programmes and neglect alternative options (Glover and Granberg 2020, 13).

Local implementing agencies must have some reasons for selecting locations for the adaptation programme. Jung (2023) has identified that donors might place aid in certain areas in Myanmar for at least six reasons: effectiveness, organisational incentives structure, preferences, harmonisation, visibility, and existing networks. Jung's (2023) list of why donors select project locations in Myanmar helps to identify local implementing agencies' reasoning for selecting adaptation programme locations in Indonesia:

1. Donors often distribute development projects in urban areas of Myanmar because this is relatively more **effective** than distributing them to rural and remote areas.
2. They also often avoid conflict zones. Selecting more secure locations gives them **organisational incentive structures** for running the projects without dealing with potential conflicts.
3. Donors' decisions are sometimes influenced by the local governments' **preferences**, which might prefer city areas, for example, due to the higher potential of political unrest in urban areas.
4. The **harmonisation** principle, which is based on the Paris Declaration on Aid Effectiveness, usually encourages donors to coordinate the distribution of development projects to avoid duplication.
5. By distributing development projects in locations where no other donors are operating, the donors can "plant their flags" or increase the **visibility** of their projects.
6. Donors usually target locations with **existing networks** with private facilitators.

Draw on elite interviews with elite participants from local environment agencies, Universitas Indonesia, Yakkum Emergency Unit, DAI, and Home Energy Foundation, this thesis argues that the selections of adaptation programme locations in Indonesia are based primarily on effectiveness, the harmonisation principle, visibility, and existing networks.

The CCA programmes need careful calculation and delivery mechanisms to enable vulnerable populations to adapt to severe climate change hazards. Li (2007, 6) highlights that calculation includes the "right manner", prioritising distinct "finalities", and fine tuning tactics to allow the central government to devise specific interventions. This section delves into calculations in selecting priority locations to deliver adaptation resources. From various tactics used by the implementing agencies, location selection is an initial tactic utilised to achieve optimal results or to convince the ICCTF and secure funding for their institutions. To examine the specific calculations taking place at village level, interviews were conducted with eight local elites who implemented adaptation programmes in four villages. The interview data helps to pinpoint their reasoning for selecting particular programme locations. One clear finding is that none of the local elites referred to the vulnerability assessments undertaken by the BAPPENAS or the MoEF to determine the programme locations.

The local Environment Agency officials in Gunung Kidul and Malang seem to target villages with existing mitigation and adaptation programmes, assuming that these villages have the capacity and prior experience needed to establish a Climate Village Programme.

Government officials can skip the laborious task of educating the villagers about climate change or conducting inclusive stakeholder consultations for programme planning. Three Environment Agency officials in Gunung Kidul and Malang did not mention the Climate Vulnerability Index Data Information System (SIDIK) or the NDC Adaptation Roadmap documents when asked about the criterion for selecting the Climate Village Programme locations (interviews EP23, EP25, and 26). One official seemed to have no idea what SIDIK is, so during the interview I had to repeat the question and explain that SIDIK is the abbreviation for *Sistem Informasi Data Indeks Kerentanan* to make the official understand (interview EP25).

Two Environment Agency officials answered that they selected villages that already had waste bank programmes (interviews EP25 and EP26). Another official explained, “We continue our previous Kampung Bersinar (Shining Village) programme. We select and assist ten villages from the Kampung Bersinar program. So, we do not start from scratch to propose climate villages since our environment agency already has existing programmes. We just need to polish them a bit to meet the assessment indicators of Climate Village Programme” (interview EP23). The local environment agency officials selected the Climate Village Programme locations without referring to the vulnerability mapping done by the MoEF. Overall, the local environment agencies select the Climate Village Programme locations based on effectiveness and visibility reasons. Selecting villages that already have existing climate actions is undoubtedly more effective in guaranteeing the programme's success than establishing a new programme from scratch. Villages that have existing climate programmes usually have been recognised by political leaders and got media exposure, hence raising their visibility. For example, the Climate Village Programme in Malang had been visited by the Malang Vice Mayor in 2021 (Malang City Government 2021).

Anthropology Research Centre (Universitas Indonesia), Yakkum Emergency Unit, DAI, and Home Energy Foundation that conducted adaptation programmes under the ICCTF also had their own rationality in selecting programme locations. The location selection was not based on the BAPPENAS' vulnerability assessment. A scholar who conducted an adaptation programme in Indramayu stated: “We did not use administration classification [to select the locations], but we use agro ecosystem classification, our understanding from working with them since 2006, and the initiation of climate change adaptation activities has been going on since 2009, so it is seven years early before getting the funding from the ICCTF.” (interview EP21). Jung (2023) identifies that existing networks can be a reason for donor agencies to deliver their aids. Anthropology Research Centre Universitas Indonesia has a similar reason.

It selects Pranggong village because it has existing networks in this village and has a long experience working in Indramayu Regency.

Yakkum Emergency Unit who conducted an adaptation programme in Gunung Kidul explained: “Fortunately, I am originally from Gunung Kidul Regency. Therefore, when I brought the issue about the impacts of climate change in Gunung Kidul and determined location, it would be easier to identify. Our goal was not establishing new group because we were afraid if the new group would not sustain. The people were familiar, and the activities were tangible in the existing groups.” (interview EP16). This quotation shows that effectiveness and existing networks are the two main reasons for selecting Dusun Temon. First, selecting an adaptation project location near your home is effective and efficient. EP15 can take a short journey to arrive at the location. He is familiar with the location and it can cut the location survey cost. Second, he has good networking and knows many people there, including the Dusun Head.

A Home Energy Foundation official who ran an adaptation programme in North Lombok Regency revealed: “The first reason (to select salut village) is that there are biogas digesters. There are 149 biogas digester units built in that village. Second, they face difficulties in accessing water. Even if they can get it, it is not hygienic. Previously, we entered Salut Village with biogas programme. This biogas programme has been existing since 2013. Based on this potential, we started to collect the data and write a proposal to be submitted to ICCTF.” (interview EP32).¹⁸ Effectiveness, visibility, and existing networks are the three main reasons for this quotation. Writing an adaptation project proposal based on an existing project is easier and more effective than writing it from scratch by proposing a new project. Introducing a successful project location like Salut Village to the ICCTF increased the visibility of the project proposal. On top of that, EP32 has established good networking with people in Salut since 2013. It was an asset for the Home Energy Foundation to ensure the success of the adaptation project in Salut, and it convinced ICCTF to give them the project grant.

Achieving optimal results became the development mantra to justify the selection of project locations. For instance, the Yakkum Emergency Unit did not want to establish a new farmer group since the sustainability was uncertain, so it would be risky for project implementation. Another example is the Home Energy Foundation selected Salut because it already had a well-established village with 149 biogas digester units. This establishment would make Salut a promising site in the proposal and give the ICCTF’s decision-makers an

¹⁸ Biogas digester is a container that has a function to digest manure from livestock and then produce the biogas.

excellent impression. However, this development mantra pushed them to fall into a narrow framing trap. The narrow framing might cause decision-makers to lose sight of more fundamental goals (Findlater et al. 2021). The fundamental goal in CCA cases should be assisting the most vulnerable communities, not just showcasing the project's success. The location options are already narrow when their goals present optimal results to the donors or fund agencies. The locations must meet the key criteria, which is a high percentage rate of success, if they decide to deliver the projects there. Unwittingly, this framing distances the local implementing agencies from alternative locations that might be more vulnerable to climate change and need immediate assistance, like villages with red and orange colours in Figures 5.8 to 5.15. These neglected communities in 'non-strategic' locations are not on the radar of implementing agencies due to the low percentage rate of success consideration. Borrowing the term used by Ariefiansyah and Weber (2022), those villages are not 'sellable'. Beginning a project from scratch has a high failure risk indeed. A new location, where the implementing agencies are unfamiliar, might not be the top option for conducting adaptation projects.

The location selection by the DAI company as the private implementing agency funded by USAID has a different pattern, and it is not based on the central government's vulnerability assessment. Based on interview with a USAID official, former DAI official, and former Wonokerto Village Head, this thesis identifies that USAID and DAI selects East Java and Wonokerto Village for the harmonisation principle, visibility, existing networks, and effectiveness reasons. East Java Province was selected due to the harmonisation principle that USAID has to follow. It has been discussed previously that there is a political arrangement between donor agencies and the BAPPENAS to harmonise development aid distribution and to avoid project duplication in the same region (interview EP12; interview EP22). The harmonisation principle used by Jung (2023) also occurs in USAID's decision to select East Java Province. Moreover, selecting a location where no other donor agencies are operating will increase the visibility of the project.

An USAID official explained a technical reason of why USAID delivered adaptation projects in East Java Province:

"In the beginning, USAID had targeted provinces. APIK selected three targeted provinces that had different characteristics. Programmes in East Java province focused on watershed areas, Maluku focused on small islands, and Sulawesi Tenggara focused on coastal areas. So, we selected provinces that had different characteristics." (interview EP18).

This answer reveals that the USAID Climate Change Adaptation and Resilience (APIK) programme selects East Java Province because it has different characteristics from Maluku

and Sulawesi Tenggara. East Java Province has watershed areas that face climate change negative impacts. It is not based on the central government vulnerability assessments or a particular vulnerability assessment conducted nationally by USAID. A DAI company official revealed another reason as to why USAID delivered adaptation programmes there. The official revealed that they were not sure why USAID delivered adaptation programmes in East Java Province because it was a long time ago. However, he presumed that there was a tendency that USAID had been there for a long time. That was why USAID selected East Java Province (interview EP22). This answer implies that USAID selects East Java province because of the existing networks established in East Java Province for a long time.

During the interview, Wonokerto Village Head shared interesting information to reveal why his village was selected as the beneficiary of the USAID adaptation project. He said that his village was not the first one the USAID APIK team contacted. Before they came to Wonokerto, the USAID APIK (Adaptasi Perubahan Iklim dan Ketangguhan/Climate Change Adaptation and Resilience) team attempted to approach a village head in another village. The former Wonokerto Village Head did not know the village's name, but he knew that the USAID APIK team had cancelled the approach because the other village was not ready and chose to approach Wonokerto. The former Wonokerto Village Head was ready and welcomed the adaptation project from USAID. He also committed to supporting the project by providing a plot of land for the climate field school programme (interview VH02). This story from the former Wonokerto Village Head tells that USAID APIK seems to target a village where the village government is ready and welcome them. The programme preparation becomes effective since the USAID APIK team does not have to deal with a complicated village bureaucracy.

Overall, effectiveness, the harmonisation principle, visibility, and existing networks are recurring reasons in determining adaptation project locations in eight sites. Those reasons are political since they are based on the local implementing agencies' interests and not based on efforts to bring recognition justice by delivering adaptation projects to the most vulnerable communities as mapped by the Climate Vulnerability Index Data Information System (SIDIK). These implementing agencies often selected locations to favour their position in getting funding from the donors. Figures 5.8 to 5.15 have illustrated how implementing agencies have overlooked more vulnerable locations as alternatives. Although the mapping of SIDIK might not be 100% accurate in mapping vulnerability at the village level, this vulnerability index is the best guideline for the implementing agencies to select project locations. It is an official vulnerability assessment submitted as one of Indonesia's climate

commitments to the UNFCCC. If there is disagreement in defining which location or community is vulnerable, the implementing agencies could conduct a more robust vulnerability assessment to justify their decisions in site selection. In fact, calculations of vulnerability levels are usually not the central rationality. It usually comes after technical calculations written in the proposal to make the project look promising and secure funding.

The CCA implementing agency rationale for the selection of projects risks widening the socioeconomic inequality gap. Strategic locations will get more assistance due to their closeness with some implementing agencies and a higher percentage of project success. The local implementing agencies can access multiple and multiyear adaptation projects. Meanwhile, the neglected vulnerable communities will make autonomous adaptation efforts using their limited resources and skills, which sometimes might exacerbate their socioeconomic condition. More evidence on an inequality theme happening at the village level can be found in Chapters 6 and 7.

Local Contestation and The Variety of Vulnerability Perspectives

Previous discussions have identified vulnerability assessment discrepancies between the BAPPENAS and the MoEF, as well as ministries and local implementing agencies. A competition in mapping vulnerable locations occurs nationally between the BAPPENAS and the MoEF. Moreover, contestation over vulnerability assessment and project location selection also occurs at the local level, where the local implementing agencies can resist or disregard the vulnerability mapping developed by the ministries. The local implementing agencies often have different perspectives on assessing vulnerability. They usually interact intensively with potential beneficiaries of adaptation projects and have a relatively better understanding of local challenges than the ministries that conduct centralised vulnerability mapping from Jakarta.

Ishtiaque (2021) has identified that power interplay among actors plays a pivotal role in determining the effectiveness of multilevel adaptation governance. Sometimes, a local adaptation actor can overpower other actors, including national-level actors, and dominate a decision-making process. In the Indonesian case, this happens during the selection process for project locations. Local implementing agencies can overpower the BAPPENAS and the MoEF in selecting the best project locations. The knowledge of vulnerability at the grassroots level and actual conditions in the field is the advantage held by local implementing agencies. The value of this knowledge enables the local implementing agencies in eight villages to negotiate the adaptation strategies and not just follow orders from the ministries. For

instance, agencies can select project locations outside the pilot project locations listed in the RAN-API.

The experience of Yakkum Emergency Unit bringing an adaptation project to Gunung Kidul Regency (see Figure 5.13), which was not listed as a pilot project location, was an example of how local knowledge could be a source of power to negotiate adaptation strategies in selecting project locations at the local level. A Yakkum Emergency Unit official shared their experience in negotiating a project location in Jakarta (interview EP16). At the beginning of the project planning, the official wrote a proposal and involved agricultural instructors based in Gunung Kidul Regency in selecting a potential project location. They also wrote the proposal based on his first-hand experience as a person who grew up in Gunung Kidul and witnessed repeated crop failures and the struggle of farmers to adapt to the impacts of climate change. The official also mentioned that there were many suicide cases caused by poverty and crop failures in Gunung Kidul (interview EP16). Using his local knowledge and perspective in viewing vulnerability at the local level, the YEU official could contest the idea of pilot project locations determined in the RAN-API document. This example suggests that adaptation strategies at the local level are highly contested, and the local implementing agencies can play their role in resisting centralised adaptation strategies and reshaping adaptation strategies implemented at the local level.

Not every decision of local implementing agencies represents the experience of village communities. The local implementing agencies might determine a vulnerable and feasible location as the beneficiary of adaptation projects. However, the selected village community might have a different perspective on their vulnerability. The experience of village communities in Tinumpuk and Pesanggrahan villages are two examples (see Figures 5.8 and 5.11). A Climate Village Leader in Tinumpuk expressed that their village was not the most vulnerable in Indramayu (interview F37). They believed that the government should assist villages that are unfamiliar with climate change and have no prior adaptation projects. The climate village leader said, “Why does the government keep coming to us? If the government really aims to help the society, they should assist other villages that really need the assistance” (interview F37). A member of the climate village programme in *Dusun Joben* also believed that their village was not vulnerable to climate change. Instead, their village supplied free water to other villages from several new water springs in her village (interview F02).

It is evident that there are a variety of vulnerability perspectives in Tinumpuk and Joben. The village communities’ perspectives are often underrepresented due to the dominance of a technocratic approach in conducting vulnerability assessments. The MoEF

has developed the SIDIK to identify vulnerability at the village level, yet what we find is just a vulnerability index with numbers that do not represent the actual vulnerability conditions or real challenges that village communities face. The story of how people in Pranggong experienced floods or how people in Temon suffered from droughts worsened by poverty cannot be found in the SIDIK or the RAN-API Review document.

Conclusion

This chapter is aimed to answer the third question of this thesis: Why are there discrepancies between the BAPPENAS and the MoEF assessments of vulnerability to climate change, and to what extent do these discrepancies undermine Indonesia's national adaptation strategy? This chapter has examined how the discrepancy in vulnerability assessment occurs in Indonesia. It is not merely due to technical differences in assessing vulnerability but as a result of unequal power relations and interests divergence. There is a discrepancy of vulnerability assessment between the BAPPENAS and the MoEF because of sectoral ego that hinders them to conduct a joint vulnerability assessment. Moreover, they also have an interest to access funding from donor agencies. The 2018 RAN-API Review and the 2020 NDC Adaptation Roadmap documents that contains vulnerability assessments were funded by two different donor agencies. The BAPPENAS was supported by USAID, while the MoEF was supported by the GIZ.

This chapter also finds there is a discrepancy between vulnerability mapping done by the BAPPENAS and the MoEF and the actual locations selection by local implementing agencies. It is evident that adaptation projects do not go to the most vulnerable locations mapped by the ministries. Based on the vulnerability mapping provided by the MoEF, the allocation of adaptation projects in eight villages has violated recognition justice, because the adaptation projects allocation has neglected the most vulnerable villages. The discrepancy between the vulnerability mapping done by the central government and the actual adaptation projects distribution is caused by the interests divergence between the national government and local implementing agencies. On the one hand, the government deliberately or unwittingly excludes local actors in conducting vulnerability assessment and utilises these assessments as an instrument to realise their interests in the international arena such as conforming to the UNFCCC recommendations to develop a national vulnerability assessment and garnering legitimacy at the international climate negotiation forum. On the other hand, local implementing agencies such as local environment agencies, Anthropology Research Centre Universitas Indonesia, the Yakkum Emergency Unit, DAI, and the Home Energy

Foundation have interests to secure funding and displaying successful adaptation programmes. The interests divergence between central government institutions, local implementing agencies have resulted in different ideas of assessing vulnerability. The government institutions have created separate institutions that conduct different vulnerability assessments. Meanwhile, the local actors design adaptation programmes and select locations based on effectiveness, harmonisation principle, visibility and existing network reasons. Those four reasons are often favouring their own position.

There are some political economy processes underlying the complexity of vulnerability assessment discrepancy in Indonesia. First, there is an exclusion process done by the central government institutions in assessing vulnerability. The perspectives of village communities are often neglected. The government's vulnerability assessments are largely imbued with country-level analysis and rely on comparative statistical data excluding local perspectives, hence failing to capture subnational vulnerability conditions. Second, from the rationality in selecting programme locations, it is evident that the evasion process happens since the local implementing agencies neglect the alternative locations that might be more vulnerable than their preferred location. Finally, the local implementing agencies have a tendency to violate recognition justice by neglecting the most vulnerable villages based on vulnerability mapping provided by the government. It might widen the social inequality since vulnerable communities are being marginalised in assessing adaptation programmes. Figures 5.8 to 5.15 have demonstrated that the adaptation programmes rendered by local actors fail to target the most vulnerable groups based on vulnerability mapping conducted by the central government institutions. This unintended negative impact is an example of an entrenchment process. Exclusion, evasion, and entrenchment processes occurring in the vulnerability assessments and project locations selections have undermined the implementation of Indonesia's national adaptation strategy. Overall, this chapter has contributed to reveal the variety of representations and experiences of vulnerability observed in eight villages in four provinces.

CHAPTER 6

Climate Village Programme and the Claim Chain Politics

Indonesia has engaged its community to mitigate climate change through the Climate Village Programme to cover 20,000 villages by 2024.
(Joko Widodo 2021a).

During the 2021 Climate Adaptation Summit in the Netherlands, Indonesian President Joko “Jokowi” Widodo delivered a speech that highlighted four strategic actions to cope with climate change uncertainties. Firstly, all countries must fulfil their Nationally Determined Contributions (NDCs). Secondly, it is crucial to mobilise all community potentials. Thirdly, the global partnership needs to be strengthened. Lastly, the promotion of sustainable development must be continued. The second point about communities addresses Indonesia’s ambitious target in climate adaptation action. President Jokowi (2021a) claims that the Indonesian Government has engaged local communities to mitigate climate change through the Climate Village Programme (Program Kampung Iklim, PROKLIM) that will encompass 20,000 villages by 2024. As of March 2024, 7,604 number of villages have been proclaimed as Climate Villages under this programme (MoEF 2024), which is behind target.¹⁹

This chapter scrutinises the implementation of the Climate Village Programme as one of the ambitious adaptation targets set by the Indonesian Government in 2021. It reveals the nature of climate adaptation interventions at the local level. Hence, this chapter helps to answer the fourth research sub-question of this thesis: to what extent are the benefits of local-level climate adaptation projects unevenly distributed among communities in Indonesia? In Chapters 4 and 5, it is evident that the vulnerability to climate change is an ambiguous concept in Indonesia. This chapter provides empirical evidence that the distribution of adaptation resources in the Climate Village Programme implementation is not based on a systematic or neutral vulnerability assessment. The selection of project locations is political and results in uneven adaptation project benefits among communities.

This chapter is structured as follows. The first section provides the background of Climate Village Programme implementation in Indonesia. Section two provides an outline of how the government selects targeted villages, establishes climate villages, and distributes

¹⁹ The number of climate villages data was obtained from the National Registry System website developed by the MoEF. The website provides total climate change actions data nationally including mitigation, adaptation, and joint mitigation and adaptation actions. Using PROKLIM (Program Kampung Iklim) as a key word, the registry system showed 7,604 entry data for climate villages. Available at <https://srn.menlhk.go.id/index.php?r=home/index#> (Accessed 23 March 2024).

resources at the village level. Section three investigates the effects of the Climate Village Programme upon a sample of vulnerable farmers and how they react to the outcomes. The fourth section examines why the government and local communities replicate the Climate Village Programme, and reveals the instrument effects of the Climate Village Programme for both sides. Section five draws conclusions about the effects of the Climate Village Programme and how the Ministry of Environment and Forestry, local environment agencies, political leaders, and communities utilise this scheme as an instrument to achieve concrete effects beyond reducing vulnerability and increasing adaptive capacity, such as building Indonesia's reputation as a climate champion at the international level.

An Ambitious Climate Village Programme

Indonesia has 84,096 villages in total according to the Statistics Indonesia (2024, 11), so the Climate Village Programme aims to cover a quarter of Indonesia's vast territory. Questions remain as to whether this ambitious target can be implemented and achieved within a limited timeframe, benefitting vulnerable farmers, as opposed to being used as a political instrument to disguise the inefficient conduct of climate adaptation governance in Indonesia. By disguising inefficiencies of adaptation governance, the Indonesian Government can evade the naming and shaming mechanism in the UNFCCC. In pursuance of this Climate Village proclamation target, this chapter reveals a "claim chain" process where governments at different levels attempt to claim credit for adaptation efforts made by the communities and label them as part of the Climate Village Programme.

The Climate Village Programme is a national programme under the Ministry of Environment and Forestry (MoEF) of the Republic of Indonesia that focuses on improving adaptive capacity (adaptation) and reducing greenhouse gas emissions (mitigation). This joint adaptation mitigation programme also intends to give recognition to adaptation and mitigation efforts conducted by stakeholders at the village level units known as *kelurahan*, as well as community units or hamlets as the lowest administrative level in the country (MoEF 2016).²⁰ The Climate Village Programme was initiated in 2012. However, the target of 20,000 Climate Village Programme is far from achieved. There were only 1,343 villages proposed to the MoEF for Climate Village Programme status between 2012 and 2017 (Albar et al. 2017,

²⁰ Community unit refers to *Rukun Warga* (RW) and Hamlet refers to *Dusun*. Both RW and *Dusun* are administrative units below *Kelurahan* or Village. *Kelurahan* and Village are in the same administrative level. However, they have different authority. For instance, the head of village is elected by the people through direct election, while the head of *Kelurahan* is a civil servant appointed by the district head or *Camat*,

19). 594 of these climate villages (44%) are located in Java Island, which is near the central government in Jakarta. As of 23 October 2020, the MoEF claimed on its website that the number increased to 2,775 villages in 2020. Using a business as usual scenario, the government will not achieve the 20,000 climate villages target in 2024. The failure is likely to happen. The number of climate villages has not increased significantly since 2020 and the Indonesian Government can only establish 7,604 climate villages as of March 2024. The actual number might be lower than this because data duplications of registered climate villages can be found in the National Registry System. For example, the Climate Villages in Tinumpuk appears twice in the National Registry System.

Considering this underperformance, proclaiming 20,000 climate villages is an impossible task to accomplish in 2024. If the goal is symbolic or political rather than substantive, then the Indonesian Government might claim to achieve the Climate Village Programme target by the end of 2024, but the number will not reflect the increase of adaptive capacity and the reduction of vulnerability of those 20,000 villages. Development programmes always have an entry point for the intervention (Ferguson 2014, 255), and climate vulnerability is an entry point for the Climate Village Programme intervention. As this chapter shows, the typical patterns of intervention in many villages have little or no effect in reducing the vulnerability and increasing the adaptive capacity of the people. In some cases, development intervention generates unintended impacts, such as putting an administrative and financial burden on the community (Li 2007, 4). Despite these apparent flaws and limitations, the Indonesian government and the communities are still replicating the Climate Village Programme nationally. The government lauded the Climate Village Programme as a success to increase climate resilience and it has become another green development fad in the post-Paris Agreement era (Rutt et al. 2018). This chapter develops a more specific question to scrutinise the implementation of the Climate Village Programme. It questions why the Climate Village Programme is still being replicated thousands of times if it does not meet its primary goals to reduce vulnerability and increase the adaptive capacity of vulnerable groups. The analysis in this chapter demonstrates that the Indonesian Government uses the Climate Village Programmes for more extensive political gains in international climate change negotiations.

Fieldwork Sites

The arguments of this chapter draw from information gathered from fieldwork in four officially designated “climate villages” in West Java, East Java, West Nusa Tenggara, and Yogyakarta Special Region Provinces.

1. *Tinumpuk Village, Indramayu Regency, West Java Province Yogyakarta Special Region*

Tinumpuk village experiences occasional floods that submerge rice fields around the village. For example one farmer said that when the flood came in February 2018, it destroyed the crops (interview F38). After the water drained away, the floods left litter and waste in the rice fields. Small-scale paddy farmers are one of the groups who experience the impacts of flooding the most. Tinumpuk Village established the Climate Village Programme with assistance from the Indramayu Regency Environment Agency and received funding from a company called PT Polytama Propindo for a waste bank programme to achieve a zero-waste community. The waste bank programme is a flagship programme for the Climate Village Programme in Tinumpuk. PT Polytama Propindo manufactures polypropylene resin. This company is based in Indramayu, West Java. Most of the people in Tinumpuk Village work as Indonesian Migrant Workers. Saudi Arabia, Malaysia, and Taiwan are their number-one destination (interview F38). Indramayu Regency is one of the biggest senders of Indonesian migrant workers. It sent approximately 25,985 migrant workers from 2020 to 2023 and 75% of migrant workers were women (Izan 2022). Many of them are interested becoming migrant workers after witnessing the success of other migrant workers with high salary (Rasmadi 2023).



Waste bank storage of Tinumpuk Village in January 2022. Source: Author

2. *RW 05, Arjowinangun Village, Malang City, East Java Province*

RW (Community Unit) 05, Kelurahan Arjowinangun, was awarded Climate Village Programme Utama from the MoEF in 2022 (MoEF 2022). The main activity that attracted the Local Environment Agency to encourage them to establish Climate Village Programme was the success of urban farming in RW 05. They could produce and sell organic vegetables with limited space in urban areas. RW 05 also branded their neighbourhood as the Butterfly Pea Flower Village (*Kampung Telang*) since they planted Butterfly Pea flowers and sold Butterfly Pea Flower Tea or also known as Blue Tea. Despite having the potential to develop urban farming, RW 05 still need to cope with annual floods from a canal that passes through their neighbourhood.



Butterfly pea flower tea, a product of community in RW 05, Arjowinangun in December 2021. Source: Author

3. *Dusun Joben, Pesanggrahan Village, East Lombok Regency, West Nusa Tenggara Province*

Dusun Joben, Pesanggrahan Village, was awarded Climate Village Programme status by the MoEF in 2020. Joben is located in the foothills of Mount Rinjani. People in Joben faced droughts that caused crop failures before a group of people named Kelompok Masyarakat Peduli Hutan (A Forest Awareness Community) began to replant forest areas surrounding their village circa 2004/2005 (interview F01). Since the Forest Awareness Community established replanted trees surrounding their village and foothill areas of Rinjani using their own resources, several new springs were found in Joben. Most people in Joben depend on the water supply from springs in Rinjani Mount for farming (interview F39).



A discussion with the Climate Village Programme head, members and a forest ranger of Rinjani Mount National Park in January 2022. Source: Author

4. *Dukuh Kedung Poh Lor, Kedung Poh Village, Gunung Kidul Regency, Yogyakarta Special Region Province*

Dusun Kedung Poh Lor is a Climate Village Programme location recommended by an official from the Gunung Kidul Local Environment Agency during an online interview in June 2021 (interview EP25). This *Dusun* has a similar story to *Dusun* Joben in adapting to climate change effects. *Dusun* Kedung Poh Lor often experiences water scarcity caused by a long dry season that often hits Gunung Kidul. Realising this challenge, the Resan community in Kedung Poh Lor and people from other villages began to plant trees in the forest areas voluntarily in 2018. The Resan community plants trees voluntarily in Gunung Kidul. They usually perform traditional rituals such as covering trees with white cloths to respect the sacredness of trees and praying to the ancestors to ask permission before planting the trees. This tradition is known as *Nglangse*, a Javanese language, that means covering tree with white shroud (interview F26). Most of them are Muslim, yet they still preserve the Gunung Kidul cultural tradition such as *Nglangse* as part of their identity as Gunung Kidul people. That is why many people label them as tree worshippers (Winandar 2022). The story from Gunung Kidul shows that adaptation is often inseparable from a cultural dimension in developing countries like Indonesia.



A Resan member who is also the Head of Climate Village Programme in Kedung Poh after preparing tree seeds for the next trees planting in January 2022. Source: Author

The Claim Chain and the Instrument-Effects of Climate Village Programme

Since the initiation of the Climate Village Programme in 2012 (Directorate of Climate Change Adaptation 2015), there have been several studies analysing the implementation of this large-scale ambitious scheme, with a focus on political and economic factors that rarely include in depth empirical research across different locations. This thesis reviews research published both in English and Indonesian to engage with the debate on the effectiveness of the Climate Village Programme, which ranges on a scale from effective to moderate to ineffective (see Table 6.1).

The Climate Village Programme implementation can be considered effective if researchers are able to identify direct and indirect benefits for vulnerable communities. For instance, Dewi, Maryono, and Warsito (2019) find that three Climate Village Programmes in Sambirejo (2014), Sekip Kadipiro (2015), and Ngemplak Sutan (2017) located in Surakarta city had several positive impacts, such as generating extra income for the people from the development of a waste bank programme and recycling the waste to become innovative products. These authors argue that the Climate Village Programme has a potential for the sustainability of Surakarta City development. Muttaqin, Yulianti, and Karmanah (2019) find a similar result from the 2015 Climate Village Programme in Margawati Village, Garut, West Java Province. They have identified several positive impacts like increased climate resilience, improved life quality, and emission reduction. Even though one activity to increase water

supply had a moderate result, the Climate Village Programme implementation was good overall. Sudarwanto, Tjoneng, and Suriyanti (2020) assess the effectiveness of the 2020 Climate Village Programme in Poleonro Village, South Sulawesi Province by using participation rate in adaptation activities as one of the indicators for the assessment. They found that the participation rate in Poleonro Village for climate change adaptation activities was high (87.59% people agreed to participate).

By contrast, Setiawan (2019) and Ramdani and Resnawaty (2021) criticise the Climate Village Programme and find it ineffective in improving the adaptive capacity of vulnerable groups. In the case of the Riau provincial government, they did not provide much contribution or assistance to the community and the infrastructure to support the Climate Village Programme implementation in Tangkerang Labuai Village, Riau Province, hence suboptimal outcomes (Setiawan 2019). Some vulnerable groups, such as the elderly, the poor, and people with disabilities, were excluded from the Climate Village Programme activities in Ujungalang and Panikel villages, Central Java Province (Ramdani and Resnawaty 2021). Most studies criticising the Climate Village Programme focus on examining the challenges of the Climate Village Programme implementation and the impacts of climate adaptation interventions. Ramdani and Resnawaty (2021) are one of the few scholars to examine the unintended impacts of the Climate Village Programme, with reference to one programme that aimed to find an alternative livelihood for local people using unsustainable materials like plastic packaging.

Table 6.1 Variations in Climate Village Programme Performance

Climate Village Programme	Approaches	Development Dimension	Outcomes
Sekip Kadipiro, Sambirejo, and Ngemplak, Surakarta City (Dewi, Maryono, and Warsito 2019)	<ul style="list-style-type: none"> Collecting quantitative data of the Climate Village Programme activities and outcomes such as the number of infiltration wells and pump wells Mapping stakeholders who support Climate Village Programme Assessing the potential of Climate Village Programme Sustainability 	<ul style="list-style-type: none"> Social: food security Economy: reducing household spending Environmental: vegetation cover 	<p>Effective</p> <ul style="list-style-type: none"> Climate Village Programme in three locations have potential as climate change mitigation and adaptation at the local level The more Climate Village Programme will reduce the impact of Climate Change
Simurugul sub-village, Margawati Village, Garut (Muttaqin, Yulianti, and Karmanah 2019)	<ul style="list-style-type: none"> SWOT analysis Examining the benefits of Climate Village Programme 	<ul style="list-style-type: none"> Social: mutual cooperation, and community resilience Economy: additional family income 	<p>Effective</p> <ul style="list-style-type: none"> The overall implementation is good, but some are moderate and less satisfying. Climate Village Programme gives benefits.

Climate Village Programme	Approaches	Development Dimension	Outcomes
		<ul style="list-style-type: none"> • Environmental: plantation in social forestry area 	<ul style="list-style-type: none"> • Lack of equipment and funding are the main challenges of Climate Village Programme implementation.
Poleonro, South Sulawesi Province (Sudarwanto, Tjoneng, and Suriyanti 2020)	<ul style="list-style-type: none"> • Assessing the implementation of climate adaptation and mitigation actions. • Measuring the participation rate of Climate Village Programme 	<ul style="list-style-type: none"> • Social: participation rate • Economy: lower participation for people with higher income 	<p>Effective</p> <ul style="list-style-type: none"> • The percentage of climate adaptation and mitigation implementation is above 50%, 70.12% and 66.06% respectively. • The participation rate are high for both climate adaptation and mitigation actions.
Tangerang Labuai Village, Riau Province (Setiawan 2019)	<ul style="list-style-type: none"> • Assessing the level of knowledge, attitudes and motivation towards Climate Village Programme • Identifying Climate Village Programme implementation challenges 	<ul style="list-style-type: none"> • Social: community's knowledge, attitude, and motivation towards Climate Village Programme • Environmental: waste management 	<p>Ineffective</p> <ul style="list-style-type: none"> • Contradiction: the level of knowledge, attitudes, and motivation towards Climate Village Programme are considered good, but the Climate Village Programme implementation is suboptimal due to lack of facilities, infrastructure, and the Government's support.
Ujungalang, Panikel and Kebonmanis villages, Central Java Province (Ramdani and Resnawaty 2021)	<ul style="list-style-type: none"> • Sustainable development analysis • Assessing the social, economy, and environmental aspects of Climate Village Programme • Assessing the sustainability of Climate Village Programme 	<ul style="list-style-type: none"> • Social: unsustainable participation in Climate Village Programme • Economy: Funding from CSR, excluding low-income vulnerable group • Environmental: waste management supported by CSR 	<p>Ineffective</p> <ul style="list-style-type: none"> • The participation is not sustainable • Excluding vulnerable groups in the implementation • Generating unintended impact: the massive use of plastic to wrap local MSMEs products.
Jati and Kebon Kosong Village, Jakarta Province (Faedulloh, Prasetyanti, and Irawan 2019)	<ul style="list-style-type: none"> • Comparative analysis in two locations • Assessing the community empowerment activities • Assessing the role of state 	<ul style="list-style-type: none"> • Social: social cohesion) • Economic: securing food stock), • Environmental: conserving biodiversity, waste bank • Political: state interventions through policy 	<p>Moderate</p> <ul style="list-style-type: none"> • Climate Village Programme brings positive but limited impacts • The community has limited resources • The role of government is still minimum in climate policy making

Social, economic and environment are common aspects analysed by the scholars listed in Table 6.1. For instance, Muttaqin, Yulianti, and Karmanah (2019) find that the Climate Village Programme generates positive impacts for people in Simurugul sub-village, Margawati Village, Garut Regency. Drawing on 46 interviews, they find that several adaptation activities such as building a small pond in the rice field, preserving springs, and implementing rotating cropping patterns help people in Simurugul to enhance climate resilience (social), and

increase additional family income (economy). The political aspect remains largely absent from their Climate Village Programme study. The work of Faedlulloh, Prasetyanti, and Irawan (2019) is one of the studies that has covered the political dimension of the Climate Village Programme. They identify the Climate Village Programme implementation in Jati and Kebon Kosong Villages, Jakarta Province, as a moderate result due to a lack of government intervention through relevant climate policies. However, they do not give a further analysis of why the government's support is insufficient. Are the people in both villages excluded from the policy-making process? Does the climate fund allocation tend to favour those areas and local leaders that have a political affiliation with some top-rank government officials? The answers remain obscure. Muttaqin, Yulianti, and Karmanah (2019) address the insufficiency of climate funding from the government to support adaptation actions. However, there are no follow-up questions about the distribution of the climate fund or village fund that might be determined by the political interests of the village head or government officials. Most of the analysis of recent Climate Village Programme studies focuses on the technicality of Climate Village Programme implementation by examining the activities, challenges, and outcomes.

This chapter goes beyond the technicality analysis of Climate Village Programme. It contributes to the Climate Village Programme effectiveness debate by exploring the political and economy aspects that are related to the effectiveness of Climate Village Programme implementation. Further, this chapter analyses the replication of suboptimal Climate Village Programme at the village level. This chapter sheds light on the bigger political deployment behind the Climate Village Programme and its 20,000 village target. The claim chain concept is proposed in this chapter to address this research gap.

This chapter draws upon Ferguson's (2014, 256) idea of the instrument-effects of development projects to examine the intriguing question of Climate Village Programme replication. Ferguson (2014, 256) argues that while development projects have no effects in reducing poverty in the case of Lesotho and cause unintended effects, they generate other concrete effects that can be used as an instrument of more extensive political deployment. Ferguson (2014) scrutinises the implementation of Thaba Tseka Project funded by the Canadian International Development Agency (CIDA). This project focused on agricultural development in the mountain region. It aimed to increase the livestock production and local economy, but the project failed. Despite its failure, the Thaba Tseka project was instrumental in linking Thaba Tseka with the capital city Maseru through the new road development, establishing a new government administration, and deepening the central government

presence in Thaba Tseka. Funder, Mweemba, and Nyambe (2018) have identified the same pattern in the Namapande Resettlement Scheme in Zambia, which has an instrumental effect of rewarding political supporters. Ethiopia's villagisation or resettlement programme is developed, ostensibly for addressing drought and increasing agricultural productivity. However, it aims mainly to protect border areas, infiltrate areas populated by rebel movements, and control the population (Milman, and Arsano 2014).

Ferguson's (2014, 256) idea offers a framework to answer why suboptimal adaptation projects are replicated. This chapter examines the instrumental effects of the Climate Village Programme by scrutinising the concrete effects of the Climate Village Programme, stakeholders benefiting most from the Climate Village Programme and political interests larger than the climate change adaptation agenda. This chapter has found a pattern where the development state apparatus at different levels such as the MoEF, local environment agencies, political leaders, and village heads 'claims' (or takes credit for) the adaptation actions made by the farmers using their limited resources by rebranding them as part of the Climate Village Programme.

There is a claim chain process where the local environment agencies, political leaders, the MoEF, and the President then claim Climate Village Programme as government's programmes that helps vulnerable people to adapt and cope with climate change impacts. By taking credit for the spread of climate villages, the government can utilise the claim as an instrument to gain concrete effects in the UN climate negotiations. The claim of 20,000 Climate Villages builds Indonesia's image as a country that has an ambitious climate adaptation target. This ambitious adaptation target is meant to show that Indonesia contributes to global climate actions. Hence, Indonesia is gaining legitimacy internationally. World political leaders always meet at the COP every year. The Indonesian Government must be ready to demonstrate what has been done and display ambitious targets. Using the ambitious 20,000 climate village target, Indonesia can evade the naming and shaming mechanism and attract more potential international funding. One example of concrete effect is that Indonesia received USD 3,764,229 from the Global Environment Facility for implementing the Spatial Planning for Protected Areas in Response to Climate Change (SPARC) project in Indonesia from February 2013 to December 2016 (47 months). The MoEF allocated this funding through the Climate Village Programme scheme to establish climate villages in 21 locations in Nusa Tenggara Province.

The focus of this chapter differs from the cases of instrumentalism and opportunism in Lesotho (Ferguson 2014), Zambia (Funder, Mweemba, and Nyambe 2018) and Ethiopia

(Milman, and Arsano 2014) that focus on how the governmental actors utilise development project as their instrument. The Climate Village Programme in Indonesia is an intriguing case as the development apparatuses, including the Ministry of Environment and Forestry, and the Environment Agencies are not the only one that intend to replicate the Climate Village Programme. The communities also actively continue and replicate Climate Village Programme. Based on interviews in four villages in Indonesia conducted from September 2021 to January 2022, many village communities are keen to continue the programme and assist other villages in establishing Climate Village Programme even though they have understood already that the Environment Agency gives them nothing to reduce the vulnerability and increase their adaptive capacity. Drawing on interview data from three village heads and 22 members of the Climate Village Programme, analysis in this chapter show that the village communities can use the Climate Village Programme to gain concrete effects such as obtaining recognition from the government, increasing publicity to attract tourists, building village reputation, and assessing assistance from private actors. The Climate Village Programme provides an opportunity for village communities to get more funding. Based on the National Registry System, the total domestic funding for the Climate Village Programme, which mostly comes from private actors, can reach IDR 4,454,963,000 or around GBP 223,471 as of March 2024 (MoEF 2024). When a village gets a Climate Village Programme status, it can increase its visibility among other villages and get funding from private actors. For instance, Junjungan Village in Riau Province got IDR 200,000,000 or around GBP 10,032 (as of March 2024) from Asia Pulp and Paper Company for a 61-month project (MoEF 2024).

The claim concept is generally used to describe a process where actors state that something valuable belongs to them and intend to possess the object. Terms like territorial claim and land claim are frequently used in conflict studies and development studies. Kelle (2017) brings the territorial claim concept to explain how Mount Kailash in Western Tibet is critical for Tibetans as a source to provide group identity and shape demands for self-determination. Astuti and McGregor (2017) employ the land claim concept to describe how the Indigenous People's Alliance of the Archipelago (AMAN) helps the indigenous people in Indonesia, like in Bahanei, Central Kalimantan, to map the forests and obtain the tenure rights of customary forests. Material assets, such as lands, forests, or territories, are not the only object that the claimants can claim. Sometimes, as the claimants, the political actors can claim nonmaterial assets such as ideas, inventions, identities, representations, or activities benefitting them. In representative claim-making, political actors need to receive and

establish identity from their constituents as the basis to become representatives (Saward 2006). In the context of the Climate Village Programme implementation, claim in this thesis implies ownership and taking credit for a positive outcome. By taking credit from village communities over their adaptation actions, the government can support a wider claim about the success of a policy, which then gives the Indonesian government negotiators some leverage on the global stage or allows the government to ease some of the pressure to comply with climate targets, or to ease pressure on other high polluting sectors such as palm oil sector.

In the case of the Climate Village Programme rollout across Indonesia, the pattern is for the MoEF and Environment Agencies to claim the activities and ideas initiated by the communities as mitigation and adaptation actions as though they are attributable to the Climate Village Programme. This scheme enables the MoEF and the Environment Agencies to establish the Climate Village Programme instantly because the programmes do not start from zero and they do not target vulnerable groups with less knowledge about climate change. Strictly speaking, the Indonesian government claims the communities' adaptation actions and takes the credit by rebranding those actions as part of the Climate Village Programme. For example, the experience of the Climate Village Programme in Tinumpuk village reveals how this works. Before Climate Village Programme was introduced to the communities in Tinumpuk Village by the Indramayu Environment Agency, a group of ex-migrant workers formed a community-based organisation. The name of the community-based organisation is Ibu Tin Berseri, an acronym for *Ikatan Buruh Migran Tinumpuk Berseri* or ex-migrant workers in Tinumpuk. This organisation ran a waste bank programme in Tinumpuk Village before the establishment of a Climate Village Programme, but nevertheless the Environment Agency claimed this waste bank programme and rebranded it as a Climate Village Programme. The Indramayu Environment Agency can gain a good performance index by making this false claim since the Climate Village Programme establishment in their area was then registered to the National Registry System organised by the MoEF.

The claim-making is not just happening at the village and regency level. The government bureaucrats at the higher level also claims the Climate Village Programme as a success and takes those credits. For example, President Jokowi claimed that the Climate Village Programme helped communities to adapt to climate change during Climate Adaptation Summits and COP 26 (Widodo 2021a; Widodo 2021b). By proclaiming that the Indonesian government has done something to tackle climate change through the Climate Village Programme, it provides a cloak of legitimacy for the President to demand more

support for developed countries in the international climate negotiations. The cloak of legitimacy is a term used by Kapelus (2002, as cited in Seagle 2012) to demonstrate how companies claim that the community development programmes benefit the local communities to protect them from pressure groups and continue their production activity as usual with minimum disruption. In the case of Indonesia, the Government is using the claim of the 20,000 Climate Village Programme to protect them from peer group pressure and gain legitimacy in the UN climate negotiations. This strategy is working. For example, the Climate Village Programme got positive feedback from the Partnership on Transparency in 2019. It recognised the Climate Village Programme as an effective programme to increase the awareness of local communities and government to enhance climate actions (Rijhwani and Singh 2020). The Adaptation Fund also recognises the Climate Village Programme as an eligible programme that can get funding from the Adaptation Fund. Indonesia requested USD 999,226 through Partnership for Governance Reform (Kemitraan) of Indonesia for a Climate Village Programme in Ecoregion Neck of Sulawesi Island (Adaptation Fund 2023). Climate Scorecard, an NGO concern about climate change reporting and advocacy in the Paris Agreement, considers the Climate Village Programme as an initiative that support Indonesia to achieve its NDC commitments by coordinating national climate-related targets with local-level actions (Naik 2023). This chapter takes this multilevel claim into account and introduces the claim chain concept to understand these practices by development agencies in Indonesia.

Mount the Mountain and Salt the Ocean

The Climate Village Programme has been lauded as a breakthrough that can help vulnerable communities to mitigate the negative impacts of climate change. President Jokowi during the 2021 Climate Adaptation Summit claimed that the Indonesian Government is engaging communities to mitigate climate change impacts through the Climate Village Programme (CAS TV, 2021). The Director of Climate Change Adaptation, Sri Tantri Arundhati, during a webinar on Community Based Disaster Risk Reduction in Jakarta claimed that the MoEF encourages contribution and increases the adaptive capacity of the communities, such as coping with droughts, floods, landslides, improving food security, and controlling climate-related diseases through the Climate Village Programme (Simanjuntak 2021). Political leaders and governments at the local level also claim that the Climate Village Programme contributes to improving the adaptive capacity of some communities. For instance, the West Java Province Government claimed on its website jabarprov.go.id that the communities could have better waste management or zero waste and got economic benefits from the Climate

Village Programme (December 31, 2018). The national and local governments have made their claim. However, it remains unclear whether the Climate Village Programme is as truly as portrayed by the Indonesian Government. This section answers the questions about the implementation of the Climate Village Programme within a limited timeframe, and the effect of this programme on vulnerable farmers.

In principle, limited adaptation resources should be distributed to the most vulnerable groups who need them most. The MoEF claims that they have developed a nationwide Climate Vulnerability Index Data Information System (SIDIK). The SIDIK system supports data transparency and allows the public to access the information (the Republic of Indonesia 2021). Ideally, the SIDIK data should be utilised by the local governments and environment agencies to provide an initial vulnerability assessment. This assessment is crucial to identify the most vulnerable groups or areas, which should allow for better distribution of adaptation resources. Local governments seem to not refer to the SIDIK in selecting the locations for Climate Village Programme. Three local environment agency officials in Gunung Kidul and Malang City also explained that they were not involved in gathering the vulnerability data. They only received the outcomes of vulnerability assessment (interviews EP23, EP25, and EP26). They were not involved because the MoEF used top-down approach in conducting vulnerability assessment. The assessment was conducted by the Directorate of Climate Change Adaptation team using the village potential statistics obtained from Statistics Indonesia (Directorate of Climate Change Adaptation 2015). Therefore, the assessment could be done in Jakarta without involving local actors. An official from BAPPENAS did not want to use the SIDIK data for RAN-API and other BAPPENAS' documents. He criticised the use of obsolete data from 2012 and decided to not refer to SIDIK for the BAPPENAS documents and programmes (interview EP31). The BAPPENAS hired experts for each sector to develop vulnerability assessment per sector to obtain better identification of vulnerability challenges in Indonesia (BAPPENAS 2018).

The fieldwork I carried out in four villages identifies the potential of each village. I find that people in Tinumpuk, Kedung Poh, Arjowinangun, and Pesanggrahan Villages already have environmental awareness and performed climate-related activities before being listed under the Climate Village Programme. Their potential becomes a magnet for the development agencies with a primary agenda to introduce and establish the Climate Village Programme as mandated by the MoEF in the Climate Village Programme Roadmap document published in 2017. The Environmental Agency in Indramayu Regency came to Tinumpuk Village and approached the people there since this village attracted a lot of media publicity

with its successful waste bank programme initiated by the Indonesian ex-migrant workers (interview F37). The other villages also have different magnetism. Kedung Poh Village has a potential since a group of people involved in *Resan* Community have been replanting forest areas in Gunung Kidul since 2018. Arjowinangun Village is well known for its urban farming producing vegetables. While Pesanggrahan Village successfully establishes an eco-park initiated by *Dusun* Joben people in the foothills of the mount Rinjani.²¹

The four villages already have existing climate-related projects and environmental awareness, so they have relatively better adaptive capacities. These sample villages seem to be less vulnerable than villages with no climate-related projects and less understanding of climate change. Using the latest SIDIK data published in 2018 provided by the MoEF, the four villages were not categorised as vulnerable villages. During the interview process, I asked a reflective question about vulnerability level to identify whether their village is regarded as vulnerable or not. Participants in four villages identify their villages as less vulnerable villages based on the frequency of natural disasters experienced by their villages. A Climate Village Programme member from *Dusun* Joben reported that her village was less vulnerable and never experienced floods or droughts (interview F02). She also added that the water from the springs in her village flowed steadily during the dry season and supplied clean water for her village as well as the neighbouring village (interview F02).



The new water spring after reforestation in Rinjani Mount foothill. The picture was taken in January 2022. Source: Author

²¹ *Dusun* is smaller administrative government under a village.

Local interviewees were able to identify risks and the measures needed to minimise the negative impacts of climate-related disasters. A Climate Village Programme member from Arjowinangun Village said that he was aware of the flood risk as some areas of his village were below the level of the irrigation canal. The community took a self-supporting initiative to build infiltration wells near the canal (interview F24). Kedung Poh is vulnerable during the dry season due to water supply problems, but people understand this challenge and take several adaptive measures (interview F29). A village elder who is also a member of the Climate Village Programme Kedung Poh in Gunung Kidul said that the water supply increased since *Resan* community members in this village replanted trees around the village that used to be a massive teak tree plantation (interview F27).²² He added that those plantations were a legacy of Soeharto's New Order era. He also witnessed how this teak tree monoculture depleted water resources surrounding his village (interview F27). Besides planting trees, they also drilled a well to extract groundwater supported by Lazizmu, a *zakat* charitable institution established by the Islamic organisation Muhammadiyah.²³

There is an argument to be made that limited resources from the government should be distributed to the vulnerable villages that are not familiar with climate change and have less adaptive capacity. However, the government seems to have no clear plan to target the villages that need the most assistance. Many of the villages are selected for the Climate Village Programme for convenience, or for political purposes, or even at random. A climate village leader in Kedung Poh Village states that the outset of the Climate Village Programme began when he met an environment agency official at a motocross club gathering circa 2019. From a small talk, he shared climate-related activities in Kedung Poh, and the official was interested in introducing the Climate Village Programme to his village (interview F26). The Climate Village Programme in Arjowinangun Village was initiated in 2021 when an environment agency official visited the village to buy orchid flowers (interview F01). The official realised that the Arjowinangun Village had the potential to be featured as part of the Climate Village Programme. People from Joben village knew the Climate Village Programme

²² *Resan* is a community in Gunung Kidul Regency that regularly plants trees and preserves springs. The members do these activities voluntarily. Before planting the trees, they usually perform a ritual ceremony wearing traditional garments and carrying offerings comprising incense and prayers. This ceremony is a pearl of local wisdom aiming to ask permission from the unseen ancestors living around their place. Sometimes they are accused by society as tree worshipers (Winedar 2022).

²³ Muhammadiyah is the oldest Islamic Organisation in Indonesia, established in 1912 in Yogyakarta. The organisation is not only developing in Indonesia but also going international. It directs many charities in education, health, social services, community empowerment and preaches based on worshippers and communities (Suara Muhammadiyah, January 1, 2020).

not from the environment agency but from a small talk when they visited a neighbouring village (interview F01).

Chapter five has discussed a Climate Village Programme leader from Tinumpuk Village that criticised the Local Environment Agency officials who kept coming to her village to persuade village communities to participate in a climate village competition and asked them to find another village (interview F37). Her critique implies that the government does not bother identifying other vulnerable villages or starting a Climate Village Programme from scratch. She assumes that the government kept coming to her village because she thought the Environment Agency had an interest in persuading the community in Tinumpuk to participate in the Climate Village Programme competition (interview F37).

The decision of the Environment Agency to approach the community in Tinumpuk does make sense since Tinumpuk already had a potential programme. This well-established waste bank project at the community level had a chance of winning the Climate Village Programme competition. Indeed, it will recognise adaptation and mitigation efforts conducted by the local communities, and many villages are pleased to get Climate Village Programme certificates or trophies. However, this practice deviates from the essential aims of Climate Village Programmes as development projects to improve adaptive capacity and increase the climate resilience of the society. There is an Indonesian proverb, "*menambak gunung, menggarami lautan*" or "mount the mountain, salt the ocean", which means helping people who do not need help. In other words, what the environmental agencies have done might be completely futile or suboptimal. This proverb can portray what is happening in the Climate Village Programme implementation. Local development agencies target less vulnerable villages with better adaptive capacity resulting from existing climate-related projects, resulting in good headlines but futile or suboptimal Climate Village Programme impacts.

The experience from four villages explains that the Climate Village Programme implementation with 20,000 target in 2024 is just a numbers game. The bureaucrats at the national and local levels endeavour to proclaim as many climate villages as possible to meet the 20,000 target mentioned by the President Jokowi at the 2021 Climate Adaptation Summit, and COP 26. The Indonesian government can utilise this ambitious target in climate adaptation and COP negotiations to gain concrete effects, such as more funding such as from the Global Environment Facility and the Adaptation Fund.

Suboptimal Implementation of the Climate Village Programme

Through the Ministry of Environment and Forestry, the Indonesian government keeps replicating Climate Village Programme proclamations and updating the national registry despite its suboptimal impacts in many villages. Before answering why those replications keep happening, this section demonstrates the impacts of the Climate Village Programme on the societies' adaptive capacities. Adaptation intervention through the Climate Village Programme has a potential to reduce the negative impacts of climate change, yet a programme considered a success might need to prioritise the combination of social, economic, and environmental objectives (Eriksen et al. 2011, 8). The arguments of this section draw from participants' responses during fieldwork to several key interview questions, including what kind of assistance the development agencies design and offer, how they impact the adaptive capacities of recipient villages, and what differences are observed before and after the Climate Village Programme proclamation. The Climate Village Programme is portrayed by the Minister of Environment and Forestry, Siti Nurbaya (2022), as "a real action to achieve climate resilience and low greenhouse gas emission lifestyle at the grassroots level, through the implementation of climate change adaptation and mitigation actions". This section unveils discrepancies between the real action portrayed by the Indonesian government and actual implementation of climate adaptation measures at the grassroots level. Analysis in this chapter reveals that the PROKLIM looks ambitious internationally but the local implementation is suboptimal due to at least six circumstances.

1. Failure to Address Community Needs and Potential

The communities in my four sample villages received minimum financial and technical assistance from the Climate Village Programme except for certificates and trophies. Climate Village Programme competition winners at the province or national level get financial incentives as a recognition of their efforts. Joben Village was named as one of the winners of the Climate Village Programme competition at the province level in 2020. They received IDR 12,000,000 or around GBP 600. This amount of money is small relative to the efforts made and resources spent in preparation for the Climate Village Programme. A Climate Village Programme Joben member said that "perhaps we spent more than twelve million rupiah if we count the meals for meetings, seeds for reforestation, petrol for transportation, spending for administrative requirements, and our labour for tedious administrative work" (interview F02). Kedung Poh village received flowers from the Environment Agency to support the

production of honeybee farm and several bins to raise people's awareness in waste management, a Climate Village Programme Kedung Poh member shared (interview F30). *Dusun* Joben got a similar assistance. They received 20 compost bins from the Environment Agency (interview F03). All of them pointed out that they did not ask for the flowers or compost bins. These were delivered without prior consultations to identify what communities actually need.

People in my four sample villages did not receive the capacity building training needed to adapt to and cope with climate change impacts, whereas the Directorate of Climate Change regulation number P.4/PPI/API/PPI.0/3/2021 about guidelines in implementing the Climate Village Programme mentions that projects should build the capacity of the communities. One way to build their adaptive capacity is through training. The Climate Village Programme member in Arjowinangun explained that the environment agency organised a one-day climate change training, where he was one of the participants (interview F24). He seemed to have a general understanding of climate change adaptation, and this is one positive impact brought by the Climate Village Programme (interview F24). He recalled: "as I remember, climate change adaptation is how we anticipate weather change. If there is a flood, we elevate the buildings. That is my version of adaptation process" (interview F24). However, there was no socialisation of climate change in Arjowinangun. It disappointed him because a basic knowledge of climate change was needed before discussing more complicated things like adaptation and mitigation. If the people understood climate change and its negative impacts, they would cooperate to perform Climate Village Programme activities. There was no training intended to improve the adaptive capacity of the Arjowinangun people. The Environment Agency organised training, but it focused on training the participants to fill out the Climate Village Programme form properly (interview F24). In doing so, the Environment Agency boosted the number of villages included in the National Registry in a targets-oriented approach rather than a results-based approach.

The Climate Village Programme has failed to identify local potential for achieving optimal adaptation actions because this programme focuses on completing the Climate Village form and meeting targets. For instance, some climate village members were also active members of the Resan community and actively involved in reforestation in Gunung Kidul Regency. However, the Climate Village Programme neglected this potential because an activity that merged traditional rituals and reforestation was not listed in the formal criteria on the Climate Village form. Climate adaptation interventions are often focused on the technical environmental domain and neglect the cultural dimension in adapting to the

impacts of climate change. The Climate Village Programme has failed to address challenges faced by the Resan community, such as tree worshipers labelling that might trigger social conflicts. Moreover, the Climate Village Programme implementation is merely technocratic, using a top-down approach as though the programme template provided by the MoEF in the form of an Excel document is a panacea for all climate change impacts.

Edi Padmo, the initiator of Resan Community, criticised any program interventions distributed to village communities (Kompas.com 2023). He mentioned that village communities were often positioned as people who should hear, obey, and follow orders from outsiders who brought empowerment programmes. He argued that village communities in Gunung Kidul was already empowered by preserving values and local knowledge from their ancestors (Kompas.com 2023). Based on the interviews with people in Kedung Poh Village, the Climate Village Programme has failed to identify the potential of Resan members in this village. Instead of focusing on the Climate Village Programme template, the adaptation programmes should focus on protecting trees and water springs managed by the Resan Community in this village. Padmo mentioned that one way to protect them was creating a village regulation to state the trees and water springs as the village's assets (Kompas.com 2023). Indeed, the village regulation is crucial to prevent people from cutting down carelessly just to capture benefits by selling the woods or grabbing the land.

2. Focusing on Technicality

Drawing from the Climate Village Programme Arjowinangun member's experience, the environment agency only focused on technicality on how to complete the Climate Village Programme form and did not address the actual problems faced by the communities. From his perspective, he understood Climate Village Programme as "a process of data entry, the basis of Climate Village Programme is just entering the data to the form basically, already have biopore infiltration holes or not. So, that is it, collecting data of existing activities and entering them to the form" (interview F24).²⁴ One of the Climate Village Programme Tinumpuk leaders also had a similar experience. She had to do tedious work completing the Climate Village Programme forms (interview F02). She pointed out that she was tired because the Environment Agency kept asking her to participate in Climate Village Programme competitions. When her village won a competition, they got nothing benefitting them. One time, the Environment Agency registered her village to participate in Kalpataru Award, and

²⁴ Biopore infiltration hole is a vertical hole with one metre deep to increase the rainwater absorption capacity to the soil. It can also help to prevent floods.

then it was listed as top ten villages and she was asked to go to Bandung, the capital city of West Java Province, to receive the token of appreciation. She only got travel expenses from Indramayu to Bandung (interview F37). Kalpataru award is an award given to an individual or group for their contribution in preserving environment in Indonesia.



A biopore infiltration hole in the middle of the street of RW 05, Arjowinangun Village, Malang City. Source: Author (taken in December 2021)

Li (2007, 7) identifies problematisation and rendering technical as two intertwined practices to translate the will to improve into development programmes. Identification of problems determines the solutions. The Climate Village Programme implementation has displayed incoherence between the problems and the solutions. First, the Climate Village Programme planning is not a participatory process. The communities are not involved in identifying the problems and unable to deliver their aspirations. Hence, distributing compost bins seems to be a template for climate change solution like what happened in Joben and Kedung Poh Villages. The Climate Village Programme template is an example of exclusion process where the government formulate what is the best for local communities in the simplest possible terms without involving local communities in designing adaptation actions. Second, the MoEF and environment agencies do not even render technical development intervention, yet merely focused on “administrative” intervention to pursue the politically motivated 20,000 Climate Village Programme target.

3. Administrative Burden

One of the obvious unintended impacts of Climate Village Programme is the administrative burden weighted on the recipient communities. They need to spend a lot of their time doing tedious administrative tasks. It is not benefitting them nor improve their adaptive capacity but benefits the government instead. Some villagers revealed that they stayed up late just to complete the form (interviews F02, and F24). One farmer participant seemed to experience “Climate Village Programme Fatigue” (interview F37). She was tired of the Climate Village Programme competition and had no appetite for doing it again. This phenomenon can be identified as an encumbrance process, where the climate adaptation interventions put burden to the local communities.

The focus on “administrative” intervention results in suboptimal and unintended impacts on the communities. All participants revealed there to be no significant difference prior to and after the Climate Village Programme implementation. A Climate Village Programme Arjowinangun member stated that “Climate Village Programme is just assessing what is already there. It is not encouraging people to fulfil the gap. The facilities and activities actually already exist. So, there are no new activities in Climate Village Programme” (interview F24). This statement implies that there is an enclosure process where the MoEF capture the authority of conducting adaptation which formerly belonged to village communities. The MoEF also captures what have been done by village communities and then labels them as climate villages.

There are at least 59 actions in the Climate Village Programme form to be completed. The number of actions is even more for coastal areas, with at least 68 actions to be registered (MoEF n.d.b). For illustration, the local communities must have rainwater storage as one action. The more rainwater storage, the higher the grade they get. Communities must also explain how long they have the rainwater storage, describe the condition, assess the effectiveness, and provide supporting documents as proof.

4. Minimum Support from Village Government

Minimal support corresponds with Ferguson’s (2014, 270) anti-politics machine concept describing the state development intervention that “insistently reposing political questions of land, resources, jobs, or wages as technical ‘problems’ responsive to the technical development intervention”. The Climate Village Programme neglects political and social-economic challenges the communities face at the village level, such as the struggle of ex-

migrant workers community in Indramayu, West Java to get support from the head of the village.

The ex-migrant workers in Tinumpuk Village formed IBU TIN “BERSERI” an abbreviation of Ikatan Mantan Buruh Migran Tinumpuk or Association of Ex-Migrant Worker in Tinumpuk. This community focused on waste management in Tinumpuk village. They asked the village government for support to allocate village funds.²⁵ A series of meetings have been followed, such as participating in the Regional Development Planning Forum (Musrenbang). The Climate Village Programme Tinumpuk leader said that a decision had been made during the Musrenbang that the village government would allocate the village fund for waste management (interview F37). She also approached the Village Deliberation Agency (Badan Permusyawaratan Desa) to confirm this decision. However, when the decision at the Musrenbang level was brought to the decision-making process at the village level, the village government did not accommodate the aspiration. The Tinumpuk leader looked frustrated with that decision because the income from the waste bank was only seven million rupiahs. In contrast, the operational cost reached ten million rupiahs per month during the pandemic (interview F37).

People in Joben also encountered an experience akin to Tinumpuk Village. The Village Head always supports their activities. He consistently attends any event held in the Joben Eco Park and never discourages Climate Village Programme or the establishment of the eco-park. However, when asked about a financial issue, whether they could get the village fund allocation or not, one participant immediately put an index finger to her lips as a gesture of saying “shhhh”. She lowered her voice and said they got nothing from the village fund (interview F02). She was uneasy about telling the fact that they did not get funding from the village fund. It seemed that talking about village fund was a taboo thing and she was not interested to discuss about village fund further. In the four sample villages, there was no assistance from the Local Environment Agencies to improve the capacity of the community in utilising the village fund for the climate change adaptation programmes.

In contrast, the government claims to have the policy to utilise the village fund for climate action. The Ministerial Regulation No. 8/2022 of the Ministry of Village, Development of Disadvantaged Regions lists climate action as one of the priorities for using village funds. The Minister of Environment and Forestry, Siti Nurbaya, mentioned that the use of village

²⁵ Village fund is sourced from the state revenue and expenditure budget (APBN) that can be allocated for rural administration, development projects, social welfare programs, and assistance. The village fund is a flagship program initiated by the President Joko Widodo. Each village in Indonesia can get around 800 million to 1 billion rupiah (Savitri 2010).

funds for supporting the Climate Village Programme was one of the government's policies to achieve Indonesia's NDC during the Virtual Ministerial Dialogue with Local and Regional Governments Strengthening Coordination to Implement the Paris Agreement (MoEF 2020). The development intervention idea of using the village fund for climate action and Climate Village Programme exists, but its implementation cannot be located in the four villages included in my fieldwork.

A Climate Policy Initiative Report published in 2018 and research conducted by Silvia Irawan (2019), the Executive Director of Inobu Foundation, also found a similar pattern in village fund allocation favouring infrastructure projects. The Climate Policy Initiative investigated the use of village funds in three regencies: Katingan and Kotawaringin in Central Kalimantan, and Berau in East Kalimantan Province. The study revealed that 75% of village funds in three regencies were allocated for infrastructure projects. Funding allocated for community development was only 5.5%, and it was allocated for village enterprise development (Sutiyono et al. 2018). Irawan (2019) investigated the use of village funds in 38 villages in Southeast Sulawesi Province in 2015. All village governments in 38 villages did not use the village fund for climate action. The village governments preferred to allocate the village funds for infrastructure projects. It becomes evident that the Climate Village Programme as a development intervention programme has overlooked the political and socio-economic challenges, such as the village fund allocation for climate actions.

5. Data Manipulation

Data manipulation is another unintended impact of the Climate Village Programme. Some government officials and communities manipulated data to achieve the Climate Village Programme target or win a competition. There are parallels with China and many other developing countries where gaming strategies emerge in local governments, resulting in goal displacement and policy distortions (Liang and Langbein 2015). This sub-section does not reveal the location where the data manipulation occurred and put no citation to protect the participants confidentiality. There were at least four data manipulation practices in the field. First, a participant revealed that the officials gave them a pre-filled form with high scores. It flabbergasted them since they knew that some of the data were invalid. Second, another participant unveiled that they dug a 9-meter square hole, filled water in it, and claimed that as a pond to reach the maximum point. The communities should utilise their resources for more productive activities rather than build unnecessary infrastructure like the small pool.



Small pool claimed as a pond to meet the climate village requirements in December 2021.

Source: Author

Third, a participant witnessed an Environment Agency official taking a wooden stick, creating a hole using it, and counting it as a bio pore. Finally, a Climate Village Programme village must assist ten other villages as one of the requirements to achieve Climate Village Programme Lestari status. The Climate Village Programme (PROKLIM) has four level categories, including Pratama, Madya, Utama, and Lestari. Pratama is the entry level of a climate village, while Lestari is the highest level of PROKLIM category. It is kind of a competition where the winners are getting trophies, prizes, and cash money (Directorate of Climate Change Adaptation 2015). The purpose of this requirement is to accelerate Climate Village Programme replication. One participant said that his village was registered as a village assisted by another village in Malang City that won Climate Village Programme Lestari. The winner of Climate Village Programme Lestari, in fact, never visited or assisted his village (interview F24).

This data manipulation is an instance of maladaptation of the Climate Village Programme. Juhola (et al. 2016, 7) defined maladaptation as “a result of an intentional adaptation policy or measure leading to negative outcome(s) for the targeted or other actors”. In addition to the maladaptation concept, Magnan (et al. 2016) described that adaptation initiatives have potential risks affecting territories’, sectors’, and people’s long-term capacity and opportunity to cope with and manage the adverse impacts of climate change. The data manipulation practices exacerbate the capacity of the government officials and the communities to implement good governance in tackling climate change. The data

manipulation can be categorised as entrenchment process where the climate adaptation interventions do not empower the local communities, but influence them to cheat in the climate village programme assessment instead.

6. *Unsustainable*

The Climate Village Programme might cause environmental problems. For instance, providing recycling bins in the village to sort waste is one of the climate village activities. However, in a climate village in Malang, those recycling bins were abandoned and unsuitable for use. The irony is that a tool intended to recycle waste becomes waste. This case is an example of maladaptation and encroachment where adaptation actions turn out to cause environmental problems. The Climate Village Programme is too focused on technicality and infrastructure, but it neglects to improve people's adaptive capacity.



Abandoned recycling bin in Malang in 2021. Source: Author

A Climate Village Programme Joben member stated that “we hope there would be sustainable assistance from the environment agency to support our efforts and did not stop after the Climate Village Programme ceremony in 2020. However, it stopped there. When we received the financial incentive and compost bins, the communications ended” (interview F02). From this information, we can learn that the assistance to the villages were not sustainable, the local environment agencies only came to assist when it was approaching the Climate Village Programme competition.

The experience from four villages reveals that the Climate Village Programme implementation by the government focuses on a technicality. The ambitious Climate Village

Programme implementation in 20,000 villages has a political agenda. The Climate Village Programme becomes an instrument that conceals the larger political strategy of the Indonesian Government at the UN climate negotiations, as discussed in the following section.

The Claim Chain: Why Are Suboptimal Programmes Replicated?

The Climate Village Programme implementation in four sample villages has either suboptimal or no impacts. It is questionable whether the Climate Village Programme can be a sustainable adaptation programme. Some practices of Climate Village Programme turn out to produce unintended negative impacts, which exacerbate the vulnerability of the people. Nevertheless, the Climate Village Programme continues to be replicated to achieve 20,000 Climate Village Programme targets. There are some opportunity costs and losses caused by this government need to reach a strategic target of 20,000 villages, but this does not restrain village communities from implementing other adaptation measures and gaining some concrete effects from the Climate Village Programme. This section examines the instrument-effects of the Climate Village Programme and how the government and communities use them.

The Instrument-Effects of the Climate Village Programme

The Indonesian government has an important strategic task to achieve NDC targets. Establishing 20,000 climate villages is one of these targets. The UNFCCC Regime relies on a naming and shaming mechanism that enables the voluntary pledges in the NDC to be compared and reviewed internationally. Besides, the mechanism allows civil society to scrutinise the implementation of the NDC within a domestic context (Falkner 2016). The Indonesian government will face pressure from states internationally and civil society domestically if it fails to meet the pledges. Indonesia is facing international pressure already due to massive tropical deforestation and forest fires linked with palm oil production (Tyson, Varkkey, and Choiruzzad 2018). The implementation of the Renewable Energy Directive (RED) II by the European Union aimed to fight climate change has disadvantaged the Indonesian palm oil industry already (Tyson and Meganingtyas 2022). Failing to meet the target is not an option. Instead, the Indonesian government can use its NDC and the UNFCCC fora to counter discrimination against Indonesian palm oil imposed by the developed countries in the name of fighting climate change.

President Jokowi used the opportunity in the World Leaders Summit in Forest and Land Use during COP 26 to make his protest against trade barriers and protectionism. The President stated that “all leaders, 90% of the world population living in extreme poverty depend on the forest. The misuse of the climate change issue as a trade barrier is a big mistake. This measure will erode trust in international cooperation in fighting climate change and hinder sustainable development that is really needed” (Widodo 2021b). Earlier statements by the President highlighted the achievement made by the Indonesian government. The President pointed out that Indonesia had minimised the forest fires up to 82% in 2020, reduced emissions from forest and land use change to 49% in 2019 compared to the 2015 level, and reached the lowest deforestation rate in the last 20 years (Widodo 2021b). We can identify the strategy used by the President from this speech. First, the President claimed to have successful climate programmes. Then, the President expressed his demand to abolish trade barriers using climate change issues that disadvantaged Indonesian national strategic commodities. This pattern can also be found in the President’s speech on the opening day of COP 26.

During the COP 26 opening ceremony, President Jokowi seized the opportunity to demand more contributions from developed countries. The President pointed out that “the provision of climate finance by the developed countries is a game changer in climate change mitigation and adaptation actions in developing countries. Indonesia will contribute more to accelerating world net-zero emissions.... The question remains, how big is the contribution of developed countries to us?” (Widodo 2021c). From the President’s statement, it was apparent that the President called for increased climate finance by the developed countries. Indonesia has been granted US\$ 9,721,441 through an Adaptation Fund for five projects running until March 2024 (Adaptation Fund 2024).²⁶ An official from the Ministry of Foreign Affairs said that this number is insignificant compared to the total government spending on climate action (interview EP24). The more climate finance commitment from developed countries means the better opportunity for Indonesia to access the fund.

The 20,000 target sounds grand and also vague concurrently. The MoEF is an actor that keeps the Climate Village Programme discourse continuing. Some scholars who are the proponents of Climate Village Programme try to argue that this target is feasible. One of them is Rizaldi Boer (2021), a scholar from Bogor Agricultural University, who said that this 20,000 Climate Village Programme is a realistic to develop. He added that with the penta-helix

²⁶ This number is calculated manually by the author based on the project information data provided by the Adaptation Fund on its website accessed March 25, 2024.

collaboration between the government, business, academia, society, and media, the target is not impossible to achieve.²⁷ On the contrary, this thesis is sceptical about the Climate Village target reflecting on the poor Climate Village Programme implementation in four sample villages and the political deployment behind it.

The 20,000 Climate Village Programme target is a claim that is intended to generate a good image for Indonesia internationally and domestically based on the impression that the government has an ambitious mitigation and adaptation target. The government can use the claim as an instrument to elevate Indonesia's bargaining position at the UNFCCC fora. It can justify Indonesia's demand, such as calling the developed countries to increase the climate finance or urging developed countries to halt discrimination measures against Indonesian crude palm oil. Moreover, the claim can be utilised to promote the potential of green development in Indonesia and attract investors from developed countries.

The Claim Chain Operationalisation

The claim of 20,000 Climate Village Programme delivered by President Jokowi at the international level is just the tip of the iceberg. The implementation of the Climate Village Programme involves multilevel actors from national to village levels, hence a long chain of arduous coordination process. There is also a claim chain process where the development agencies and related actors at the different level takes credit from the communities for their existing climate adaptation actions by rebranding those activities as part of the Climate Village Programme. It was confirmed by research in the four sample villages in my study that there were no new activities after the Climate Village Programme presence in their villages. One environment agency official also confirmed that the Climate Village Programme was just the continuation of previous programmes named *Kampung Bersinar* or Shining Village. *Kampung Bersinar* is a competition organised by the Malang City Environment Agency to raise people's awareness towards sustainable environment. The Shining Village competition use several indicators in the competition such as waste management, water conservation, and open green space (Malang City Government 2023). This finding shows that Climate Village Programme is just another fad after *Kampung Bersinar*.

²⁷ This statement was presented by Rizaldi Boer during a webinar organised by the MoEF from 8 to 9 February 2021. The title of the webinar is "Dialog Kesiapan dan Strategi Para Pihak Mendukung 20.000 Kampung Iklim," or The Dialogue of Readiness and Strategy of the stakeholders supporting 20,000 climate village.

Figure 6.1 The Claim Chain Process of the Climate Village Programme

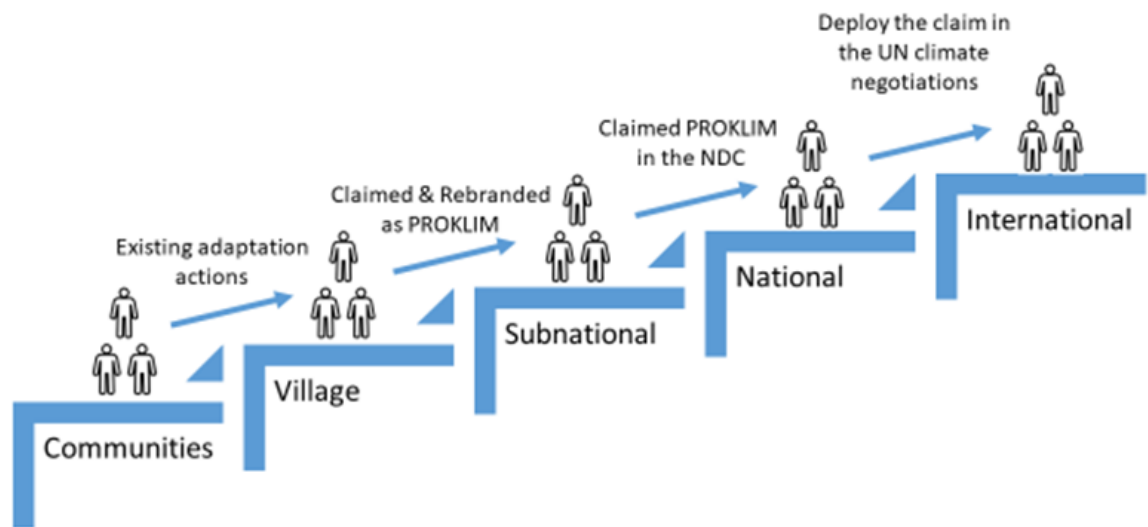


Figure 6.1. illustrates that the Climate Village Programme has instrumental effects for the development apparatuses at different levels, hence a claim chain is formed at the village, subnational, national and international levels. At the village level, the village heads can claim Climate Village Programme as one of their leadership performances or achievements, albeit without financial support from the village funds. For example, the Pesanggrahan Village Head got the “stage” and credit during the ceremonial event of Climate Village Programme. This achievement might be used for the next head of village election as one of his achievements during his administration.

It is not always the case that the head of the villages claim the credit from the Climate Village Programme achievement. There are instances where the head of a village does not even know that there are active Climate Village Programme in their village. This happened when I asked permission to conduct interviews in Tinumpuk Village and questioned the village head about Climate Village Programme implementation in Tinumpuk Village. In response, the village head asked me to clarify what the Climate Village Programme was and asked me to explain it (interview VH04). If a climate or development programme is not related to infrastructure development, many heads of villages do not favour it. They favour infrastructure programme because it is tangible and simple to be used gain legitimacy and deliver results, showing that they do perform. The Tinumpuk case shows that the claim chain process might not happen at the village level, hence there is a shorter claim chain to analyse.

At the subnational level, the Environment Agencies at the regency and provincial levels use the claim to secure the mandate to establish Climate Village Programme in their territories. The environment agency officials that participated in my study were familiar with the 20,000 Climate Village Programme target. There was no specific target for them to

achieve at the local level, but they understood that they must participate in the Climate Village Programme because the mandate came from above, from the MoEF. The Climate Village Programme implementation at the local level seemed to determine the performance index of local environment agency officials. If a village in their territory wins the National Climate Village Programme award, the local environment agencies will get the credit.

Another indicator that the Climate Village Programme is an instrument was that the environment agency officials only came to a village when the Climate Village Programme competition was approaching. A Climate Village Programme member from Kedung Poh stated that “when the Climate Village Programme competition is near, they [the Environment Agency officials] look busy and loiter” (interview F30). A Climate Village Programme leader from *Dusun* Joben argued that agency officials should “not only come during the Climate Village Programme competition. If needed, they should come ten years before the Climate Village Programme competition to assist the communities” (interview F39). From these experiences and statements, we can capture a pattern in four villages whereby the Environment Agency officials come to visit the villages during the competition only because they have an interest in participating in the Climate Village Programme competition. Shortly afterwards, the Climate Village Programme competition ended, and they reduced the assistance intensity gradually or halted it until the next competition.

Some politicians and local leaders claim the Climate Village Programmes to gain public sympathy or personal branding. A Regent in Indramayu got an award from the MoEF as the “*Pembina*” of Climate Village Programme in Tinumpuk Village, which won the Climate Village Programme competition at the national level (Yulianto 2018).²⁸ This news was published on several reliable online news sites and government official websites. I confirmed this news to the Climate Village Programme Tinumpuk leader, and she said they got nothing from the Indramayu Regent, who has never even visited their village (interview F37). The claim made by the regent does not give an instant impact to her career advancement, but it helps the regent to gain popularity through media publicity for the next election.

As the key actor of climate change governance and a national focal point for the UNFCCC, the MoEF claims the Climate Village Programme establishment by the environmental agencies at the subnational level in the NDC. The climate villages are registered by the MoEF in the National Registry System to record adaptation, mitigation, and other joint programmes. The Indonesian Government claims in the NDC that the system can

²⁸ *Pembina* is a well-known person responsible for developing a program, organisation, institution, or community, but in practice, the position is just for formality in many cases.

support an integrated national transparency framework (the Republic of Indonesia, 2021). However, the National Registry System website is not updated. The website functions more as a summary of climate commitments than as a functional tool to monitor the Climate Village Programme progress. Even then, the National Registry System website only shows 151 Climate Village Programmes on the distribution map up to March 2022.²⁹

Finally, the claim is brought by the President, Ministers, and Indonesian delegations in the UN climate change negotiations. The claim about the progress made under the Climate Village Programme is used as an instrument whereby the Indonesian government can include the Climate Village Programme in the NDC and claim the government has an ambitious target for the adaptation action. Therefore, the Indonesian government can deploy concurrent political agenda. It can get through the naming and shaming mechanism in the Paris Regime, while it demands climate finance increase and green investments.

The claim chain of Climate Village Programme answers the second question about replication. The instrument effect framework by Ferguson (2014, 256) helps reveal how the development agencies utilise the Climate Village Programme as an instrument to achieve another concrete interest. On top of that, the Climate Village Programme as an instrument served the interests of the central government the most. It complements the Indonesia NDC target and international climate negotiations as a more extensive political deployment than the Climate Village Programme itself. From the government's side, we can identify the concrete effects of the Climate Village Programme on their interests. However, the question remains as to why the communities are supportive of Climate Village Programme replication if it brings no significant impact on their adaptive capacity and resilience.

Harnessing Concrete Effects of Climate Village Programme for the Communities

Three out of the four villages in my study intend to continue their Climate Village Programme even though it did not make any difference in their village's development. One village refused to continue the Climate Village Programme because they realised that there were no concrete effects benefitting them and no point to continue it. Climate Village Programme implementation nationally might face resistance from local communities. The summary of the motives and concrete effects of the Climate Village Programme are categorised in Table 6.2.

²⁹ The National Registry System can be accessed through this link: <https://srn.menlhk.go.id/index.php?r=home%2Findex>

Table 6.2 Side Effects of Climate Village Programme from Community's Perspective

Motives	Concrete Effects	Dimension	Location
Routine	-	Ecological	Joben, Arjowinangun, Kedung Poh
Recognition	Elevating bargaining position, delivering aspirations	Political	Joben
Publicity	Attracting more tourists to visit the Eco-park	Economy	Joben, Arjowinangun
Reputation	Gaining reputation	Economy	Joben, Kedung Poh
Assistance	Knowledge sharing and networking with other villages	Social	Joben, Kedung Poh

1. Routine

A Climate Village Programme member from *Dusun* Joben said that there was no difference whether they had a Climate Village Programme or not because they had planted the trees in the Rinjani Mount area twenty years ago using their own resources (interview F01). "We expected more from Climate Village Programme, but we do not think we would discontinue Climate Village Programme" (interview F01). His statement showed that he and the community just continued their routine of preserving the forest area. The Climate Village Programme status does not change their routine. This motive is related to the ecological dimension of the Climate Village Programme. However, the Climate Village Programme generated neither positive nor negative impacts on the environment, and thus the respondent from *Dusun* Joben seemed to find no reason to discontinue Climate Village Programme. The decision to continue was made simply because the Climate Village Programme already existed. The other Climate Village Programme members from Arjowinangun and Kedung Poh had a similar response. Since they had done the climate actions before the Climate Village Programme, they decide to continue the programme. They had no problem if their existing activities were labelled as part of the Climate Village Programme. A Climate Village Programme leader from Kedung Poh stated that with or without the government's support, they would keep preserving their environment because it was important to them (interview F26). They had done the reforestation activities voluntarily, and there was no reason to stop the Climate Village Programme. The Kedung Poh Village head answered the question about why they wanted to continue Climate Village Programme bluntly: "we will continue it anyway. We do not care whether the government

will help us or not” (interview VH03). Continuing a routine activity is one of the motives to continue Climate Village Programme with no expected benefits or losses.

2. *Recognition*

One of the purposes of the Climate Village Programme is to give recognition to communities who are concerned about environment and climate change. The Climate Village Programme members from three villages revealed that they were pleased to get the recognition from the Environment Agencies and the MoEF. They were proud that their efforts and initiatives were recognised by the government. The names of their *dusun* or village are now listed on the website of the MoEF and Environment Agencies, hence more people and government officials know about their places. The Climate Village Programme members in three villages aim to achieve the Climate Village Programme Lestari status, as the highest recognition of Climate Village Programme. Even though they are required to recruit ten other villages with their own resources to achieve that, they remain committed to replicate the Climate Village Programme. This scheme sounds like multi-level marketing strategy or pyramid scheme. The new recruits must recruit other people as a requirement to elevate their level. One of the members from Climate Village Programme Joben expected that they could utilise this recognition or status to demand something useful from the government: “we have contributed to the field (establishing Climate Village Programme). Now, what is your (the government) contribution to the society?” (interview F02). From this quote, the member sees the recognition as an opportunity to elevate their bargaining position to demand more resources for village development so that the government officials hear their aspirations. This motive has a political dimension.

3. *Publicity*

The publicity motive often exists in tandem with reputation motive. Villages can get economic benefits as the concrete effects of Climate Village Programme. A respondent from Joben said that the Climate Village Programme helped her village to be widely known by the public, enabled them to share their experience with other villages, and gave them an opportunity of accessing further assistance from the government (interview F02). Indeed, the publicity from the Climate Village Programme is valuable to attract more tourists to visit the Joben Eco Park in Pesanggrahan Village.



Joben Eco Park in East Lombok Regency in January 2022. Source: Author

4. Reputation

The Village head of Kedung Poh reckoned that the Climate Village Programme might be useful for the village in getting better name recognition and reputation. He explained his answer by using a Javanese proverb, “*ojo golek jenang, ananging golek jeneng*” (interview VH03). It means that we should not try too hard and focus on pursuing fortune (*jenang*), but we should build our reputation or name (*jeneng*), and the fortune will find us.³⁰ The village head gave the Climate Village Programme leader’s experience as an example. The Climate Village Programme leader of Kedung Poh planted the trees voluntarily with the *Resan* community that had planted 11,000 trees so far. He had built his reputation by doing his voluntary actions. He unexpectedly got a pickup truck offers from a son-in-law of Yogyakarta Sultan Hamengkubuwono X for the operational need of the *Resan* community (interview VH03). The experience showed that the village head saw an opportunity of Climate Village Programme that could build the reputation of Kedung Poh Village. When the village had a good reputation, he believed that other resources would flow to his village (interview VH03). Based on the data from the National Registry System, the Climate Village Programme can get

³⁰ *Jenang* is a Javanese sweet made from palm sugar, coconut milk, and rice flour. It has a toffee-like texture. *Jeneng* means name.

funding from private actors such as Pertamina (Indonesian state-owned oil company) and Asia Pulp and Paper.

5. Assistance

Providing assistance to other village is a motive related to social dimension of Climate Village Programme replication. The Climate Village Programme members in three villages revealed that there was no funding distributed to them for recruiting an additional 10 villages. They used their resources including transportation, communication, and meal costs. They aim to help other village through knowledge sharing and assist them to be more resilient to climate change. The Climate Village Programme leader from Kedung Poh said that they do it voluntarily as a human who should help each other out (interview F26). A member from Joben Climate Village Programme said that this scheme was good for their networking: “we could learn from best practices of climate adaptation and mitigation from other villages as well” (interview F39).

The responses from the people at the village level reveal that they continue with the Climate Village Programme and plan to replicate it in other villages for several reasons. First, they found no disincentive to halt Climate Village Programme. There was no difference with or without Climate Village Programme for their villages, hence continuing their routine as usual. They continue Climate Village Programme as a routine to preserve the environment surrounding them. They did not mind their activities being labelled or claimed as Climate Village Programme. Second, they got recognition for their existing efforts. Many of them were fairly content with the recognition and trophies. This recognition is considered as a first step to negotiate with the government officials. The communities can utilise the Climate Village Programme status as an instrument to elevate their bargaining position. Third, the community like in Joben can gain publicity from the Climate Village Programme, hence attracting more tourists and resources to their village. Joben people run several business activities such as renting a camping ground and lodge for public and organising outdoor training in Joben Eco Park. Their accommodation business now can be booked through several booking apps such as Booking.com, Tiket.com, and Planet of Hotels. A respondent in Joben said that more people came to their village and used their service (interview F01). Fourth, the Climate Village Programme can be utilised by the communities to gain reputation. They believe that this reputation can attract more donors to fund the village development. For instance, Joben Village gets assistance from Mataram University, Hamzanwadi University,

the East Lombok Agricultural Agency, and the Easet Lombok Tourism Agency. Finally, the Climate Village Programme members and leaders in three villages are recruiting 10 villages to replicate the Climate Village Programme for social purpose helping other communities and level up their climate village status.

Conclusion

Targeting 20,000 climate villages seems ambitious, but it does not reflect the improvement of the adaptive capacity of the vulnerable communities in the field. First, the experience from four villages shows that the Climate Village Programme brings no difference to their adaptive capacity but does have some unintended negative impacts. Second, one village decided to discontinue the Climate Village Programme, but that village is still listed as one of the climate villages in the National Registry System of the MoEF. Therefore, when the government claims that the Climate Village Programme has reached 20,000 villages, that number will not represent the actual number of climate villages in the field. In the case of Tinumpuk Village is evident that the Climate Village Programme has an unsustainable development pattern that will also potentially appear in other villages in Indonesia.

The Climate Village Programme replication is used as an instrument for more extensive political gains from the government side. The government at different levels claim the outcomes of the Climate Village Programme and use it for different purposes, hence forming a claim chain from the village to international levels. The Indonesian Government mentioned the Climate Village Programme in the NDC and during the UN climate negotiations to display that Indonesia has done something ambitious. It is crucial to elevate the bargaining position in negotiating Indonesia's interests, such as accessing more climate finance support from developed countries or countering the negative narrative on Indonesian palm oil commodities. The development agencies are not the only actors that use Climate Village Programmes as an instrument to achieve advantages. Some villagers see an opportunity beyond recognition and trophies from the MoEF. They plan to use their newfound publicity to obtain further assistance from the development agencies and gain recognition and resources for their village.

CHAPTER 7

The Uneven Distribution of Adaptation Project Benefits under ICCTF

This Chapter explores the implementation of climate adaptation projects under the BAPPENAS authority and funded by the Indonesia Climate Change Trust Fund (ICCTF) to understand the nature of CCA at the local level. This chapter has the same aim with Chapter 6 to expose the uneven of adaptation projects distribution among local communities at the local level. It helps to answer the fourth sub-question of this thesis: to what extent are the benefits of local-level climate adaptation programmes unevenly distributed among communities in Indonesia? Although this chapter discusses the same question answered in Chapter 6, it offers different stories of adaptation programmes implementation under the BAPPENAS which have a different pattern with the Climate Village Programme under the MoEF. The findings in this chapter help to understand the nature of CCA actions under the BAPPENAS.

The arguments of this chapter are drawn from fieldwork data in Pranggong Village, *Dusun* Temon, Wonokerto Village, and Salut Village from December 2021 to January 2022. The arguments are also drawn from online interview with participants in Salut Village conducted in September 2021 during the COVID-19 pandemic. A comparison of four villages enables this thesis to identify the pattern of uneven distribution of adaptation costs and benefits among village communities triggered by adaptation interventions funded by the ICCTF. This chapter argues that enclosure, exclusion, entrenchment, and encroachment processes in political economy of CCA coined by Sovacool, Linnér, and Goodsite's (2015) also happen at the micro level or at the village level. Besides, this chapter also argues that a cultural dimension matter to understand the political economy of CCA happening at the local level comprehensively. Moreover, this thesis chapter also contributes in expanding the political economy framework of CCA by adding a cultural dimension into the analysis. Modern adaptation strategies sometimes do not fit to be implemented at the local context and might cause cultural erosion. The enclosure (economic), exclusion (political), entrenchment (social), encroachment (ecological), and erosion (cultural) processes have distributed adaptation costs and benefits unevenly in four sites.

The distribution of adaptation programmes under the ICCTF shows a multilevel governance process where the funding comes from international donor agencies such as World Bank, USAID, JICA and the Asian Development Bank, the distribution of adaptation

funding is decided in Jakarta, and the programmes implementation at the village level are executed by private and civil actors in Indonesia such as the Anthropology Research Centre of Universitas Indonesia, the Yakkum Emergency Unit, the DAI company, and the Home Energy Foundation.

This chapter consists of six sections. This first section introduces the ICCTF adaptation projects and background of the problems. The second section describes the socio-economic and vulnerability conditions in four villages. The third section analyse the distribution of adaptation programmes using Sovacool, Linnér, and Goodsite's (2015) political economy typology. The fourth section proposes a cultural dimension analysis focusing on the case in *Dusun* Temon, in Gunung Kidul Regency. The fifth section analyses the nature of CCA interventions at the local level based on the experience of adaptation resources distribution in four villages. The last section concludes the discussion in this chapter.

The Indonesia Climate Change Trust Fund and the Will to Improve

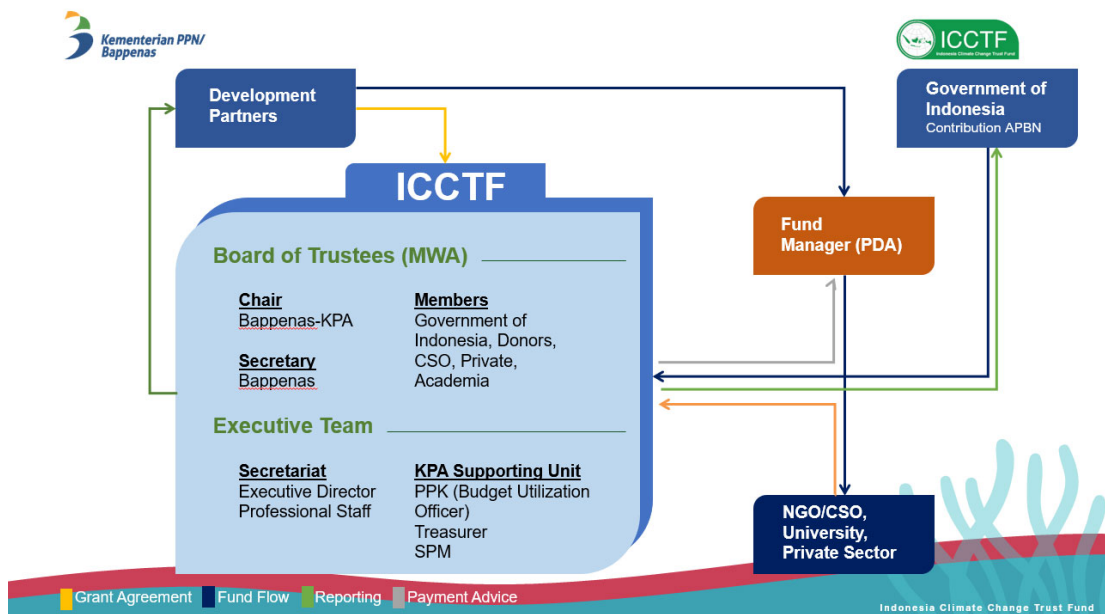
Many stakeholders seek to improve the adaptive capacity of village communities in Indonesia. The Indonesia Climate Change Trust Fund (ICCTF) is one of the stakeholders possessing the power to shape CCA governance at the national and local levels. The ICCTF exercises power over CCA governance by leveraging and channelling domestic resources and international funds to scale up adaptation actions nationally (ICCTF n.d).

The history of the ICCTF establishment could be discovered from a document published by the BAPPENAS in 2009. The establishment of the ICCTF was an example of multilevel governance process since it was influenced by international actors. Through cooperation with the Deutsche Gesellschaft für Technische Zusammenarbeit (GTZ), the BAPPENAS made a blueprint for the ICCTF. The German development agencies have played important roles in designing the architecture of climate finance governance in Indonesia. Two German development agencies, the GTZ and the GIZ, assisted the establishment of two climate finance institutions in Indonesia. The GTZ assisted the establishment of the ICCTF under the BAPPENAS and the GIZ assisted the Indonesia Environment Fund Agency (BPLDH) under the Ministry of Finance in collaboration with the MoEF. In Chapter 4 we have learnt that the existence of two climate finance institutions might be counterproductive as the coordination between ministries is still lacking.

Besides the GTZ, other donor agencies such as the Department of International Development (United Kingdom), and AusAid also provided assistance and funding in the initial phase of the ICCTF. The Indonesian Ministry of Finance also played a pivotal role in the

establishment of ICCTF. Six of their officials were appointed as the members of strategic coordination team for the ICCTF establishment (BAPPENAS 2014). The Indonesian Government adopted the national trust fund mechanism since it was considered an acceptable mechanism to place the funds for freestanding projects and programmes into "basket funds". It aimed to reduce transaction costs and harmonise climate financing (BAPPENAS 2009).

Figure 7.1 The ICCTF Business Process



Source: ICCTF (2021)

Figure 7.1 shows five stakeholder groups involved in the ICCTF business process, ministries/agencies, donor agencies, CSOs/NGOs, universities, and private sector. Based on the Blueprint for ICCTF, this trust fund agency can gather funding from bilateral donors, multilateral donors, and private sector (CSR). The ICCTF's primary investment activities focus on climate change mitigation (energy, mining, and forestry) and climate change adaptation (agriculture and coastal area). The project cycle in the ICCTF begins with proposals submission by sectoral ministries, CSOs/NGOs, universities, or private sector. Next, these prospective proposals must go through a selection process. A steering committee is responsible for decision-making and approval over the management and operational aspects of ICCTF, including recommending or rejecting prospective climate project proposals (BAPPENAS 2009). The steering committee consists of representatives from the BAPPENAS, ministries, donors, CSO, private, and academia. This arrangement is seen as a positive development in the decision-making process within the ICCTF over adaptation resource

distribution. However, the decision of adaptation resource distribution seemed not to be based on existing policy documents made by the BAPPENAS, such as RAN-API published in 2014, RAN-API Review 2018, and Location List and Climate Resilience Action (see Figure 7.2).

Figure 7.2 Key Climate Change Adaptation Policy Documents



The 2014 National Action Plan on Climate Change Adaptation

The 2018 RAN-API Review Document



Book 1 Locations Lists and Climate Resilience Actions

Source: BAPPENAS (2021)

As of March 2024, this climate finance agency has channelled 17 on going CCA projects covering western, central, and eastern parts of Indonesia (see Figure 7.3).

Figure 7.3 The Distribution of Climate Change Adaptation Projects Nationally by the ICCTF as of March 2024



Source: ICCTF (n.d.b)

Figure 7.3 displays that adaptation projects under the ICCTF have been distributed to main islands such as in Sumatra, Java, Kalimantan, Sulawesi, Bali, and Nusa Tenggara, except in Papua. The distribution pattern of adaptation projects violates the distributive justice principle. Lee and Shon (2024) define distributive justice as a concept that deals with the unjust distribution of energy assets and questions where the energy assets are concentrated. In the case of CCA in Indonesia, distributive justice helps to investigate where adaptation resources are concentrated. Figure 7.1 shows that most adaptation projects are still concentrated on Java Island, an island well known as Indonesia's centre of development and economic growth. Seven adaptation projects funded by the ICCTF are distributed in Java Island, which is around 41% of the total adaptation projects. Despite being identified as a vulnerable region based on the Climate Vulnerability Index Data Information System (SIDIK) and the 2018 RAN-API Review document for the agricultural sector, Papua Island gets zero adaptation project (see Figures 5.3 and 5.4 in Chapter 5). This pattern shows that the distribution of adaptation resources under the ICCTF has violated the distributive justice principle that might widen the adaptation gap between regions. This unintended negative impact can be identified as an entrenchment where adaptation projects widen socioeconomic inequality between community groups (Sovacool, Linnér, and Goodsite 2015).

Analysis shows that the selection of locations does not reflect the pilot project recommendations in RAN-API or the vulnerability assessment prepared by the BAPPENAS (see Chapter 5). This mismatch between plan and project execution shows that in multilevel

adaptation governance there is power interplay between national governments and local actors in determining project locations. It is evident that the ICCTF and the BAPPENAS are not the only important actor with the single intention to improve the adaptive capacity of local communities. Indeed, local implementing agencies such as CSOs, NGOs, academia, and private actors also play an important role in adaptation policymaking such as determining where to distribute adaptation resources, who are eligible beneficiaries, and what kind of assistance should be distributed. The involvement of local actors in multilevel adaptation governance is not limited to the policymaking process. They also play an important role in the implementation, monitoring, and evaluation processes (Ishtiaque 2021).

The distribution of adaptation projects by the ICCTF has a different pattern with the Climate Village Programme (Chapter 6). The ICCTF projects do not have any template that should be followed by the local implementing agencies, while the Climate Village Programme has a specific template designed by the MoEF applied nationally. The local implementing agencies involved in the ICCTF adaptation projects have power to determine the ideal locations for adaptation projects and design adaptation activities. Chapter 5 has discussed how the local implementing agencies under the ICCTF funding has a flexibility to select project locations based on their vulnerability assessments and justifications. The locations selected can differ from vulnerability assessments and pilot project locations prepared by the BAPPENAS. This finding shows that local adaptation actors have some discretionary authority and are not dominated by national actors like the BAPPENAS and the ICCTF in adaptation governance at the local level. Officials from four local implementing agencies appointed by The ICCTF mentioned that they had flexibility in designing the adaptation projects based on their expertise and experience (interviews EP06, EP08, EP16, EP22). They wrote the proposal and presented the project designs to the BAPPENAS and the ICCTF officials in Jakarta to get some feedback for the implementation. The fact that local implementing agencies has a flexibility in designing adaptation activities without any significant interventions from the BAPPENAS or ICCTF is proof that local actors can play an important role in multilevel adaptation governance and challenge state-centrism in multilevel adaptation governance. It also suggests that the bottom-up approach can thrive in multilevel adaptation governance.

The local implementing agencies usually have the intentions to improve the adaptive capacity and reduce the climate change vulnerability of the local communities. Li's (2007, 4) anthropological study of landscapes and livelihoods in Indonesia describes national governments and local implementing agencies as occupying the position of trustees who claim to know how others should live or how to strive for better lives. This process is a claim

to power. Even though the trustees may have a good intention to help vulnerable communities, their interventions might cause maladaptation that harms and exacerbates the climate vulnerabilities of local communities. Government usually intervenes to improve the well-being of population at large by educating desires and configuring habits, aspirations, and beliefs. When the power of the government operates at distance, people are not necessarily aware of whether their conduct is being conducted. Hence, government sometimes does need to obtain consent to regulate people (Li 2007, 5). The village communities might not be aware of the uneven distribution of adaptation benefits brought by the trustees through development projects. The next sections focus on exploring power interplay in adaptation governance processes at the local level and analysing the uneven distribution of adaptation benefits among communities in four villages using the political economy framework of Sovacool, Linnér, and Goodsite (2015).

Fieldwork Sites

Table 7.1 Summary of Fieldwork Sites

Location	Population	Economy	CCA Project
Pranggong Village, Indramayu Regency, West Nusa Tenggara Province	6,546 People Source: BPS Indramayu Regency (2021)	Most Pranggong people work as farmers, migrant workers, and low-skilled labour in factories. Most farmers in Pranggong grow paddy and they face droughts and rob tidal floods (interview VH05).	The Science Field Shop: Facilitating farmers to learn agrometeorology by establishing weather observer clubs. Organised by the Anthropology Research Centre, Universitas Indonesia
Wonokerto Village, Malang Regency, East Java Province	9,522 people Source: BPS Malang Regency (2022)	Most farmers in Wonokerto are elderly. They plant sugarcane since this village is nearby a sugar factory. They experience droughts as main challenge (interview VH02).	The Climate Field School: Training farmers to use weather forecast, helping them to grow sugarcane seeds with better quality, and facilitating farmers to use organic fertilisers. Organised by USAID APIK and DAI in collaboration with Meteorology, Climatology and Geophysics Agency and Malang Regency Agricultural Extension Centre.
Salut Village, North Lombok Regency, West Nusa Tenggara Province	4,141 people Source: BPS Lombok Utara Regency (2022)	Many Salut People are poor farmers who grow horticulture plants such as chili, peanut, casava, tomato, and eggplant. They experience droughts as main challenge. In a long dry season, they must buy water from private supplier (interview F05).	Climate Change Adaptation and Bioslurry Implementation: Distributing rainwater tanks, delivering bioslurry programme, and facilitating farmers to implement drip irrigation system. Organised by the Yakkum Emergency Unit

Location	Population	Economy	CCA Project
<i>Dusun</i> Temon, Giripurwo Village, Yogyakarta Special Region	9,047 people Source: BPS Gunung Kidul Regency (2023)	Many Temon people are poor farmers. Some have land and many are landless farmers. They cannot depend their living on farming. Many of them must work as low-skilled construction workers in other regions. They always experience droughts every year (interview EP16).	Improving Climate Adaptive and Food Security: Introducing jajar legowo planting technique (planting paddy seeds in straight lines), facilitating farmers to use weather forecast and climate calendar, and training farmers to use organic fertilisers. Organised by the Home Energy Foundation

1. *Pranggong Village, Indramayu Regency, West Nusa Tenggara Province*

The fieldwork in this province took place in January 2022. Pranggong Village is located in Indramayu Regency. The number of respondents in this village are five. Small-scale farmers in this village are vulnerable to droughts and floods. Pranggong Village is adjacent to the Cimanuk River and coastal areas of Java Sea. The Pranggong village head mentioned that floods squeezed his village from the north and south. It faced annual floods from the Cimanuk River from the south and rob tidal flood from the Java Sea from the north that submerged the rice fields in this village. Some farmers changed them into shrimp ponds to adapt to rob tidal floods and saltwater intrusion that submerged their rice fields. Most of Pranggong Village worked as factory workers in industrial areas like Bekasi, Karawang, and Cikarang. Pranggong village received a CCA programme funded by ICCTF. Anthropology Research Centre, Universitas Indonesia, was appointed to implement the project. The ICCTF annual report 2017 claims that the programme has succeeded in establishing one satellite club in Pranggong Village and increasing agrometeorology learning for farmers through Science Field Shops (SFS). The SFS are rainfall observer clubs consisting of academic anthropologists and agro-meteorologists initiated (non-fixed) curricula of 'agrometeorological learning'.



An example of autonomous adaptation by people in Pranggong. These paddy fields used to be shrimp ponds due to saltwater intrusion. Source: Author

2. Wonokerto Village, Malang Regency, East Java Province

Fieldwork in Wonokerto Village was conducted in December 2021 and involved nine participants. Wonokerto Village was a beneficiary of an adaptation programme funded by the USAID Climate Change Adaptation and Resilience (APIK). The programme focused on improving sugar cane plantations through the climate field school (DAI 2019). Most people in this village worked as sugar cane farmers for a living. They usually owned around two hectares of sugarcane plantations, but some were landless farm workers. Most of the farmers were elderly. The youth are not interested in being sugar cane farmers. Sugar cane plantations in Wonokerto Village were a legacy of Dutch colonialism and still sustained even after 78 years of independence. Most farmers here had no other options and only knew about growing sugar cane for a living. Even though their sugar cane plantations can survive during the dry season, climate change affects their yields. A farmer compared the yield of his field now and ten years ago. He remembered that he could yield more than now (F16). The USAID Climate Change Adaptation and Resilience (APIK) programme was planned as five years programme. However, the funding in this village was discontinued suddenly in year five due to the shifting of the United States' global climate policy under President Trump. The withdrawal of the United States from the Paris Agreement also affected the climate funding in Indonesia. Several elite participants also affirmed that there was a connection between the withdrawal of the United States with the sudden termination of USAID APIK funding for Indonesia (interview EP12; interview EP22).



Two farmers who still use organic fertiliser and yield more sugar canes. Source: Author

3. Salut Village, North Lombok Regency, West Nusa Tenggara Province

Fieldwork in West Nusa Tenggara Province was conducted in Salut Village, Lombok Utara Regency in January 2022. The number of respondents in this village are ten. Salut Village received CCA programme funded by the ICCTF. Yayasan Rumah Energi or the Home Energy Foundation was a partner appointed by the ICCTF to render the projects. Home Energy Foundation introduced the bio-slurry technique to paddy and corn farmers in Salut Village. Salut village people faced water scarcity and a longer dry season, which might cause crop failure. Most people in this village depended on horticulture farming for a living. Salut village also received climate funding from the Ministry of Energy and Mineral Resources before receiving adaptation funding from the ICCTF. The funding from the Ministry of Energy and Mineral Resources was delivered in partnership with the Home Energy Foundation as well. The climate programmes funded by the Ministry of Energy and Mineral Resources and the ICCTF were similar and delivered by the Home Energy Foundation, yet they labelled the programmes differently. The Ministry of Energy and Mineral Resources categorised the programme in Salut as a mitigation programme, while the ICCTF label the programme in Salut as an adaptation programme (interview EP27; interview EP32).



A broken bio-slurry unit due to earthquake. Source: Author

4. *Dusun Temon, Giripurwo Village, Yogyakarta Special Region*

Fieldwork took place in January 2022, and I interviewed four farmers in *Dusun Temon*. The ICCTF granted adaptation funding to the Yakkum Emergency Unit (YEU), which delivered an adaptation project in *Dusun Temon*. The Yakkum Emergency Unit was established in 2001. It is part of ACT Alliance and a member of Core Humanitarian Standard. It has distributed development projects in Yogyakarta, West Java, and Central Sulawesi (Yakkum Emergency Unit 2024). The project was focused on improving farmers' adaptive capacity by producing organic fertiliser and implementing *Jajar Legowo* technique in planting paddy. People in *Dusun Temon* usually worked as paddy farmers and construction workers. They earned more money from working as construction workers in Bantul, another Regency next to Gunung Kidul Regency than working as farmers. Farming was not their primary job because they earned less from farming, and some did not sell their paddy for a living but for fulfilling their daily food needs. People in Temon usually only had small land, around one or two hectares and the quality of their paddy was low because it was planted in dry lands, hence not meeting the quality standard for sale.



A farmer demonstrates the process of making organic fertiliser. Source: Author

This section provides basic information on socioeconomic conditions, adaptation challenges, and adaptation projects implemented in each village. The next section analyses how the distribution of adaptation projects in four villages under the BAPPENAS coordination has unevenly distributed costs and benefits among village communities using the political economy of CCA framework.

Distribution of Adaptation Resources: Who are the Winners and Losers?

This chapter proposes encumbrance (economic), evasion (political) and erosion (cultural) processes to complement Sovacool, Linnér, and Goodsite's (2015) political economy typology to investigate CCA interventions in four village sites in Indonesia. The chapter explores the uneven distribution of adaptation costs and benefits among village communities. According to the 2005 UNFCCC Nairobi Work Programme, the planners and implementing agencies should consider not only the climate change adaptation benefits, but also the distribution of adaptation costs and benefits (Atteridge and Remling 2018). This section consists of four sub-sections discussing four dimensions of the political economy of CCA to better understand the uneven distribution of costs and benefits. Four dimensions, including economic, political, ecological, and social, have been developed by Sovacool, Linnér, and Goodsite (2015). In the next section, this thesis makes an original contribution by adding a cultural dimension to the analysis to understand CCA phenomena at the village level in Indonesia.

Table 7.2 Summary of Political Economy Factors

Dimensions	Pranggong	Wonokerto	Salut	Temon
Economic Dimension Enclosure & Encumbrance	N/A	The adaptation programme was captured by the village head and his inner circle.	Wealthier farmers could capture the grant from the ICCTF by paying contribution fees to build rainwater tanks and bioslurry unit	The <i>jajar legowo</i> technique was introduced, yet some farmers could not implement it because it took time, and they could not take job as a low-skilled worker construction.
Political Dimension Exclusion and Evasion	The Science Field Shop targeted young farmers, and excluded elderly farmers.	The village head selected his inner circle networks as the participants of the climate field school programme.	The rainwater tanks programme only excluded poor farmers who were unable to pay contribution fees.	The Yakkum Emergency Unit introduced a new planting technique and overlooked an alternative to improve the spreading technique.
Social Dimension Entrenchment	Adaptive capacity gap between elderly and young farmers because the science field school targeted young farmers.	Adaptive capacity gap occurred between farmers.	The rainwater tanks caused water access inequality	Some farmers applied organic fertilisers, yet other farmers did not. Chemical fertilisers spread to paddy fields that used organic fertilisers when the rain fall.
Ecological Dimension Encroachment	N/A	N/A	Many plastic bottles were delivered to Salut for drip irrigation programme. Some farmers failed to implement it. The plastic bottles became waste.	N/A

Economic Dimension

Enclosure is the key term for the economic dimension to investigate the process where private hands or authority capture adaptation resources or expand the role and authority into a formerly public sphere (Sovacool and Linner 2016). An example of enclosure can be seen in Salut Village. The Home Energy Foundation got funding from the ICCTF to build rainwater tanks in Salut Village. The Home Energy Foundation did not build these rainwater

tanks for free in Salut. People must contribute IDR 1,250,000 rupiahs to build a rainwater tank with a 10,000-litre capacity.³¹ One rainwater tank infrastructure cost around IDR 3,500,000, and the Home Energy Foundation subsidised the rest using funding from the ICCTF (interview EP32).³² The name of the programme was Programme ASA-Lombok. Although Salut Village had 250 households, the programme only targeted building 100 rainwater tanks and achieved the target in 2017 (ICCTF 2017). It was a retrenchment tactic due to budget limitations. Hence, limited subsidies were provided. Home Energy Foundation got one billion rupiahs for 16 months programme period.³³ Indeed, Home Energy Foundation must make precise calculations to ensure the programme plan worked well. Building 250 rainwater tanks with one billion rupiah in funding were impossible since the implementing agency also needed operational cost to run the programme.

The tactic and calculation worked well. The Home Energy Foundation built 100 units of rainwater tanks. They were helpful in harvesting rainwater during the rainy season and storing water from water tank trucks during the dry season. Based on the interview data from ten farmers, they also admitted that the water tanks helped store more water during the dry season. However, the massive development of water tanks in Salut did not change the reality that the people have to buy relatively expensive water from private suppliers using water tank trucks during the drought season. Furthermore, the development of 100 rainwater tank units transferred public funding from the ICCTF to 100 households only. The units became the private property of those selected 100 households. The programme excluded the remaining 150 households due to limited quota or because they could not afford to pay the IDR 1,250,000 contribution fee. Wealthier households benefit more from this rainwater tanks programme. Households with bigger water tanks capacity could capture more water than other households with normal water tanks capacity.

The enclosure process can also be found in the Climate Field School implementation in Wonokerto from 2017 to 2018. Village heads in Indonesia usually have the privilege of managing village treasury land (*tanah kas desa*) that can be used by the village administration for the 'common good' (Heron and Kim 2023). The Wonokerto Village head allocated land to implement the Climate Field School funded by the USAID Climate Change Adaptation and Resilience (APIK) programme. The main activity was to grow a new variety of sugar cane sections that had excellent quality to be used by Wonokerto farmers or for sale. However, the village head also had the privilege of selecting participants of the Climate Field School in

³¹ IDR 1,250,000 is equal to GBP 63 as of March 2024

³² IDR 3,500,000 is equal to GBP 176 as of March 2024.

³³ One billion rupiahs is approximately equal to GBP 50,416 as of March 2024.

Wonokerto, and the participants were people who had close relationships with the village head (interview F15). Therefore, the benefits of using village treasury land were captured by the village head and people in his circle. In the latest village head election in 2019, the village head who committed to helping the Climate Field School implementation were not reelected. The newly elected village head had a different agenda. He immediately allocated the land (approximately 0.5 hectare) and rented it to other people. A farmer said that he did not know how the new village government allocated the money from renting that 0.5-hectare treasury land, whether it was used for the common good or used for repaying the campaign expenses (interview F15). It is common for village heads in Indonesia to grant some gifts to their campaign teams when they are elected as the village head (Sidik and Habibi 2023). The Climate Field School was halted due to no available land for the farmers to do the activities such as producing sugar cane seeds.

I asked whether the farmers who participated in the Climate Field School protested to the new village government to get the access back to the land for continuing the Climate Field School activity. They were angry because the new village head took the land without communicating with the Climate Field School members. They suddenly found that the 0.5 land that used to be a place for them to do the activities had given to other people and been planted with new sugarcane plants. However, they were resigned and did not do the protest because they thought that it would not change anything (interviews F15, F16, and F22). Farmers who used to be Climate Field School participants and worked on that land to grow sugar cane were not allowed to use the land anymore (interview VH02). Learnt from this case, the continuation of adaptation projects at the village level is often in the hands of the village head. The assistance from USAID ended in 2020, the new village head seemed to have neither interest nor political will to continue the Climate Field School because the project was stopped.



*Approximate location of the contested 0.5-hectare “tanah kas desa” or village treasury land
Source: Author*

Encumbrance is another process proposed for analysing the economic dimension of CCA. Adaptation programmes inadvertently might place economic burdens or hidden costs that the local communities have to shoulder. In the Salut Village case, the rainwater tank infrastructure lasted only a short time. People had paid 1,250,000 rupiahs contribution fee for a rainwater tank unit. Unfortunately, a 7.0-magnitude earthquake on 5 August 2018 damaged most of the rainwater tanks and bio-slurry units in Salut (Tehusijarana 2018). People were unable to utilise the unit again. They must spend more money to fix it. The Home Energy Foundation official was aware of this situation and visited Salut Village several times after the 2018 earthquake. However, the adaptation project in Salut Village was completed in June 2018, and there was no further funding from the ICCTF then. The Home Energy Foundation could not help to fix the broken rainwater tank units and had to wait for funding from another project (inerview EP32).



Bio-Slurry Unit Damaged by Earthquake in 2018. Source: Author

During a difficult time, post-disaster, fixing the water tanks were not a priority for Salut people. Their priority was fixing their house. Hence, many rainwater tanks were abandoned because the people could not afford to fix them. Some people were back to autonomous adaptation by using tarpaulin or a wide plastic for water storage. It means that they had to spend more money to build another water storage facility. Indeed, the 2018 earthquake in Lombok was an unfortunate event affecting the sustainability of the Home Energy Foundation project. It was not a climate-related disaster. It seems unfair to place the responsibility on the Home Energy Foundation for unsustainable outcomes caused by the

earthquake. However, it has become common knowledge that most of Indonesia's areas are prone to earthquakes. The construction of rainwater tank units should consider earthquake-resistance structures in the programme planning, yet the construction planning was not comprehensive enough to consider potential risks like earthquake.

Another encumbrance process occurred in Gunung Kidul. One of the programme activities implemented by the Yakkum Emergency Unit in Giripurwo Village was producing and utilising organic fertiliser. However, the implementation was not done collectively. Organic fertiliser was relatively cheaper than chemical fertiliser. It was because the farmers in Giripurwo could utilise animal waste, yet producing organic fertiliser was time-consuming. The farmers had to spend more time for utilising organic fertilisers than chemical ones. Some farmers were reluctant since they could not use the time for doing other jobs if they made organic fertiliser (interviews F41 and F42). Losing some daily wages was the opportunity cost of making organic fertiliser. Furthermore, one farmer revealed that the organic fertiliser was inefficient in increasing their yield due to their surrounding paddy field's continued use of chemical fertiliser (interview F41). A problem occurred when rainwater flew and transferred chemical fertiliser from neighbouring paddy fields into paddy fields utilised organic ones. The farmer highlighted that the organic fertiliser programme would not be effective unless all the farmers did it collectively (interview F41). Despite some farmers failing to get the optimal result from using organic fertiliser, one farmer said that he could yield more because his field was not surrounded by other's fields (interview F44).

Political Dimension

The implementing agencies of ICCTF projects are familiar actors in the game. They have handled many climate-related projects from several donors. They, without doubt, understand the donor's basic rules that a project should be inclusive and not exclude any particular groups. Based on the interviews with four elite participants (interviews EP08, EP16, EP22, and EP32), all implementing agencies could explain well if their projects were inclusive from the beginning, including project planning. They began the project's initial phase by inviting stakeholders to a meeting to gather input from the stakeholders at the village level. They also considered gender balance to bring inclusivity to the next level. These initial meetings were claimed in the project reports as inclusive measures of the project. Even though the implementing agencies were aware of the inclusion aspect of the project, exclusion practices did still emerge inadvertently. Sometimes, the local implementing agencies did it on purpose to achieve the project's specific goals or due to a tight budget that forbade them to involve

many participants, like what happened in the limited distribution of rainwater tanks in Salut Village or the selection of young farmers in Pranggong Village. The implementing agencies had to face many trade-offs in the project implementation.

An adaptation project in Indramayu aimed to develop young farmers' capacity in farming through the Science Field Shop programme (interview F32). One of these project activities aimed to develop their capacity to record rainfall and project it. This capacity would enable young farmers to predict the best time to plant the paddy seeds. However, most young farmers in Pranggong Village do not have paddy fields, and they are not interested in becoming farmers (interview F32). They are more interested in working as factory workers that earned monthly salaries. The project successfully involved young potential in the Science Field Shop training, but most participants did not use the skills gained from the training because they were landless and preferred to work in a factory offering a monthly salary (interview F33). By targeting youth in Pranggong, this programme indirectly excluded elderly farmers having land to access adaptation resources funded by the ICCTF.

Analysis shows that exclusion also happened in Salut Village. The Home Energy Foundation limited the beneficiaries to 100 households only, whilst there were 250 households in Salut. First, it had already excluded 150 households from accessing rainwater tank units because the funding from the ICCTF was limited and not everyone could afford to pay the contribution fee to get the rainwater tanks. Second, the 1,250,000 rupiah contribution also excluded poor households from accessing adaptation resources from the ICCTF. Some farmers mentioned that they could not afford the contribution fee, so they resigned to the reality that they could not be the beneficiaries of rainwater tank units (interviews F09 and F11).

Exclusion in Wonokerto Village is another example of the inadvertent exclusion of the CCA programme. Based on nine Wonokerto farmer interviews, there was no apparent justification of who was eligible to be the participants of the Climate Field School. One farmer said that the participants were people who had close relations with the Wonokerto Village Head or the inner circle of the village head (interview F17). The former Village Head seemed to be the broker of the adaptation programme implemented in Wonokerto. This case is an example that shows the elite-capture nature of governance at the village level where the village head can become dominant in the decision-making process and discourage inclusivity in adaptation governance (Ishtiaque 2021). The village heads in Indonesia usually have the power to determine who are eligible to be the project's participants.

To avoid exclusion, the local implementing agencies usually take some prevention actions to make the adaptation projects as inclusive as possible (interviews EP08, EP16, EP22, and EP32). For example, agencies expect a high-rate of participation of the farmers in the project planning, while considering gender balance, and organising focus group discussions to gather aspirations can be used to claim the inclusion of the project. The USAID Climate Change Adaptation and Resilience (APIK) Programme claimed that it involved 5,193 male and 3,557 participants for adaptation projects implemented in East Java until 2020 (USAID-APIK 2020). In the ICCTF report published in 2017, the Yakkum Emergency Unit claimed that they conducted a survey and project consultations with many stakeholders such as communities from eight *Rukun Tetangga* (RT) or Neighbourhood Units in *Dusun* Temon.³⁴ However, that kind of inclusion is only a narrow definition of inclusion. The inclusion principle should consider to what extent grassroots aspirations and alternative strategies are accommodated in the project planning and implementation. Selected adaptation strategies should address real problems faced by vulnerable communities. Li (2007, 1) draws attention to the inevitable gap between what is attempted and what is accomplished in development programmes in Central Sulawesi, Indonesia. This pattern is also found in the exclusion process in Pranggong, Wonokerto, and Salut. The implementing agencies said that they did the consultation to gather people's aspirations. Based on the fieldwork in four sites, this thesis found a gap between what is needed for climate change adaptation at the village level, and what is actually provided.

During my fieldwork, farmers were asked what they needed most to adapt to climate change impacts. A farmer in Salut answered that they needed water access, particularly during a long dry season (interview F05). They claimed to have asked the Home Energy Foundation officials whether they could build bored wells in their village so that the people could get better water access (interview F05). However, this request could not be accommodated because the cost to build one bored well was around IDR 650,000,000 (Rosidi 2024). The grant from the ICCTF was only one billion rupiah for 16 months. Therefore, building bored wells was not a feasible project with one billion rupiah budget for 16 months. The Salut people asked for bored wells because they only know that a bored well will give them water. This request shows that the main problem was water access.

The Home Energy Foundation should find an alternative strategy to give Salut people access to water during the rainy and dry seasons instead of building rainfall water tanks that

³⁴ Rukun Tetangga (RT) or Neighbourhood Unit is the lowest administrative division in Indonesia that consists of several households.

are only useful during the rainy season. When the dry season came, the people in Salut depended on buying expensive water from private suppliers to fill the water tanks. This case exposes an evasion process where an implementing agency might avoid alternative strategies such as fog harvesting that could address water scarcity as the fundamental problem faced by Salut people.³⁵ The BAPPENAS has identified fog harvesting as an alternative for local communities to get fresh water. This method can work best in coastal and highland areas that have high air humidity (Meliala 2023). Salut village is located 3.5 km from coastal area and fog harvesting should be considered as an alternative.

Ecological Dimension

Analysing adaptation projects cannot be isolated from its evil twin maladaptation (Phillips 2021, 42). Even a well-planned adaptation project might still result in maladaptation outcomes. Adaptation projects can cause unintended impacts such as environmental degradation. For example, Salut Village received an adaptation project from March 2017 to June 2018 from the Home Energy Foundation to practice drip irrigation techniques for their horticulture plants. The drip irrigation project used mineral water bottles and made a small hole in the bottle cap. This technique saved water usage to maintain the humidity of the plants. However, one farmer claimed that his chilli plants died because of this technique (interview F05). The temperature in North Lombok was relatively high during the dry season. Transparent bottles and the hot sun were a deadly combination for his plants. The heat was trapped in the bottle and caused the water to boil. He added, "I could use the water inside the bottle to brew coffee" (interview F05). This micro example of maladaptation is related to the encumbrance concept. The drip irrigation programme had put an economic burden on the farmers, and some of them failed to harvest their valuable chillies. The Home Energy Foundation official did not believe the story at first, but when the official visited the Salut Village he found that the claimed about the failure of drip irrigation was true (interview F05). The programme also causes a waste problem for Salut Village. A farmer revealed that the Home Energy Foundation delivered tons of plastic bottles (interview F05). Many of them were unused, becoming a waste problem in Salut. The Home Energy Foundation official and the farmers discussed the problem and attempted to find a solution together. They changed the bottle with hose pipes. This case is a good micro scale example of participatory

³⁵ Fog harvesting is a method to harvest fogs as an alternative source of fresh water in dry region by using simple and affordable collection systems such as a mesh net (UN CTCN n.d.).

engagement, with a local implementing agency fixing the maladaptation together with the village communities by considering proposals directly from the farmers.

Social Dimension

The entrenchment process occurs when climate change adaptation projects widen the inequality between the haves and the have not within communities, aggravating the disempowerment of women or minorities (Sovacool, Linnér, and Goodsite 2015). It is another maladaptation in the social inequality dimension that is intertwined with the exclusion process. An example from my fieldwork is in Salut Village. The rainwater tanks project excluded 150 households and people that could not afford the contribution fee. This exclusion led to an entrenchment process where people who could afford the rainwater tanks had a better adaptive capacity to store more water than people who could not afford them. Even people who had money could request to build rainwater tanks with bigger capacity by adding more contribution fees.

In Salut Village, if the water were still flowing from a nearby spring, the people would take turns to fulfil their water tanks using hose pipes or polyvinyl chloride (PVC) pipes. A farmer denounced unfair water distribution. Sometimes a household took a long time to fulfil its water tank. The bigger the water tank, the longer it took to make it full. It meant the longer other household taking turns. Sometimes when his turn came, the water flow was getting weak or even stopped. She also witnessed how her neighbour had some heated argument over water distribution, but it did not escalate into physical conflict (interview F14). The adaptation programme failed to address the inequality problem in water access. The opportunity for poor people, who could not afford to build a bigger water tank, to get better water access becomes even bleaker. It reproduced the inequality structure within the local community instead. Worsening inequality in accessing water was an example of how a project that too focused on technicality reposed political-economic causes of social problems such as poverty (Li 2007, 126). The opportunity for poor people, who could not afford to build a bigger water tank, to get better water access becomes even bleaker.

The adaptation project delivered by the Home Energy Foundation has a good intention of improving the water tank capacity of Salut people, and it works to help people who can access the programmes. However, the water tanks programme has distributed the adaptation costs and benefits unevenly because some people still struggle to get better water access in Salut. The improvement of water access of a few households might mean worse

water access to other households. Local implementing agencies should consider the redistributive impacts of adaptation programmes (Atteridge and Remling 2018).

Low women participation was still the main problem for adaptation project implementation in four villages. Men were dominant participants in four adaptation projects funded by the ICCTF. It took much work to find women participants during fieldwork. From a total of 29 participants from four villages, only six participants were women. It becomes a limitation of this thesis that the perspectives of women are underrepresented. I had tried to find women who participated in adaptation projects in each village, but there were few. The nature of farmer numbers in Indonesia is always dominated by men farmers. There were 25,111,004 men (85%) working as individual farmers in the agricultural sector, while there were only 4,231,198 women (15%) working in the same sector in 2023 (BPS 2024). The adaptation projects in four villages were too focused on the farmers as the project beneficiaries. The adaptation projects in four villages need to consider women's empowerment more. For instance, the projects can also target homemakers as participants in different adaptation activities.

Cultural Dimension in Political Economy of Climate Change Adaptation

This thesis includes a cultural dimension in the analysis since it is hardly possible to isolate cultural aspects when analysing CCA project intervention at the village level in developing countries where cultural heritage practices still prevail. In Chapter 6, this thesis has analysed the cultural dimension of climate change adaptation by using the case of *Resan* Community in Gunung Kidul. This sub-section focuses on examining CCA project implementation in *Dusun* Temon, Giripurwo Village. The case from *Dusun* Temon offers an intriguing case of how modern adaptation practices intervene and disrupt cultural heritage practices but still fail to improve adaptive capacity or even cause maladaptation. The erosion concept helps to understand how adaptation interventions might erode cultural values or cultural heritage practices in adaptation project locations. Modernisation, globalisation, mass tourism, and environmental degradation could be the causes of cultural erosion (Brosi et al. 2007; Sujarwo et al. 2014; Fentiman and Zabbey 2015). This section explores how climate change adaptation projects could also cause cultural erosion in village communities. The cultural dimension is one of the original contributions of this thesis in analysing the political economy of CCA at the local level.

Planting the *Segreng Handayani* rice seed variety and utilising the spreading technique to plant the *Segreng Handayani* rice seeds is a traditional cultural heritage practice

for Temon farmers. The *Segreng Handayani* is a local paddy variety originally from the Gunung Kidul area, but it can rarely be found in other regions (interview EP16). This local paddy variety was almost extinct when the Indonesian Government introduced the high-yielding paddy variety to Indonesian farmers during the Green Revolution era circa 1960 (JEO-Insight 2023). The *Segreng Handayani* can be categorised as red rice. It has unique characteristics such as using less water than usual paddy planted in irrigation paddy fields, short growing period (100 days), and high-yield productivity (around 6.6 tons per hectare) (interview EP16; Pandangan Jogja 2021). However, it also has disadvantages such as plain taste due to lower glycaemic index (interview F43; Nugraheni 2023). The Ministry of Agriculture has recognised that the *Segreng Handayani* was a local paddy variety from Gunung Kidul and allowed its distribution nationally in 2009 through the Ministry of Agriculture Decision Letter No. 2226/Kpts. SR.120/2009 (Pandangan Jogja 2021).

The spreading technique to plant paddy seeds in Gunung Kidul is known as *ngawu-awu* (interview EP16). *Ngawu-awu* is a ritual and a culture of farmers in Gunung Kidul. *Ngawu-awu* in the Javanese language means preserving the ancestors' traditions (Priyono 2023). A farmer said that this tradition had existed since his grandfather and perhaps existed long before that (interview F45). It has some unique characteristics that cannot be found in other regions. The planting technique adapts to the karst landscape of Gunung Kidul, which cannot absorb or hold rainwater longer than silt soil. *Ngawu-awu* must be done before the first rainfall touches the soil (Priyono 2023). In deciding when the best time is to spread the seeds, farmers in Gunung Kidul use *pranata mangsa*. Farmers use this method to decide the best time to spread the seeds by observing the movement of the Orion constellation and avoiding 'bad days' or 'sacred days', such as the commemoration day of their parents or grandparents who have passed away using the Javanese calendar (interview EP16). The spreading technique is simple, the farmers just need to throw the seeds randomly on the soil without planting them in straight lines and measuring the gap between plants.

The *Segreng Handayani* variety, *ngawu-awu* tradition, and *pranata mangsa* method have become identities, routines, and everyday activities of Temon farmers, hence can be identified as a cultural practice (Best and Paterson 2010). Farmers in *Dusun* Temon pass this knowledge down from generation to generation. Their conduct of life is largely in line with the practices of their ancestors (Eagleton 2018). However, climate change has changed the weather, increased climate disasters, created new pests and caused many uncertainties for farmers and threaten the cultural heritage practices of Temon people. This situation is a good entry point or justification for local implementing agencies to intervene in the hope of

improving the Temon people's adaptive capacity to climate change. Local knowledge can contribute to adaptation practices at the village level, but its roles to tackle recent climate variability and unfamiliar climate pattern in the future have been questioned (Naess 2013). Not every local knowledge can tackle contemporary challenges posed by climate change. *Pranata Mangsa* method failed to help Temon farmers deciding the best day to plant the seeds. In many cases they failed to grow the seeds (interview EP16). The use of modern technique like climate calendar and weather forecast were introduced by the Yakkum Emergency Unit. This activity reduced the potential of crop failure in Temon. However, not every modern solution is better than local knowledge. Local implementing agencies need to identify the local knowledge potential in adaptation actions.



Paddy (Segreng Handayani) field planted with spreading technique and combined with mist irrigation in Gunung Kidul. Source: Author

The Yakkum Emergency Unit was not the only actor delivering assistance in *Dusun* Temon. Farmers in Temon also got rice seeds subsidy from the Gunung Kidul Agriculture Agency. A Yakkum Emergency official criticised this subsidy programme, claiming that the rice seeds were unsuitable for highland areas in Gunung Kidul because the soil differed from lowland areas (interview EP16). The types of paddy fields in Gunung Kidul were also different. Most of them were rainfed paddy fields. They depended on rainfall to irrigate the fields. He also compared rice fields in Gunung Kidul and Bantul Regency. The rice fields in Bantul Regency could get the water from canal irrigation to keep the soil wet. Even during the dry season, they could still plant their fields. The condition was different for rainfed rice fields in Gunung Kidul. Rice seeds that could grow in Bantul did not necessarily could grow in Gunung Kidul. The Gunung Kidul Agriculture Agency distributed the same rice seeds as those distributed in other regions, despite differences in soil and rice field types in Gunung Kidul. Crop failure was unavoidable, and the rice seeds could not grow well. Farmers who took the

rice seeds from the Gunung Kidul Agriculture Agency did not receive compensation. What they could get was rice seeds replacement, but the planting season was over. Hence, the farmers could not harvest their paddy fields (interview EP16).

The Yakkum Emergency Unit official understood that the subsidised rice seeds were not suitable for the rice fields in Gunung Kidul (interview EP16). He tried to inform the Agriculture Agency. However, he got the classic response that the local agency only receives the rice seeds from the centre (*pusat*), a term used to describe the central government in Jakarta (interview EP16). This response demonstrates that local government agencies in vertical adaptation governance or Type I multilevel governance have a limited power against the national government or *pusat*. The national government, as the primary actor, can often overpower local government and local agencies within a top-down hierarchical structure (Ishtiaque 2021). However, the Yakkum Emergency Unit as an actor positioned outside the government hierarchy has power to challenge the national government's policy implemented at the local level. Even when the Yakkum Emergency Unit explained the seed problem to the farmers in Temon and suggested them to not use the seeds, some farmers in Temon still utilised the seeds because they were subsidised or free (interview EP16). Some farmers even believed that the rice seeds were good because the seeds were distributed by the Agricultural Agency, an institution they could trust for delivering agricultural project from the government. The poverty condition of the farmers in Temon put them in a position where they had no other choice but to accept the rice seeds subsidy. The rice seeds subsidy lured the farmers to abandon a cultural heritage practice to use local rice seeds. This programme attempted to help farmers to adapt to climate change, but it caused maladaptation instead.

The Yakkum Emergency Unit had exercised its knowledge power to influence the Agriculture Agency by reporting the incompatibility of subsidised rice seeds, but that attempt could not change the government's policy immediately (interview EP16). The Yakkum Emergency Unit then tried to offer an alternative by identifying local rice seeds that were more resistant to climate change impacts. They found *Segreng* rice seeds the best local variety because they were more resistant to pests and had shorter planting times than normal rice seeds. With a shorter rainy season caused by climate change, these *Segreng* seeds could survive until the harvest season. Several Temon farmers followed this suggestion and cropped their paddy fields successfully. The Yakkum Emergency Unit official said that some farmers who did not plant *Segreng* paddy failed to crop during the same growing season (interview EP16). Even though the Yakkum Emergency Unit had proved that *segreng* paddy was a better option, not all Temon farmers accepted this idea. Some

farmers still did not want to use the *Segreng Handayani* seeds for some reasons, such as the plain taste of the harvested rice, hence the lower price in the market (interviews F45, and F46).

The Yakkum Emergency Unit helped to preserve cultural heritage practices by identifying the best local rice seeds more resistant to climate change. However, Yakkum Emergency Unit also intervened to change Temon farmers' technique for many generations, the spreading technique. The Yakkum Emergency Unit introduced the *Jajar Legowo* technique to Temon farmers. *Jajar Legowo* was a very different technique and time-consuming. This technique required farmers to measure the distance between plants, make myriads of holes to put the seeds inside, and plant them in straight lines. Notwithstanding this technique required more effort and was time-consuming, the Yakkum Emergency Unit claimed that *Jajar Legowo* required fewer seeds than the spreading technique. Furthermore, it made the paddy fields easy to maintain. The gap between plants did ease farmers cleaning the weed and preventing the pest from spreading. On top of that, this technique did increase the yield (interview EP16).

Despite the success claim made by the Yakkum Emergency Unit, not all farmers were keen and tempted to adopt this technique. There was fragmentation among Temon farmers. Some adopted the *Jajar Legowo* technique, but others persisted in using the spreading technique. A farmer said that by using this simple technique, he only needed a half day (interview F46). On the contrary, they could spend days finishing the planting process using the *Jajar Legowo* technique. Perhaps, it took two or three days, depending on how many labourers did the planting (interview F43). The fragmentation among the Temon farmers was counterproductive for the Yakkum Emergency Unit's adaptation project. For instance, the modern *Jajar Legowo* technique prevented pests from spreading. However, a paddy field that used *Jajar Legowo* still faced the risks of pests from its surrounding areas that used the old technique. This phenomenon was similar to the implementation of organic fertiliser discussed previously. For comparison, the spreading technique can also be found in other regions like in East Java. The Madiun Regency Government and a farmer community in Madiun Regency, East Java Province, claimed they could increase their yields by 20% to 30% using the spreading technique for growing paddy. They also claimed that the spreading technique they used could reduce the use of fertiliser up to 20% to 30% (Akbar 2015).

The disagreement about farming techniques was the main challenge in the project implementation. Due to its suboptimal outcomes, a farmer revealed that they began to abandon some new techniques (interview F45). For example, organic fertiliser was not strong

enough to maintain the greenness of paddy leaves. When he saw the paddy leaves getting yellowish-green, he boosted the plants with chemical fertiliser, and it worked (interview F45). Another farmer revealed that he did not use *Jajar Legowo* anymore because he needed extra money. Taking odd jobs or being a low-skilled construction worker offered an instant way out from this problem (interview F44).

Using organic fertiliser, the *Jajar Legowo* technique and *Segreng Handayani* seeds were technical solutions offered by the Yakkum Emergency Unit, and nothing was wrong with those initiatives. However, being too focused on technicality would distance the Yakkum Emergency Unit from the fundamental socio-economic problems village communities face. From information collected from Temon farmers, this thesis finds that some socio-economic factors make the spreading technique still prevailing in Temon. First, water scarcity hindered Temon farmers from developing and improving their agricultural sector. Second, farming was not their primary income due to low rice production. Three farmers said they produced rice for their own consumption, not for sale (interviews F43, F44, and F45). They sold the rice only if they produced more than what they needed. It was most likely that the yields were only enough for their own consumption. Third, high unemployment and low job creation in Gunung Kidul forced them to find jobs in other more developed regencies (interviews F43, F44, and F45). If they could find jobs near their place, they could still maintain their paddy fields. This situation forced Temon farmers to use the spreading technique, not the *Jajar Legowo*. It was easier and faster. This simple technique could optimise their time working in Bantul Regency or Yogyakarta City while fulfilling their daily needs. The *Jajar Legowo* might increase the yield, but more was needed as their primary income. Temon farmers will always revert to traditional farming methods when fundamental socio-economic problems persist, such as water scarcity, poverty, high unemployment, low job creation, and dependency on neighbouring regencies for employment.

The Nature of Climate Change Adaptation Actions at the Local Level

Chapters 4 and 5 demonstrated the national contestation over climate change adaptation agendas. Chapters 6 and 7 focus on the implementation of adaptation projects that distribute adaptation benefits unevenly among communities at the village level. From the fieldwork in four climate villages and four villages under the ICCTF adaptation financing scheme, this thesis finds that the fragmentation between the BAPPENAS and the MoEF at the national level is extended to the local level. The nature of adaptation governance at the local level is polycentric, where the implementation of Climate Village Programmes and adaptation

projects under the ICCTF are operated independently of the others. Local implementing agencies involved in establishing climate villages are not involved in implementing adaptation projects under the ICCTF and vice versa. Both ministries depend on the line agencies at the local level, such as the local environment agencies and the BAPPEDA.

Other ministries, such as the Ministry of Agriculture that also deliver adaptation projects such as climate-smart agriculture, are often not involved in the climate villages or the ICCTF adaptation projects. For instance, two agricultural instructors who worked for the Gunung Kidul Agricultural Extension Centre under the Ministry of Agriculture had never been involved in climate villages or the ICCTF project in Gunung Kidul (interview EP37). The main task of an agricultural instructor is to provide technical assistance and workshop for farmers to improve their productivity, increase their income, and improve their welfare (Ministry of Agriculture 2023). Two agricultural instructors joined an adaptation project location assisted by Yakkum Emergency Unit in Gunung Kidul. They visited paddy fields that implemented mist irrigation that could save more water usage. They said that it was the first time they visited the project location, even though their office was nearby (interviews EP37 and EP38). A senior researcher from the Ministry of Agriculture realised that specific types of fragmentation are occurring at the local level between ministries (interview EP30). They mentioned that working independently was the nature of ministries in delivering adaptation projects, including when they implemented adaptation projects at the local level. Each ministry had its particular sector. The Ministry of Agriculture official often found mismatches in the field. For example, the Ministry of Public Works built canal irrigation as an adaptation project to help farmers. However, according to her observations, the canal locations were often far from paddy fields (interview 30).

This polycentric structure in local adaptation is not necessarily a bad thing. There is a bright side to this polycentric governance. Even though the BAPPENAS and the MoEF implement the adaptation programmes separately without coordination, the number of adaptation programmes is increasing at least, and more village communities can benefit from the distribution of adaptation programmes by both ministries at the village level. However, there is always a chance of overlapping programmes occurring when coordination between ministries is lacking and when they distribute the programmes sporadically. An example has been discussed in Chapter 4, where the Ministry of Energy and Mineral Resources and ICCTF delivered adaptation programmes in the same village but at different times. It could mean the continuity of a programme in Salut Village. However, it could also mean that uncoordinated adaptation programmes by two ministries were concentrated in the exact

location for a long time. The latter happened in Salut Village. Indeed, the village can benefit from this kind of privilege. However, the concentration of adaptation resources in one village can be counterproductive as it widens the adaptation gap between local communities. The study shows that one village can be leading in adaptation actions and attract more funding, while the neighbouring villages still struggle to adapt to climate change. The Home Energy Foundation official stated that the neighbouring villages also requested rainwater tanks to be delivered in their villages. However, due to a limited adaptation budget, the Home Energy Foundation had to decline those requests. It was a hard decision for the Home Energy Foundation officials to take (interview EP06).

The nature of local contestation over adaptation agendas at the local level is determined by the nature of contestation over climate adaptation agendas between ministries nationally. National and local contestation has undermined the implementation of climate adaptation projects at the local level. The case of seed distribution in Temon, Gunung Kidul, is an example of contestation over the adaptation agenda between the Ministry of Agriculture and the BAPPENAS. The seeds regime under the Ministry of Agriculture focused on completing seed distribution from the centre (*pusat*) to farmers. At the same time, the Yakkum Emergency Unit attempted to preserve the use of local seeds against the free seeds distribution since the seeds were not suitable for land in Temon. From this example, this thesis finds that local actors can sometimes ignore rules or mandates from the national government. For example local actors have knowledge and some autonomy to influence village communities to reject a subsidised rice seeds programme that is not suitable for the land in Gunung Kidul.

The implementation of climate adaptation projects at the village level is also beset with exclusion, evasion, enclosure, encumbrance, entrenchment, encroachment and erosion processes that can be found in four villages. The presence of these processes in the adaptation projects implementation leads to the same direction, maladaptation and uneven distribution of adaptation project benefits that exacerbate the vulnerability conditions of village communities. These processes, which usually involve power and politics, are often hidden and not realised by the implementing agencies or village communities. However, some processes might be done intentionally, such as selecting adaptation project locations benefitting the local implementing agencies in securing adaptation project funding.

Seven political economy processes in the four villages have confirmed that climate change adaptation is political. Even though the ministries, donor agencies, and local implementing agencies claim that their adaptation projects are apolitical, the nature of

climate change adaptation is political. The suboptimal results of adaptation projects analysed in the preceding section are not merely about technical problems. To understand the failure or suboptimal outcomes of adaptation projects, we should pose political questions to understand the root problems of climate adaptation, such as why the local implementing agencies overlooked possible adaptation alternatives like fog harvesting method to give water access to people in Salut, why farmers in Temon and Wonokerto were reluctant to use organic fertiliser, or why the Climate Field School in Wonokerto was discontinued by the newly elected village head.

Conclusion

The ICCTF is a strategic institution under the BAPPENAS authority to broker climate finance from donor agencies and other sources. It plays a crucial role in distributing adaptation funding to improve the adaptive capacity of local communities. However, some flaws are found in the adaptation programmes implementation in Pranggong Village, *Dusun* Temon, Wonokerto Village, and Salut Village. All four political economy processes coined by (Sovacool and Linnér 2016), including enclosure, exclusion, encroachment, and entrenchment, occurred in four villages (see Table 7.2). Those processes resulted in maladaptation that exacerbated the local community vulnerabilities. Enclosure occurred when people with more wealth could capture the adaptation funding because they could chip in some money to support the programme success. Exclusion is not limited to the decision-making process. Still, exclusion can occur when a programme excludes particular vulnerable groups for some reason, such as their status as outsiders or their economic conditions preventing them from accessing adaptation programmes that require them to prepare some money for a contribution. Encroachment happens when the plastic bottles in Salut Village that should have been used for adaptation increased plastic waste in the village instead. Entrenchment cases emerged due to the exclusion of several groups, widening the adaptation gap within local communities in Wonokerto Village and Salut Village.

This chapter offers three findings that support the third contribution of this thesis to expand the political economy of climate change adaptation typology. First, it can locate evasion practices where the decisions by a local implementing agency cause maladaptation, such as increased plastic waste and widening adaptation gap. The programme actions might work in the previous location but does not necessarily work in the new location. Second, this thesis reveals the encumbrance process where adaptation programmes burden local communities, such as money to chip in to begin the programme or more time spent to

implement new adaptation techniques, but with suboptimal outcomes. Lastly, this thesis highlights the importance of including a cultural dimension in the CCA political economy analysis. Cultural heritage practices such as planting techniques and particular local paddy seeds can be found in Gunung Kidul. This technique is a traditional knowledge produced through their ancestors' long process of autonomous adaptation and passed to present farmers in Gunung Kidul. CCA stakeholders must consider this knowledge when planning the best adaptation strategy for vulnerable communities.

CHAPTER 8

Conclusion

This thesis sought to investigate the emerging patterns of climate change adaptation in Indonesia to understand the changing nature of climate adaptation initiatives as well as the diverse representations and experiences of vulnerability in specific local settings. This primary objective was supported by several specific objectives that could be found in Chapters 3 to 7. This thesis was designed to meet the primary objective of this thesis. First, it aimed to investigate the adoption of global climate adaptation goals by the Indonesian government and reveal its implications for Indonesia's national adaptation agenda (Chapter 3). Second, this thesis scrutinised the nature of CCA governance at the national level (Chapter 4). Third, this thesis shed light on the variety of representations and experiences of vulnerability by examining the vulnerability assessment discrepancies between international (USAID) national (the BAPPENAS and MoEF), and local actors (Chapter 5). Fourth, this thesis examined how the benefits of adaptation programmes distributed by the BAPPENAS and the MoEF have been unevenly distributed among communities at the local level and created the winners and losers of CCA (Chapters 6 and 7).

This thesis has shown that the nature of complexity of climate change adaptation in Indonesia stems from three factors: contestation and fragmentation between ministries over national adaptation agendas, vulnerability assessment discrepancies that obscure the identification of vulnerable communities, and unequal distribution of adaptation benefits among local communities which then create the winners and losers of CCA. Drawing on the analysis and findings from Chapters 3 to 7, this thesis made three noteworthy contributions to advance our knowledge of climate change adaptation in developing countries, particularly in Indonesia. First, it enhances our understanding of the nature of national adaptation politics in Indonesia by revealing the contestation over national adaptation policies between two dominant ministries, the BAPPENAS and the MoEF. Second, the empirical findings in Chapter 5 has provided evidence of vulnerability assessment discrepancies and the variety of representations and experiences of vulnerability observed in eight villages in four provinces. Third, it has contributed to extending the dimensions of the political economy of climate change adaptation typology into five dimensions by incorporating the cultural dimension to understand the implementation of adaptation programmes in the global south. The addition of cultural dimension in this thesis complemented the analysis framework provided by

Sovacool, Linnér, and Goodsite (2015). It helped to understand the distribution of gains and losses in the global south where cultural tradition in adaptation remained strong.

This conclusion chapter consists of seven sections. First, it concludes the discussion on how global adaptation norms was adopted by the Indonesian Government. Second, it highlights the two paths of adaptation governance in Indonesia. Third, it focuses on concluding the variety of representations and experiences of vulnerability. Fourth, this section spotlights the uneven distribution of gains and losses in five dimensions. Fifth, this section wraps the discussion and makes connecting line between findings found in Chapters 3 to 7. The last two sections provide recommendations for the policy makers and suggestions for further research on CCA.

The UNFCCC Pressure and Indonesia's National Interests

Chapter 3 has addressed the first research question: *Why did Indonesia ratify the Paris Agreement and what are the implications of the Paris Agreement ratification towards Indonesia's national adaptation policies?* This chapter echoed Persson's (2019) call to include the global political process of climate adaptation in the study of politics of climate adaptation that remains underexplored. Persson (2019) argues that the analysis of adaptation interventions implemented at the national and local levels somewhat cannot be done in isolation. Chapter 3 has demonstrated that the national and local climate adaptation actions are inseparably linked with the global political process in the UNFCCC negotiations.

This thesis has shown that the nature of national adaptation agenda in Indonesia was shaped by the UNFCCC rather than initiated by national actors. In Indonesian case, the UNFCCC has succeeded to influence the Indonesian Government to set ambitious adaptation agenda. Through the naming and shaming mechanism in the UNFCCC, Indonesia must conform to global adaptation norms included in the Paris Agreement to remain relevant in international relations. However, Indonesia only gains a little material from the UNFCCC, such as a little adaptation financing from adaptation fund and expects loss and damage payments from developed countries that is still uncertain. Still, Indonesia and other developing countries are certainly not the winners of climate adaptation negotiations. The broken US\$100-billion climate finance pledge by developed countries and the withdrawal of the US from the Paris Accord initiated by Trump show that rich nations are circumventing their responsibility, whereas, financially speaking, they are wealthy enough to fulfil the promise (Latour 2017, 2). For example, the US military spending reached US\$ 801 billion in 2021 (SIPRI

2022). It was eight times bigger than the US\$100 billion promise of all developed countries combined.

Albeit Indonesia got minuscule material benefits from climate negotiations under the UNFCCC Regime. Indonesia could utilise the UNFCCC as an instrument for achieving concrete effects beyond adaptation. First, the Indonesian Government had an agenda to realise the Global Maritime Fulcrum through raising ocean adaptation. Second, the Indonesian Government had an agenda to build a good image as a climate champion and use it to counter negative narratives such as palm oil expansion in forest areas, forest fires, and massive deforestation. Yet, these benefits were only “a crumb” from the climate negotiation table. Adaptation financing and loss and damage compensation, as “the main courses”, were still being held by developed countries. Conforming to global adaptation norms had brought enormous consequences for the Indonesian government to develop its national adaptation policies, including adaptation planning, financing, transparency, institutions, and interventions, yet with limited adaptation resources distributed from the global north.

Two Paths of Adaptation Governance

Chapter 4 addressed the second question: *Why has national contestation over climate adaptation policies emerged between the BAPPENAS and the MoEF in Indonesia, and to what extent does this rivalry undermine the implementation of the Paris Agreement adaptation framework?* Adaptation has been gaining momentum globally since the adoption of the Paris Agreement and production of the Global Goal on Adaptation (Bendell 2021, 70), marked by adaptation mainstreaming conducted by ministries and agencies. Analysis in Chapter 4 has revealed the contestation and fragmentation between the BAPPENAS and the MoEF over national adaptation agendas, which is the first original contribution of this thesis. It has engaged with existing literature on the politics of climate adaptation at the national level to understand the nature of climate change adaptation under the UNFCCC regime. It has found that the Global Goal on Adaptation (GGA) agendas never land smoothly in developing countries, such as in Bangladesh, Brazil, Malawi, Nepal, Tanzania and Zambia (Nightingale 2017; Pardoe et al. 2020; Ishtiaque et al. 2021; Milhorance et al. 2022). The nature of competition and fragmentation between ministries over adaptation agendas relates to what can be called sectoral ego. It makes the adoption process of global adaptation agendas becoming even more complex in Indonesia. Global adaptation agenda lands in a highly contested environment involving polycentric institutions.

This thesis is the first study to explore national contestation over climate adaptation agendas in Indonesia based on a systematic analysis of the fragmentation between the BAPPENAS and the MoEF. This thesis has shown that contestation and fragmentation over national adaptation policies between the BAPPENAS and the MoEF have shaped two branches of adaptation with two different paths supported by different donor agencies. The contestation and fragmentation are apparent in adaptation planning, climate finance, vulnerability assessment, and adaptation actions. First, Indonesia has two rival strategies in adaptation planning, the BAPPENAS with the RAN-API and the MoEF with the NDC Adaptation Roadmap. Second, Indonesia also has two climate financing agencies, the Indonesia Environment Fund Agency (BPD LH) and the ICCTF that have become brokers for adaptation financing. Third, the two vulnerability assessment models used by the BAPPENAS and the MoEF have exacerbated the ambiguity in assessing vulnerability to climate change in Indonesia. Finally, both ministries conducted exclusive adaptation projects based on their adaptation planning policies. This contestation and fragmentation played a crucial role in distributing unequal adaptation project benefits resulting from overlapped adaptation policies. This national phenomenon has become a nature of climate change adaptation in Indonesia in the post-Paris Agreement.

This thesis has raised the debate whether polycentric institutions help or hinder the effectiveness of climate project outcomes at multiple scales (Ostrom 2010a). The analysis in Chapter 4 showed that the contestation and fragmentation between the BAPPENAS and the MoEF hindered the effectiveness of climate adaptation projects because Indonesia had two rival adaptation strategies overlapping to each other. To bring optimal advantages to adaptation governance, a polycentric governance system needs an immense amount of successful collective action McGinnis (2016). The duplication of policies by the BAPPENAS and the MoEF does not complement each other due to fragmentation of adaptation governance and lack of coordination between them. For instance, these polycentric institutions failed to prevent adaptation resources distribution were concentrated in Java Island.

The Variety of Representations and Experiences of Vulnerability

Chapter 5 provided a vulnerability assessments divergence case which emerged due to contestation and unequal power relations between the BAPPENAS and the MoEF; the ministries and donor agencies; and between ministries and local implementing agencies. It developed answers to address the third research question: *Why are there discrepancies*

between the BAPPENAS and the MoEF assessments of vulnerability to climate change, and to what extent do these discrepancies undermine Indonesia's national adaptation strategy? The central government institutions, donor agencies, local government institutions, NGOs, and academia have different interests in using vulnerability assessments as their instruments to gain benefits. The vulnerability mapping discrepancies wreaked havoc in the distribution of adaptation interventions at the grassroots level. The local implementing agencies did not refer to the assessments found in the RAN-API document and the NDC Adaptation Roadmap in targeting ideal locations for delivering adaptation resources.

The use of different assessment approaches results in the variety of representations of vulnerability. Fussel (2007) has classified five classical approaches to vulnerability research, including risk-hazard, political economy, pressure-and-release (PAR), integrated, and resilience approaches. Each approach uses different indicators, hence display variety of representations. Chapter 5 has given examples of how the BAPPENAS, the MoEF, and USAID apply particular approaches to conduct vulnerability assessments with divergent vulnerability mapping. Even when the approaches used were similar, the results were different. In the 2018 RAN-API Review Document and the 2020 NDC Adaptation roadmap, both documents used risk-hazard approach, yet used different indicators.

Chapter 5 also displayed how adaptation resources do not flow to the most vulnerable areas mapped by the BAPPENAS and the MoEF. The ministries have violated recognition justice because it is evident that there are mismatches between vulnerability mapping done by the ministries and the actual distribution of adaptation projects at the local level. From eight villages, none of the local implementing agencies refer to vulnerability mapping provided by the BAPPENAS or the MoEF. Local implementing agencies have their justifications for selecting adaptation project locations instead. Analysis in Chapter 5 has shown that the decisions of local implementing agencies to select ideal locations are based on effectiveness, harmonisation principle, visibility, and existing network reasons. Those four reasons are often favouring the local implementing agencies position.

This thesis has shown that the vulnerability assessment discrepancies in Indonesia occur due to unequal power relations and interests divergence. The assessments often do not represent the actual condition experience by the local communities themselves. The power asymmetries between the local communities in eight villages and the ministries or between the local implementing agencies and the ministries have hindered the voices from grassroots level to be heard by climate adaptation decision makers.

The Five Dimensions of Political Economy of Adaptation

Chapters 6 and 7 supported evidence to answer the fourth research question: *To what extent are the benefits of local-level climate adaptation programmes unevenly distributed among communities in Indonesia?* These two chapters investigated two flagship programmes from the BAPPENAS and the MoEF. The investigation in Tinumpuk Village, Kedung Poh Village, RW 05 Arjowinangun Village, *Dusun* Joben, Pranggong Village, *Dusun* Temon, Wonokerto Village, and Salut Village revealed five dimensions of political economy processes in the implementation of CCA programmes. The story of enclosure, exclusion, encroachment, entrenchment, encumbrance, evasion, and erosion processes could also be identified in the CCA programme implementation in eight sites.

Chapter 6 offered a “claim chain” idea to understand the nature of Climate Village Programme implementation led by the MoEF. This “claim chain” illustrates how gains and losses were distributed unequally under the Climate Village Programme. Through Climate Village Programme, different levels of government attempted to claim credit for adaptation efforts made by local communities and strategically labelled them as the Climate Village Programme. The government brought this claim at international climate negotiations and gained a reputation from this practice at the expense of local communities struggling with the administrative burden of Climate Village Programme, like what happened in Tinumpuk, Kedung Poh, Arjowinangun and Joben. This claiming practice by its nature is an enclosure process where the central government capturing the authority of village communities in conducting adaptation actions and then claiming them as government’s projects.

Chapter 7 has examined the uneven distribution of adaptation project benefits under the ICCTF. It has exposed how exclusion, evasion, enclosure, encumbrance, encroachment, and entrenchment occurring at the micro level or village level. Chapter 7 provided a section focusing on a cultural dimension to demonstrate the links between culture and political economy using *Dusun* Temon case in resisting free seeds assistance from the local agriculture agency and the implementation of a modern planting technique (*Jajar Legowo*). A case from *Dusun* Temon showed that the adaptation template from top to down disrupted the cultural heritage practices of Temon farmers and resulted in crop failures. Hence, political economy analysis of CCA at the local level should consider the cultural dimension since cultural heritage practices remain strong in several communities.

Overall, Chapters 3 to 7 have exposed the political economy processes of CCA occurring at the international, national, and local levels. Using the Indonesian case study, this thesis has demonstrated that exclusion, enclosure, encroachment, and entrenchment

processes coined by Sovacool, Linnér, and Goodsite (2015) also reoccur in developing countries like Indonesia. However, after expanding the examination of CCA policies and programmes to village levels, some political economy processes are arising beyond the four processes. Encumbrance, evasion, and erosion processes have been identified through fieldwork in eight villages in four provinces. These three processes can complement the political economy of CCA typology advanced by Sovacool, Linnér, and Goodsite (2015) to analyse global CCA phenomena, particularly in the global south.

Each political economy process has undermined the effectiveness of adaptation projects implementation nationally and locally. The political economy processes have generated suboptimal adaptation interventions leading to maladaptation and uneven distribution of gains and losses, leaving many vulnerable communities in dire predicaments. Examining political economy processes at three levels has helped to understand the nature of climate change adaptation in Indonesia in the post-Paris Agreement Era.

Political Dimension

Exclusion and evasion processes have marginalised the voices of developing countries and their vulnerable communities. Negotiations within the UNFCCC are often exclusionary (Sovacool and Linnér 2016, 122). It took longer for the UNFCCC to address the developing countries' interests because most of the critical decisions within the UNFCCC were in the hand of developed countries. It took 30 years to finally secure loss and damage funding in COP 27 in Egypt. Meanwhile, Adaptation funding still gets a tiny share of global climate finance. Indonesia has an interest in accessing adaptation funding and loss and damage compensation. Yet, limited adaptation funding must be shared with many vulnerable developing countries, and Indonesia only gets an insignificant amount of adaptation funding. Evasion occurs when the mitigation agenda is still a preference for developed countries. It is expected because developed countries are leading in new and renewable energy industry development, and mitigation projects are easier to measure with tangible and immediate outcomes. The way many developed countries evade climate financing responsibility is also an evasion process in global CCA.

The Indonesian Government is aware of the exclusion process. In formulating national adaptation policies, ministries usually hire consultants from reputable universities who must be aware that every decision-making process should be inclusive. To anticipate exclusion issues, government institutions usually invite non-state actors such as NGOs and Think Tank organisations and claim their participation in a series of meetings or a single meeting as an

inclusive practice. The inclusivity of non-state actors in CCA decision-making should be beyond inclusion on the paper. That was the main critique addressed by several NGO representatives during interviews. Public consultations are just like programme socialisations.

The local implementing agencies are usually benevolent actors, yet they often do not realise if their adaptation programmes contribute to the exclusion processes of marginalised groups in accessing adaptation resources. Chapters 6 and 7 have provided many examples of exclusion processes occurring at the village level. For instance, the distribution of water tanks in Salut was a good intention from the Home Energy Foundation to help Salut people in accessing water. However, they must limit the number of beneficiaries due to the budget limitation. This decision excluded poor people in Salut because they did not have budget to pay contribution fee.

Evasion is a process that needs attention from CCA stakeholders. The Indonesian government and implementing agencies at the local level must consider other possible adaptation alternatives. The more options, the better. Possible adaptation alternatives could come from local knowledge of vulnerable communities. For instance, people in Kedung Poh preserve local tradition to protect trees and springs surrounding them with some cultural rituals. An adaptation programme should depart from this local knowledge and practices. The adaptation programmes should empower vulnerable communities to express their idea and hear those voices. It is fundamental to identify adaptation needs from the vulnerable communities' lens.

Economic Dimension

Enclosure and encumbrance are two processes in the economic dimension that impinge CCA implementation in Indonesia. Adaptation Fund was established under the UNFCCC framework and Kyoto protocol. The Adaptation Fund then captures the authority to distribute adaptation financing. Sovacool and Linnér (2016, 120) found that developing countries were frustrated with the structure of climate financing under the UNFCCC, such as Least Developed Countries Fund (LDCF) managed by the Global Environment Facility (GEF) due to the slow pace of the process and complicated process. The Indonesian government also faced these challenges. Limited adaptation funding causes the process to get the funding even more competitive. For instance, the funding from adaptation funding should be distributed to an accredited National Implementing Entity (NIE). The NIE for Indonesia is Kemitraan which was accredited for the first time in 2016 or six years after the establishment

of the Adaptation Fund. Therefore, the disincentives emerging from multilateral schemes have inspired the Indonesian Government to shift its focus back to bilateralism.

The enclosure process also occurred when the central government captured the authority of local communities to conduct adaptation actions. For instance, analysis in Chapter 6 demonstrates that the top-down approach used in the Climate Village Programme implementation directed village communities to follow a template prepared by the MoEF. This template becomes a panacea designed by experts in Jakarta and implemented nationally without considering socioeconomic context in each village. There is no one fit for all for CCA programmes. Four villages implementing the Climate Village Programme had to follow guidance imposed by the MoEF to be granted the Climate Village Programme status. The Climate Village Programme members in four villages had to shoulder the administrative burden of fulfilling the Climate Village Programme instead of focusing on improving their adaptive capacity. This story is an example of the encumbrance process where the Climate Village Programme becomes a burden for vulnerable communities.

Ecological Dimension

Adaptation can turn into maladaptation that damages the environment or an encroachment process. The development of Jakarta Giant Sea Wall with a Garuda shape, a symbol of Indonesia, is an example of how the ambitious national plan of the Indonesian Government to save Jakarta from sinking turns into a maladaptation that damages the environment. A massive reclamation within Jakarta Bay caused water pollution due to sedimentation in that area. Tons of litter from dirty rivers in Jakarta were trapped in this bay (Sherwell 2016).

The encroachment process also occurs at the village level. The story from Salut Village shows that the adaptation technique using plastic bottles for drip irrigation moves plastic bottle waste from other locations to this village due to the failure of this drip irrigation technique. In RT 05 Arjowinangun, sustainable litter bins to sort litter based on their types turned into litter because people abandoned them and left them unmaintained.

Social Dimension

Vulnerability assessments diverge opaques who are vulnerable, the Indonesian Government has no clear direction to distribute limited adaptation resources. Each implementing agency at the local level, such as local environment agency, NGO, academia, and consultant, also has a different perspective in defining and assessing vulnerability. The

inaccuracy in distributing adaptation resources is high because, in many cases, path dependence usually influences the decision in selecting programme locations. With this path dependence pattern, one location can repeatedly receive an adaptation programme and become a magnet for adaptation resource distribution. This pattern can widen the adaptation gap between communities. The odds for other vulnerable communities to be neglected are high. It is evident that many adaptation programmes are still centred on Java Island. For example, pilot project planning for RAN-API (2014) left out the eastern part of Indonesia. This pattern of adaptation resources distribution has violated distributive justice.

Dimensions in political economy analysis are often intertwined. For instance, exclusion during a programme implementation can lead to a widening socio-economic inequality gap within a local community (entrenchment). Exclusion might occur due to programme budget limitations, personal closeness with influential people in the village, the patriarchal system, and financial limitations. The exclusion practices widen the adaptation gap within local communities. People involved in the programmes have better adaptive capacity, while people excluded must continue their lives with autonomous adaptation using their knowledge and limited resources.

Cultural Dimension

The cultural dimension has not been included in the existing political economy of adaptation framework (Sovacool, Linnér, and Goodsite 2015; Sovacool and Linnér 2016). This thesis found that a cultural dimension should be considered to complement the existing framework. Understanding the link between cultural values and political economy process happening at the local level would be helpful to understand the nature of climate change adaptation in Indonesia where cultural heritage practices are still part of the village communities' daily lives. Negligence of cultural heritage practices that are potential for local adaptation might bury the opportunity for local communities to improve their adaptive capacity.

Adaptation programmes rendered by the implementing agencies often focus on imposing a new or modern technique that is successful elsewhere. They always attempt to replicate it in other locations, whereas the conditions of each village are unique, with different potentials and challenges. Sometimes the replication of adaptation programmes erodes cultural heritage practices done by local communities for a very long time. The replication of programme also tends to create homogenous adaptation actions. The distribution of free rice seeds claimed as good quality seeds in Gunung Kidul was a bad practice that the implementing agencies should learn from. The free seeds caused crop

failures instead of helping farmers to increase their yields. People in *Dusun Temon* resisted the assistance and returned to plant *Segreng* seeds. Even though the quality of *Segreng* was not good, it was enough to fulfil their need for rice. The experience from *Dusun Temon* shows that the local communities could push the technocratic knowledge back by using their local knowledge of the best seeds suitable for karst landscape in Gunung Kidul.

Kedung Poh people have the potential to adapt to drought through the *Resan* community's traditional activities to preserve forests and water springs. However, their activities to preserve their identity and cultural traditions of Gunung Kidul make some people label them as tree worshipers because their cultural traditions are unusual (Adam and Smith 2023). The Climate Village Programme activities are too focused on fulfilling the MoEF's requirements and neglected this cultural tradition potentials. There is a missing link between the Climate Village Programme and cultural values held by local communities in Gunung Kidul in adapting to climate change. From the experience in Gunung Kidul, the Climate Village Programme should not be just an adaptation template applied nationally. Instead, it should embrace local knowledge or cultural values held by local communities as the core of Climate Village Programme actions.

The Nature of Climate Change Adaptation in Indonesia

Analysis and findings from Chapters 3 to 7 help to address the overarching question of this thesis: *What is the nature of climate change adaptation in Indonesia in the post-Paris Agreement Era?* Climate change adaptation in Indonesia is shaped by the global adaptation commitments under the UNFCCC regime. However, the translation of those global adaptation commitments into national adaptation policies is beset with interministerial rivalry and contestation between the BAPPENAS and the MoEF, the two dominant ministries in adaptation governance that shape two paths of adaptation governance in Indonesia. The nature of adaptation resources distributions is not based on vulnerability assessments because the selection of adaptation project locations is often political. The selections are based on reasons favouring the national government or local implementing agencies, such as programme visibility. The potential of adaptation interventions conducted by the ministries and local implementing agencies to cause maladaptation at the village level is high. Exclusion, enclosure, encroachment, entrenchment, evasion, encumbrance and erosion processes that undermine adaptation programmes implementation could be spotted in eight sites. It is evident that adaptation projects can distribute gains and losses unevenly among communities and create the winners and losers of adaptation in Indonesia.

This thesis has three core contributions that advance our understanding of the political economy of CCA in the global south particularly in Indonesia. First, using the Indonesian case, it provides empirical findings to show that the adoption of global adaptation norms in developing countries is situated in a highly contested environment where contestation and fragmentation over national adaptation agenda exist between ministries and institutions. The contestation and fragmentation between the BAPPENAS and the MoEF create the winners and losers of climate change adaptation through exclusion, enclosure, and entrenchment processes in the policy-making processes and implementation of national adaptation policies. The ministries usually claim that they have involved non-governmental and local actors, yet their aspirations are often neglected. Rather than focus on improving coordinating between ministries to implement collective adaptation actions, the ministries focus on capturing funding for their institutions and developing their own flagship projects. Contestation and fragmentation over national adaptation policies cost suboptimal adaptation projects, such as the suboptimal distribution of adaptation resources that is concentrated in Java Island and the widening adaptation gap between regions in Indonesia. The 4E typology of Sovacool, Linnér, and Goodsite (2015) is a relevant tool for understanding the nature of climate change adaptation in Indonesia. However, this thesis suggests that scholars who use the 4E method to not limit the analysis only to identify exclusion, enclosure, entrenchment, and encroachment processes. There might be other political economy processes that the 4E typology could not capture.

The contestation and fragmentation between the BAPPENAS and the MoEF are not merely about exclusion. Indeed, there is an exclusion process where the BAPPENAS and the MoEF formulate adaptation policies independently. However, there is another political factor beyond exclusion causing suboptimal policy implementation, such as sectoral ego within each ministry that hinders them to coordinate and collaborate for a collective adaptation action. This thesis also proposes the evasion process in which the government institutions avoid possible better adaptation alternatives and retain existing adaptation policies.

Second, the empirical findings in Chapter 5 have provided evidence of vulnerability assessment discrepancies and the variety of representations and experiences of vulnerability observed in eight villages in four provinces. Using the Indonesian case, this thesis finds that the pattern of domination of the risk-hazard approach in vulnerability assessment could also be found in Indonesia. The political economy approach that considers socioeconomic conditions in vulnerability assessments remains marginalised. Moreover, this thesis also finds that the vulnerability assessments conducted by the ministries and local implementing

agencies also create winners and losers of adaptation. Inaccurate vulnerability assessments and vulnerability assessment discrepancies result in the exclusion of vulnerable village communities that need more assistance, enclosure of adaptation resources by village communities preferred by the ministries or local implementing agencies, and entrenchment of socioeconomic inequality where the distribution of adaptation resources replicates the pattern of unequal development distribution that is always concentrated in Java Island.

Third, this thesis has a theoretical contribution to advance the 4E typology of the political economy of CCA. It has contributed to extending the dimensions of the political economy of CCA into five dimensions by incorporating the cultural dimension to understand the implementation of adaptation programmes in the global south. Chapters 6 and 7 have provided additional case studies to test the 4E method and presented data obtained from fieldwork in eight villages where the exclusion, enclosure, entrenchment, and encroachment processes emerge concurrently. However, the 4E method did have some limitations to help understand the relationships between adaptation projects and culture and how it creates the winners and losers of adaptation in rural communities in the global south. This thesis argues that the cultural dimension matters in understanding the political economy of CCA in the global south where adaptation actions of communities in rural areas are often related to their cultural practices. This thesis has contributed to incorporating the cultural political economy approach in the 4E method to understand how culture as daily practices of people in the global south are closely related to the everyday economic and everyday political practices in climate adaptation.

Overall, the evidence of adaptation policies implementation in Indonesia could be useful to help making sense of the dynamics of CCA in the global south using the political economy lens. Even though the dynamics of CCA implementation in each country are heterogenous with different political environment and challenges. There are several common challenges of CCA implementation in the global south that the policymakers, relevant stakeholders and scholars should consider for better adaptation with effective outcomes. First, local adaptation interventions in the global south are getting more complex due to the growing of multilevel adaptation actors with various interests, and higher level of polycentricity in adaptation governance (Di Gregorio et al. 2019; Hamilton and Lubell 2019; Amaruzaman et al. 2022). Second, the adoption processes of global adaptation norms in the global south are situated in highly contested environment where national government institutions compete to capture benefits from national adaptation projects and gain power (see page 11). Third, socioeconomic problems such as poverty, unemployment, and gender

inequality that exacerbate the vulnerability conditions of rural communities are often neglected by the government institutions, development agencies, NGOs, or scholars who still favor the risk-hazard approach in conducting vulnerability assessments and research (Ford et al. 2018). Fourth, maladaptation caused by suboptimal adaptation projects is the biggest challenge in the global south. Not only it exacerbates vulnerability conditions of rural communities, but it has also created the losers of adaptation.

A Beacon of Hope for Vulnerable Communities

Exclusion, enclosure, encroachment, entrenchment, evasion, encumbrance, and erosion wreak havoc in the CCA implementation, particularly at the local level. These political economy processes flow to the same estuary, maladaptation. It exacerbates the vulnerability of local communities and impinges local communities' capacity to cope with climate change's adverse impacts (Magnan et al. 2016). This thesis has mainly exposed the dark side of adaptation from the negotiation process at the UNFCCC, policymaking at the national level, and adaptation interventions at the local level. It is crucial to identify and learn from previous adaptation failures to prevent the same mistakes from reoccurring in the future. These failure stories rarely can be found in government or adaptation programme reports because the programme success is above all, or programme failure narratives can give a bad name to the institutions or organisations. Learning from those shadowy sides of adaptation, this thesis attempts to display that the future of adaptation seems to be pretty bleak in Indonesia. Maladaptation cases found in this thesis should alarm all stakeholders involved. A transformation to more sustainable adaptation is definitely needed.

Two central problems that hinder the effectiveness of the polycentric structure of adaptation governance are sectoral ego and poor coordination among ministries (horizontal coordination) and between ministries and local implementing agencies (vertical coordination). Sectoral ego or silo leads to contestation and fragmentation between ministries, while poor coordination causes redundancy and overlapping of adaptation policies. Adaptation governance in Indonesia needs an authority positioned above the ministerial level to tackle sectoral ego and poor coordination challenges. Gillard et al. (2017) highlight that the central government can play a pivotal role in building collaboration with private and civic sectors. Indonesia used to have the National Council on Climate Change under President Susilo Bambang Yudhoyono. Indonesia needs a similar institution that can coordinate polycentric institutions scattered at the national and local levels and enable

collaboration with private and civic sectors. Another alternative is to give a mandate to one of the coordinating ministries to coordinate nationwide climate adaptation actions.

Even though this thesis focuses on examining the unintended negative impacts of adaptation, there is a beacon of hope to vulnerable communities this thesis would like to expose. As Morgan Phillips (2021) said in his book, “Shining a light on these (the brighter side of adaptation), bringing them out of shadows, is just as important as exposing the multiple maladaptations that give adaptation a bad name.” Some bright stories of adaptation implementation in Indonesia also need more exposure.

A local community in Indramayu had not taken Climate Village Programme orders from the Local Environment Agency, but they continued a waste bank programme built by its people. They cut a collaboration with a vendor exploiting them. This case shows that the local community is creative in establishing an adaptation programme. They are not just a group of people that receive orders from above. They are brave enough to challenge wrong ideas based on their perception. The Yakkum Emergency Unit, an NGO based in Yogyakarta, has successfully integrated technological and culture-based adaptation. It has developed mist irrigation using simple materials and uses local rice seeds suitable for planting in the Gunung Kidul area. In Kedung Poh, the support from the local environment agency needed to be more robust. Albeit a lack of support from the government, *Resan* Community in Gunung Kidul remains passionate about growing trees using the resources they got. The people in Joben Village show the same spirit as in Kedung Poh Village. They keep preserving the forest area around Rinjani Mount with or without government support. Their practices are true examples of restoration, a deep adaptation action conducted by local communities to rewild the landscape surrounding them so they can obtain ecological benefits from the forests (Bendell 2021, 72). The adaptation programmes should focus on identifying and improving local potential instead of imposing top-down programme templates. A strong leadership from the Indonesian Government is needed but not to conduct how people should conduct, but to accommodate what local communities need, what best practices that can be shared to other regions. The government should build enabling conditions to encourage collaboration between ministries, agencies, local governments, corporations, NGOs, universities and local communities.

Suggestions for Further Research

This thesis offers several contributions to the study of political economy of climate change adaptation. Whilst this thesis has covered several largely unexplored topics, such as the

political economy of CCA in the global south, contestation between ministries over climate adaptation agendas, cultural dimension of CCA, three levels of analysis in CCA multilevel governance, and ambiguity in vulnerability assessments, others remain. Several areas of this thesis still need more information that can be considered additional areas for further research. First, the presence of business actors in eight villages for adaptation interventions rarely could be found. The presence of a business actor could only be found in a village in Indramayu. Hence, the exploration of how business actors contribute to distributing unequal gains and losses is lacking in this thesis. Second, this thesis lacks an examination of the ecological and social dimensions of CCA at the national level. It only offers Jakarta Great Sea Wall (encroachment) and vulnerability assessment divergence (entrenchment) cases at the national level. Lastly, most of the research participants at the local level were men. The fieldwork attempted to involve as many women participants as possible in the research, yet many participants of adaptation programmes in eight villages were men. Even though some views from women participants can be found in this thesis, their views are still lacking compared to the views on adaptation provided by men participants. Further research would be beneficial by providing more adaptation cases at the national level, examining the involvement of business actors, and targeting fieldwork locations that could increase the participation of women in the research.

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List of Abbreviations

ACRN	ASEAN Climate Resilience Network
ADB	Asian Development Bank
AF	Adaptation Fund
AHA CENTRE	ASEAN Coordinating Centre for Humanitarian Assistance on Disaster Management
AMAN	Aliansi Masyarakat Adat Nusantara / Indigenous People's Alliance of the Archipelago
APIK	<i>Adaptasi Perubahan Iklim dan Ketangguhan</i> / Climate Change Adaptation and Resilience
ASEAN	Association of Southeast Asian Nations
BAPPEDA	<i>Badan Perencanaan Pembangunan Daerah</i> / Regional Development Planning Board
BAPPENAS	National Development Planning Agency/Ministry
BBC	British Broadcasting Corporation
BIRU	<i>Biogas Rumah</i> / Home Biogas Project
BLU	<i>Badan Layanan Umum</i> / Public Service Agency
BNPB	<i>Badan Nasional Penanggulangan Bencana</i> / National Disaster Mitigation Agency
BP	British Petroleum
BPDLH	<i>Badan Pengelola Dana Lingkungan Hidup</i> / Indonesian Environment Fund Agency
BPS	<i>Badan Pusat Statistik</i> / Statistics Indonesia
CAS	Climate Adaptation Summit
CBDR	Common but Differentiated Responsibilities
CBO	Community-Based Organisation
CCA	Climate Change Adaptation
CCM	Climate Change Mitigation
CIDA	Canadian International Development Agency
COP	Conference of the Parties
COVID-19	Coronavirus disease
CSO	Civil Society Organisation
CSR	Corporate Social Responsibility

CMoEA	Coordinating Ministry of Economic Affairs
DGCC	Directorate General of Climate Change
DAI	Development Alternative Incorporated
Depsos	Indonesian Department of Social Affairs
DKI	<i>Daerah Khusus Ibukota / Special Capital Region (of Jakarta)</i>
DMP	Decision Making Process
DNPI	<i>Dewan Nasional Perubahan Iklim / National Council on Climate Change</i>
DoE	Division of Environment (in Tanzania)
ENDC	Enhanced Nationally Determined Contribution
EP	Elite Participant
GCF	Green Climate Fund
GEF	Global Environment Facility
GGA	Global Goal on Adaptation
GIZ	<i>Deutsche Gesellschaft für Internationale Zusammenarbeit / German Development Agency</i>
GMF	Global Maritime Fulcrum
GTZ	<i>Deutsche Gesellschaft für Technische Zusammenarbeit</i>
G77	Group of 77 (a coalition 135 of developing countries at the UN)
ICCTF	Indonesia Climate Change Trust Fund
IPCC	Intergovernmental Panel on Climate Change
INDC	Intended Nationally Determined Contribution
JICA	Japan International Cooperation Agency
LCDI	Low Carbon Development Initiative
LEG	Least Developed Countries Expert Group
LDCF	Least Developed Climate Fund
MoA	Ministry of Agriculture
MoEF	Ministry of Environment and Forestry
MoEMR	Ministry of Energy and Mineral Resources
MoF	Ministry of Finance
Musrenbang	<i>Musyawaharah Perencanaan Pembangunan / Regional Development Planning Forum</i>
MoSTE	Ministry of Environment/Ministry of Science, Technology and Environment (in Nepal)

NAP	National Adaptation Plan
NAPA	National Adaptation Programmes of Action
NasDem	Partai Nasional Demokrat / the NasDem Party
NDC	Nationally Determined Contribution
NGO	Non-Governmental Organisation
NIE	National Implementing Entity
LPBI NU	<i>Lembaga Penanggulangan Bencana dan Perubahan Iklim Nahdlatul Ulama / Nahdlatul Ulama's Disaster Management and Climate Change Agency</i>
LTS-LCCR	Long-Term Strategy for Low Carbon and Climate Resilience
PBI	<i>Pembangunan Berketahanan Iklim / Climate Resilience Development</i>
PODES	<i>Potensi Desa / Village Potential (data)</i>
PPP	<i>Partai Persatuan Pembangunan / United Development Party</i>
PROKLIM	<i>Program Kampung Iklim / Climate Village Programme</i>
PT	<i>Perseroan Terbatas / Limited Liability Company</i>
PVC	Polyvinyl Chloride (pipe)
RAD-API	<i>Rencana Aksi Daerah Adaptasi Perubahan Iklim / Regional Action Plan on Climate Change Adaptation</i>
RAD-GRK	<i>Rencana Aksi Daerah Penurunan Emisi Gas Rumah Kaca / Regional Action Plan for Reducing Greenhouse Gas Emissions</i>
RAN-API	<i>Rencana Aksi Nasional Adaptasi Perubahan Iklim / National Action Plan on Climate Change Adaptation</i>
RAN-MAPI	<i>Rencana Aksi Nasional Mitigasi dan Adaptasi Perubahan Iklim / National Action Plan on Climate Mitigation and Adaptation</i>
RED	Renewable Energy Directive
REDD+	Reducing Emissions from Deforestation and Forest Degradation
RENSTRA	<i>Rencana Strategis / Strategic Plan</i>
RPJMN	the National Medium-Term Development Plan
RPJP	the National Long-Term Development Plan
RKP	Government Annual Plan
RW	<i>Rukun Warga/Community Unit</i>
SCCF	Special Climate Change Fund
SIDA	Swedish International Development Agency

SIDIK	<i>Sistem Informasi Data Indeks Kerentanan / Climate Vulnerability</i> Index Data Information System
SFS	Science Field Shops
SRN	<i>Sistem Registri Nasional / National Registry System</i>
TNC	The Nature Conservancy
Tupoksi	<i>Tugas Pokok dan Fungsi / Tasks and Functions</i>
ULMWP	United Liberation Movement for West Papua
UN	The United Nations
UNESCO	The United Nations Educational, Scientific and Cultural Organization
UNFCCC	The United Nations Framework Convention on Climate Change Change
USAID	United States Agency for International Development
UUD 1945	<i>Undang-Undang Dasar 1945 / the 1945 Constitution of the</i> Republic of Indonesia
WALHI	Indonesian Forum for Environment
WWF	World Wild Fund for Nature
YEU	YAKKUM Emergency Unit
YRE	<i>Yayasan Rumah Energi</i>

Appendix I

Detailed Interview Schedule and Research Participants

PHASE 1 ELITE INTERVIEWS (ONLINE) – JULY 2020 TO JULY 2021				
Positions	Institution/ Organisations	Location	Dates	Initials
Executive Director	WALHI West Java	Bandung, West Java	9 Jul 2020	EP01
Chairman	Lembaga Penanggulangan Bencana dan Perubahan Iklim Nahdlatul Ulama	Jakarta	10 Jul 2020	EP02
Researcher	Bogor Agricultural University	Bogor, West Java	30 Jul 2020	EP03
Program Director	World Resource Institute	Jakarta	10 Aug 2020	EP04
Director	The Ministry of Environment and Forestry	Jakarta	6 Nov 2020	EP05
Communication and Stakeholder Relations	Yayasan Rumah Energi	Jakarta	15 Dec 2020	EP06
Professor of Meteorology and Climatology	The Agency for Assessment and Application of Technology (BPPT) Indonesia	Jakarta	19 Jan 2021	EP07
Researcher	Universitas Indonesia	Jakarta	23 Jan 2021	EP08
Researcher	Institut Teknologi Bandung	Bandung, West Java	26 Jan 2021	EP09
Program Officer (ex)	Partnership for Governance Reform	Jakarta	20 Jan 2021	EP10
Program Manager	Mercy Crops	Jakarta	1 Feb 2021	EP11
Project Coordinator (ex Consultant at RAN-API Secretariat)	Climate Resilient and Inclusive City UCLG ASPAC and	Jakarta	9 Feb 2021	EP12
Advisor	GIZ (German Development Agency)	Jakarta	1 Mar 2021	EP13
Program Director	Partnership for Governance Reform	Jakarta	2 Mar 2021	EP14
Researcher	Bogor Agricultural University	Bogor, West Java	26 Mar 2021	EP15
Community Organiser	YAKKUM Emergency Unit	Yogyakarta	9 Apr 2021	EP16
Country Manager	ICLEI (Local Governments for Sustainability)	Jakarta	12 Apr 2021	EP17
Environment Specialist, online interview;	USAID	Jakarta	12 Apr 2021	EP18
Program Officer	Partnership for Governance Reform	Jakarta	15 Apr 2021	EP19
Campaign Manager	WALHI	Jakarta	16 Apr 2021	EP20
Researcher	Universitas Indonesia	Jakarta	21 Apr 2021	EP21
Consultant	DAI	Jakarta	22 Apr 2021	EP22
Head of Section	Malang City Environment Agency	Malang, East Java	5 May 2021	EP23
Director	The Ministry of Foreign Affairs	Jakarta	11 May 2021	EP24

Head of Division	Gunung Kidul Environment Agency	Gunung Kidul, Yogyakarta	2 Jun 2021	EP25
Head of Section	Gunung Kidul Environment Agency	Gunung Kidul, Yogyakarta	2 Jun 2021	EP26
Analyst of Energy Conservation	The Ministry of Energy and Mineral Resources	Jakarta	7 Jun 2021	EP27
Analyst of Bioenergy Cooperation and Investment	The Ministry of Energy and Mineral Resources	Jakarta	7 Jun 2021	EP28
Head of Division	The Ministry of Energy and Mineral Resources	Jakarta	7 Jun 2021	EP29
Senior Researcher	Indonesian Agency for Agricultural Research and Development	Jakarta	30 Jun 2021	EP30
Director	The National Development Planning Ministry/Agency	Jakarta	5 Jul 2021	EP31
Region Coordinator	Yayasan Rumah Energi	Lombok, West Nusa Tenggara	20 Jul 2021	EP32
Analyst	The Ministry of Finance	Jakarta	23 Jul 2021	EP33
Analyst	The Ministry of Finance	Jakarta	23 Jul 2021	EP34
Researcher	The Ministry of Finance	Jakarta	23 Jul 2021	EP35
Researcher	The Ministry of Finance	Jakarta	23 Jul 2021	EP36
TOTAL PARTICIPANTS				36

PHASE 2 FIELDWORK INTERVIEWS (ONLINE) – SEPTEMBER 2021 TO NOVEMBER 2021				
Positions	Adaptation Projects	Location	Dates	Initials
Village Head	Climate Village Programme Implementing Agency: The East Lombok Environment Agency	<i>Dusun</i> Joben, Pesanggrahan Village, East Lombok Regency, West Nusa Tenggara Province	21 Sep 2021	VH01
Vice Head of Climate Village Programme			21 Sep 2021	F01
Secretary of Climate Village Programme			21 Sep 2021	F02
Financial Manager			21 Sep 2021	F03
Member			21 Sep 2021	F04
Farmer	Climate Change Adaptation by Bioslurry Implementation in Lombok (ASA-Lombok) Implementing agency: Yayasan Rumah Energi	Salut Village, North Lombok Regency, West Nusa Tenggara Province	23 Sep 2021	F05
Farmer			23 Sep 2021	F06
Farmer			23 Sep 2021	F07
Farmer			23 Sep 2021	F08
Farmer			23 Sep 2021	F09
Farmer			27 Sep 2021	F10
Farmer			27 Sep 2021	F11
Farmer			27 Sep 2021	F12
Farmer			27 Sep 2021	F13
Farmer			27 Sep 2021	F14
Farmer	Climate Field School and Disaster Risk Management Implementing agency: DAI funded by USAID APIK	Wonokerto Village, Malang Regency, East Java Province	28 Oct 2021	F15
Farmer			10 Nov 2021	F16
Farmer			10 Nov 2021	F17
Farmer			11 Nov 2021	F18
Farmer			17 Nov 2021	F19
Farmer			24 Nov 2021	F20
Farmer			30 Nov 2021	F21
TOTAL PARTICIPANTS				22

PHASE 3 FIELDWORK INTERVIEWS (IN PERSON) – DECEMBER 2021 TO JANUARY 2022				
Positions	Adaptation Projects	Location	Dates	Initials
Farmer (reinterview)	Climate Field School and Disaster Risk Management Implementing agency: DAI funded by USAID APIK	Wonokerto Village, Malang Regency, East Java Province	9 Dec 2021	F15
Ex Village Head			10 Dec 2021	VH02
Farmer (reinterview)			11 Dec 2021	F16
Farmer			11 Dec 2021	F22
Head of Climate Village Programme	Climate Village Programme Implementing agency: Malang City Environment Agency	RW 05, Arjowinangun Village, Malang City, East Java Province	14 Dec 2021	F23
Secretary of Climate Village Programme			14 Dec 2021	F24
Climate Village Programme member			14 Dec 2021	F25
Village Head	Climate Village Programme Implementing agency: Gunung Kidul Environment Agency	Dusun Kedung Poh Lor, Kedung Poh Village, Gunung Kidul Regency, Yogyakarta Special Region Province Jakarta	31 Dec 2021	VH03
Head of Climate Village Programme			31 Dec 2021	F26
<i>Dusun</i> Head			4 Jan 2022	F27
Climate Village Programme Member			4 Jan 2022	F28
Climate Village Programme Member			4 Jan 2022	F29
Climate Village Programme Member			4 Jan 2022	F30
Climate Village Programme Member			4 Jan 2022	F31
Village Head			Climate Village Programme Implementing Agency: Indramayu Environment Agency	Tinumpuk Village, Indramayu Regency, West Java Province
Village Head	Establishment of Regional Networks for a Rural Response to Climate Change with Farmers, Scientists, and Extension. Implementing agency: Anthropology Research Centre, Universitas Indonesia	Pranggong Village, Indramayu Regency, West Java Province	6 Jan 2022	VH05
Head of Section			7 Jan 2022	F32
Farmer			7 Jan 2022	F33
Farmer			7 Jan 2022	F34
Farmer			7 Jan 2022	F35
Farmer			7 Jan 2022	F36
Head of Climate Village Programme	Climate Village Programme Implementing Agency: Indramayu Environment Agency	Tinumpuk Village, Indramayu Regency, West Java Province	7 Jan 2022	F37
Finance Manager of Climate Village Programme			7 Jan 2022	F38
Farmer (reinterview)	Climate Change Adaptation by Bioslurry Implementation in Lombok (ASA-Lombok) Implementing agency: Yayasan Rumah Energi	Salut Village, North Lombok Regency, West Nusantara Province	13 Jan 2022	F05
Farmer (reinterview)			13 Jan 2022	F06

Head of Climate Village Programme	Climate Village Programme Implementing Agency: The East Lombok Environment Agency	<i>Dusun Joben, Pesanggrahan Village, East Lombok Regency, West Nusa Tenggara Province</i>	15 Dec 2022	F39
Vice Head of Climate Village Programme (reinterview)			15 Dec 2022	F01
Secretary of Climate Village Programme (reinterview)			15 Dec 2022	F02
Climate Village Programme Member			15 Dec 2022	F40
Farmer	Supporting an Adaptive Food Security for Communities in Gunungkidul District Implementing Agency: YAKKUM Emergency Unit	<i>Dusun Temon, Giripurwo Village, Gunung Kidul Regency, Yogyakarta Special Region Province</i>	18 Jan 2022	F41
Farmer			18 Jan 2022	F42
Farmer			18 Jan 2022	F43
Farmer			18 Jan 2022	F44
Agricultural Instructor			19 Jan 2022	EP37
Agricultural Instructor			19 Jan 2022	EP38
TOTAL NEW PARTICIPANTS				29

Appendix II

Policy Documents Relating to Climate Change Adaptation

No.	Document Name	Institution	Year
1.	The Establishment of Indonesia Climate Change Trust Fund (ICCTF)	BAPPENAS	2009
2.	Blueprint for ICCTF	BAPPENAS	2009
3.	National Action Plan on Climate Change Adaptation (RAN-API)	BAPPENAS	2014
4.	Intended Nationally Determined Contributions (INDC)	MoEF	2015
5.	Climate Vulnerability Index Data Information System (SIDIK)	MoEF	2015
6.	First NDC	MoEF	2016
7.	Guidelines for Formulating Climate Change Adaptation Actions	MoEF	2016
8.	Climate Village Programme Roadmap	MoEF	2017
9.	The Governance of National Registry System for Climate Change	MoEF	2017
10.	Guideline for Assessing Vulnerability, Risk, and Impact of Climate Change	MoEF	2018
11.	RAN-API Review	BAPPENAS	2018
12.	National Adaptation Plan (Executive Summary)	BAPPENAS	2019
13.	Organisation and Governance of the Indonesian Environment Fund	MOF	2019
14.	NDC Adaptation Roadmap	MoEF	2020
15.	the National Medium-Term Development Planning (RPJMN) 2020-2024	BAPPENAS	2020
16.	Updated NDC	MoEF	2021
17.	The Long-Term Strategy on Low Carbon and Climate Resilient (LTS-LCCR) 2050	MoEF	2021
18.	Climate Resilience Development Policy 2020-2045	BAPPENAS	2021
19.	Location Lists and Climate Resilient Actions	BAPPENAS	2021
20.	Enhanced NDC	MoEF	2022