



LUND UNIVERSITY

Making meaning of adaptation under a changing climate: Unpacking the assumptions underpinning how adaptation is known and experienced in coastal settings

Espinoza Córdova, Fabiola

2026

[Link to publication](#)

Citation for published version (APA):

Espinoza Córdova, F. (2026). *Making meaning of adaptation under a changing climate: Unpacking the assumptions underpinning how adaptation is known and experienced in coastal settings*. [Doctoral Thesis (compilation), LUCSUS (Lund University Centre for Sustainability Studies)]. Lund University Centre for Sustainability Studies (LUCSUS).

Total number of authors:

1

General rights

Unless other specific re-use rights are stated the following general rights apply:

Copyright and moral rights for the publications made accessible in the public portal are retained by the authors and/or other copyright owners and it is a condition of accessing publications that users recognise and abide by the legal requirements associated with these rights.

- Users may download and print one copy of any publication from the public portal for the purpose of private study or research.
- You may not further distribute the material or use it for any profit-making activity or commercial gain
- You may freely distribute the URL identifying the publication in the public portal

Read more about Creative commons licenses: <https://creativecommons.org/licenses/>

Take down policy

If you believe that this document breaches copyright please contact us providing details, and we will remove access to the work immediately and investigate your claim.

LUND UNIVERSITY

PO Box 117
221 00 Lund
+46 46-222 00 00



Making meaning of adaptation under a changing climate

Unpacking the assumptions underpinning how adaptation
is known and experienced in coastal settings

FABIOLA ESPINOZA CÓRDOVA

LUCSUS | FACULTY OF SOCIAL SCIENCES | LUND UNIVERSITY



Making meaning of adaptation under a changing climate

Unpacking the assumptions underpinning how adaptation is known and experienced in coastal settings

Coastal adaptation, especially in Small Island Developing States (SIDS) is increasingly urgent, yet current approaches remain insufficient, shaped by competing assumptions about what adaptation means and whom it serves. How are different understandings of adaptation constructed? What assumptions about reality shape these understandings? And what happens when differently grounded understandings of adaptation meet in practice? In this thesis, I address these questions through a critical analysis of how coastal adaptation is constructed across research, policy, and lived experience in Caribbean SIDS, with Barbados as the empirical focus. Specifically, I examine the foundational assumptions about risk, social imaginaries, and temporalities that underpin different understandings of adaptation across perspectives and explore the consequences that emerge when these constructions collide. By showing how adaptation meanings are deeply normative and political, this thesis opens space for more reflexive engagement with the assumptions shaping current approaches. It also helps clarify how different ideas about adaptation collide, align, or reshape one another, expanding what adaptation can mean in this context. This reflexive move aims to support more transformative adaptation in the region.



FABIOLA ESPINOZA CÓRDOVA is an interdisciplinary researcher interested in climate adaptation, justice, and development, with a particular focus on coastal social systems. She holds a background in biology, environmental science, and policy and management, and has experience in fisheries and marine protected area governance.

Making meaning of adaptation under a changing climate

Making meaning of adaptation under a changing climate

Unpacking the assumptions underpinning how
adaptation is known and experienced in coastal settings

Fabiola Espinoza Córdova



LUND
UNIVERSITY

DOCTORAL DISSERTATION

Doctoral dissertation for the degree of Doctor of Philosophy (PhD) at the
Faculty of Social Sciences at Lund University to be publicly defended on
June 8, 2026 at 13.00 in Ostrom, Lund University Centre for Sustainability
Studies (LUCSUS), Biskopsgatan 5, Lund

Faculty opponent
Professor Lisa Schipper
University of Bonn

Organization: LUND UNIVERSITY

Document name: Doctoral dissertation

Date of issue: 08 June 2026

Author(s): Fabiola Espinoza Córdova

Sponsoring organization: LUCSUS

Title and subtitle: Making meaning of adaptation under a changing climate: Unpacking the assumptions underpinning how adaptation is known and experienced in coastal settings

Abstract: Despite growing efforts, coastal adaptation remains fragmented and insufficient in addressing the vulnerabilities of those most affected. These shortcomings are not only technical but political, shaped by competing ideas about what counts as adaptation and whom it serves. Although there is growing recognition of the need to understand the various ways adaptation is known and experienced, empirical work remains limited, especially work that critically examines the assumptions shaping these understandings and their implications for more just and effective practice.

This thesis addresses this gap by revealing how coastal adaptation is constructed across research, policy, and lived experience, and what consequences emerge when these constructions meet in practice. It focuses on the Caribbean Small Island Developing States (SIDS), with Barbados as the empirical focus, where climate vulnerability is acute and adaptation is a central policy priority. Grounded in critical constructivism and employing social imaginaries, risk, and temporalities as analytical lenses, I first examine the foundational assumptions shaping understandings of adaptation in research and policy, and how they relate to one another. I then explore how adaptation is understood by people who live and work along the coastline, how these meanings relate to stabilised understandings, and lastly, what consequences emerge when these collide in practice. The analysis is developed across three interrelated papers: Paper I is a systematic literature review of how adaptive capacity is understood in indicator-based assessments of coastal systems; Paper II analyses how adaptation is imagined in policy in Barbados; and Paper III examines how islanders living or working in coastal areas make sense of coastal change and adaptation interventions.

The findings show that coastal adaptation is constructed in increasingly sophisticated ways across research and policy. Yet persistent assumptions about risk, what adaptation should achieve, and how change unfolds over time can leave structural and political conditions underexamined. These understandings, however, are not totalising. Meanings grounded in lived experience are broader, shaped by social and climatic rhythms, understandings of nature as an active force, and notions of risk rooted in direct experience, everyday demands, and religious beliefs. When adaptation is reduced to a single interpretation, practice becomes constrained, not only by neglecting what people value, but by creating conditions in which maladaptation becomes more likely, and the uneven distribution of benefits and burdens is obscured. By clarifying how adaptation meanings are constructed across diverse perspectives, this thesis shows that coastal adaptation, especially in Caribbean SIDS, is deeply normative and political. It makes visible where different understandings diverge, align, or reshape one another, while opening space to redefine what adaptation means. This more nuanced understanding supports the reflexive approaches needed for more transformative adaptation in the region.

Key words: Climate change, adaptation, SIDS, island, coast, imaginaries, temporalities, risk

Classification system and/or index terms (if any)

Supplementary bibliographical information

Language: English

Number of pages: 114

ISBN: 978-91-8104-977-0 (print)

978-91-8104-978-7 (electronic)

Recipient's notes

Price

Security classification

I, the undersigned, being the copyright owner of the abstract of the above-mentioned dissertation, hereby grant to all reference sources permission to publish and disseminate the abstract of the above-mentioned dissertation.

Signature

Date 2026-04-17

Making meaning of adaptation under a changing climate

Unpacking the assumptions underpinning how
adaptation is known and experienced in coastal settings

Fabiola Espinoza Córdova



LUND
UNIVERSITY

Cover art by Nicola Parfitt

Copyright pp 1-114 Fabiola Espinoza Córdova

Paper 1 © 2024, The authors, Ocean & Coastal Management

Paper 2 © by the Author (In Review)

Paper 3 © by the Author (Manuscript unpublished)

Faculty of Social Science

Lund University Centre for Sustainability Studies (LUCSUS).

ISBN 978-91-8104-977-0 (print)

ISBN 978-91-8104-978-7 (electronic)

Printed in Sweden by Media-Tryck, Lund University

Lund 2026



Media-Tryck is a Nordic Swan Ecolabel certified provider of printed material. Read more about our environmental work at www.mediatryck.lu.se

MADE IN SWEDEN 

“You can always find a solution. If you go straight and hit a wall, then you know that is not the way. So, you go right, and if not, you go left. You need to keep going; there is always a way”

-A fisherwoman interviewed in Barbados in October 2023

Table of Contents

Acknowledgements	10
Abstract	12
List of papers.....	13
Author's contribution to the papers.....	13
Other relevant publications	14
Introduction	15
Adaptation shortfalls and the politics of meaning-making.....	16
Meaning making of adaptation in context.....	18
Aim, research questions, and outline.....	20
Overview of papers.....	20
Scope of analysis	22
Conceptualizing adaptation	24
Theoretical and analytical framework	27
Situating the theoretical approach.....	27
Critical constructivism as a meta-theory.....	29
Building the analytical approach.....	31
Social imaginaries	34
Risk.....	35
Temporalities.....	36
Research strategy, empirical context and methods	39
Research strategy and design	39
Empirical study context.....	40
Historical, economic and environmental context	41
Study site	44
Coastal adaptation policy and practice	49
Methods for data collection and analysis	50
Overview of methods	50
Research process and fieldwork	53
Positionality.....	55
Limitations	56

Findings	59
Constructing adaptation meanings in science and in policy.....	59
Meaning making of adaptation from place-based experience.....	63
Different meanings about adaptation: consequences and blind spots	68
Discussion	75
Diverse framings, persistent logics: reimagining or repacking what adaptation means?.....	75
From the ground up: understanding adaptation through lived experience ...	79
When meanings collide: risk of maladaptation, constraints and the cost of singular framings.....	82
Concluding remarks	85
Thesis approach and synthesis of the main findings	85
Contributions to sustainability science.....	86
Future directions.....	89
Practical implications	90
References	93

Acknowledgements

Although I am the single author of this thesis, it is by no means the product of a solo effort. I want to give my deep thanks to everyone who supported me through this process, through its ups, intellectually enriching and creative, and through its downs, where loneliness and doubt got in the way.

First, I would like to thank my PhD supervisors. Emily Boyd, thank you for those brainstorming sessions that sparked my curiosity and for giving me the freedom to explore my own ideas. Torsten Krause, thank you for your continuous support all these years, for revising all those endless drafts, and for always having your door open whenever I wanted to discuss or ask for advice. Your constant present has been a key to keep me going and motivated these years. I would also like to thank everyone at LUCSUS and beyond who engaged with my work at different stages of my PhD. Special thanks to Stacy-ann Robinson, Ebba Brink, April Baptiste, Murray Scown, and Åsa Knaggård, who acted as discussants during my seminars. Your constructive feedback was invaluable in shaping the direction of my research. My deep gratitude also to Anne Jerneck, for taking the time to read through some of my work and for the encouragement that helped me keep my spirits up when I needed it most. And a warm thanks to Christine Wamsler and Bregje van Veelen, whose careful feedback in the final stages helped me bring this thesis to a close. And thank you to Cecilia Kardum who helped me navigate the countless rounds of paperwork around residence permits, maternity leave, and other practicalities during these years.

I am also grateful to colleges from MaCoBioS project, especially Bethan O’Leary, Karima Degia, Catarina Fonseca and Elisa Furlan who provided close collaboration at the beginning of my research. A heartfelt thanks also goes to my collaborators and all the people in Barbados who were kind enough to open their doors and allow me to learn from their context. Especially Karima Degia, who kindly introduced me to several policymakers and practitioners working on adaptation in Barbados and generously guided me around the island. Our conversations about Barbados and its realities were foundational to my understanding of the context in which I was working. Also, to all the people from different institutions whom I spoke with during my fieldwork, as well as to all the people I interviewed during my walks along the coast, I want to express here my deep gratitude. Without your willingness to give your valuable time and share your experiences and views about life under a changing climate and what adaptation means in your daily life and work; this research would have not been possible. Work like this only exists because people like you are generous enough to share your time and perspectives with us, and for that I am forever grateful.

Thanks to all my fellow PhD candidates at LUCSUS. Thanks to Darin Wahl for sharing your experience as someone further along the path, and to Sara Ullström for the good conversations and company as my office mate. Kelly Dorkenoo and Natalia Rubiano, for your friendship, our discussions, and the constant laughter that carried me through difficult stretches. Lina Lefstad, your warmth, and continue support have been a light throughout these years. Sahana Subramanian, Emilia Ganslandt, and Carmen Margiotta, I am so grateful to have shared these final years with you; your company and encouragement kept me going, especially towards the end. Valentina Lomanto, thank you for all your support, especially as I navigated motherhood and PhD life. And to Bernard Ekumah, Michaelin Sibanda, Ronald Byaruhanga, Jonas Allesson and Juan Samper, thank you interesting chats and fun we shared during these years.

I also want to give my deep thanks to my family. Aunque no entiendan del todo los detalles de mi tesis ni cómo han transcurrido mis días como estudiante de doctorado, su apoyo a la distancia me ayudó a seguir adelante. Mamá, gracias por tantos mensajes a lo largo de estos años deseándome un día exitoso, por escucharme cuando más lo necesitaba y por darme fuerzas y serenidad desde lejos. Papá, gracias por los mensajes recordándome que creyera en mí. Tu cariño y apoyo a lo largo de estos años ha sido invaluable. A mis hermanas, Erika y Karina, así como a Sebastián y Juan Carlos, incluso en la distancia, sus risas, bromas y cariño me ayudaron a tomar distancia de la tesis cuando lo necesitaba, y saber que siempre estaban ahí para escucharme significó mucho para mí. Mi pequeño Matthias, ver tu carita y tus ocurrencias me ha traído mucha alegría a mi vida, y me ha ayudado a desconectar, especialmente en esos momentos de estrés.

An immense word of gratitude goes to my dear husband, Henrik. You have been the reason I kept going and was able to bring this thesis to completion. Your constant support carried me through, whether by listening patiently, offering advice, hearing me talk enthusiastically, or very frustratedly, about my research, or simply being there whenever I needed to talk through complicated ideas. Especially this last year, you took on so much at home so that I could have the time and space to focus. I truly could not have done this without you. Finally, to my beautiful son, Samuel. Vida, you are still too little to understand any of this, but you have played a bigger role in this thesis than you will ever know. Even before you came into this world, you gave me the push I needed to keep moving forward. When you arrived, you gave me a reason to step away and gain perspective. And in these last months, your smile brought me back to life on the days I felt most exhausted, reminding me that there is a world beyond the thesis. This is my way of showing you that you can achieve anything you set your mind to in life, with the support of those who love you, belief in yourself, and the strength to rise again when life brings you down.

Abstract

Despite growing efforts, coastal adaptation remains fragmented and insufficient in addressing the vulnerabilities of those most affected. These shortcomings are not only technical but political, shaped by competing ideas about what counts as adaptation and whom it serves. Although there is growing recognition of the need to understand the various ways adaptation is known and experienced, empirical work remains limited, especially work that critically examines the assumptions shaping these understandings and their implications for just and effective practice.

This thesis addresses this gap by revealing how coastal adaptation is constructed across research, policy, and lived experience, and what consequences emerge when these constructions meet in practice. It focuses on the Caribbean Small Island Developing States (SIDS), with Barbados as the empirical focus, where climate vulnerability is acute and adaptation is a central policy priority. Grounded in critical constructivism and employing social imaginaries, risk, and temporalities as analytical lenses, I first examine the foundational assumptions shaping understandings of adaptation in research and policy, and how they relate to one another. I then explore how adaptation is understood by people who live and work along the coastline of Barbados, how these meanings relate to stabilized understandings, and lastly, what consequences emerge when these collide in practice. The analysis is developed across three interrelated papers: Paper I is a systematic literature review of how adaptive capacity is understood in indicator-based assessments of coastal systems; Paper II analyses how adaptation is imagined in policy in Barbados; and Paper III examines how islanders living or working in coastal areas make sense of coastal change and adaptation interventions.

The findings show that coastal adaptation is constructed in increasingly sophisticated ways across research and policy. Yet persistent assumptions about risk, what adaptation should achieve, and how change unfolds over time can leave structural and political conditions underexamined. These understandings, however, are not totalising. Meanings grounded in lived experience are broader, shaped by social and climatic rhythms, understandings of nature as an active force, and notions of risk rooted in direct experience, everyday demands, and religious beliefs. When adaptation is reduced to a single interpretation, practice becomes constrained, not only by neglecting what people value, but by creating conditions in which maladaptation becomes more likely, and the uneven distribution of benefits and burdens is obscured. By clarifying how adaptation meanings are constructed across diverse perspectives, this thesis shows that coastal adaptation, especially in Caribbean SIDS, is deeply normative and political. It makes visible where different understandings diverge, align, or reshape one another, while opening space to redefine what adaptation means. This more nuanced understanding supports the reflexive approaches needed for more transformative adaptation in the region.

List of papers

Paper I

Espinoza Córdova, F., Krause, T., Furlan, E., Allegri, E., O’Leary, B. C., Degia, K., Trégarot, E., Cornet, C. C., de Juan, S., Fonseca, C., Simide, R., & Perez, G. (2024). Framing adaptive capacity of coastal communities: A review of the role of scientific framing in indicator-based adaptive capacity assessments in coastal social-ecological systems. *Ocean & Coastal Management*, 259, 107455. <https://doi.org/10.1016/j.ocecoaman.2024.107455>

Paper II

Espinoza Córdova, F. 20XX. Beyond climatic risk: envisioning, legitimizing and materializing imaginaries of climate change adaptation in Barbados. Under review, following second-round revisions.

Paper III

Espinoza Córdova, F., Scown, M., Boyd, E. 20XX. Islander’ time: Towards more just and effective climate change adaptation in small islands. Manuscript unpublished.

Author’s contribution to the papers

Paper I: I led the conceptualization, analysis, and writing. The other authors (TK, EF, EA, BO, KD, ET, CC, SJ, CF, RS, GP) contributed with the data analysis, and writing (review & editing).

Paper II: I am the first and solo author of this paper, for which I led the conceptualisation, data collection, analysis and writing.

Paper III: I led the conceptualization of this paper with guidance from MS and EB. I carried out the data collection, analysis and writing. MS and EB contributed revising the manuscript and writing (review & editing).

Other relevant publications

Casal, G., Fonseca, C., Allegri, E., Bianconi, A., Boyd, E., Cornet, C. C., Juan, S. de, **Espinoza Cordova, F.**, Furlan, E., Gil, A., Krause, T., Maréchal, J.-P., McCarthy, T., Özkiper, O., Pérez, G., Pham, H. V., Roberts, C., Simide, R., Simeoni, C., ... O'Leary, B. C. (2025). Informing implementation of Nature-based Solutions in marine and coastal environments: The MaCoBioS Blue NBS Toolbox. *One Ecosystem*. <https://doi.org/10.3897/oneeco.10.e149010>

O'Leary, B. C., Fonseca, C., Casal, G., Cornet, C. C., **Espinoza Cordova, F.**, Furlan, E., Hawkins, J. P., de Juan, S., Krause, T., Pérez, G., Simide, R., Trégarot, E., & Roberts, C. M. (2026). Eight recommendations for advancing blue Nature-based Solutions. *Ambio*. <https://doi.org/10.1007/s13280-026-02380-4>

Simeoni C., Furlan E., Pham H. V., Critto A., de Juan S., Trégarot E., Cornet CC., Meester E., Fonseca C., Botelho AZ., Krause T., N'Guetta A., **Espinoza Cordova F.**, Failler P., & Marcomini, A. (2023). Evaluating the combined effect of climate and anthropogenic stressors on marine coastal ecosystems: Insights from a systematic review of cumulative impact assessment approaches. *Science of the Total Environment*, 861, 160687. <https://doi.org/10.1016/j.scitotenv.2022.160687>

Introduction

Climate change is one of today's most urgent societal challenges, driving rising temperatures, shifting precipitation patterns, and increasingly frequent and severe extreme weather events (IPCC, 2023). As these impacts compound, they endanger people and ecosystems globally (Birkmann et al., 2022), posing existential threats to our society (AghaKouchak et al., 2020; Simpson et al., 2023). Coastal areas are particularly exposed, where human systems and ecosystems are deeply intertwined and vulnerabilities to climate-related change converge (Pörtner et al., 2022). Yet, coastal risk is not uniform, but shaped by geomorphological conditions, patterns of urban development, and other climate-and human-driven pressures (Magnan et al., 2023). Nowhere is this more evident than in the Caribbean Small Island Developing States (SIDS), where these drivers coincide with low-lying, highly exposed coastlines and the concentration of urban settlements, critical infrastructure, and key economic activities along the shore (Cashman & Nagdee, 2017).

In this context, adaptation to climate change (hereafter adaptation), broadly defined here as deliberate and strategic response to actual or expected climatic changes, is key for supporting these coastal areas, specially within SIDS (Robinson, 2018a). While adaptation is not a new phenomenon in island states, as island communities have long histories of adjusting to environmental change (Campbell, 2009; Nunn & Kumar, 2017), its role as a deliberate and formalized policy response gained increasing prominence in recent decades. In the Caribbean, attention to adaptation dates back to 1994 with the Barbados Programme of Action, which placed sustainable development at the centre of SIDS policy. Since then, its importance has continued to grow, driven by landmark global frameworks such as the Intergovernmental Panel on Climate Change (IPCC) Second Assessment Report (1995) and the Paris Agreement, which formally established adaptation as a central policy goal alongside mitigation (Horowitz, 2016).

In Caribbean SIDS, adaptation efforts have largely focused on developing adaptation policies, mainstreaming adaptation into national development frameworks, and conducting vulnerability and risk assessments (Robinson, 2018a). In terms of implementation, progress has been slower, and projects have largely prioritised short-term, hard coastal defence approaches such as seawalls and groynes (Laurent & Duvat, 2024; Petzold et al., 2023). While ecosystem-based initiatives, including mangrove and coral reef restoration, have gained increasing attention,

their uptake remains limited compared to engineered solutions (Laurent & Duvat, 2024). At the regional level, risk financing mechanisms such as the Caribbean Catastrophe Risk Insurance Facility (CCRIF) have also been established to support post-disaster recovery, though these address response rather than long-term adaptation.

Given the reality of global emission trends, with emissions not declining fast enough to keep warming below 2°C (Anderson et al., 2020) and some additional warming already locked in even if net-zero targets were achieved (Wang et al., 2018), a more innovative and effective adaptation is urgently needed. This urgency is particularly pronounced in SIDS, where climate impacts intertwine with urban, social, economic, political and environmental. Not only are climate impacts expected to continue, but pressing development challenges, exacerbated by recurring global financial crises including the recent COVID-19 pandemic, are expected to further increase vulnerability. Calls to substantially scale up adaptation efforts in the region have therefore intensified (Klöck & Fink, 2019; Thomas et al., 2020). These include demands for international recognition of adaptation as a challenge for sustainable development (Bishop et al., 2021), calls for more transformational approaches to adaptation (Thomas, 2025), improved access to climate finance tailored to their unique vulnerabilities (Mohan, 2023; Treichel et al., 2024), and greater justice in climate responses (Baptiste & Robinson, 2023).

Adaptation shortfalls and the politics of meaning-making

Despite recent efforts, a widening gap remains between adaptation needs and the delivery of solutions that are effective within complex social contexts. Recent assessments, including the IPCC AR6 and UNEP Adaptation Gap Reports, find that adaptation is still fragmented and limited in scale, often geared toward immediate risks rather than longer-term and compounding impacts, and overall is not keeping pace with climate change (IPCC, 2023; Berrang-Ford et al., 2021; UNEP, 2024). Similar patterns are evident in coastal adaptation: although initiatives have expanded globally, progress remains insufficient relative to escalating coastal hazards (Magnan et al., 2023). Concerns extend beyond slow implementation, partly driven by adaptation finance that remains far below needs (UNEP, 2024), to whether interventions reduce vulnerability in practice. This is particularly argued in relation to technical and managerial approaches, such as engineered solutions, which are often found to fall short of meaningful vulnerability reduction (Eriksen et al., 2021).

In response to these limitations, a growing body of critical adaptation scholarship has sought to reframe adaptation to become both more just and more effective.

Across diverse approaches, a central argument is that adaptation is fundamentally political (Chavez-Rodriguez, 2018; Eriksen et al., 2015). Adaptation decisions are shaped by competing values, unequal power relations, and governance structures that legitimize some interventions while marginalizing others. As a result, adaptation challenges often reflect unequal access to power and resources (Malik et al., 2025), which in turn enable institutions to privilege incremental, technical responses. In SIDS, as elsewhere, such responses rarely challenge the status quo and can reinforce business-as-usual development trajectories (Leon Sealey-Huggins, 2017; Perry, 2022). Accordingly, critical scholarship calls for rethinking adaptation not as a set of incremental adjustments, but as a contested socio-political process (Nightingale, 2017) that often unfolds under conditions of uncertainty and change.

Importantly for my thesis, understanding adaptation as inherently political implies that what counts as adaptation is not a neutral category but a contested label, with important implications for its implementation. While science and policy have tended to stabilise one particular interpretation, especially adaptation as adjustment to actual or expected climate change, what counts as adaptation remains conceptually unsettled, with multiple interpretations (Broto et al., 2024; Orlove, 2022; Schipper & Mukherji, 2024; Singh et al., 2022). This is because defining adaptation in practice, what to adapt to, who is protected (when and at what cost), and what counts as “success”, inevitably rests on value-laden judgements, contested interests, and different forms of knowledge shaped by environmental conditions and socio-cultural and institutional contexts (Bauriedl & Müller-Mahn, 2018; Dujardin, 2020; Goodwin et al., 2025). For example, adaptation debates hinge on how to weigh present needs against future generations (Lau et al., 2021), how political and economic systems are understood to drive climate impacts and vulnerability (Lindegaard, 2018) and what kinds of futures are considered desirable (Kanarp et al., 2025; Muiderman et al., 2020), among others. Clarifying what adaptation to climate change means for different people is therefore not merely semantic: how adaptation is understood directly structures policy agendas and shapes how it is planned, implemented, and evaluated (Pelling et al., 2024; Wamsler et al., 2023).

Across research, policy and practice, there are growing calls for transformative adaptation: one that goes beyond reducing vulnerability to climate impacts to address the conditions or root causes that produce risk in the first place (Vogel & O’Brien, 2022). If, as outlined above, how adaptation is understood shapes how it is planned and implemented, then pursuing transformative adaptation requires being reflexive about those understandings (Taylor et al., 2025). This involves scrutinising how stabilised understandings of adaptation come to be, including what is identified as a problem, by whom, and on what basis, as well as recognising other ways in which adaptation is known and experienced across scales (Ensor et al., 2019; Goldman et al., 2018; Nightingale et al., 2020; Olazabal et al., 2024). By stabilised, I refer to those meanings that are embedded in and sustained by institutional

arrangements and that, as a result, shape practice. Examining both stabilised and more local, bottom-up understandings can reveal not only what is foregrounded in current approaches, but also what is obscured. This can open up alternative perspectives on the root causes of risk that stabilised framings alone may not surface.

Being reflexive about what adaptation means, for whom, and in which contexts can support more just and effective approaches, which is central to transformative adaptation (Colloff et al., 2021; Schipper et al., 2022). This matters for two related reasons. First, it is intrinsically important because whose understandings of adaptation are included or marginalised is itself a matter of recognition justice (Schlosberg, 2004). It concerns whether different people, experiences, and ways of knowing are given standing in how adaptation is imagined, planned, and implemented. Second, it is instrumentally important because excluding marginalised perspectives can lead to adaptation practices that fail to address the drivers of vulnerability, redistribute risk, or even create new harms for already vulnerable communities (Eriksen et al., 2021; Olazabal et al., 2024). Reflexivity about how adaptation is understood therefore connects directly to transformative adaptation: it helps make visible the power relations and underlying conditions that produce risk, while also supporting more just processes that recognise diverse experiences and priorities.

Meaning-making of adaptation in context

The previous section argued that pursuing transformative adaptation requires reflexivity about how adaptation is understood. This involves not only documenting what adaptation means to different people, but examining the assumptions, values, judgements, and expectations that produce these meanings, and how they, in turn, shape outcomes (Goldman et al., 2018). How we understand the world shapes how we act within it, and those actions help produce the realities we live with (Barad, 2007). Debates about adaptation are therefore also debates about how realities are defined, lived, and governed. Examining different understandings of adaptation is thus not simply a matter of comparing perspectives, but of interrogating the underlying assumptions that make certain understandings, and the practices they enable possible in the first place.

It is in this space, between how adaptation is understood and how it is practised, that my thesis is situated. I investigate how coastal adaptation is constructed across different sites of meaning-making, especially research, policy and lived experienced, with a focus on the foundational assumptions that shape each construction. Drawing on the case of coastal Barbados, it analyses the

consequences, including the blind spots, that emerge when these different constructions meet in practice. In doing so, I respond to calls to move beyond examining how adaptation is measured, described, or assessed, and to interrogate the deeper assumptions about the world that shape what adaptation comes to mean in the first place (Ensor et al., 2019; Eriksen et al., 2015; Goldman et al., 2018; Nightingale et al., 2020). This approach is crucial not only for critiquing mainstream adaptation, but also for expanding what adaptation can be imagined to be (Nightingale et al., 2020). This is particularly important for coastal adaptation in SIDS, which is the empirical focus of this thesis, as coastal areas are among the most climate-exposed spaces in the Caribbean, concentrating populations, infrastructure, and economic activity, making them the central arenas where adaptation priorities and policy goals largely play out.

To achieve my thesis aim, and drawing on insights from critical adaptation studies, I begin from the premise that adaptation is not merely a reactive response to external biophysical change. Rather, it is a relational and normative process in which meanings are embedded in socio-natural entanglements and continually co-produced, negotiated, and reshaped through discourse and lived experience. These entanglements cannot be understood in isolation from ongoing struggles and the enduring legacies of unequal power relations. Recognising that different understandings of reality shape what adaptation comes to mean, and that these meanings are produced within specific socio-political contexts, I treat adaptation as inherently situated and partial (Nightingale, 2016). In this sense, rather than deciding which understanding is “better,” this study aims to make visible the often-unspoken assumptions that underpin different perspectives on adaptation and to examine the tensions and struggles that arise when these understandings meet in particular places. This step is necessary, if adaptation planning is to move beyond singular framings and engage with the plural values and commitments through which climate change is understood and acted upon (Nightingale et al., 2020).

Building on critical constructivist perspectives and using an analytical framework centred on concepts of imaginaries, risk, and temporalities, I examine how assumptions about uncertainty, norms of desirability and legitimacy, and different understandings of time shape what it means to adapt across research, policy, and lived experience. Barbados is used here as a case study of how adaptation is understood and constructed in policy and everyday life, because it offers a productive setting for analysing how adaptation is understood and constructed across policy and everyday life in the Caribbean. Located in the eastern Caribbean, Barbados shares a set of characteristics common to many Caribbean SIDS: high dependence on coastal zones, a tourism-driven economy, established institutional adaptation frameworks, and a middle-to-high income classification that restricts access to concessional climate finance and official development assistance despite acute climate vulnerability. As such, Barbados can be understood as a typical case

(Seawright & Gerring, 2008) selected not for its uniqueness, but because characteristics shared across the region make it an instructive lens for analysing how adaptation meanings are constructed in similarly structured contexts.

Aim, research questions, and outline

The aim of this thesis is to contribute to more transformative approaches to climate change adaptation by critically examining how adaptation is constructed across research, policy, and lived experience, with a focus on unpacking the underlying assumptions that shape each construction. Moreover, based on the case of coastal Barbados it examines the consequences, including blind spots, that emerge when differently grounded constructions meet in practice. The research questions that guide my research are presented below. The first question focuses on research and policy as institutional domains that tend to set the terms of adaptation practice, the second examines how these meanings are considered through lived experience, while the third one bring these sites of meaning-making, specially policy and lived experience, into dialogue and explores what happen when they encounter each other.

- (i) What assumptions shape meanings of adaptation in coastal settings in research and policy, how are these shaped by broader cultural, historical, and epistemic contexts, and how do they relate to each other?
- (ii) How are meanings around adaptation constructed through lived experience among people living and/or working along the coastline, and how do the assumptions that shape them relate to research and policy understandings?
- (iii) What consequences, including blind spots, emerge when different construction around adaptation encounters one another in practice?

Overview of papers

To address the research questions and overall aim of my thesis, I draw on a systematic literature review about ways of understanding coastal adaptation in scientific assessments (paper I), and two empirical studies in Barbados that explore how adaptation is constructed in policy and by people who either work or live along the coastline (paper II and paper III respectively). All of them are centred around how meanings of adaptation come to be, but the context in which meaning takes place differs. In the following section I present an overview of each article:

Paper I: Framing adaptive capacity of coastal communities: A review of the role of scientific framing in indicator-based adaptive capacity assessments in coastal social ecological systems.

Drawing on framing as an analytical lens, this article presents the results of a systematic literature review examining how academic literature frame empirical assessments of adaptive capacity in coastal systems between 2014 and 2021. Adaptive capacity was selected as the case study to explore how meanings around adaptation are constructed, given this concept a critical role in understanding how coastal communities can adapt within scientific and policy contexts. By deconstructing how adaptive capacity is framed during its conceptualization, characterization, and operationalization, it pays attention to how these representations are produced including biases, beliefs, values, and norms that influence conceptual and methodological choices, and which actors are included or excluded in the process.

Paper II: Beyond climatic risk: envisioning, legitimizing and materializing imaginaries of climate change adaptation in Barbados

Employing the concept of social imaginaries, this paper examines empirically how meanings around coastal adaptation are produced and legitimized within the national context of Barbados. Grounded in critical adaptation studies, it approaches adaptation as a normative process that links the present to the future understood as a product of human imagination, visions, and desires shaped by social structures and relations. The paper is motivated by an interest in understanding the stabilised conceptions of adaptation and why they are constructed in particular ways. By attending to the temporal, spatial, and political dimensions of adaptation imaginaries, the paper demonstrates how adaptation, with focus on the coast, are framed as pathways to sustainable growth, the preservation of economic and cultural identity, and as mechanisms for achieving climate financial justice.

Paper III: Islander' time: Towards more just and effective climate change adaptation in small islands

Drawing on temporalities as an analytical lens, this paper empirically examines how islanders who live or work along the coast of Barbados make sense of climate change adaptation. Grounded in the literature on temporalities, the paper assumes that local perceptions of time in relation to climate change shape how understandings about climate impacts and responses are created and interpreted. Rather than being solely future-oriented, these temporal understandings are entangled with past, present, and future experiences as lived in the everyday. Using temporal reference points such as rhythms, connection to place, and direct experience, the paper illustrates how climate change is perceived, its causes understood, and expectations formed, thus revealing local meanings of adaptation that are often overlooked in policy discourse.

Table 1. Contribution of each of the academic papers to the research questions.

Research questions 1 is answered by the findings from Paper I and II, research question 2 is replied by findings from Paper III, with insights from Paper I and II, and research question 3 is answered by findings from Paper II and Paper III.

Research questions	Papers		
	I	II	III
What assumptions shape meanings of adaptation in coastal settings in research and policy, how are these shaped by broader cultural, historical, and epistemic contexts, and how do they relate to each other?			
How are meanings around adaptation constructed through lived experience among people living and/or working along the coastline, and how do the assumptions that shape them relate to research and policy understandings?			
What consequences, including blind spots, emerge when different construction around adaptation encounters one another in practice?			

Scope of analysis

To ensure the thesis remains both manageable and analytically robust, I have delimited the analytical focus, the units of analysis, and the empirical entry points through which I explore the research questions (Fig. 1). The analytical focus is on revealing how adaptation is constructed across different perspectives and what are the consequences when different constructions meet in practice, specifically focusing on coastal contexts, using SIDS as the primary empirical setting. To analyse how adaptation is constructed, I focus on meaning-making processes: that is, the process through which adaptation comes to signify something specific, including what the problem is, what response is appropriate, what future these actions are expected to bring, and how urgent they are. Central to this process are two connected concepts that I use throughout the thesis. By assumptions, I refer to the foundational, and often tacit, beliefs about how the world works, what is considered normal or expected. These operate as the ground on which meanings stand. By understanding, I refer to how people, given those assumptions, make sense of what is happening around them in a concrete situation, that is, how they read the world through the lens that their assumptions provide. Together, assumptions and understanding produce meaning: that is, the particular construction of what adaptation is and what it demands within a specific setting.

At this point, it is useful to clarify my understanding of knowledge and its connection to meaning-making. In this thesis, I understand knowledge not as a set of facts and rules about how things are, but as a living and dynamic process through which we come to know the world. If knowledge is a process rather than a product, then there is no single correct way of knowing. Scientific knowledge production, policy framings, and lived experience are different modes of knowing the world,

each carrying its own assumptions, and each shaping how adaptation is interpreted, framed, and governed.

To show how adaptation is constructed across different perspectives, I focus on three sites of meaning-making, which serve as my units of analysis: research, policy, and lived experience. The empirical entry points for each unit centre on indicator-based scientific assessments of adaptive capacity (research), policy frameworks and interviews with policymakers (policy), and everyday life (lived experience). Importantly, the scope of my thesis was not fixed at the outset but emerged progressively through an iterative research approach that moved back and forth between theory, empirical observation, findings, and evolving research questions (Ragin & Amoroso, 2019).

The choice of these empirical entry points requires further justification. Regarding the first unit of analysis (research), I focus on scientific assessments of adaptive capacity within coastal social–ecological systems for several reasons. Adaptive capacity is a core concept around which much adaptation research revolves (Siders, 2019; Singh et al., 2022). By specifying what constitutes adaptive capacity and how it should be strengthened, such assessments implicitly define what it means to adapt, what counts as effective adaptation, and how adaptation should be operationalised. I focus on these assessments, rather than broader conceptual or literature-based discussions, because they are explicitly designed to inform and guide policymakers. By analysing what these assessments include, exclude, and measure, I can trace how scientific knowledge constructs meanings of adaptation that shape what becomes legible, prioritised, and actionable in adaptation planning.

For the second unit of analysis (policy), I examine how adaptation is constructed in national adaptation policy by combining policy document analysis with interviews with policymakers. Policy documents provide insight into official and institutionalised framings of adaptation, including the assumptions embedded in how adaptation is defined, problematised, and addressed. Interviews allow me to explore how these assumptions are interpreted and negotiated among policy actors, and how they are translated into practice during implementation. Importantly, although policymakers may draw on local knowledge and personal experience, their views are also shaped by professional roles and institutional settings, including the demands, constraints, and expectations associated with the policy context they represent. Interviews therefore complement the document analysis by showing how adaptation is constructed through the policy role.

Finally, I focus on the everyday as a site through which to explore how constructions of adaptation are shaped by lived experience. I understand everyday life as the routine and situated experiences through which individuals make sense of the world and of daily social life. Rooted in particular places, everyday life provides the

material and relational backdrop through which people interpret climate impacts both emotionally and cognitively (Bee et al., 2015). These interpretations can shape how people understand themselves and their circumstances and can also motivate adaptation responses (Castro & Sen, 2022; Kothari & Arnall, 2019). By focusing on the everyday, I examine how stabilised governance ideas about adaptation are taken up, embodied, or resisted in lived practices, and how power dynamics shape unequal experiences of climate governance, particularly in relation to who bears responsibility and who has the capacity to respond (Iniesta-Arandia & Ravera, 2025).

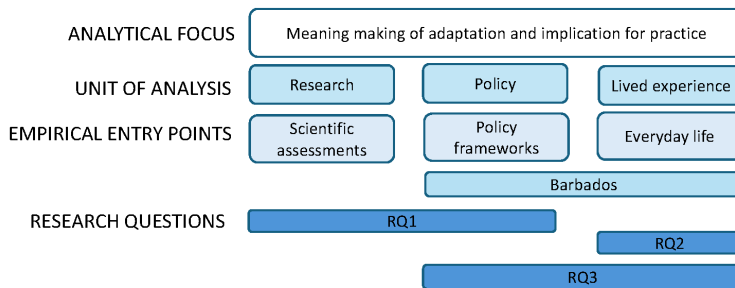


Fig. 1. Scope of analysis.

Source: Author

Conceptualizing adaptation

In the previous section, I outlined the scope of my analysis. If I aim to understand how meanings around adaptation are produced across these three dimensions, then it is necessary to first clarify how I understand adaptation as a concept. This is because how adaptation is defined shapes what questions can be asked and what becomes visible in the analysis (Nightingale, 2016). Having introduced some of the broader adaptation literature in the introduction, in this section I engage more deeply with the concept and present how I approach it in this thesis.

Over the past two decades, scholars have increasingly scrutinized the concept of adaptation, seeking to unpack its underlying ontological assumptions. Early critical work, drawing on political ecology and political economy, challenged the apolitical framing of adaptation prevalent in environmental research and management (Hulme, 2011; Taylor, 2015; Watts, 2015). These critiques argue that stabilised understandings, grounded in deterministic and positivist natural science traditions, uphold a rigid divide between the social and climatic realms (Nightingale, 2017; Taylor, 2015). As a result, this understanding contributes to technocratic and universalizing approaches that cast adaptation as a largely apolitical process of

adjusting to external climatic change (Dujardin, 2020; Goldman et al., 2018; Mabon et al., 2022), often at the expense of recognising socio-environmental complexity and relational vulnerability (Eriksen et al., 2015; Nagoda & Nightingale, 2017; Scoville-Simonds et al., 2020). In response, a growing body of critical scholarship, drawing on interdisciplinary perspectives, has worked to reframe adaptation in ways that foreground its socio-political dimensions (Chavez-Rodriguez, 2018; de Wit, 2018; Eriksen et al., 2015; Nightingale et al., 2020). Building on this literature, this thesis conceptualizes adaptation not as a technical response to the impacts of climate change. Rather, drawing on socio-nature perspectives that understand society and nature as intrinsically connected and mutually produced (Castree & Braun, 1998). I consider adaptation an emergent and contested process shaped by human relations and co-evolving with the environment.

This perspective does not deny the material reality of climate risk; instead, it highlights that the meanings and knowledge produced around climate change are not formed in isolation. Rather, they emerge through ongoing interactions among environmental conditions, social structures, and power dynamics (Miller & Wyborn, 2020; Nightingale et al., 2020). In this sense, normative and ideological orientations, shaped by socially shared values, beliefs, emotions, culture, are not merely “context”; they are active forces through which climate realities are lived and understood. Power dynamics influence authority over these understandings, delimiting which forms of adaptation become meaningful while others are rendered less plausible or desirable (Loch & Riechers, 2021; Nightingale et al., 2022).

At the same time, in this thesis adaptation is understood as a travelling idea whose meaning is continually reshaped by diverse actors as it encounters specific local contexts (de Wit, 2018; Weisser et al., 2014). This perspective, inspired by Science and Technology Studies (STS), emphasizes that ideas do not travel on their own; rather, they must be materialized and embodied in discourses, practices, or technologies before they can be communicated, enacted, and transformed.

In this sense, while stabilised framings of adaptation, such as those promoted by global institutions, exert a certain influence, they cannot simply be imposed onto diverse contexts. Instead, these ideas are inevitably modified, reinterpreted, and translated in contingent and often unpredictable ways (Chavez-Rodriguez, 2018). This conceptualization is significant for this thesis, as it foregrounds adaptation as a dynamic, contested, and co-produced process that is continually negotiated and reshaped through real-world encounters.

Building on this body of critical scholarship, I approach adaptation as a desired process of change whose meanings are situated within complex socio-natural entanglements and continuously co-produced and negotiated.

Theoretical and analytical framework

This chapter outlines the theoretical and analytical foundations that inform my approach to examining how meanings of coastal adaptation are constructed across different perspectives and the consequences when different constructions meet in practice. I begin by situating the theoretical approach adopted in this thesis. I then introduce critical constructivism as the meta-theoretical lens for analysing meaning-making processes around adaptation. Finally, I present the analytical lenses used to deconstruct how coastal adaptation is articulated across research, policy, and lived experience.

Situating the theoretical approach

A wide range of theoretical approaches has been used to examine how adaptation is constructed. One strand of research focuses on the discursive dimensions of this process. Drawing on analytical tools such as frames and narratives, early studies highlighted the role of language in shaping stabilised understandings of adaptation, mapping which interpretations prevail, and which issues are emphasised or marginalised (Dewulf, 2013; Fünfgeld & McEvoy, 2014; Ojha et al., 2016; Woroniecki, 2019).

To address the more explicitly political dynamics surrounding adaptation, subsequent critical scholarship, often informed by post-structuralist perspectives, examines why and how particular meanings of adaptation become stabilised through discourse and power. For example, scholars have shown how affective dynamics, such as fear, anxiety, and desire, steer commitments toward particular adaptation pathways (Remling, 2023), and how racialised and colonial constructions of vulnerability inform interventions that reproduce neocolonial relations (Andreucci & Zografos, 2022; Mikulewicz, 2021). Collectively, this work shows not only that adaptation is historically contingent and politically constructed, but also that political struggle concerns not only who holds power or authority, but how adaptation itself is defined (Remling, 2019).

A second strand of literature, drawing on the critical and reflexive idiom of co-production developed in Science and Technology Studies (STS), extends analysis

beyond discourse to examine how adaptation knowledge is shaped through material practices, institutions, and infrastructures. Building on the premise that knowledge-making cannot be separated from social and political choices about how societies are organised (Jasanoff, 2004, p. 2), this work shows that meanings of adaptation are inseparable from structural, political-economic, and socio-material processes. For instance, studies demonstrate how particular understandings of risk, embedded in measurement practices and policy procedures, carry implicit assumptions about what constitutes the “problem” (often climate change itself), thereby marginalising alternative interpretations and priorities (Forsyth et al., 2022; Llanos, 2020). In coastal contexts, work has shown how mainstream notions of vulnerability are deeply entangled with existing political-economic structures (Paprocki, 2018), and in the context of SIDS how this is reproduced through institutions that hold decision-making authority (Klepp & Fünfgeld, 2022). Taken together, this scholarship underscores that neither research nor policy is neutral: implicit values shape what counts as evidence, how this evidence is collected and produced, and the purposes it ultimately serves.

A related strand of recent research shifts attention to the “inner” lenses through which people interpret and navigate the world, and to how these orientations shape the ways climate change is understood and responded to. Focusing on individual and collective values, beliefs, worldviews, and the inner (cognitive, emotional, and relational) capacities that shape them, recent research shows how such orientations influence sense of meaning, agency and responsibility among different actors in relation to adaptation planning and implementation (Wamsler, Mulligan, et al., 2023; Wamsler et al., 2023; Wamsler & Bristow, 2022). Related work drawing on critical phenomenology and analyses of subjectivity highlights how lived experience and everyday social interactions, together with broader structural conditions, shape how people experience change and make sense of it (Calliari et al., 2020; Wibeck et al., 2015; Woroniecki et al., 2019, 2024). Others, based on that adaptation planning is usually intertwined with anticipation and planning for an uncertain future, have focused on how visions of the future shape understandings around adaptation (Goodwin et al., 2025; Kanarp & Westberg, 2024), including in the SIDS context.

Specifically, in the context of SIDS, a growing body of literature examines how climate change is framed as problem. Particularly, this literature has highlighted how stabilised framings of island vulnerability, rooted in imaginative geographies that depict islands as small, weak, and isolated, often direct attention towards biophysical impacts, rather than asking why and how islands are vulnerable (Forsyth et al., 2022). Related studies argue that this helps to legitimize technocratic and security-oriented discourses (Kate Weatherill, 2023; Weatherill, 2024), that limit narrow understandings on how to adapt (Petzold et al., 2023), while limiting meaningful participation (Mikulewicz, 2021). Other work has highlighted how

doomsday narratives around islands, very much present in most media and policy narratives, contributes to pessimistic narratives or a normalization of loss, which further narrows the scope of possible solutions (Barnett, 2017; Farbotko et al., 2023). In the Caribbean specifically, critical scholarship has traced how these framings are not merely technical but deeply entangled with enduring epistemic legacies of colonialism and the plantation economy, arguing that stabilised logics of climate response, centred on technological intervention and economic growth, reproduce the very power relations through which vulnerability was historically produced (Bonilla, 2020; Leon Sealey-Huggins, 2017; Perry, 2022; Sheller, 2021). By doing so, these studies expose the conditions under which certain meanings of adaptation become possible, legitimate or stabilised.

While these bodies of work have increased understanding of how meanings around climate change and its potential solutions are constructed, there are three gaps that I have identified. First, while conceptual and theoretical work has advanced understanding of how assumptions shape what adaptation means remains a paucity of empirical studies focusing on how meaning-making related to adaptation policy and practice. Second, where studies have examined the meaning-making dimensions of adaptation, they have tended to do so within single actor groups, rather than bringing these sites of construction into dialogue to examine what happens when differently grounded understandings encounter one another. Third, this gap is especially pronounced in Caribbean SIDS, where adaptation research has mainly focused on external dimensions, the limits imposed by finance, governance, and geophysical exposure, or the injustices embedded in global climate architectures. While recent work has begun to examine how political economic logics shape the construction of adaptation meaning in the region (Friedman, 2023; Vaughn, 2020), such studies remain rare, and none, to my knowledge, bring the meaning-making of different actor groups into comparative dialogue within a single site of intervention. Thus, situating my research within critical scholarship on adaptation meaning making, focusing on the Caribbean, and investigating how adaptation is constructed across different perspectives, my thesis responds to these gaps.

Critical constructivism as a meta-theory

Critical constructivism provides a critical lens for examining how knowledge is produced and legitimised. Building on the foundations of social constructivism, it rejects the notion that understandings of the world emerge solely from objective observation or empirical testing (Chipangura et al., 2016). Instead, it emphasises that shared understandings are actively constructed through meanings, norms, beliefs, ideas, and language (Risse, 2019). Importantly, these processes do not occur

in a vacuum; they are shaped by the historical, socio-cultural, economic, and political contexts within which actors interact (Weldes et al., 1999). As such, it highlights that knowledge is never neutral, value-free, or ahistorical, but is always situational (Haraway, 1988). Crucially, it goes beyond describing how meanings are constructed by foregrounding power: it asks how particular assumptions, categories, and interpretations become stabilised and rendered authoritative in the first place. In doing so, critical constructivism unsettles taken-for-granted assumptions underpinning identity formation and brings the politics of knowledge and meaning into analytical view (Hopf, 1998). The following sections outline the three key features of critical constructivism that guide my thesis.

First, and central to my research, is attention to how frameworks of meaning are produced and stabilised. From a critical constructivist perspective, meanings are neither inherent nor given; rather, they emerge through socially embedded processes that organise how the world is understood and acted upon (Weldes et al., 1999; Nissinen, 2001; Macleod & Jones, 2007). These processes are structured through shared cultural norms, belief and knowledge systems, and material conditions, such as economic arrangements, which together constitute the social structures that provide the interpretive frameworks through which actors come to understand who they are in the world and how they relate to it. However, while such structures shape what actors perceive as sensible, legitimate, or even imaginable, they do not determine behaviour in a mechanical way. Rather, they acquire social force only through their continual reproduction in social norms, rules, and everyday practices that render certain actions normal and acceptable; conversely, they can be challenged by contesting those same norms, rules, and practices (Hopf, 1998). This understanding of meaning production is crucial for my thesis, as it directs analytical attention to how actors, whether scientists, policymakers, or people who work or live within coastal areas, shape and stabilise particular understandings of adaptation over time through reproducing, negotiating, or contesting norms, beliefs, and categories of knowledge.

Second, critical constructivism emphasises that processes of meaning-making are inseparable from relations of power. Drawing on post-structural understanding of power, power is not necessarily understood as something actors possess, but as a productive and relational force embedded in discourse and social practices. It shapes how reality is understood, including what is considered normal, legitimate, or even possible (Doty, 1993). Understood in this way, control over meaning-making, how issues are interpreted, described, and understood, is itself a form of power. Meaning-making processes therefore define the boundaries of the politically possible, privileging certain actors, knowledges, and futures while marginalising others (Weldes et al., 1999; Das, 2009). Crucially, by operating through systems of representation, power not only shapes how reality is understood but also helps to create it (March & Olsen, 1989). For example, when specific meanings of adaptation

are embedded in institutional routines, such as policy frameworks, funding criteria, or indicators, they stabilise particular understandings of adaptation and shape what gets funded, measured, and governed, while other possibilities fade out. This understanding of power enables me to explore meanings of adaptation as power-laden constructions that shape what is perceived as real, governable, and actionable.

Lastly, I adopt a critical constructivist perspective that foregrounds multiple ways of knowing. From this view, knowledge is not a neutral reflection of the world but is produced within specific historical, social, and political contexts. In other words, what counts as “reality” is made meaningful through locally situated practices of being in, and relating to, the world. This challenges the assumption that competing meanings of adaptation simply reflect different perspectives on a single underlying reality. Instead, it suggests that different realities give rise to different ways of knowing, which in turn shape multiple understandings of adaptation. Moreover, because reality cannot be fully fixed or exhaustively represented, as it is shaped by dynamic, emergent, and complex interactions (Pérez-Hämmerle et al., 2024), meanings remain open to reconstruction, contestation, and transformation (Chukwuma, 2020; Weldes, 1999, p. 16). This creates an analytical space to highlight that no single meaning of adaptation is final or universally authoritative. Scientific, policy, and lived experience, should therefore be treated as partial and incomplete, yet equally legitimate, as each reveals partial realities and enables different forms of response. The task, then, is to examine how these meanings relate to one another, where they align, where they diverge, and where they cannot be combined without losing or distorting important aspects, while still acknowledging that power and politics shape which meanings become stabilised (Pérez-Hämmerle et al., 2024). I address this specifically in the results section for RQ3.

Building the analytical approach

While critical constructivism provides the overarching theoretical grounding for examining how meanings are socially produced in context, including how power shapes which meanings become authoritative, credible, and actionable in particular contexts, there is a need for an analytical framework that guides me in how meanings, specifically in the context of adaptation, are produced. To do so, based on my research aims, I focus my analysis on three interconnected and mutually constitutive conceptual and analytical entry points through which shared meanings of adaptation are produced and stabilised: social imaginaries, risk, and temporalities (Fig. 02).

These entry points were selected because each foregrounds a distinct dimension of meaning-making around adaptation. The concept of social imaginaries was applied

to illuminate how people make sense of their world, including what is normal, desirable, or legitimate; risk to assess how uncertainty about the future is made visible; and temporalities to examine how different ideas about time shape experiences of change and urgency. Together, these dimensions organise how people construct ideas about what comes to appear as a problem, what is normal or inevitable, and what forms of adaptive action appear rational, responsible, or necessary in the context of climate change. In this way, these dimensions reveal not only how stabilised meanings of adaptation are produced, legitimised, and normalised, but also how they become consequential in practice, shaping what adaptation is understood to be, privileging certain experiences, forms of knowledge, and desired futures, while marginalising others.

While existing studies have examined these dimensions individually, whether through imaginaries (Griswold, 2021; Lundberg et al., 2021; Saddington, 2023), temporalities (Jackson, 2021; McMichael & Katonivualiku, 2020; Saddington, 2023) or risk perceptions (Clissold et al., 2023; Constantino & Weber, 2021), they tend to do so in isolation or at a single scale. Bringing them together within a single analytical framework, grounded in a critical constructivist perspective, allows me to place these dimensions in conversation with one another, offering a broader comprehension of the dynamics that shape adaptation as a socially and politically constructed process.

Each paper in this thesis engages with the analytical framework to examine how meanings of climate change adaptation are constructed across research, policy, and lived experience. While Papers II and III explicitly focus on specific entry points of the framework, social imaginaries and temporalities, respectively. Paper I engagement is somewhat different. Rather than starting from risk as an explicit entry point, the paper applies frame analysis to examine how scientific knowledge constructs ideas about adaptation through the design and application of empirical adaptive capacity assessments within coastal social-ecological systems. Risk emerged as a central dimension through this analysis, rather than being the starting point: because adaptive capacity is commonly mobilised as a means of reducing risk, understandings of adaptive capacity inevitably embed assumptions about what kinds of risks matter, how they are expected to affect communities, and how they can be managed (Jones & Tanner, 2017; Serdeczny et al., 2024). Frame analysis thus makes these underlying assumptions visible, revealing how they shape stabilised interpretations of how adaptation is realised through adaptive capacity assessments.

While each paper makes a focused and distinct contribution, each one drawing on its own analytical approach, in this Kappa I zoom out to analyse the empirical material as a whole, engaging with all three entry points of the analytical framework presented in this section in a more general and integrative way. This broader

perspective is possible because these elements are deeply interrelated and mutually constitutive in processes of meaning-making around adaptation. Social imaginaries, by shaping how people imagine their collective existence and possible futures, influence how potential threats are perceived and interpreted, while also structuring assumptions about change, continuity, and urgency. Interpretations of risk, including what is considered a threat and how it is expected to evolve, emerge from broader expectations about how the world works and are closely tied to uncertainties about how the future might unfold. Temporalities are shaped by social imaginaries that render certain frameworks of time natural, inevitable, or desirable, while simultaneously shaping risk understandings by structuring perceptions of urgency and framing risks as preventable, manageable, or inevitable. By drawing on the full empirical material through this analytical framework presented in this section, the cross-case analysis traces how different meanings around adaptation are formed through these distinct dimensions, and how these intersect, collide, and reinforce one another.

In the following sections, I elaborate in more detail on the theoretical foundations of each of the three analytical entry points, and how I have used them in the different papers.

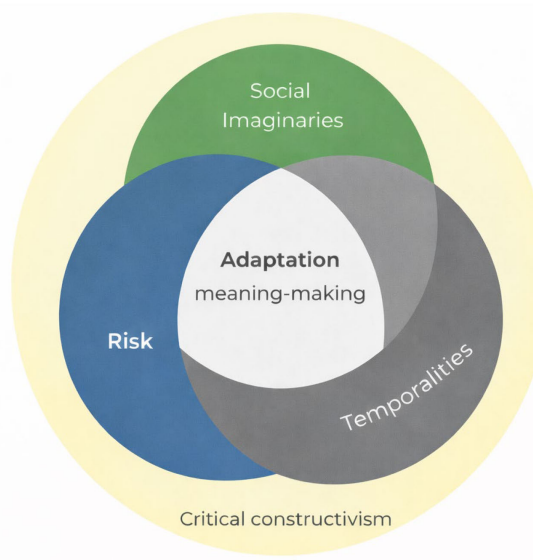


Fig. 2. Analytical approach.
Source: Author

Social imaginaries

In policy circles, adaptation is often constructed as a means of managing, or even controlling, an uncertain future (Bauriedl & Müller-Mahn, 2018). While scientific and policy debates tend to focus on future climate impacts, their magnitude, and their likely consequences, the future is not simply an outcome of environmental conditions. Following a constructivism perspective, what is considered possible, probable, or inevitable is shaped by background assumptions about how the world works, including nature–society relations, and by ideational and political dynamics (Bauriedl & Müller-Mahn, 2018). This, in turn, structures how adaptation is planned and implemented (Arnall & Hilson, 2023; Ghimire & Chhetri, 2023; Kanarp & Westberg, 2024). From this perspective, shared assumptions about how the world is and how it works, and the dynamics through which these assumptions are formed, become central to understanding meaning-making around adaptation (Goodwin et al., 2025; Muiderman et al., 2020; Olazabal et al., 2024).

I draw on social imaginaries as the analytical entry point for examining how actors collectively understand their social life, what feels normal, desirable, and legitimate, and, in turn, how adaptation is made meaningful. Following Taylor (2004), social imaginaries are understood as shared, often implicit, ideas, assumptions, and beliefs through which people make sense of social reality, and through which political, social, and economic life is organised. They operate as deep intellectual and ethical frameworks that structure collective interpretation, shaping which futures appear possible, desirable, or inevitable (Gaonkar, 2002). In doing so, social imaginaries contribute to what comes to be perceived as “common sense” by establishing reference points that appear natural, normal, or self-evident.

While social imaginaries shape how people interpret their conditions and what they envision as possible and desirable, they are not merely abstract or idealised visions of the future. Crucially, imaginaries also help constitute social reality by informing institutions, practices, and forms of collective action (Grant, 2014; Steele, 2017; Yusoff & Gabrys, 2011). In the context of climate adaptation, imaginaries of a “resilient future,” for example, can legitimise particular priorities, such as infrastructure protection, technocratic planning, or economic growth, thereby shaping which interventions are funded, implemented, and recognised as responsible responses (Kanarp et al., 2025; Levy & Spicer, 2013; Milkoreit, 2017). In this way, imaginaries do not merely reflect normative visions of future realities; they actively participate in producing them by organising social and economic priorities and orienting governance toward particular pathways of change (Jessop et al., 2008; Levy & Spicer, 2013; Milkoreit, 2017). Importantly, this relationship is not unidirectional, from imaginaries to material outcomes, but recursive. Imaginaries shape practices and institutions, while material practices can communicate, reinforce, or contest imaginaries, contributing to their evolution over time (Watkins, 2015).

Against this background, I use social imaginaries as an analytical lens to examine, across all empirical material, what is perceived as normal, self-evident, possible, and desirable in relation to adaptation, and how these shared assumptions shape what adaptation comes to mean across different sites of meaning-making. Specifically, the analysis attends to:

- what is considered essential for collective and meaningful life - including relationships to place, identity, and wellbeing;
- what is taken for granted or treated as self-evident - including assumptions about development, growth, and nature-society relations;
- what must be sustained and protected;
- what needs to change, and what kinds of transformation are imagined as possible or desirable.

Risk

Social imaginaries delineate the shared horizons through which people make sense of social life, including what appears possible, desirable, or inevitable. In the context of climate change adaptation, these horizons are inseparable from how uncertainty about the future is perceived and negotiated (Ayeb-Karlsson et al., 2019; Mehta & Srivastava, 2020; Scoones, 2019). For instance, climate projections can make some future risks appear unavoidable, strengthening calls for anticipatory action. At the same time, uncertainty about the scale, intensity, or timing of impacts highlights that the future cannot be fully known, leaving room for alternative possibilities. In modern times, a key concept through which uncertainty is translated into categories that appear real, measurable, is risk. Risk is thus a keyway in which expectations about adaptation actions are made visible/communicated/constructed.

Following critical constructivist perspectives, risk here is not treated as an objective condition “out there,” defined solely by the probability of a future event waiting to be discovered (Granderson, 2014). Following Reith (2004), risk is a social practice through which uncertain futures are made visible, interpretable, and discussable, which are themselves shaped by specific temporal orientations and cultural and social contexts (Rühlemann & Jordan, 2021; Tschakert et al., 2017). For example, in early modernity, where interpretations of the future were largely predictable and controllable, risk rationalities emphasized calculation and prediction, while in late modernity, where the future is something that is not certain, risk has been used to reframe uncertainty. Importantly, through risk, uncertain futures are not only made visible, but also framed as something that can be anticipated, estimated, or even assessed. In this way, risk becomes a political tool through which how risks are classified, prioritised, and delimited can generate specific interests and choices

(Bulkeley, 2001). For example, decisions regarding time horizons, potential thresholds after which there is uncertainty about what may happen, what is at stake, and who is most affected have consequential effects on what is prioritised, often with distributive effects. Therefore, debates over risk are key in shaping meanings and debates over adaptation, including what it should prioritise, who it is for, and who is expected to bear its costs.

While there are certain stabilised risk perspectives, risk, due to its social construction, is never fully fixed. Because risk depends on framing, what is counted as harm, which forms of knowledge are trusted, and which futures are assumed, multiple risks can coexist and compete, shaped by lived experience, imaginaries, narratives, and representations (Granderson, 2014). For example, while experts may foreground projected impacts and prioritise quantifiable losses such as damage to housing or infrastructure, residents may emphasise place attachment, identity, and cultural continuity, orienting them toward different futures and responses. As such, risk rationalities are context-dependent, as they take form within specific socio-economic and cultural conditions and therefore remain open to interpretation, contestation, and plurality.

Building on these insights, I use risk as an analytical lens to examine how uncertainty about the future is made visible, harmful, and actionable across empirical material, and how this shapes meanings around adaptation. In practice, this means attending to:

- how the future is constructed as predictable or manageable;
- what is identified as potential harm;
- what is understood to be at stake if action is not taken;
- how is risk distributed, who is seen as more or less at risk and why.

Temporalities

Understanding climate change, and how to adapt to it, is often framed in temporal terms and shaped by specific ways of experiencing and organising time (Wardekker et al., 2025). For example, to understand what constitutes climate change, climate science has relied on “deep time,” using paleoclimatic records to trace climate variations over long periods, while recent changes are assessed against defined pre-industrial baselines to reveal their unprecedented speed. Future climate conditions are then projected through climate models that extend far into the future, extrapolating from past climate data to estimate the rate and direction of change. Policy, which often relies on linear notions of time, where time moves in a straight line from past to present to future, tends to focus on strategic planning in the present

through targets and time horizons, in order to address anticipated impacts expected to unfold in coming decades (Wardekker et al., 2025).

In local settings, however, research shows that people's perceptions and experiences of weather and climate, and their ideas about how to adapt, are shaped by more complex temporal experiences rooted in everyday social and cultural life (Bowden et al., 2019; Fincher et al., 2015; Jackson, 2021; McMichael & Katonivualiku, 2020). These temporal understandings form not only through direct encounters with weather and climatic variability, but also through changes in social relations, livelihoods, mobility patterns, and ways of living in a place. For instance, climate variability may be experienced through seasonal patterns, weather forecasts, or day-to-day changes in livelihoods, while decisions about how to respond to disturbances may be guided by short-term shifts or by ideas of deep uncertainty.

Against this background, in my thesis I examine how people make sense of adapting to climate-related risk through different experiences and interpretations of time using the concept of temporalities. Following (Wardekker et al., 2025), I understand temporalities as the different ways people in a specific place or situation perceive, interpret, and engage with time. Temporalities vary across social groups, historical moments, and cultural contexts, as different actors orient themselves toward different memories, rhythms, and temporal reference points (Lennon & Tubridy, 2023). At the same time, temporalities are always multiple: several temporalities can operate simultaneously, intersecting and shaping one another. In this sense, they are relational and produced through interactions among people, environments, institutions, and expectations (Wardekker et al., 2025). Temporalities therefore encompass seasonal rhythms of weather, work routines, and broader processes such as development or economic growth, as well as how time is felt and evaluated, for example through experiences of urgency, longer life-course perspectives, or short-term orientations. Importantly, because multiple temporalities can coexist and intersect, their encounters can generate struggles over which temporalities are prioritised and whose are marginalised, while also remaining open to reinterpretation and transformation (Pahl et al., 2014).

These different understandings of time are therefore central to how people make meaning around adapting to climate-related risk. They influence how adaptation is discussed, how people relate to it, how they interpret their own situation, and which actions come to seem appropriate or necessary. Seen through this lens, I use temporalities as an analytical lens to examine how different actors, across all empirical material, draw on distinct understandings of time to make sense of climate change adaptation and what it requires. In practice, this means attending to:

- how temporal orientations, including long-term linear trajectories, recurring rhythms, direct lived experience, and affective attachments to place, shape how change is experienced and interpreted;

- how the future is imagined in relation to the present and the past;
- how temporalities shape what is considered urgent versus what can be delayed;
- how competing temporalities can create tension in how adaptation is planned and experienced.

Research strategy, empirical context and methods

In this chapter, I outline the methodological foundations of this thesis, explaining how the research was designed, conducted, and situated. First, I begin by presenting the overarching research strategy, which is grounded in processes of deconstruction informed by case study design. Following this, I detail the empirical context I use to understand how adaptation is constructed, especially policy and lived experience. Then, I show the methods and data collection procedures used in the three papers serving as the empirical basis of my thesis. Finally, I offer some reflections on my own positionality in relation to the research process as well as the methodological limitations.

Research strategy and design

The aim of this thesis is to reveal how adaptation is constructed across different sites of meaning-making, particularly research, policy, and lived experience, with attention to unpacking the foundational assumptions that shape those constructions and the consequences that emerge when they meet in practice. As such, my thesis is an endeavour of deconstruction (Derrida, 1978). Deconstruction, as a research strategy, informs how I approach and explore the research questions posed in this thesis. Deconstruction, as a practice of critical science, seeks to break down and interrogate existing frameworks of meaning by uncovering the underlying structures and assumptions embedded in texts, discourses, and institutions. Rather than rejecting stabilised ideas or proposing fixed alternatives (Gaillard, 2021), deconstruction challenges the notion of stable meaning. It uses questioning and critical examination as method of inquiry, thereby opening up new possibilities for interpretation (Butler, 1992, p. 49).

While deconstruction has often been employed as a strategy to critically interrogate stabilised discourses, for example in the fields of disaster risk (Gaillard, 2021) or western conceptualizations of adaptation (Bauriedl & Müller-Mahn, 2018), I apply it more broadly: On one hand, by examining scientific assessments and policy frameworks that stabilise understandings and decision-making about adaptation, I

expose the underlying assumptions and potential limitations that sustain these dominant narratives. On the other hand, by examining how adaptation is constructed through lived experience, including the assumptions and perspectives that shape those constructions, I open space for reflecting on where these different understandings align, diverge, or prove difficult to reconcile in practice.

To specifically disentangle the processes through which adaptation is constructed in context, I employ a qualitative case study research design. A qualitative case study is a research strategy that investigates a contemporary phenomenon in depth within its real-life context, typically drawing on multiple methods and sources of evidence (Yin, 2009). While it can serve explanatory purposes, it is most often used to explore the factors that shape a phenomenon and its relationship to its broader context (Bhandarkar, 2010). Importantly, a case study does not aim for a complete or exhaustive understanding. Rather, it offers a partial view of empirical reality, emphasizing certain aspects while backgrounding others, with the goal of organizing knowledge in a focused and manageable way (Lund, 2014). Case studies are best conceptualized through the bounded empirical phenomenon of interest, that is, the specific issue, process, or experience the researcher seeks to understand (Schoch, 2020).

In this thesis, the phenomenon under examination is the construction of adaptation meanings in coastal settings. The case, then, refers to the specific unit of study through which this phenomenon is explored within a defined spatial and temporal context (Miles et al., 2013, p. 28). Specifically, I investigate how meanings of coastal adaptation within research, policy and practice, are constructed. I employ an embedded case study design (Yin, 2009), which allows for the inclusion of multiple units of analysis within a single case. This approach enables a more detailed and nuanced inquiry into the phenomenon under study.

In this research, the units through which I examine the production and reproduction of adaptation meanings are research, policy, and lived experience. Each of these is analysed in depth within the individual papers that comprise this thesis. This design allows for a richer understanding of the multiple perspectives involved in shaping what adaptation means and facilitates comparison and contrast across different domains of meaning-making.

Empirical study context

To reveal how coastal adaptation is constructed specifically within policy and lived experience, I use Barbados as the empirical context. In what follows, I describe the

historical, economic and environmental context, the selected study site, and an overview of coastal adaptation policies and practices.

Historical, economic and environmental context

From a constructivist perspective, adaptation does not emerge in a vacuum. How it is understood and structured is shaped by the broader conditions within which actors operate. In Barbados, these include the geographic and climatic vulnerabilities of a small island exposed to rising seas, as well as a colonial legacy, economic dependence on tourism, and persistent fiscal constraints. Below, I outline these conditions, which form part of the interpretive context through which adaptation is made meaningful at both policy and local levels.

Geography and environmental context

Barbados is the easternmost island in the Caribbean archipelago, bordered by the Atlantic Ocean to the east and the Caribbean Sea to the west. Covering a land area of approximately 430 km², the island measures 34 km in length and 23 km in width, with a coastline spanning 97 km. It is not only one of the larger islands in the eastern Caribbean but, with a population of approximately 275,000, also ranks among the most densely populated countries globally (Stanišić et al., 2021). Administratively, Barbados is divided into 11 units known as parishes.

Geologically, Barbados differs from its mountainous volcanic neighbours by exhibiting a flatter topography composed primarily of coral limestone, with comparatively little forest cover. The porous nature of this limestone allows rainfall to infiltrate the ground, where it is channelled into underground aquifers and stored as groundwater, later extracted through wells.

This coral limestone geology makes the island particularly vulnerable to flooding, an issue projected to intensify due to climate change. Increased frequency of intense rainfall events, particularly during the rainy season (June to November), is expected to overwhelm drainage systems, resulting in surface flooding (Government of Barbados, 2021). These flood events pose significant risks not only to infrastructure and settlements but also to groundwater availability which is the island's primary source of freshwater for both its population and key economic sectors, including tourism (Springer, 2020). Notably, Barbados is ranked among the top 15 most water-scarce countries in the world (Government of Barbados, 2021).

In addition to flooding, Barbados's relatively low elevation and coral limestone cap make the island particularly vulnerable to storm surges, which contribute significantly to coastal erosion. Projections of sea-level rise and increased tropical storm activity are expected to heighten the frequency and intensity of storm surges,

thereby exacerbating the risks of coastal flooding and shoreline degradation (Mycoo et al., 2021).

This vulnerability is further intensified by the concentration of socio-economic activity along the coast. A substantial proportion of the country's population, infrastructure, and human settlements are located within the coastal zone (Government of Barbados, 2021). Nearly 60% of Barbados's population resides in coastal areas, with approximately 25% living within 2 kilometres of the shoreline (Government of Barbados, 2021). Moreover, most of the tourism-related infrastructure, including hotels, guesthouses, restaurants, and beachfront properties, is situated within low-lying areas, typically at elevations below 10 meters (Mycoo et al., 2021). These settlement patterns render Barbados highly susceptible to the impacts of sea-level rise, coastal erosion, flooding, and tropical cyclones, placing an estimated 50% of the population and 95% of tourism infrastructure at significant risk (Government of Barbados, 2021). Compared to other Caribbean islands, Barbados's high population density and the large proportion of its population living in urban coastal areas make it one of the most climate-vulnerable nations in the region (Mycoo et al., 2021).

Although Barbados lies on the southern edge of the Atlantic hurricane belt and typically experiences minimal cyclone activity, it is occasionally struck by tropical storms and hurricanes, sometimes with severe consequences. For instance, in July 2021, Hurricane Elsa made landfall, causing widespread damage, including the destruction or severe damage of approximately 1,300 homes and disruption to essential services (Alleyne, 2019). More recently, in June 2024, Hurricane Beryl resulted in the destruction or damage of nearly 90% of the nation's fishing fleet, with estimated economic losses amounting to US\$96.5 million, equivalent to approximately 1.4% of Barbados's gross domestic product (GDP) (Nation news, 2024). In addition to direct hurricane impacts, the island remains vulnerable to other severe storm events (Nguyen & Robinson, 2019). Between 2000 and 2023, Barbados experienced 14 recorded natural disasters, of which storms accounted for approximately 71.4%. The cumulative economic losses from these events are estimated at US\$300 million (Central Bank of Barbados, 2024).

History and economy

Formally colonized by England in 1627, Barbados became an independent democratic nation in 1996 and transitioned into a republic on November 30th, 2021, marking its full political sovereignty. Its colonial history, especially the plantation system centred on sugar production and trade, has significantly shaped the country's social and economic structures (Bonilla, 2020; Leon Sealey-Huggins, 2017; Perry, 2022; Sheller, 2018). Below, I provide a brief overview of this historical trajectory, with particular attention to its implications for Barbados' reliance on tourism, high levels of public debt, current economic challenges and access to climate finance.

Almost 300 years of bondage with the British the plantation economy, sustained by primarily African slave labour, made Barbados one of the most politically stable and economically successful sugar-producing British colony (Beckles, 1990). However, while this status as a colonial centre once made Barbados a key hub for international trade in British America, and even the seat of government for the British colony in the 17th century (Mycoo et al., 2021), the decline in sugar prices in the mid-1800s drastically reduced the island's economic standing. In the period leading up to independence, and in an effort to prevent economic decline, Barbados began to position tourism as a key driver of economic development, capitalizing on its warm climate and attractive coastal landscapes. Following full independence, this shift toward a tourism-based economy gained momentum throughout the 1980s and 1990s. As part of this transition, Barbados sought financial support from international development institutions, particularly the International Monetary Fund (IMF) (Chase, 2019). These funds were used not only to develop tourism-related infrastructure such as hotels, restaurants, and roads, but also to modernize key facilities like the international airport, with the aim of boosting tourism and fostering economic stability. This strategic pivot transformed Barbados into an emerging regional economic leader, generating substantial development gains and elevating the country to the status of a high-income economy, a classification it continues to hold today.

While the tourism sector provided a foundation for economic security in the post-independence period, it has also left Barbados highly vulnerable to external shocks, particularly economic downturns linked to global recessions, such as the 2008–2009 financial crisis (Chase, 2019). During this period, the country's domestic debt rose significantly. By 2017, national debt had reached 159% of GDP, placing Barbados among the most indebted countries in Latin America and the Caribbean (Álvarez et al., 2019) a debt-to-GDP ratio that has remained relatively high in subsequent years. Barbados's economic challenges are largely attributed to its continued dependence on a single, climate-sensitive service sector: tourism (Álvarez et al., 2019). Today, tourism remains central to the national economy, generating approximately 50% of foreign exchange earnings and contributing up to 40% of GDP when indirect impacts are included (World Travel & Tourism Council, 2018). The sector also supports around 40% of total employment, both directly and indirectly (World Travel & Tourism Council, 2018).

The current administration, led by Prime Minister Mia Amor Mottley, which came into office in 2018, has adopted a proactive approach to economic reform, with the primary goal of reducing national debt. A key motivation behind these reforms is to create greater fiscal space and enhance Barbados's eligibility for financial mechanisms, particularly concessional funding, from which the country is currently excluded due to its middle-income classification. Among the major initiatives is a

reform program developed in partnership with the International Monetary Fund (IMF), which aims to reduce the debt-to-GDP ratio to below 100% by 2026 (Central Bank of Barbados, 2024). The government has also advocated for the redistribution of Special Drawing Rights (SDRs) using a revised classification system that accounts for vulnerability to natural disasters (Government of Barbados, 2021). In parallel, Barbados is exploring innovative private finance instruments to support climate adaptation and resilience, including green and blue bonds and debt-for-nature swaps. These reforms are complemented by continued investment in the tourism sector, still considered a key pillar of the economy, through tax incentives and other support measures for international investors (Chase, 2019).

Study site

For the empirical component of Paper III, which examines how people who live and work along the coast construct meanings around adaptation, I focused on a specific geographical area. The selected study site encompassed the western and southern coasts of Barbados, specifically Sub-Areas 6, 7, and 8 as defined in the Integrated Coastal Zone Management (ICZM) Policy Framework 2020–2030 (Figure 3). These areas were selected due their critical socio-economic importance, high exposure to climate change impacts, such as coastal erosion and sea level rise, and their prioritization by national authorities for adaptation interventions, including the constructions of groynes and breakwaters. Sub-Area 6 is notably shaped by concentrated tourism and residential development, while Sub-Area 7 represents the most densely populated region on the island. Sub-Area 8, meanwhile, is experiencing increasing tourism activity and plays a critical role in the island's fisheries sector (Government of Barbados, 2021). Photos 01, 02, and 03 provide a visual impression of these sub-areas. However, it is important to note that these images represent particular locations and moments in time, coastal conditions, levels of erosion, and adaptation interventions vary considerably across and within the different coastal zones.

The western and southern coastal areas of Barbados have undergone significant landscape transformation since colonial times which has contributed to their current vulnerability, and as such demands a brief overview. During the colonial period, Barbados's prominence as a British trade hub and the expansion of the sugar economy spurred rapid urban growth around Bridgetown. To accommodate this growth, extensive alterations were made to the natural landscape, including the infilling and draining of coastal swamps, the construction of canals, harbours, and railway infrastructure, and the widespread removal of mangroves and forest cover (Mycoo et al., 2021).

While these changes generated changes in the landscape, it was not until the last 60 years that with the rise of mass tourism, that coastal transformation accelerated.

Starting from the late 1970s, agricultural and rural lands were steadily converted into residential and tourism-related developments, particularly on the west coast, which included resorts, villas, timeshares, golf courses, and other amenities (Bunce, 2008). This period also saw continued mangrove loss due to unchecked construction, leaving only the Graeme Hall Swamp, approximately 20 hectares, as the island's last significant mangrove ecosystem (Schueler, 2017). Today, while 25% of the population resides within three kilometres of the coast (Government of Barbados, 2021), the low-lying coastal zones, defined as land contiguous to the shoreline up to ten meters in elevation, is predominantly occupied by tourism infrastructure. This spatial development pattern heightens exposure to climate-related risks, including sea-level rise, coastal erosion, and storm surges.

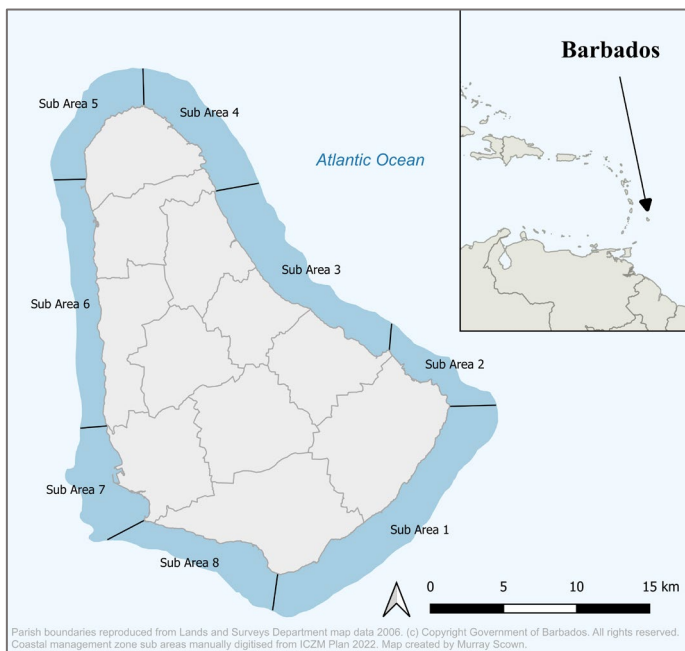


Fig. 4. Delimitation of the coastal management area, Barbados. Adapted from the Integrated Coastal Zone Management (ICZM) Policy Framework 2020–2030.

Map created by Murray Scown



Photos 01. Sub Area 8. Top image, Oistins Fish Market. Bottom image, white sandy beach along the southern coast of Barbados.



Photos 02. Sub Area 7. Top image, Richard Haynes Boardwalk along the southwestern coastline of Barbados. Bottom image, locals playing cricket on the beach at Carlisle Bay.



Photos 03. Sub Area 6. Top image, in transit along the western coastal road, illustrating the narrow strip of land between the road and the sea. Bottom image, beach around Speightstown, illustrating the proximity of hotels and coastal development to the shoreline.

Coastal adaptation policy and practice

Barbados' government is highly centralized, with most adaptation coastal management being coordinated by the central government (Mycco, 2021). Given the critical link between Barbados' coast and its economic and urban development, hazard management policies are deeply integrated into the country's national physical development strategies.

Notably, Barbados' two primary development frameworks, the Town and Country Planning Act (CAP. 240) and the Physical Development Plans (PDPs) published by the Barbados Town and Country Development Planning Office (TCDPO) – have a longstanding tradition of incorporating climate change adaptation and resilience. While earlier versions of these documents mentioned addressing climate and environmental hazards as key for sustainable national development, it was not until the PDPs 2017 publication that the term 'adaptation' was clearly and formally introduced as one of the main principles of this policy (Town and Country Development Planning Office, 2017a).

The most recent 2021 PDP is currently regarded as the main legal framework for shaping adaptation policy. It outlines strategies related to land use, settlement planning, food production, infrastructure, mobility, and environmental management; all aimed at enhancing national resilience under changing climatic conditions (Government of Barbados, 2021). Adaptation, particularly in coastal areas, is now considered central to the country's development agenda. While the PDP provides the overarching framework, the Government of Barbados introduced the Roofs to Reefs Programme (R2RP) to operationalise its goals by directing public and private investment toward climate adaptation (Government of Barbados, 2021). Although not exclusively focused on coastal resilience, R2RP seeks to establish a stable financing mechanism and institutional framework to support adaptation initiatives across sectors. Through these legal and programmatic tools, adaptation has become embedded in Barbados's development planning, recognized as the nation's main priority (Government of Barbados, 2021).

While these policy instruments have facilitated the integration of adaptation across various sectors and government agencies, coastal adaptation in Barbados has primarily been implemented through institutionalized coastal management practices led by the Coastal Zone Management Unit (CZMU). Established under the Coastal Zone Management Act (1998) and guided by Integrated Coastal Zone Management (ICZM) Plans, the CZMU plays a central role in addressing sea-level rise, intensifying storms, and other human-induced coastal challenges.

A core strategy of these ICZMs has been the 'hold-the-line' approach, which involves the installation of hard engineering structures such as groynes and

breakwaters to widen beaches and reduce erosion to protect infrastructure and property. Funded primarily by the Inter-American Development Bank, numerous projects have been undertaken, especially along the densely developed southwest and west coasts, to assess and mitigate coastal climate hazards. Complementary regulatory measures include mandatory building setbacks, requiring a minimum distance of 30 meters from the high-water mark for all new construction and 10 meters along cliffs, to limit exposure to sea encroachment.

Reflecting the government's growing emphasis on climate resilience, the 2021 update of the ICZM Plan marks a significant policy shift by placing adaptation and disaster risk reduction at the forefront of coastal planning. This latest iteration integrates risk assessments into the planning process and promotes ecosystem-based approaches to enhance long-term coastal resilience (Government of Barbados, 2021).

Methods for data collection and analysis

In my thesis I apply a qualitative approach aiming to understand how meanings around adaptation are constructed within research, policy and lived experience. Grounding my research in a constructivist paradigm, I do not assume a single, objective reality. Instead, I recognise that individuals' interpretations are deeply shaped by socially and culturally constructed personal experiences (Flick, 2022). Therefore, the goal is not to produce clear-cut answers, but rather to explore the deeper meaning of human experience and perspective (Silverman, 2021). Qualitative methods are thus well-suited to the aim of this thesis, which is to generate in-depth insights into the diverse dimensions of adaptation meanings.

It is important to note, that while the overall research design is qualitative, the systematic literature review included a descriptive quantitative element. Specifically, percentages were used to summarise the distribution of themes and patterns across the reviewed literature. These descriptive statistics were used to support the qualitative interpretation of the material.

Overview of methods

I applied different qualitative methods, specifically literature review, document analysis and semi-structured interviews, and did so in different stages of the research process and for different purposes. Table 2 provides an overview of this application and uses. Below, I provide specific information on each method used, the data collected, and how they relate to the papers. It is important to note that during the parts of the cross-paper analysis in this kappa, I draw on interview material that was

not included in the individual papers due to their specific scope and focus, but that became relevant when examining the consequence when different constructions of adaptation meet in practice

Systematic Literature review

This method allows for a comprehensive and structured overview of existing research on a specific topic. In this thesis, I used a systematic literature review (Luederitz et al., 2016) to examine how academic literature frames empirical assessments of adaptive capacity in coastal social-ecological systems (Paper I). This allowed me to get insights on how research construct ideas around adaptation through the conceptualization, operationalization and application of adaptive capacity assessments. Specifically: how the problem and purpose of the assessment are framed; through which theoretical lens adaptive capacity is understood; which societal level is prioritised; at what temporal scale change is expected to occur; what is understood to build or undermine adaptive capacity; how results are used; and who is involved in the assessment process.

Document analysis

Document analysis is a systematic method for reviewing and interpreting existing documents to develop empirical knowledge (Bowen, 2009). In this thesis, I used document analysis, focusing primarily on policy documents, to examine how meanings around coastal adaptation are constructed and legitimised in the context of Barbados (Paper II). Policy documents provided a valuable window into how adaptation is officially framed, imagined, and made actionable, revealing the assumptions, priorities, and visions that underpin formal adaptation planning in a small island coastal context. Beyond identifying these tendencies, document analysis also allowed me to contextualise and complement the interview material, capturing dimensions of how adaptation is constructed that extend beyond what interviewees explicitly articulated, including the institutional logics, political framings, and development priorities embedded in official texts.

Semi-structured interviews

Qualitative interviewees aim to produce knowledge from conversations in which individuals talk to each other to share how they experience the world, what they believe in, and what opinions they hold (Brinkmann, 2014). Among the various forms of qualitative interviewees, I employed semi-structure interviewees. This type of interview offers a more flexible format that give interviewees greater freedom to follow up or choose specific angles of a topic which hold personal relevance, while still maintaining enough structure to ensure comparability across interviews (Brinkman, 2014 p. 286). I used this method in two instances of the research.

First, I used semi-structured interviewees to understand how adaptation is produced and legitimized in the context of Barbados (Paper II), complementing the document analysis described above. These interviewees aimed to capture the participant's understanding on climate change, their perspective on the country's future and the role of adaptation. Initial participants were selected through research partners and additional participants were identified via snowball sampling (Noy, 2008). Although participants spoke from the perspective of their professional roles, their responses were not limited to official policy positions. In line with scholarship on elite interviews and power dynamics (Neal & McLaughlin, 2009), interviewees expressed multi-layered insights, including personal reflections and institutional viewpoints on climate change and adaptation. These discussions revealed participants' visions, emotions, and expertise which are crucial for understanding how adaptation is constructed.

Second, I used semi-structured interviewees to understand how people who either work or live along the coastline of Barbados (southern and western coast) construct ideas of adaptation (Paper III). These interviews aimed to capture how people understand and experience climate change and adaptation, including their perceptions of risk and vulnerability, their visions of desirable and possible futures, and the assumptions and values that shape how adaptation is understood and practised in the context of their everyday lives. To recruit participants for the study, I conducted a linear walk along the coastline of the study site, extending from the south coast to the west coast of Barbados. Along this route, I approached individuals who were either working or simply spending quality time along the coastline. Following an informal conversation, during which I introduced myself as a researcher, explained my presence in Barbados, and asked about their connection to the area through residence or employment, I presented the study's objectives and ethical protocols, and invited them to participate. Selection criteria were based on the depth and length of the interviews, and a purposeful effort was made to ensure diversity across geographic sub-areas, gender, age, and varying degrees of connection to the coastline to reflect a broad cross-section of coastal experiences. Participants included a diverse range of individuals involved in coastal livelihoods, such as tourism operators, hotel staff, beach vendors, fisherfolk, and fish vendors, encompassing both men and women between the ages of 35 and 68.

Table 2. Overview of the methods, data collected and their contribution to the research

Unit of analysis	Method	Type of material	Number	Contribution
Research	Document analysis	Peer reviewed empirical assessments of adaptive capacity in coastal social-ecological	42	Paper I
Policy	Document analysis	Latest national policies related to adaptation, including in coastal areas, as well as most recent NDC report submitted to the UNFCCC.	4	Paper II
	Semi-structure interviewees with policy makers involved in developing and implementing adaptation policies	Transcript of the interviews	13	Paper II
Lived experience	Semi-structure interviewees with islanders who live or work withing the southern-western coast	Transcript of the interviewees	36	Paper III

Research process and fieldwork

The empirical research for this thesis was developed over several years and across three papers. Paper I, a systematic review of adaptive capacity assessments in social-ecological systems, was carried out in collaboration with the research team of the EU Horizon 2020 project MaCOBIOS, which I joined at the outset of my doctoral studies. For papers II and III, I conducted two fieldwork visits to Barbados.

The first visit, carried out between May and July 2022, had a twofold purpose. First, I wanted to establish initial contact with various stakeholder groups involved in coastal adaptation and to gain a contextual understanding of adaptation management on the island. Second, it involved data collection, specifically conducting interviews with policymakers engaged in the development and implementation of adaptation policies. The insights from this visit were instrumental in shaping the design of the second and third papers, and I began drafting Paper II during this period.

The second field visit was conducted between September and November 2023. During this period, I focused specifically on collecting qualitative data through interviews with island residents who live and/or work along the coastline of the designated field study site (Paper III). In addition to conducting interviews, this fieldwork included direct observation and systematic walks along the coastal areas, particularly in the western and southern sub-regions where my research was concentrated. These activities provided deeper insights into the socio-economic and environmental conditions of the coastal zones. Following this visit, I began writing Paper III.

The first field visit took place during a transitional period immediately following the peak tourism season, while the second occurred at the end of the low season just before tourism activity began to rise again. This scheduling enabled a broader understanding of the island's dynamics in terms of economic activity and social interactions. It also facilitated greater access to local residents, who were generally less occupied with tourism-related work during this time.

Importantly, both field visits, especially the preparatory phases, were supported by close academic collaborators from the University of the West Indies, who, like me, are also involved in and funded by the EU Horizon 2020 project – MACOBIOS. Their guidance was instrumental in helping me contextualize the research, navigate the local environment, and establish initial contacts, particularly with governmental institutions.

In late April 2025, an earlier than anticipated start to parental leave meant that revisions to Paper II and the drafting of Paper III were paused for several months. I returned to work in December 2025, focusing on the revision of Paper II, the finalisation of Paper III, and the writing of this kappa. While this interrupted the continuity of the writing process and delayed the submission of some outputs, it did not affect the analytical direction or overall coherence of the thesis

Ethical considerations

The research activities, particularly data collection, processing, and parts of the analysis, were conducted in Barbados and were therefore subject to ethical considerations and approvals applicable in this country. At the national level in Barbados, there are no formalized, country-wide regulations or guidelines specifically governing research ethics. However, in alignment with best practices and given the collaboration with academic partners at the University of the West Indies (UWI), the research adhered to the university's internal ethical protocols.

Two ethics approvals were obtained from UWI's ethics committee, one prior to each phase of fieldwork. The initial approval (CREC-CH.00061/05/2022E) was granted in May 2022, and a subsequent extension was approved in October 2023. The

application process required submission of a detailed project description and a clear outline of the ethical procedures, with particular attention to data management and participant confidentiality. In addition, this research received ethical approval from the Swedish Ethical Review Authority.

During the first fieldwork, all potential interviewees were provided with a participant information sheet outlining the purpose of the research and data protection measures. Those who agreed to participate were asked to sign a consent form acknowledging their informed consent. In the second fieldwork, the same procedure was followed; however, in most cases, consent was given verbally rather than in written form, reflecting the informal and context-specific nature of interactions at that stage.

Positionality

Knowledge is always situated, produced from a specific standpoint rather than coming from an objective and detached perspective (Haraway, 1988). In my thesis, this idea is not only central to understanding how adaptation knowledge is generated by participants within the research context, but also in reflecting on how my own positionality has shaped the way I approached and conducted the research. Positionality refers to where the researcher stands in relation to the ‘other’, whether that be research participants or broader social structures (Merriam et al., 2001). This position, whether as an insider or outsider, is not fixed and can shift at various points throughout the research process (Merriam et al., 2001).

Throughout my research journey, I have moved between the positions of an insider, outsider, and something in between. I situate myself as a woman born and raised in Lima, Peru, where I lived, studied, and worked until the age of 28 before moving to Europe and Sweden for postgraduate studies. Although I have not lived on a small island or directly on the coast, I have long felt a deep connection to coastal spaces and to the struggles of communities who live in close relationship with the sea. My undergraduate studies focused on coastal and marine management, and I worked for about six years as part of the management team of a protected area consisting of islands and islets along Peru’s coast. During this time as a policy maker, I was actively involved in designing and implementing fisheries and tourism management plans. This work required coordination with a wide range of stakeholders, multi-level governance bodies, and international funding organizations – all in a context of growing pressures due to climate change. This experience shaped the perspective I brought into this PhD, including certain preconceptions about the tensions between meeting international policies and funding goals and the everyday policy perspectives and lived realities on the ground. Specially it led me to be interested in

exploring adaptation not just as a political process that can produce inequalities during implementation, but as a set of ideas formed even before concrete actions are planned, emphasizing the agency of local actors in shaping their own futures. This semi-insider status brought both benefits and challenges: it allowed me to relate to the struggles faced by policy makers in Barbados but also made it difficult at times to remain fully critical, particularly when producing knowledge that might question those very perspectives.

The positions of being an insider and outsider also became evident during my initial engagements with research partners from Barbados and throughout fieldwork. On the one hand, being a PhD student from a European University, living and working in Sweden, led some national partners to question my qualifications to conduct research in this context. This prompted me not only to emphasize the collaborative nature of the research whenever possible, but also to reflect on my role as a learner and observer, rather than someone evaluating from a distance, a stance I aimed to maintain throughout the entire research process. On the other hand, despite my affiliation with a European institution, my cultural position as someone from a developing country helped build rapport with participants. During interviews, various stakeholders, including those living and working along the coast, often referred to my background and drew comparisons between the development situations in Barbados and Peru. This likely contributed to a sense of familiarity and trust, making participants feel more comfortable and confident in sharing their genuine perspectives on climate change, adaptation, struggles, and future aspirations.

Throughout the research process, I did my best to reflect on my dual positionality, both external and internal, and how it influenced my perceptions, as well as the ways in which I processed and interpreted data. During fieldwork, I kept a reflective journal where I recorded interactions, personal reactions, and thought processes. This practice was instrumental in helping me understand my own standpoint and how it shaped the analyses I was producing.

Limitations

The methodological approach and data collection process adopted in this thesis are not without limitations. In what follows, I outline the most significant ones and the steps taken to mitigate them.

A first limitation concerns the case study nature of this research. While case study research is well suited to generating in-depth understanding, they do not aim for statistical generalization (Flybjer, 2006). The findings should therefore not be read

as representative of all Caribbean SIDS, but rather as offering critical insights into the assumptions shaping adaptation in one small island context, insights that may nonetheless resonate more broadly given shared colonial histories, development trajectories, and climate vulnerabilities across the region. Future research could build on these findings by extending the analysis to comparative cases or combining different methodological approaches to allow for greater generalization.

A second limitation relates to the retrospective nature of the cross-case synthesis presented in this kappa. The empirical material was originally collected and analysed through distinct analytical entry points, frames, imaginaries, and temporalities, each designed to address the specific questions of individual papers. Bringing this material together under a unified framework risks imposing a coherence that was not fully present in the original analysis, with some dimensions potentially better evidenced than others. This limitation was mitigated by grounding the synthesis in the recognition that these three dimensions are deeply interrelated and mutually constitutive rather than arbitrarily combined, and by returning systematically to the full empirical material rather than relying solely on the conclusions of individual papers.

A further limitation relates to participant recruitment. Interviews with policymakers and institutional actors were conducted using snowball sampling, whereby initial participants recommended subsequent ones. While common in qualitative research, this approach carries an inherent risk of bias, potentially privileging more visible or powerful actors while obscuring perspectives from those with less institutional power (Robinson, 2014). To mitigate this limitation, I sought to diversify recruitment by actively pursuing participants beyond initial referral chains, and continued data collection until saturation was reached that is, until additional participants no longer added substantial new insights (Creswell, 1998). Related to data collection, another limitation concerns the walking interview method used to access participants within coastal communities. Because participants were approached based on their presence in particular spaces at particular times, rather than through purposive selection, certain groups may be underrepresented, including younger residents, and those whose livelihoods do not bring them to coastal areas during fieldwork hours. To partially mitigate this, fieldwork was conducted across different times of day and different periods, in order to capture a broader range of people present in these spaces at different moments. Nevertheless, the sample may still reflect the demographics of those most visible in coastal areas, and future research could enrich these findings by deliberately including more diverse voices in terms of gender, age, and socioeconomic background.

A final limitation concerns the temporal scope of the policy analysis. In the final stages of this thesis, the Government of Barbados released several new policy documents relevant to climate adaptation, most notably the Second Nationally

Determined Contribution (2025–2035). Published after data collection and core analysis on adaptation construction within policy were completed, these fall outside the temporal scope of this research and are therefore not examined. Nevertheless, they suggest that the imaginaries shaping constructions of adaptation in Barbados continue to evolve, and future research could valuably explore how these emerging frameworks reinforce, challenge, or extend the constructions identified in this work.

Findings

In this chapter I show how meanings around coastal adaptation are constructed across different perspectives and what are the consequences that emerge when differently grounded construction meet in practice. I begin with explaining what assumptions shape meanings of adaptation in coastal setting in research and policy, and how these assumptions are formed by broader cultural, historical and epistemic context, and how they relate to each other (RQ1). Then, I show how people who live and/or work along the coastline of Barbados create meanings around adaptation, and how the assumptions that shape these meanings are related to research and policy understandings (RQ2). Lastly, I examine what consequences, including blind spots, emerge when different constructions of adaptation encounter in practice (RQ3).

Constructing adaptation meanings in research and in policy

In this section I reveal how research (Paper 1), and policy (Paper 2), constructs ideas about what adaptation is in coastal systems, and how these align or differ. Throughout the section, I also reflect on the structures and conditions that influence how assumptions underpinning such constructions are formed and gain prominence in research and policy.

Adaptation to what? Assumptions about threat, time, and urgency

My findings from Paper I reveal that the reviewed scientific adaptive capacity assessments of coastal systems, understand the capacity to adapt is through various theoretical underpinnings, including risk-hazard vulnerability (41%), vulnerability-livelihood approaches (33%) and social vulnerability (25%). Importantly, there is a prevailing assumption that adaptive capacity is aimed at strengthening community responses to predominantly climatic hazards. These climatic hazards are mostly related to sea-level rise and associated impacts (76% of studies, Paper I), while around one quarter of the studies move beyond such assumptions to explicitly incorporate socio-ecological entanglements, such as fisheries decline in relation to climate change. Most likely this is because, irrespectively on the theoretical

underpinning used to understand adaptive capacity, when it comes to the operationalization of the assessments, the most used framework in the assessments reviewed was the vulnerability approach based on the TAR/AR4 IPCC guidelines (IPCC, 2001; 2007) (67% of studies, Paper I). In this framework, exposure refers primarily to “nature and degree to which a system is exposed to significant climatic variations” (IPCC, 2011), which is understood as the main stress that drives vulnerability (Sharma & Ravindranath, 2019).

In policy, the construction of risk that shapes what adaptation means is more nuanced than in scientific assessments, and this nuance operates precisely through how vulnerability is understood. My findings show that policy situates vulnerability, particularly within the coast, within longer temporal horizons, linking it not only to increasing climate impacts in the future, but also to historical processes of colonial development and economic restructuring (Paper II). In this sense, policy implicitly draws on a broader understanding of vulnerability, one closer to the AR5 reconceptualization, in which vulnerability is repositioned as an inherently social condition, shaped by historical and structural processes, that climate hazards may exacerbate (Ishtiaque et al., 2022). This is evident, for instance, when policymakers connect the early development of the coastline, relative to other neighbouring islands, to colonial and post-colonial socio-economic structures, linking these to the intense urbanization and significant habitat change along the western and southern coastline. Yet this broader framing does not necessarily translate into a broader understanding of what constitutes risk. Rather, historical vulnerability is mobilized to reinforce the severity and inevitability of climatic impacts, as shown in policy projections of future risk directly connected to climate change, especially sea-level rise and tropical storms: “*even under the smallest sea-level rise scenario, 37% to 72% of highly valued beach resources in Sandy Lane and Holetown could be lost, and coastal inundation would significantly disrupt economic and social sectors with knock-on effects*” (Government of Barbados, 2018, p. 49). In this sense, the development and economic model that produced the current coastal vulnerability remains unquestioned, while risk is defined as what climate change will do to it.

This sense of inevitability is reinforced by a linear temporal understanding of change, in which the past shapes the present and the present projects into the future (Paper II). Within this framing, climate risk is not positioned as a distant or hypothetical threat, policy documents describe climate change as already '*wreaking havoc on Barbados*', collapsing in this way the distance between present conditions and future impacts. Risk is thereby rendered not as something that might happen, but as the logical continuation of what is already underway, making climatic harm feel like common sense rather than contingency. It is within this construction of inevitable risk that adaptation emerges as a source of hope, a means of ensuring that the future is not wholly defined by impending catastrophe (Paper II).

What becomes thinkable as adaptation: assumptions about assets, progress, and transformation

While assumptions about risk shape which uncertainties are rendered calculable and therefore actionable, social imaginaries, involving what seems possible and desirable, shape the horizons within which adaptation becomes thinkable. In scientific adaptive capacity assessments, my findings show a widespread underlying normative vision that social improvement occurs through the expansion of economic dimensions, access to assets, and livelihood opportunities (shown in 86%, 60%, and 59% of the papers respectively) (Paper I). Although this assumption exerts substantial influence, a smaller number of studies foregrounds social improvement through the mobilization of capabilities related to institutional coordination, reflexivity, and collective learning (shown in 30%, 12%, and 19% of the articles analysed respectively). Whether through increasing assets or mobilising them, these approaches assume that society is composed of rational and autonomous actors capable of making strategic use of available capacities (Moore et al., 2018). If the capacity to adapt is imagined as something individuals can achieve or mobilise through their own resources and decisions, then it follows that adaptive capacity is best assessed at the level of the individual. This logic is reflected in the predominance of individual- or household-level indicators (83%), such as income level, used to measure adaptive capacity, while only 17% of studies considered cross-level interactions, such as community–government cooperation or intergovernmental resource allocation (Paper I).

In policy, my findings reveal that adapting to climate change is imagined as an opportunity for transformation, particularly in relation to the historical causes of vulnerability (Paper II). Yet despite this more expansive language, the imaginaries underpinning what transformation entails rest on assumptions not unlike those found in scientific assessments. Where research imagines adaptation as achievable through enhancing individual assets and capacities (Paper I), policy imagines, under the logic of transformation, as achievable through improved institutional arrangements and market mechanisms, green and blue economy strategies, sustainable tourism, and strengthened regulatory frameworks. (Paper II). Through these strategies, and as framed across several policy documents, a more environmentally conscious form of development pursued under the umbrella of sustainable development becomes possible. This vision, however, is not ideologically neutral. It is rooted in Eurocentric development and planning rationales (Felli, 2001) that have been identified as deeply embedded in mainstream adaptation thinking (Haverkamp & Snorek, 2026). The appeal of such an imaginary lies in its capacity to reconcile environmental concern with continued economic growth, promising improvement without fundamentally disrupting the socio-economic order that produced vulnerability in the first place (Ellis & Tschakert, 2019; Karlsson et al., 2023).

My findings from Paper II further reveal how this imaginary of transformative adaptation is concretized and legitimized through two interrelated logics. The first concerns the coastline itself: protecting its 'pristine' beach landscape through hard engineering interventions is justified through both economic and cultural rationales. Drawing on long-standing imaginaries of "trickle-down" growth, multiple interviewees articulated how safeguarding coastal tourism is expected to generate benefits for all. But the justification extends beyond economics, the coastline is framed as central to collective well-being and Barbadian identity. As one policymaker reflected, *'even if the majority of Bajans cannot swim, if you take the beach from Barbadians there will be serious troubles.'* Maintaining the beach landscape is thus imagined as safeguarding not only economic livelihoods, but the social and affective foundations of life on the island. The second logic concerns finance: economic growth is positioned not merely as a practical means of funding adaptation, but as a matter of justice. As a middle-income country largely excluded from concessional financing and Official Development Assistance (ODA), Barbados faces significant restrictions in accessing the resources needed to fund climate resilience. Policymakers consider this deeply unjust: it is wealthy, high-emitting countries that have produced the conditions of vulnerability in Barbados, yet the international financial system fails to provide adequate support to address it. Securing greater adaptation finance, through strategic regulation and investment promotion, is therefore imagined not merely as a practical necessity, but as a rightful claim against a global order that both generates vulnerability and denies the means to respond to it (Paper II).

Acting in the present, sustaining the future: assumptions about stability and temporal change

My findings from paper I suggest that adaptive capacity within scientific assessments is treated as a stock, rather than a process, measured at a point in time and implicitly assumed to persist under future conditions. This is evident, for example, in how temporal variation enters the analysis exclusively through the climate variable: 74% of studies used past or current climatic data to evaluate present levels of adaptive capacity, while 21% projected future exposure scenarios forward, yet in both cases the capacity itself remained static. Only two studies considered how adaptive capacity might itself change over time. The result is a temporally flat picture in which future climate stress is modelled with increasing sophistication, but the social, political, and ecological conditions that shape capacity are held constant. What is absent, then, is not attention to the future per se, but attention to the dynamics that could erode, reconfigure, or exceed adaptive capacity over time.

In relation to policy, my findings from paper II suggest that adaptation is imagined, within a linear development temporality, in which temporal change, one that goes from past, present to the future, in which temporal change is equated with progress,

measured through economic growth. This is shown in two ways. On the one hand, coastal protection structures, for instance, are valued not only from protecting the coastline to the impacts of climate change, but for advancing a vision of sustainable development, one in which tourism-driven economic growth, social-well-being and environmental stability are mutually reinforcing. On the other hand, adaptation is imagined as the path to avoid a reverse trajectory. For instance, when describing potential extreme weather events, policy makers warn that such events could “*jeopardize the development of what has been achieved so far*” which could “*set Barbados back by decades of development*” (Paper II). This temporal framework is not neutral. Scholars have argued that such linear, progress-oriented conceptions of time are deeply rooted in Eurocentric modernity, rendering alternative temporal perspectives unintelligible (Helgesson, 2014; Hunfeld, 2022). Within this logic, adaptation then becomes intelligible as the continuation of development, protecting what has been built and ensuring progress is not reversed, rather than as an opportunity to reflect on or reconfigure the developmental model itself.

Meaning making of adaptation from place-based experience

In this section, I show how people who live and work along the Barbadian coastline construct meaning around adaptation, and how this relates to research and policy understandings (RQ2). I draw primarily on empirical material presented in Paper III (lived experience), with additional insight from Paper II (policy) and Paper I (research).

Shifting rhythms and seeking stability through everyday adjustments

In both research and policy, adaptation is meant to address a problem that is defined in broadly similar terms: climate-related hazards are expected to intensify, and adaptation, including efforts to enhance adaptive capacity, should be undertaken now to prepare for the worsening impacts of climate change (Paper I; Paper II). In policy, this is reinforced by casting the present as already precarious, which makes a dystopian future appear not only plausible but inevitable, and positions adaptation as the necessary response to avert it (Paper II).

Consistent with these constructions, my findings in Paper III show that people who live and work along the coastline of Barbados also experience the impacts of climate change as escalating. People spoke of personal experiences and observations of sea-level rise, coastal erosion, flooding, and increasingly unpredictable rainfall and wind patterns, and they expected these to intensify in the future. However, whereas policy frames escalating risk as long-term disruption projected linearly into the future, the people I interviewed also experienced it through shifts in the rhythmic patterns of

everyday life. These shifts related to seasonal regularities, such as familiar tidal and erosion cycles, and to weather tempos that no longer aligned with long-held experiences of living in coastal spaces. For instance, in relation to weather patterns, including precipitation, one person commented: “*Right now, we were supposed to have rainy season, but you cannot predict that anymore. Before, you could, you knew that in between July and October there would be the rainy season. Now it is the end of October, and we are getting a lot of rain still.*” Similarly, people described shifts in the rhythmic cycles of erosion and sand deposition along the shoreline, changes that, while understood as part of the coast's normal dynamics, now felt out of pattern. As Adrian, who was born and raised in the north of the island, reflected: “*I used to walk around here... you could not lose the sand from your feet... now you cannot walk along the coastline anymore.*”. For others in the south, the change manifested differently, not as erosion but as unexpected sand accumulation and a widening beach. What mattered across these accounts was not the direction of change but its disruption of familiar coastal rhythms.

Unlike in policy, where adaptation is positioned as anticipatory, acting now to avoid or mitigate a future framed as inevitably worsening (Paper II), people who live or work along the coastline constructed adaptation differently, based on their own experiences of change. Because environmental change was experienced through shifting rhythms rather than linear projections, adaptation was given meaning as incremental and practical adjustments made in and through everyday life as familiar patterns shifted (Paper III). Rather than planning for a distant future, adaptation meant responding to uncertainties encountered in daily engagement with place, for instance adjusting routines to less predictable weather, finding new ways to access stretches of coastline reshaped by erosion, or installing coastal defences earlier than once felt necessary. These were not grand transformative gestures but quiet, ongoing recalibrations of everyday life to rhythms of weather and the erosion and sand deposition in the coast that no longer behaved as it once did.

Yet even though people did adjust their daily routines to respond to change, it does not mean such changes were simply accepted as unavoidable, but they affected people deeply. As familiar rhythms of weather and ocean became less reliable, participants expressed uncertainty, anxiety, and a sense of temporal disorientation (Paper III). This concern was most pronounced among those whose livelihoods depended on knowledge about the regularity of rhythmic weather conditions, such as fishers. Importantly, for them, it was the intersection of environmental unpredictability with rising costs of living that made adapting to such changes increasingly difficult.

Beyond climate impacts: nature's agency, development and limits of control

In both research and policy, adaptation to climate change is constructed through imaginaries that reflect a broader nature-society duality. In research, enhancing the

adaptive capacity of coastal systems is treated as the primary means of reducing vulnerability to climatic hazards, hazards that are cast as external forces acting upon social systems (Paper I). In policy, this duality is particularly evident in the logic underpinning hard infrastructure interventions along the coastline, where climatic impacts are framed as something to be controlled and resisted. This is reflected in the language of policymakers, who describe coastal change in terms of siege and defence: “*the waves are attacking, the shoreline is disappearing, and we need to defend*”, “*defend your property*”, or “*push back*” the sea (Paper II). Such patterns echo what scholars have long argued: that dominant adaptation practices are grounded in a 'nature-culture' duality in which humans and nature are treated as separate, with humans positioned to control and manage the natural world rather than being part of it (Do Thi & Dombroski, 2022; Nightingale et al., 2020; Tschakert, 2022; Tschakert et al., 2021).

Among people who live or work along the coastline of Barbados, nature, expressed through changing weather patterns and intensifying climatic conditions, was also understood as something that needed to be navigated. However, particularly among older residents and those whose livelihoods were closely tied to the coast, such as fishers, adaptation was constructed through a fundamentally different socio-nature imaginary (Paper III). Coastal change, expressed through shifts in the rhythms of erosion and sand deposition along the shoreline, was not framed as an external threat to be controlled, but as an expression of nature's agency in response to long-term human interventions. In this view, tourism development and hard-engineered adaptation structures, such as groynes and breakwaters, had disrupted the rhythmic dynamics that once characterised the coastline (See picture 04). Coastal erosion was thus interpreted not as a climatic hazard to be resisted, but as nature's response to a human-made imbalance, a sign that the coast had been pushed beyond its own rhythms.



Picture 04. Rock groyne along the southern coastline of Barbados, of the kind referred to by interviewee.

This interpretation is exemplified in the comments of one interviewee, who, referring to an adaptation project installed along the southern coastline, stated: *“When you do things that are not natural, it causes trouble. For example, the lovely boardwalk right there—they had to take some of the sea to make it. So, when you take some of the sea, the sea will always come back and take it back (...) because the sea was there, and then you move it back to put something, the balance is lost”*. (See picture 05). In this comment, coastal erosion was not understood as the result of climate change impacts, especially sea-level rise, on the shoreline, as it is typically framed in research and policy, but rather as nature’s reaction to unrelenting human intervention. Erosion therefore becomes legible as the beach’s response to the disruption of its temporal and spatial rhythms by human-built forms.



Picture 05. Rock armour revetment and boardwalk along the southern coastline of Barbados, the adaptation project referred to by the interviewee.

Within these understandings, people who either live or work along the coastline construct adaptation not necessarily as a response to escalating climate risk, but as a form of care for nature: attending to coastal dynamics and balancing economic activities with the rhythms of the beach (Paper III). Yet this was also seen as increasingly unlikely. Drawing on memories of how coastal development, particularly the expansion of tourism and the implementation of coastal protection infrastructure to support it, had reshaped the coastline, residents held low expectations that this pattern would change. As suggested by one interviewee, nature would continue to “*push back*” against sustained intervention, producing changes that were ultimately beyond control.

Adaptation now? Urgency, deferral and endurance

In research and policy, adaptation is typically constructed in relation to climatic hazards expected to intensify over time (Papers I and II). In Barbados, this framing is further shaped by a strong sense of urgency, as climate change is seen not only as an environmental threat but also as a risk to development gains and future progress (Paper II). Adaptation thus becomes both a response to climatic impacts and an urgent effort to secure the island’s developmental future.

While escalating environmental change was acknowledged and often experienced with concern by people who live or work along the coastline of Barbados, the understanding that these changes were urgent and demanded immediate intervention was not universally shared (Paper III). Younger participants, perhaps more attuned

to climate change narratives circulating in island contexts, often aligned with policy assumptions, speaking of the urgency of acting now to control climate risks and safeguard their ways of living and their future. A second group, usually of middle to older age, recognized that climatic changes were likely to intensify but did not construct them as risks demanding immediate action. For this group, environmental change, especially unpredictable rainfall and more intense storms, was understood through cyclical patterns of disturbance, endurance, and return, grounded in previous experiences of having lived through such episodes and come through them. This is captured in one participant's reflection on tropical storms: "*there was a big storm, they told me to stay at home, but I went anyways. I kept working, nothing happened to me... nothing ever happens.*". A third group questioned whether catastrophic change would materialise at all, drawing on the island's historical fortune of having avoided the worst: "*it has never happened here; we have always been so lucky. We have always been able to bypass it, I don't think it will come*" (Paper III). For a fourth group, present and more immediate demands, paying bills, working, juggling multiple jobs, took precedence over uncertain future threats. For these participants, increasing climatic risk was not denied but deferred, becoming salient mainly when it produced visible and practical disruptions that could no longer be absorbed into everyday routines, and otherwise understood as a concern for future generations.

Still, another group of people I interviewed interpreted the environmental changes they experienced not as a source of risk, and therefore not as something that required preparation. This understanding was grounded in the view that environmental change forms part of broader cyclical rhythms of creation, decline, and renewal governed by divine will. As one interviewee put it, "*The Bible says these things will happen (...) I don't worry; I cannot do anything about it.*" Such a perspective enabled participants to accept these changes, as they were perceived as beyond human agency, and gave reassurance that they would ultimately be alright, leaving little reason for worry.

Different meanings about adaptation: consequences and blind spots

In this section, I examine what happens when different constructions of adaptation encounter one another in practice. The analysis draws primarily on empirical material from policy (Paper II) and lived experience (Paper III) on adaptation in Barbados. It is also supplemented by interview material not included in the papers, but relevant for the cross-paper analysis I develop here.

Engineered coasts, overlooked meanings

Different assumptions shape what adaptation means in policy (Paper II). One with practical implications for coastal space is the understanding of adaptation as the protection of the coastline. Within this framing, as my findings show, the coast, and pristine beaches in particular, are seen as central to Barbadian ways of life, collective identity, and national development, especially through tourism. This imaginary renders hard infrastructure, such as groynes and breakwaters, as the most rational adaptive response: measures designed to “defend” the coastline from climatic impacts, thereby preserving well-being and allowing development to continue.

While the economic importance of the coast and its cultural significance are not in question, my findings from Paper III show that there are other ways of relating to the coastline, including different understandings of what is valuable and therefore worth protecting, which are not considered in mainstream adaptation practices. People I interviewed observed changes in coastal dynamics and were concerned about these changes. However, what the coast means to them extends beyond its pristine attributes that are frequently presented in Barbadian tourism brochures that widely shaped the global image of the island. It is about access and walking along the coast, about seeing and being in the landscape, an aesthetic and embodied experience shaped by how people have lived with and along the coast over their lifetimes. As such, it is not that local people disagree with the idea that the coast is central to their well-being, as imagined within policy, but that what the coast means for their well-being is fundamentally different.

Moreover, from the perspective of those living or working along the coastline, adaptation infrastructures, such as groynes or breakwaters, have reshaped coastal dynamics in ways that undermine their long-standing connection to the coast. For instance, some respondents expressed sadness that they could no longer walk along the coastline as they used to. As one interviewee commented, “*I used to walk around here... you could not lose the sand from your feet... now you cannot walk along the coastline anymore. It makes me sad.*” Others, referring specifically to increased tourism development along the coastline, expressed sadness that they could no longer see the land- and seascape they were used to. As another participant mentioned, “*Sea level rise? It does not impact me, only the sense in the eyes, you cannot see the beauty of the beach anymore. Seeing no beach affects me because it is not how it used to be.*”

While these experiences may reflect changes shaped by multiple interacting processes, including climate-driven erosion and development pressures, the analytical point here is not primarily about how these infrastructures may themselves have contributed to changing the coastline. Rather, the point is that the assumptions through which these adaptation infrastructures are implemented,

materialized both in their installation and in the development model they are designed to sustain, do not necessarily encompass what people value about the coast. It is precisely through this omission that adaptation, in what it builds and what it protects, can produce harm where it intends protection.

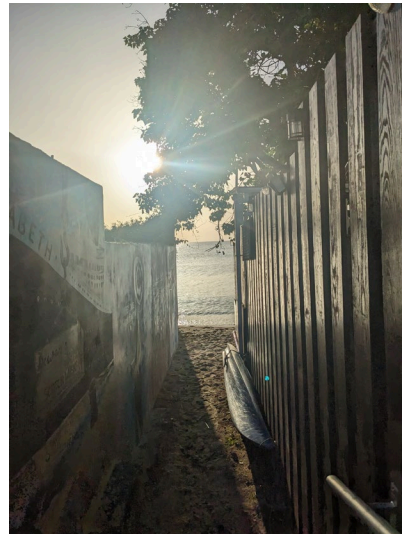
Imaginary of pristine conditions and trickle-down adaptation

Adaptation policy in Barbados, is primarily constructed through preserving the coastline with hard-engineering infrastructures, grounded in the assumption that maintaining a “pristine” coastal landscape will support tourism, whose benefits are assumed to “trickle down” to the wider population (Paper II). Maintaining such conditions is furthermore seen as key to unlocking new development opportunities and supporting the island’s future development (Paper II). Together, these assumptions construct a particular understanding of adaptation: one in which its purpose is to safeguard a space of pristine beaches and, by doing so, the economic activity and future development of all Barbadians.

While this understanding might be internally coherent and, in certain respects, pragmatically justified given Barbados’s economic dependence on tourism, it operates as a singular framing that can narrow other experiences around the distribution of benefits and burdens of development, including those associated with tourism gains. In my walk-along interviews, many people who live and work along the coastline expressed scepticism about the benefits of tourism development and the government's support for it. Many felt that such benefits do not in fact trickle down to them, receiving only a small share of what the industry generates. As one vendor working along the coastline observed: *“We have to work harder nowadays, we that come from outside. Once they (tourist) come to the hotels, everything is already booked for them, jet skis, dinners, drinks, everything is almost fully inclusive. So as a tourist you come to the hotel, and everything is provided for you. We don't get anything from that.”* Another participant, who worked part of the year in tourism and part in fishing, was more direct: *“See that big yacht over there? Money calls money. Tourism only benefits the already rich.”* As these accounts suggest, the benefits of tourism development do not necessarily reach those who live and work along the coastline, reflecting broader concerns raised in the literature about how foreign-controlled resorts in Barbados (Jönsson, 2018) and across the Caribbean (Sealy, 2018; Russell, 2020) tend to generate economic leakages that limit the share of tourism revenue retained by local communities.

Moreover, people working in hotels along the coastline, revealed the precarity embedded in tourism-based livelihoods. They described seasonal employment, long hours, and low pay, under conditions shaped largely by foreign-owned operations. One of my interviewees, who had worked for nearly 20 years in one of the most exclusive hotels in Barbados, explained how eight years ago they turned to fishing, a livelihood they described as equally uncertain, but one that afforded them better

living conditions, including less stress and fewer long hours. As he accounted *“sometimes in tourism things get really slow, in the low season specially, when it is very low, sometimes you cannot work, you do not get paid, and when you do work, its long hours for a low pay (...)I feel happier now, more flexible in time”*. Others described how tourism development along the coastline had gradually restricted their access to the sea. While beaches in Barbados are legally public, the concentration of hotel infrastructure has made access increasingly difficult in practice, requiring residents to walk further, navigate around private grounds, or avoid stretches of coast they once moved through freely. The coast had not been closed off in law, but it had been reorganized around visitors rather than residents. As one interviewee commented *“along the coastline, there are not too many public access to the beach (...) you have to walk all the way to go to the beach, you have to cross to somebodies’ property in many cases. The next access would be next to sandy land, and the for the next one you would have to walk more down. Many years ago, you could access the beach from any point but now is not so easy. Every hotel has built along the coastline, they should have leave an access to the beach for the public, but they didn’t”*. Or as other commented *“the government says that the beach is not private, but yet then hotel owners come and take over the beach ans say this is ours, but how the beach can be yours? The beach is public. But you see, even here, all these people (tourist) are here, they have that barricade that says Sandals’ property (hotel name)”*. (See pictures 06).



Pictures 06. Examples of restricted public access to the beach along the southern and western coastline of Barbados, a narrow public access corridor between hotel properties (left) and a fenced passage to the shore (right).

The analytical point here is not primarily about the tourism industry or the inequalities it generates, but about what happens when one understanding of adaptation becomes dominant. In Barbados, coastal adaptation is organized around a single imaginary: that the coastline must be maintained in its pristine condition to withstand climate change and support national well-being. This imaginary is grounded in recognition of historical vulnerability and connects to something meaningful: the coast as central to Barbadian identity and collective life. Yet the inner logics through which it operates, tourism-led growth, foreign investment, coastal infrastructure, are not neutral. Even as adaptation policy in Barbados has become more environmentally attentive, evident in coastal setback regulations, planning controls, and erosion reduction measures, the inner logics organizing these responses may nonetheless continue to channel coastal development along familiar lines, raising questions about whose needs and values adaptation ultimately serves.

Local constructions of risk: overlooked dimensions of adaptation planning

In Barbados' policy circles, adaptation is typically constructed as a means of regaining control over a climate future that is seen as both predictable and dystopian (Paper II). In this understanding, risk is fundamentally framed as disruption: the possibility that increasing climatic impacts, including extreme events, could derail developmental gains accumulated over decades (Paper II). From this framing follows a clear urgency to act, prepare, and anticipate this imminent risk.

From the perspective of people who live and work along the coast, however, this was different, as I showed in the previous section. Some, drawing on temporalities of the past, considered there to be risk, but not an urgent one. Others did not consider risk in the same way at all, particularly in relation to religious beliefs. The interaction between these two perspectives, policy constructions of risk organized around urgency and preparedness, and lived understandings of risk grounded in everyday concerns, created a gap between what policy said and how people related to adaptation. This was illustrated in one episode during my fieldwork. One afternoon, a severe tropical storm moved close to the island, bringing several changes, including flooded roads and sharply increasing winds. Official warnings called for all outdoor activity to cease. As I was on my way back home and passed through the market area near my house, I noticed that several food vendors had not closed. I stopped and asked one of the vendors whether he had heard the warning. His response came without hesitation or concern: of course he had heard it, but he was used to this. He had seen worse. He could not just stop working because of a storm. Compared to the many storms he had weathered in his lifetime, this one was ordinary.

Adaptation to these risks, including the capacity to cope with increasing flooding and stronger tropical storms, forms part of the portfolio of options and strategies of the Barbadian government. This includes early warning systems for hurricanes and

tropical storms, which are intended to allow people to take protective measures. However, the example above shows how important it is to understand that responsiveness to these adaptation actions is shaped by how people themselves understand risk, including their own perceptions of resilience and their expectations of future variability. As such, limited engagement with these measures is not a failure on the part of communities, but evidence of different understandings of what risk means for people and how they deal with these risks, which ultimately should inform and shape more effective and equitable adaptation policy. Thus, supporting long-term adaptation requires attention not only to potential future risks and how to adapt to them, but also to how such risks are anticipated by local people and to their belief in their own capacity to cope.

Discussion

In the previous chapter, I presented the findings of my thesis. These addressed how coastal adaptation is constructed in research and policy, including what assumptions underpin them and how they relate to each other, how adaptation is constructed through lived experience, and how these compare to research and policy framings, and what consequences emerge when different constructions meet in practice. Across these findings, I show how assumptions about risk, social imaginaries, and temporalities shape each construction. In this chapter, I discuss each of these findings and interpret their meaning in relation to previous research, specifically within the context of Caribbean SIDS where my empirical material is situated.

Diverse framings, persistent logics: reimaging or repacking what adaptation means?

To move beyond what Siders & Pierce (2021) calls the persistent 'ghost' of rationality in adaptation governance, research has called for greater transparency about the assumptions that shape adaptation decision-making (Arteaga et al., 2023; Nalau, 2025; Siders & Pierce, 2021). The first part of my thesis responds to this call empirically, by tracing the foundational assumptions embedded in adaptive capacity scientific assessments and adaptation policy framework, and how these shape what adaptation comes to mean within these contexts.

In relation to how adaptation is constructed within research, my findings reveal an increasing sophistication in how adaptive capacity is conceptualized and assessed, evident for instance in the diversification of analytical frameworks and growing attention to dimensions such as socio-cognitive conditions, including physiological factors. Yet when it comes to operationalization, persistent underlying assumptions about how risk is interpreted, how adaptive capacity is mobilized and how these change overtime may leave other structural conditions, such as power relations and scale, unconsidered. This overall resonates with Singh (2025) observation that adaptation theory has grown but also ossified, remaining somewhat unfit-for-present-purpose, with methodologies that are conservative and insufficiently attentive to the structural conditions that shape vulnerability. In policy, my findings from Barbados also show a more nuanced construction of adaptation. While

adaptation remains organized around responding to climatic hazards, it is situated within a richer understanding, one that connects vulnerability to longer histories of colonial development, raises questions of justice, and positions the coast as central to collective well-being and identity. These findings resonate with a body of literature suggesting that SIDS offer important cases where dominant paradigms around climate change and adaptation are challenged (Sou & Corbett, 2026), or even actively resisted (Weatherill, 2024). However, my findings also show that the transformative ambitions embedded in adaptation in the Barbados case do not necessarily translate into deep-seated social, institutional and cultural changes that would meaningfully support communities in adapting to change. Within these more nuanced understandings, assumptions rooted in Eurocentric rationalism and modern worldmaking practices, such as nature-culture dualism and economic determinism, remain dominant, and thus, as a result structural and political conditions risk being left underexamined. In the sections below, I explore these persistent underlying assumptions in more detail.

One such assumption concerns risk: across both research and policy risk tends to be constructed primarily as something arising from climatic hazards, the main threat that adaptation is expected to address. In relation to adaptive capacity assessments, these findings align with recent scholarship noting that despite growing conceptual complexity, vulnerability assessments, and embedded concepts such as adaptive capacity, continue to prioritise biophysical impacts (Higuera Roa et al., 2025; Ishtiaque et al., 2022). This understanding risks narrowing the scope of what counts as a source of risk for coastal communities, obscuring the structural, relational, and ecological conditions that scholarship has increasingly called to incorporate (Kanan & Giupponi, 2024). I contribute to this literature by showing that such narrow framings not only shape how the problem facing coastal communities is defined, but also what adaptation means and how it is pursued. For instance, when risk is understood primarily as exposure to climate hazards, responses logically centre on buffering against that exposure, making individual- and asset-based indicators a consistent and coherent focus. If risk were instead understood as emerging from structural and relational conditions, collective coordination and systemic change would also become thinkable as dimensions worth assessing. In relation to adaptation policy, my findings align with evidence showing how some island states resist passive vulnerability identities that reduce them to their biophysical exposure to climate impacts (Weatherill, 2024). Caribbean scholars have argued that foregrounding the historical production of vulnerability is essential for supporting more just outcomes (Baptiste & Robinson, 2023; Baptiste & Rhiney, 2019; Kelman, 2014). However, my findings suggest that even when island states resist dominant vulnerability framings, climate risk continues to reassert itself as the organising logic when it comes to what gets prioritised, funded, and implemented. Framing vulnerability as historically produced does not, in itself, ensure that the underlying structural conditions are addressed within adaptation.

Another key assumption is a somewhat limited construction of what is thinkable about how adaptation can be achieved. Even as adaptive capacity assessments considered in this thesis increasingly incorporate physiological factors (Eriksen et al., 2020; Mortreux et al., 2020), they often retain the assumption that individuals are rational, autonomous actors capable of mobilizing and using their adaptive capacity. This result speaks to the lack of more innovative conceptions of adaptive capacity, ones that move beyond individual mobilisation to examine how capacity is enhanced or diminished through interactions between individuals, groups, and broader societal structures (Elrick-Barr, 2023.). As suggested by Nightingale et al., 2021, such lack of scale complexity, persistent in adaptation research, can displace attention from the interconnected and cross-scalar processes that produce vulnerability. In policy, while visions of what adaptation should achieve have broadened, encompassing transformational goals, justice claims, and ways of well-being, how adaptation should be achieved remains deeply tied to development logics rooted in economic determinism and a nature-society dualism. These findings contribute to a more nuanced understanding of how assumptions about what normal, achievable, and possible shape conceptions of adaptation (Cretney et al., 2025; Ghimire & Chhetri, 2023; Remling, 2023; Rickards et al., 2014), particularly in contexts where Eurocentric and colonial legacies have been persistent and formative (Paprocki, 2018; Symons, 2014). As I show, this is not driven by any singular assumption, but by a heterogeneous and fluid mix of understandings. Some of these reflect more radical imaginaries, which open space to reimagine what adaptation could look like as reported in the Caribbean (Sou & Corbett, 2026), while others remain rooted in ontologies that do not exceed the habitual logics sustaining apolitical framings of adaptation (Haverkamp & Snorek, 2026; Kanarp et al., 2025; Olazabal et al., 2024).

Finally, my findings show a recurring pattern in adaptive capacity assessments and adaptation policy, in which adaptation is constructed as future oriented. In scientific assessments of adaptive capacity, enhancing the capacity to adapt now is understood to enable to cope with the increasing impacts of climate change in the future. This understanding might limit considering that there are other issues that undermine future adaptive capacity, such as climate change itself (Callahan, 2025; Serdeczny et al., 2024), as well people's perceptions of their own capacity to adapt, which change through time (Berkhout, 2024). In relation to policy, my findings show that temporal constructions of adaptation, including what needs to change, when, and in response to what, are embedded within a developmental logic in which linear progress serves as the assumed pathway and end goal. As Saddington (2023) showed in Tuvalu, this framing may allow to frame the climate problem as a developmental issue, which may usefully support to resist discourses that treat climate change as a distraction from development priorities. However, as my overall findings show, it can also foreclose other understandings. When adaptation is framed as supporting a linear developmental trajectory, one oriented toward

avoiding reversal and securing forward progress, particularly economic progress, the trajectory itself remains unquestioned. My findings on how adaptation is constructed within lived experience (RQ2), suggest that adaptation is not always understood in terms of sustaining development gains but may instead centre on more caring and relational engagements with the coast itself.

Following a critical constructivist perspective, it is important to understand not only the assumptions embedded in adaptation frameworks, but the contexts and power relations that make certain assumptions appear logical or natural. In the case of adaptive capacity, my analysis focused on index-based assessments. These assessments are typically shaped by methodological preferences for comparability and standardisation, which tend to favour indicators that are more easily quantified at the expense of those that are not. While the epistemic environment within which these assessments are produced helps explain why certain dimensions, such as interactions among groups that shape adaptive capacity, or the ecological and climatic conditions that constitute risk, are more easily overlooked, this does not make them politically neutral. Processes of quantification are themselves shaped by values and beliefs about the world and the future (Fukuda-Parr & McNeill, 2019), with consequences for adaptation planning that may enable or constrain effective action (Fisher, 2024). My work contributes by making these underlying assumptions visible, which can in turn inform more reflexive methodological decisions. It is also worth noting who has been involved in shaping these assumptions. As my findings show, scientists were primarily responsible for establishing the theoretical and conceptual logics of assessments, while local people were mostly incorporated at the stage of data collection (Paper I). Greater engagement with communities in the design of assessments, especially in defining what is at risk, how adaptive capacity is understood, and what futures are considered desirable and possible, could open space for more grounded, inclusive, and locally meaningful constructions.

In relation to policy, it is equally important to understand the context within which adaptation assumptions are produced. Scholars have long argued that Caribbean SIDS, despite formal independence, remain embedded in colonial logics of development (Girvan, 2015), including the historical legacies of colonial rule and the exploitative heritage of the plantation economy, which persist today through debt dependency, unequal economic relations, and structural inequalities (Gahman et al., 2021; Leon Sealey-Huggins, 2017; Perry, 2022, 2024; Sheller, 2018). These conditions have not only shaped the region's deep vulnerability (Bonilla, 2020; Rhiney & Baptiste, 2019), but also the institutional and epistemic conditions through which climate change responses are conceived. While this has been examined primarily in relation to disaster risk (Bonilla, 2020; Gahman et al., 2021; Perry, 2024; Sheller, 2019), my work contributes to a small but growing body of literature that applies this lens to adaptation in the Caribbean (Robinson et al., 2023; Vaughn, 2020). Specifically, I show how logics of economic determinism and

nature–society dualism, rooted in colonial frameworks, shape how adaptation is imagined. In this sense, calls for more inclusive and transformative adaptation, which are increasingly prominent within SIDS contexts (Thomas, 2025), must engage not only with structures, economic policies, and institutions, but also with the underlying assumptions and worldviews that define what adaptation is understood to be, what it targets, and what it leaves untouched.

From the ground up: understanding adaptation through lived experience

Adaptation research has long called for greater attention to the multiple dimensions of local knowledges, including in island settings (Beckford, 2018; Dorji et al., 2024; Nunn et al., 2024). Aligned with these calls, in the second part of my results I investigated how people who live or work along the coastline of Barbados make sense of adapting to climate change, and how their understandings align with or differ from research-policy framings.

Overall, my results show that the assumptions through which adaptation comes to be known in research and policy do not determine how people make sense of and respond to environmental change in their everyday lives. While certain assumptions were shared, particularly a linear, incremental understanding of how climate change is experienced, local understandings of what adaptation means were grounded in a much wider range of assumptions about what is normal, urgent, and considered harm, shaped by broader set of personal and cultural experiences. For some, adaptation involves incremental adjustments to shifting weather patterns; for others, it means respecting the natural rhythms of the coast and rethinking the economic relations shaping environmental change; for others still, climate impacts are acknowledged but adaptation is deferred or treated as less urgent. These are not simply different perspectives on the same adaptation problem but reflect fundamentally different understandings of what the problem is. These findings contribute to a growing body of research in island contexts that moves beyond examining how adaptation is known and calls for the study of the foundational assumptions through which different understandings emerge (Clissold et al., 2023; Jarillo & Barnett, 2022; P. D. Nunn et al., 2024; Nursey-Bray et al., 2020; Rarai et al., 2022). To date, this line of inquiry has developed primarily in Pacific settings. I extend it to the Caribbean, where research connecting local knowledge and adaptation remains limited (Iwama et al., 2021), and where existing studies that explore locals ways of knowing adaptation have primarily focused on perceptions, attitudes, and knowledge content (Baptiste, 2016, 2018; Beckford, 2018; Chirima, 2025), rather than on the foundational assumptions shaping what adaptation comes to mean.

A key finding of my analysis is the complexity of how local people understand and experience climate change, and how these understandings put in question to those found in policy. In research and policy, climate change is usually framed through changes across the past, present, and future, and it is through these temporal orientations that ideas of adaptation are often formed (Paper I, Paper II). My findings show that local people also understand climate change through longer-term temporal horizons. However, what counts as change for them is not understood only in linear terms, but also in relation to what is experienced as normal in everyday life, particularly through the social and environmental rhythms that sustain their life. This contributes to recent literature which strive to move beyond temporal dichotomies often shown in climate change research, where long-term futures are associated with science and policy, and shorter-term or immediate temporalities are attributed to local experience (Bowden et al., 2019; Fincher et al., 2015; McMichael & Katonivualiku, 2020; Wardekker et al., 2025). Although studies linking temporality and lived understandings of adaptation in island contexts is starting to emerge, it largely focuses on migration and mobility in the Pacific, and thus my analysis extends these discussions to the Caribbean.

My results also contribute to understanding different conceptions of nature and their implications for adaptation meaning making, particularly within the Caribbean context. As I showed, the changes people in Barbados observed along the coastline, especially erosion patterns, were not simply consequences of increasing climatic change such as sea-level rise and storm surges. Rather, some interviewees interpret erosion as the sea's response to infrastructure that had disrupted its natural rhythms of deposition and movement (Paper III). In this sense, according to them, the linear temporality through which adaptation structures were put in place, that is, defending the coastline now for the future (Paper II), did not simply ignore nature's rhythms. Rather, it actively disrupted them, which people living or working along the coastline identified as the very source of risk. This shows that in the case of Barbados, different ontological understandings of nature shape how adaptation is interpreted among people who live or work along the coastline. While such nature-society ontologies have been documented mainly in Pacific research, especially in relation to Indigenous knowledge (Nunn et al., 2016, 2024; Rarai et al., 2022; Teariki & Leau, 2024), my findings extend this discussion to the Caribbean. This is significant in a region where colonial modernisation, technological change, and economic restructuring might be expected to have displaced local ways of knowing and relating to the environment. Yet my results show that modernity has not fully replaced more embodied, relational, and rhythmic understandings of nature. This adds to a small but growing body of regional work that has documented similar relational understandings of nature and people's relations to it (Chirima, 2025; Hofman et al., 2021).

Understanding how adaptation is imagined within lived experience also contributes to explaining why, in some cases, strong environmental awareness does not translate into anticipatory action, an observation that is persistent but underexplored in the Caribbean (Baptiste, 2016, 2018; Iwama et al., 2021). My findings show that, for some people, risk associated with environmental change was not denied but deferred, whether because they trusted in their capacity to cope as they had in the past, expected little future variability, or were so absorbed by immediate everyday demands that longer-term futures carried less weight. For others, grounded in religious beliefs, environmental change was understood as beyond human agency, making preparation feel unnecessary. And for others still, whose understanding of the coast included a sense of its own agency and rhythms, the issue was about caring differently for the environment and questioning whether the current model of coastal development was sustainable in the long run. In the adaptation literature in SIDS, such understandings rooted in social norms and values are increasingly recognized as adaptation constraints (Albert et al., 2018; Nolet, 2016; Otoara Ha'apio et al., 2018). However, empirical evidence for this remains concentrated in the Pacific. My findings contribute to extending this lens to the Caribbean, showing how similar conditions also shape and constrain adaptation in this context, supporting to move beyond constraints in the region that focus primarily on financial and institutional barriers (Mycoo, 2025; Robinson, 2018a). Moreover, the findings point toward something more fundamental. The assumptions through which adaptation is given meaning, such as those described above, should not simply be understood as barriers to more effective engagement. Rather, they reflect genuinely different understandings of what the problem is: what counts as harm, what is changing, and what is considered possible and desirable. This provides empirical nuance to recent discussion to broaden how social constraints on adaptation are conceived, and therefore how they should be managed (Berkhout, 2024; Jarillo & Barnett, 2024; Puig, 2025).

The interplay between structural conditions and meaning making also speaks to emerging research on hope and faith as enablers of adaptive action (Mortreux et al., 2025). My results show that in the context of the Caribbean, religious belief acts as a key register through which environmental change is made sense of vesting hope in divine rather than human agency and shaping what is understood as requiring a response (Hermann, 2020; Marlon et al., 2019). However, I show that hope also operates at another level of meaning-making. As I show in Paper III, some people identified the problem not as increasing climatic hazards, but as unsustainable development along the coast, yet expressed little faith that this would change. This suggests that faith shapes meaning making around adaptation in at least two ways, through religious conviction about what requires human action, and through political conviction about what change is possible, and that both can lead to disengagement from anticipatory action.

When meanings collide: risk of maladaptation, constraints and the cost of singular framings.

The first two sections of the findings show that adaptation carries different meanings across the contexts I examined. For scientists, adaptation is primarily a response to climatic risk, to be enhanced at the individual level (Paper I). For policymakers, it is also framed around climatic risk but understood as transformative: a means of achieving justice and collective well-being (Paper II). For coastal residents, adaptation also means something else entirely: coping with everyday changes, contesting the impacts of development on natural systems, or simply not something that warrants concern at present (Paper III). These are not simply complementary perspectives on the same phenomenon. They rest on different assumptions about what is at stake, what counts as harm, what is possible and desirable, and what is considered urgent, and they do not necessarily sit easily alongside one another. Following a critical constructivist perspective, the third section of my results moves beyond describing how adaptation is differently constructed to examine what happens when these constructions encounter one another in practice. By holding these constructions in tension, it becomes possible to see which meanings are privileged and which are sidelined, and where particular ways of knowing may themselves constrain adaptive possibilities.

My results suggest that maladaptation, understood as the process through which adaptation unintentionally increases vulnerability (Juhola et al., 2016; Magnan et al., 2016; Schipper, 2020), may arise when a single construction of what is considered valuable, and therefore worth protecting, dominates the adaptation process. Specifically, my findings illustrate this through adaptation projects implemented along the coastline of Barbados. These projects, understood as essential for supporting the economic and cultural well-being of the population, are rooted in specific ideas about what the coast provides and for whom. Yet in practice, they actively reorganise the conditions under which people connect with and relate to the coastline. These findings align with recent arguments that maladaptation may arise not from the inadequate implementation of otherwise appropriate interventions, but from misalignments between local experiences of risk and well-being and the assumptions embedded in adaptation practice (Forsyth & McDermott, 2022; Nightingale, 2018; Tschakert et al., 2017). My results further suggest that this misalignment may not simply be an unintentional oversight. Shah et al. (2025) and Kehler and Birchall (2025) argue that maladaptation can be a consequence of colonial and development logics, locating its origins in structural and institutional conditions. My findings extend this argument by showing that maladaptation may be also rooted in the foundational assumptions through which adaptation is conceived. In Barbadian policy, what counts as a coastal problem under climate change is defined through nature–society separations and linear development logics,

rooted in Western knowledge, that the postcolonial state has not merely inherited but actively internalised (Paper II). Addressing this form of maladaptation therefore requires more than transforming structures or breaking path dependencies, it requires confronting the very terms through which adaptation is known in the first place.

From the above, and consistent with my findings, sense of place, that is, the meanings and values people attach to place, specifically in relation to the coast, is critical in shaping imaginaries of what it means to adapt. Being in a place opens possibilities for thinking, acting, and designing responses to disruption and the uncertainty it creates (Manzo et al., 2023). This normatively significant connection people hold with place has been widely examined in SIDS contexts, particularly in relation to decisions about relocation and migration in the Pacific (Biasio, 2024; Jarillo & Barnett, 2022; Yee et al., 2022; Farbotko, 2019; Hermann & Kempf, 2019). This literature broadly suggests that connection to place is key to islanders' sense of well-being and security, and that such connections should be acknowledged in adaptation planning. My findings align with this literature and confirm its relevance beyond the Pacific, but they also suggest a more nuanced picture: not just that connection to the coast is important, but which particular connections are significant, for whom, and how they align or differ. In Barbados, policymakers also connect the coast to Barbadians' well-being beyond material terms, where an uneroded beach is understood as central to quality of life (Paper II). People who live and work along the coastline value the coast through embodied, everyday encounters: walking along it, seeing the landscape, maintaining proximity to it. They are not just interpreting the same coast differently but enacting different coasts through different ways of being-in-place. Recognising this raises a further question: whose sense of place gains institutional and material force, and what happens to other ways of being-in-place when it does?

My findings also show that privileging a single understanding of the coastline, one centred on preserving its "pristine" condition as climate impacts intensify, can obscure the historical struggles and unequal power relations embedded within the "island paradise" imaginary. A broad literature has long shown how such imaginaries conceal the uneven distribution of tourism's benefits and burdens (Bottomley, 2020; Kothari & Wilkinson, 2010). What my results add is that this occurs not only through tourism development itself, but also through constructions around adaptation, which becomes a further vehicle for sustaining those same logics. This provides additional empirical insight into the process identified by Paprocki (2021), in which adaptation becomes not a corrective to uneven development but a further mechanism through which existing power relations and development visions are sustained and reproduced.

Yet my findings also reveal that local constructions of adaptation can themselves create constraints to long-term adaptation. These encompass different ideas of risk, shaped by temporal understandings and by expectations of how resilient people believe they will be, including risk perceptions and risk tolerance attached to culture. This provides empirical insight into how adaptation can be limited not because people lack the capacity to act, but because proposed actions conflict with what they value or how they understand their world (Jarillo & Barnett, 2024). In the cases examined here, this includes expectations about future coastal resilience shaped by past experience, what Berkhout (2024) describes as temporally bounded assumptions about environmental continuity, which can reduce the perceived urgency of anticipatory action.

If constraints, and, as I argued above, the risk of maladaptation, can arise from differently grounded understandings of the problem itself, then overcoming them requires more than removing barriers to implementation. In this line, Jarillo and Barnett (2024) suggest that constraints can be addressed in part by “moving the adaptation goalposts,” whereby what adaptation means can itself be changed, with localising adaptation being central to this. Calls to localise adaptation, including in SIDS (McNamara et al., 2020; Rarai et al., 2022; Westoby et al., 2020; Yee et al., 2025), are now widespread, allowing future visions and alternative imaginaries of what adaptation is to be put forward (Mahony, 2023; Nalau & Cobb, 2022; Olazabal et al., 2024). Although my findings support the call for localising adaptation, my findings also point to the need for a nuanced understanding of the assumptions that shape local meanings of adaptation and how these may influence how adaptation is defined, prioritised, and implemented. Following Pérez-Hämmerle et al. (2024), enabling more inclusive, plural, and equitable practices requires more than centring alternative understandings of adaptation in place of dominant ones, that is, replacing one set of assumptions with another. It requires making the relationships between different foundational assumptions visible and examining where they align and where they remain incommensurable.

Concluding remarks

Thesis approach and synthesis of the main findings

My study aims to reveal how adaptation is constructed across research, policy and lived experience, including the consequences that emerge when differently grounded constructions meet in practice. To do so, I focus empirically on three sites of meaning-making: scientific assessments of adaptive capacity (research), adaptation policy frameworks (policy), and the everyday life (lived experience). Barbados is used as a case study for the policy and lived-experience dimensions of the analysis. In this work I approached adaptation as a set of ideas about desired processes of change whose meanings are situated within complex socio-political and environmental dynamics which are continuously co-produced and negotiated. Grounded in a critical constructivist theoretical lens, my analysis foregrounds how assumptions about reality shape different ways of constructing meaning, as well as the socio-contextual and structural processes through which these constructions emerge. To examine these dynamics, I employ social imaginaries, risk, and temporalities as conceptual and analytical framework to reveal the key processes through meaning-making of adaptation take shape. Social imaginaries illuminate how people make sense of their world and what they perceived as normal, desirable, or legitimate. Risk highlights how uncertainty about the future is rendered visible and actionable. Temporalities expose how different understandings of time shape experiences of change, urgency, and possibility. I apply this framework to my empirical material. This approach enables me to illuminate the diversity of adaptation meanings in the coastal context and to examine what happens when these meanings intersect and collide within the island's specific socio-cultural setting, particularly between policy framings and everyday lived experiences.

Overall, this thesis makes three main findings. First, I show that coastal adaptation is constructed in increasingly sophisticated ways across research and policy. In scientific assessments, adaptive capacity is understood through different theoretical frameworks and considering wider range of factors on what constitute capacity to adapt, including conditions that enable its mobilization. In policy, adaptation is articulated as a transformative endeavour, connecting issues of justice, collective well-being, and identity. Yet despite this growing complexity, persistent underlying assumptions about risk, what adaptation is imagined achieving, and how change

unfolds over time may risk leaving structural and political conditions underexamined in both research and policy. Second, while research and policy constructions of adaptation shape the horizons of what becomes thinkable about adaptation, understandings grounded in lived experience are not reducible to these framings but are far broader and more plural. These meanings are deeply shaped by temporal rhythms, both social and climatic, understandings of nature and society that attribute agency to non-human forces, and notions of risk rooted in direct experience, everyday demands, and religious beliefs. Because these elements vary across individuals, constructions of adaptation are plural and dynamic. Third, I show that when single interpretations of adaptation dominate, including what constitutes risk, what counts as worth protecting, what futures are imagined as possible, and how change is experienced, adaptation in practice can become significantly constrained. Such dominance occurs not only by neglecting the meanings, values, and experiences that shape how people relate to and engage with adaptation. It may also condition contexts in which maladaptation becomes more likely, the uneven distribution of benefits and burdens within adaptation-aligned development trajectories obscured, and the possibilities for long-term adaptation remain limited.

Together, these findings suggest that in relation to coastal adaptation, and specifically within the Caribbean SIDS, moving toward more transformative adaptation cannot be achieved by simply calling for greater diversity and inclusivity of local knowledge within mainstream adaptation frameworks. Rather, as suggested by Pérez-Hämmerle et al. (2024), it requires explicitly recognizing, situating, and analysing the underlying assumptions about what the world is and how it works, and the power dynamics that shape which construction is legitimized. This means critically examining the underlying assumptions that shape which constructions of adaptation are rendered legitimate, how these collide with other understandings, where they align or partially overlap, and what the practical consequences of these tensions are on the ground. Only by engaging seriously with these dynamics, including where incommensurability exists and what to do with it, can adaptation move toward more substantive engagement with coexisting ways of knowing and experiencing climate change.

Contributions to sustainability science

Climate change adaptation can be understood as a wicked problem because both the future conditions of change and the terms of response remain uncertain and contested (Termeer et al., 2016). Uncertainty concerns not only the magnitude, timing, and spatial distribution of projected climate impacts, but also the evolution of political, institutional, and demographic conditions over time (Ayeb-Karlsson et al., 2019; Siders & Pierce, 2021). Yet adaptation is complex not only because the

future is uncertain, but also because different actors interpret the problem in different ways. Anchored in different assumptions, values, interests and capacities, different stakeholders bring different views around what the problem is, with consequences on what forms of response are considered appropriate, including whose interest are being prioritized (Gorddard et al., 2016; Kause et al., 2019; O'Brien & Wolf, 2010).

Sustainability science has long sought to address wicked problems such as those relating to the consequences of climate change. Its main approach has been to understand the complex interactions between social and ecological systems, combining different ways of knowing and learning from them (Kates et al., 2001; Liu et al., 2007; Vries, 2023). By doing so, sustainability science seeks to capture the full range of conditions shaping vulnerability and understand the multiple ways of understanding what the problem is and its solutions. While this perspective has been useful in recognizing that humans and nature are interconnected, recently there has been a growing emphasis on moving beyond interactions towards understanding the more dynamic processes and relationships through which these interactions arise (Lejano, 2019; Walsh et al., 2021; West et al., 2024). A critical implication of this perspective is the need to revise and reconstruct the language and concepts through which we make sense of the world, so that they better capture processes, relations, and interdependence (West et al., 2020). In relation to adaptation, moving towards more holistic approaches involve, among others, critically examining and expanding how adaptation is imagined, emphasizing socio-nature interconnections and their capacity to respond and thrive together under changing conditions (Goodwin et al., 2025). This requires not only questioning the assumptions underlying current adaptation framings but also acknowledging that multiple ways of understanding reality exist, each leading to different interpretations of what it means to adapt (Goldman et al., 2018; Nightingale et al., 2022).

My thesis responds to this need by critically examining how adaptation is constructed across different perspectives and what happens when differently grounded constructions meet in practice. In doing so, my work contributes to sustainability science in three important ways. First, it advances empirical understanding on how ideas around coastal adaptation, specifically within the context of Caribbean SIDS, are constructed. Research on adaptation in this region has largely focused on documenting progress toward adaptation goals (Mohan, 2022, 2025; Robinson, 2017), understanding adaptation constraints and limits (Galaitis et al., 2024; Mycoo, 2025; Robinson, 2018b), with a smaller but growing body of work examining local knowledge and perceptions of climate change ((Baptiste, 2016, 2018; Chirima, 2025; Cooper et al., 2025; Hofman et al., 2021; Iwama et al., 2021), as well as foregrounding justice considerations in climate change and adaptation framings (Baptiste & Robinson, 2023; Sheller, 2019, 2021). A more critical strand has shown how colonial legacies and imperialist

relationships, embedded in adaptation finance and disaster risk mechanisms, shape contemporary responses (Gahman et al., 2021; Leon Sealey-Huggins, 2017; Perry, 2022, 2024; Sheller, 2018). My thesis complements this scholarship by examining the assumptions, about what constitutes risk, what is normal and desirable, what counts as meaningful change, and what is considered possible, that shape how the people dealing with climate change themselves understand adaptation. In doing so, it contributes to a small but emerging work that examines how ideas around adaptation are constructed from within specific Caribbean contexts (Friedman, 2023; Vaughn, 2020).

Second, my research contributes to understanding how adaptation is constructed across multiple levels simultaneously. Within island studies, research on how actors make sense of adaptation has largely focused either on the policy level or on indigenous and local knowledge. Examining how different actors construct adaptation within a single case study, my findings highlight not only the distinct processes and underlying assumptions that shape each construction, but also where they diverge, align, or reconfigure one another. Holding these perspectives side by side, asking which worldviews and values are missing, overrepresented, or misunderstood, contributes to making visible the assumptions that shape adaptation decision-making across research, policy, and lived experience. As Pérez et al. (2024) suggest, this will not in itself resolve structural inequalities but can create space for diverse ways of knowing and experiencing the world to become a more meaningful part of how adaptation is understood and practiced.

Finally, my thesis contributes to the growing body of research seeking to redefine what adaptation means (Amorim-Maia & Olazabal, 2025; Goodwin et al., 2025; Heath, 2025). I do so by showing that adaptation is not only about protecting people from increasing climate risks, as dominant narratives often suggest. It is also about achieving justice, preserving identity and ways of connecting to the coast, navigating what falls outside the rhythms of everyday life, caring for the environment, and, for some actors, something not experienced as an immediate concern. Challenging dominant definitions of adaptation, particularly in coastal contexts within island states, can open space for context-driven interpretations and more inclusive pathways, ones that acknowledge and build from diverse perspectives rather than imposing a single model. In this sense, it contributes to moving the conversation beyond what Nalau (2025) describes as an 'either/or' framing toward an 'and/yes' perspective, where multiple constructions of adaptation can be recognized and held simultaneously.

Future directions

While this thesis has made key contributions to understanding how coastal adaptation is constructed across research, policy, and lived experience, and the consequences when these perspectives collide, there remain important avenues for further exploration that can extend and build on this work.

One way to extend this work is by engaging with other theoretical frameworks that can illuminate dimensions of adaptation meaning-making that remained less visible within the scope of this thesis. In particular, feminist scholarship offers a valuable lens for future research. Often connected to decolonial perspectives, feminist approaches critically examine both stabilised and local ways of knowing climate change (Zwarteveen et al., 2021). In doing so, they make visible what is typically hidden or marginalized within mainstream knowledge production (Porcuna-Ferrer et al., 2023). A key contribution of feminist perspectives lies in their attention to embodied, emotional, and more-than-human relations shaped through lived experience and everyday practices. These relational dimensions influence how knowledge claims about climate change are formed, including what climate change is understood to be and how societies ought to respond to it (Bee & Park, 2022; Sultana, 2011; S. Wang et al., 2018). While feminist approaches are gaining recognition in island research, particularly in studies of vulnerability (Weatherill, 2024), their potential for analysing situated and relational construction of adaptation remains relatively underexplored. Related relational strands, such as emotional political ecology, can further contribute by examining how emotions, such as fear, care, or shame, shape people's relationships with the environment, power structures, and governance processes, and thereby influence how adaptation is constructed and enacted (Iniesta-Arandia & Ravera, 2025).

Another important avenue for extending this work is through a stronger engagement with questions of justice. While my work has touched upon with some of the implications of competing forms of knowledge in adaptation practice, applying a justice-oriented theoretical framework would allow for a more explicit foregrounding of issues of power, inequality, and inclusion. Specifically, future research could draw on the lens of cognitive justice. Understandings of adaptation are inseparable from the processes through which knowledge about it is produced and legitimized. Cognitive justice emphasizes the coexistence of diverse ways of knowing and interrogates whose knowledge counts in decision-making processes and whose is rendered invisible or illegitimate (Visvanathan, 2005). Applying this framework would strengthen the argument for recognizing the value of lived and experiential knowledge, particularly among communities directly confronting climate impacts (Newell et al., 2021). Specifically, I suggest paying attention to the structural dimensions that perpetuate such forms of injustice, including the social, political, institutional, and cultural forces that marginalize certain types of knowledge. This perspective would complement justice debates in Caribbean Island

contexts, which often emphasize the region's minimal historical contribution to greenhouse gas emissions, the responsibility of wealthier nations to finance adaptation, and the disproportionate climate impacts and post-hurricane recovery injustices it faces (Baptiste & Robinson, 2023).

Beyond the theoretical avenues outlined above, future research could build on this work by analysing how adaptation is constructed through imaginaries, risk understandings, and temporalities in other Caribbean contexts. Examining cases such as Grenada or Barbuda, where ontological dimensions of adaptation are starting to already be explored (Friedman, 2024; Vaughn, 2020), could complement and extend these findings, contributing to a more nuanced understanding of how adaptation in the region is understood. This would also support broader discussions on limits to adaptation by highlighting differences in how adaptation is understood and enacted. While this study focuses primarily on national actors and policymakers, further research could examine how meanings of adaptation are constructed in regional spaces where SIDS, including Caribbean states, deliberate collectively. Although recent work has explored constructions around climate change and adaptation within global arenas such United Nations climate negotiations (Klöck et al., 2024; Oculi & Stephenson, 2018; Rasheed, 2019) greater attention to island-led regional meetings is warranted to deepen understanding of how island nations themselves envision and shape adaptation to climate change.

Practical implications

A central premise of this thesis is that a more reflexive approach to how adaptation is understood and constructed, one that makes visible the assumptions, values, and power relations that shape it, can open space for more transformative adaptation. One concrete way my findings can contribute to do so is by informing adaptation decision-making. The IPCC and broader adaptation science have dedicated considerable attention to developing tools such as adaptation pathways, scenario planning, and cost-benefit analysis to support better decisions (New et al., 2022; Siders & Pearce, 2021). My thesis can complement these approaches by making visible the assumptions that may predispose decision-makers toward pathways while foreclosing others, opening space for discussion and alternative understandings of what adaptation could mean and do. More directly, my thesis can guide practitioners by providing insights into how adaptation is currently constructed across research, policy, and lived experience, and why. As Nalau (2025) documents, making underlying assumptions visible in policy conversations can meaningfully support critical thinking and surface concerns that might otherwise remain unaddressed. This matters not only for rethinking current adaptation practices, but also for informing future adaptation planning and decision-making in coastal areas. This is particularly timely in the Caribbean, where critical decisions

around adaptation are on the horizon, including the Caribbean Community (CARICOM) preparations for the 2026 United Nations Climate Change Conference (COP31), ongoing reform of the international financial architecture for adaptation finance, and an intensified regional focus on ocean governance and coastal resilience. Understanding how current adaptation is constructed across different perspectives can contribute that these processes are more reflective of the diverse realities and needs of Caribbean coastal communities.

References

- AghaKouchak, A., Chiang, F., Huning, L. S., Love, C. A., Mallakpour, I., Mazdiyasn, O., Mofstakhari, H., Papalexiou, S. M., Ragno, E., & Sadegh, M. (2020). Climate Extremes and Compound Hazards in a Warming World. *Annual Review of Earth and Planetary Sciences*, 48(1), 519–548. <https://doi.org/10.1146/annurev-earth-071719-055228>
- Albert, S., Bronen, R., Tooler, N., Leon, J., Yee, D., Ash, J., Boseto, D., & Grinham, A. (2018). Heading for the hills: Climate-driven community relocations in the Solomon Islands and Alaska provide insight for a 1.5 °C future. *Regional Environmental Change*, 18(8), 2261–2272. <https://doi.org/10.1007/s10113-017-1256-8>
- Alleyne, M. (2019). *Assessing the vulnerability of Holetown, Barbados, to relative sea level rise and storm surge*. <https://doi.org/10.13140/RG.2.2.33875.53282>
- Álvarez, L. G., Waithe, K., & Deyal, Z. (2019). Economic Growth, Debt, and Fiscal Adjustment: Barbados’ Tripartite Challenge. *IDB Publications*. (Barbados). <https://doi.org/10.18235/0001563>
- Amorim-Maia, A. T., & Olazabal, M. (2025). *Beyond Adjustment: A New Paradigm for Climate Change Adaptation in a Complex World*. SSRN. <https://doi.org/10.2139/ssrn.5141464>
- Anderson, K., Broderick, J. F., & Stoddard, I. (2020). A factor of two: How the mitigation plans of ‘climate progressive’ nations fall far short of Paris-compliant pathways. *Climate Policy*, 20(10), 1290–1304. <https://doi.org/10.1080/14693062.2020.1728209>
- Andreucci, D., & Zografos, C. (2022). Between improvement and sacrifice: Othering and the (bio)political ecology of climate change. *Political Geography*, 92, 102512. <https://doi.org/10.1016/j.polgeo.2021.102512>
- Arnall, A., & Hilson, C. (2023). Climate change imaginaries: Representing and contesting sea level rise in Fairbourne, North Wales. *Political Geography*, 102, 102839. <https://doi.org/10.1016/j.polgeo.2023.102839>
- Arteaga, E., Nalau, J., Biesbroek, R., & Howes, M. (2023). Unpacking the theory-practice gap in climate adaptation. *Climate Risk Management*, 42, 100567. <https://doi.org/10.1016/j.crm.2023.100567>
- Ayeb-Karlsson, S., Fox, G., & Kniveton, D. (2019). Embracing uncertainty: A discursive approach to understanding pathways for climate adaptation in Senegal. *Regional Environmental Change*, 19. <https://doi.org/10.1007/s10113-019-01495-7>
- Baptiste, A. K. (2016). What Do We Know About Climate Change: The Jamaican Pedro Cays Fishers’ Case. *The Black Scholar*, 46(3), 40–51. <https://doi.org/10.1080/00064246.2016.1188355>

- Baptiste, A. K. (2018). Climate change knowledge, concerns, and behaviors among Caribbean fishers. *Journal of Environmental Studies and Sciences*, 8(1), 51–62. <https://doi.org/10.1007/s13412-017-0434-9>
- Baptiste, A. K., & Robinson, S. (2023). The contours of environmental justice in the Caribbean. *The Geographical Journal*, 189(4), 554–561. <https://doi.org/10.1111/geoj.12545>
- Barnett, J. (2017). The dilemmas of normalising losses from climate change: Towards hope for Pacific atoll countries. *Asia Pacific Viewpoint*, 58(1), 3–13. <https://doi.org/10.1111/apv.12153>
- Bauriedl, S., & Müller-Mahn, D. (2018a). Conclusion: The politics in critical adaptation research. In *A Critical Approach to Climate Change Adaptation*. Routledge.
- Barad, K. (2007). Meeting the universe halfway: Quantum physics and the entanglement of matter and meaning. Durham, North Carolina: Duke University Press.
- Beckford, C. (2018). Climate change resiliency in Caribbean SIDS: Building greater synergies between science and local and traditional knowledge. *Journal of Environmental Studies and Sciences*, 8(1), 42–50. <https://doi.org/10.1007/s13412-017-0440-y>
- Beckles, H. M. (1990). *A History of Barbados: From Amerindian Settlement to Nation-State*. Cambridge University Press.
- Bee, B. A., & Park, C. M. (2022). Feminist contributions to climate change research, policy and ethics. In *The Routledge Handbook of Feminist Bioethics*. Routledge.
- Bee, B. A., Rice, J., & Trauger, A. (2015). A Feminist Approach to Climate Change Governance: Everyday and Intimate Politics. *Geography Compass*, 9(6), 339–350. <https://doi.org/10.1111/gec3.12218>
- Berrang-Ford, L., Siders, A. R., Lesnikowski, A., Fischer, A. P., Callaghan, M. W., Haddaway, N. R., Mach, K. J., Araos, M., Shah, M. A. R., Wannowitz, M., Doshi, D., Leiter, T., Matavel, C., Musah-Surugu, J. I., Wong-Parodi, G., Antwi-Agyei, P., Ajibade, I., Chauhan, N., Kakenmaster, W., ... Abu, T. Z. (2021). A systematic global stocktake of evidence on human adaptation to climate change. *Nature Climate Change*, 11(11), 989–1000. <https://doi.org/10.1038/s41558-021-01170-y>
- Berkhout, F. (2024). Social limits to climate change adaptation: Temporalities in behavioural responses to climate risks. *Current Opinion in Environmental Sustainability*, 71, 101471. <https://doi.org/10.1016/j.cosust.2024.101471>
- Bhandarkar, P. L. (2010). *Methodology & Techniques of Social Research*. Himalaya Publishing House.
- Biasio, V. D. (2024). Not Just ‘Sinking Islands’: Climate Change and Adaptation in Small Island Developing States. *Political Studies*, 00323217241298848. <https://doi.org/10.1177/00323217241298848>

- Birkmann, J., E. Liwenga, R. Pandey, E. Boyd, R. Djalante, F. Gemenne, W. Leal Filho, P.F. Pinho, L. Stringer, and D. Wrathall, 2022: Poverty, Livelihoods and Sustainable Development. In: *Climate Change 2022: Impacts, Adaptation and Vulnerability. Contribution of Working Group II to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change* [H.-O. Pörtner, D.C. Roberts, M. Tignor, E.S. Poloczanska, K. Mintenbeck, A. Alegría, M. Craig, S. Langsdorf, S. Löschke, V. Möller, A. Okem, B. Rama (eds.)]. Cambridge University Press, Cambridge, UK and New York, NY, USA, pp. 1171–1274, doi:10.1017/9781009325844.010.
- Bishop, M., Argudin, C., Bouhia, R., Carter, G., Corbett, J., Lindsay, C., Scobie, M., & Wilkinson, E. (2021). *Just Transitions in Small Island Developing States (SIDS)*. The British Academy. <https://doi.org/10.5871/just-transitions/9780856726750.001>
- Bonilla, Y. (2020). The coloniality of disaster: Race, empire, and the temporal logics of emergency in Puerto Rico, USA. *Political Geography*, 78, 102181. <https://doi.org/10.1016/j.polgeo.2020.102181>
- Bottomley, A. (2020). Between Islands: Colonial Legacies and Cultural Imaginaries. *Pólemos*, 14, 237–260. <https://doi.org/10.1515/pol-2020-2016>
- Bowden, V., Nyberg, D., & Wright, C. (2019). Planning for the past: Local temporality and the construction of denial in climate change adaptation. *Global Environmental Change*, 57, 101939. <https://doi.org/10.1016/j.gloenvcha.2019.101939>
- Bowen, G. (2009). Document Analysis as a Qualitative Research Method. *Qualitative Research Journal*, 9, 27–40. <https://doi.org/10.3316/QRJ0902027>
- Braun, B., & Castree, N. (Eds.). (1998). *Remaking reality: Nature at the millennium*. Routledge
- Brinkmann, S. (2014). Unstructured and Semi-Structured Interviewing. In P. Leavy (Ed.), *The Oxford Handbook of Qualitative Research* (p. 0). Oxford University Press. <https://doi.org/10.1093/oxfordhb/9780199811755.013.030>
- Broto, V. C., Olazabal, M., & Ziervogel, G. (2024). Disrupting the imaginaries of urban action to deliver just adaptation. *Buildings & Cities*, 5(1). <https://doi.org/10.5334/bc.456>
- Bulkeley, H. (2001). Governing climate change: The politics of risk society? *Transactions of the Institute of British Geographers*, 26(4), 430–447. <https://doi.org/10.1111/1475-5661.00033>
- Bunce, M. (2008). The ‘leisuring’ of rural landscapes in Barbados: New spatialities and the implications for sustainability in small island states. *Geoforum*, 39(2), 969–979. <https://doi.org/10.1016/j.geoforum.2007.10.005>
- Butler, J. (1992). Contingent Foundations: Feminism and the Question of “Postmodernism”. In *Feminists Theorize the Political*. Routledge.
- Callahan, C. W. (2025). Present and future limits to climate change adaptation. *Nature Sustainability*, 8(4), 336–342. <https://doi.org/10.1038/s41893-025-01519-7>
- Calliari, E., Serdeczny, O., & Vanhala, L. (2020). Making sense of the politics in the climate change loss & damage debate. *Global Environmental Change*, 64, 102133. <https://doi.org/10.1016/j.gloenvcha.2020.102133>
- Campbell, J. (2009). *Vulnerability and Resilience in Oceania*. 3(1).

- Castree, N., & Braun, B. (1998). The construction of nature and the nature of construction. In *Remaking reality: Nature at the millennium* (pp. 1–38). Routledge. <https://research.manchester.ac.uk/en/publications/the-construction-of-nature-and-the-nature-of-construction/>
- Cashman & Nagdee, 2017: Cashman, A. and Nagdee, M.R., 2017: Impacts of Climate Change on Settlements and Infrastructure in the Coastal and Marine Environments of Caribbean Small Island Developing States (SIDS). *Caribbean Marine Climate Change Report Card: Science Review 2017*, pp. 155–173.
- Castree, N., & Braun, B. (1998). The construction of nature and the nature of construction. In *Remaking reality: Nature at the millennium* (pp. 1–38). Routledge. <https://research.manchester.ac.uk/en/publications/the-construction-of-nature-and-the-nature-of-construction/>
- Castro, B., & Sen, R. (2022). Everyday Adaptation: Theorizing climate change adaptation in daily life. *Global Environmental Change*, 75, 102555. <https://doi.org/10.1016/j.gloenvcha.2022.102555>
- Chase, N. (2019). *Barbados' Debt Crisis: The Effects of Colonialism and Neoliberalism*.
- Chavez-Rodriguez, S. K., Libertad (Ed.). (2018). *A Critical Approach to Climate Change Adaptation: Discourses, Policies and Practices*. Routledge. <https://doi.org/10.4324/9781315165448>
- Chipangura, P., Niekerk, D. V., & Waldt, G. V. D. (2016). An exploration of objectivism and social constructivism within the context of disaster risk. *Disaster Prevention and Management*, 25(2), 261–274. (world). <https://doi.org/10.1108/DPM-09-2015-0210>
- Chirima, R. (2025). *Harnessing Indigenous Knowledge for Climate Resilience and Economic Empowerment: Pathways to Sustainable Development in Small Island Developing States (SIDS)*. Research Square. <https://doi.org/10.21203/rs.3.rs-7384456/v1>
- Chukwuma, K. H. (2020). Constructing the Herder–Farmer Conflict as (in)Security in Nigeria. *African Security*. (world). <https://www.tandfonline.com/doi/full/10.1080/19392206.2020.1732703>
- Clissold, R., McNamara, K. E., Westoby, R., & Wichman, V. (2023). Experiencing and responding to extreme weather: Lessons from the Cook Islands. *Local Environment*, 28(5), 645–661. <https://doi.org/10.1080/13549839.2023.2169912>
- Colloff, M. J., Goddard, R., Abel, N., Locatelli, B., Wyborn, C., Butler, J. R. A., Lavorel, S., van Kerkhoff, L., Meharg, S., Múnera-Roldán, C., Bruley, E., Fedele, G., Wise, R. M., & Dunlop, M. (2021). Adapting transformation and transforming adaptation to climate change using a pathways approach. *Environmental Science and Policy*. <https://doi.org/10.1016/j.envsci.2021.06.014>
- Constantino, S. M., & Weber, E. U. (2021). Decision-making under the deep uncertainty of climate change: The psychological and political agency of narratives. *Current Opinion in Psychology, Psychology of Climate Change (2021)*, 42, 151–159. <https://doi.org/10.1016/j.copsyc.2021.11.001>

- Cooper, S., Cloos, P., Abraham, C., McPherson, N., Ravalieri, T., & Harris-Glenville, F. (2025). What can be said about risks, vulnerabilities, and adaptation to climate change in Caribbean small island developing states (SIDS)? The case of Dominica. A qualitative study. *PLOS Climate*, 4(4), e0000275. <https://doi.org/10.1371/journal.pclm.0000275>
- Cretney, R., White, I., & Hanna, C. (2025). Navigating adaptive futures: Analysing the scope of political possibilities for climate adaptation. *Kōtuitui: New Zealand Journal of Social Sciences Online*, 20(2), 227–248. <https://doi.org/10.1080/1177083X.2024.2344497>
- de Wit, S. (2018). Victims or Masters of Adaptation? How the Idea of Adaptation to Climate Change Travels Up and Down to a Village in Simanjoro, Maasailand Northern Tanzania. *Sociologus*, 68(1), 21–41.
- Das, R. (2009). Critical Social Constructivism: ‘Culturing’ Identity, (in) Security, and the State in International Relations Theory. *The Indian Journal of Political Science*, 70(4), 961–982.
- Derrida, J. (1978). Structure, sign, and play in the discourse of the human sciences. In *Writing and difference* (A. Bass, Trans., pp. 278–293). University of Chicago Press. Original work published 1967
- Dewulf, A. (2013). Contrasting frames in policy debates on climate change adaptation. *WIREs Climate Change*, 4(4), 321–330. <https://doi.org/10.1002/wcc.227>
- Dorji, T., Rinchen, K., Morrison-Saunders, A., Blake, D., Banham, V., & Pelden, S. (2024). Understanding How Indigenous Knowledge Contributes to Climate Change Adaptation and Resilience: A Systematic Literature Review. *Environmental Management*, 74(6), 1101–1123. <https://doi.org/10.1007/s00267-024-02032-x>
- Doty, R. L. (1993). Foreign policy as social construction: A post-positivist analysis of U.S. counterinsurgency policy in the Philippines. *International Studies Quarterly*, 37(3), 297–320. <https://doi.org/10.2307/2600810>
- Dujardin, S. (2020). Planning with Climate Change? A Poststructuralist Approach to Climate Change Adaptation. *Annals of the American Association of Geographers*, 110(4), 1059–1074. <https://doi.org/10.1080/24694452.2019.1664888>
- Ellis, N. R., & Tschakert, P. (2019). Triple-wins as pathways to transformation? A critical review. *Geoforum*, 103, 167–170. <https://doi.org/10.1016/j.geoforum.2018.12.006>
- Elrick-Barr, C.E., Plummer, R., & Smith, T.F. (2023). Third-generation adaptive capacity assessment for climate-resilient development. *Climate and Development*, 15(06), 518–521. <https://doi.org/10.1080/17565529.2022.2117978>
- Ensor, J. E., Wennström, P., Bhattarai, A., Nightingale, A. J., Eriksen, S., & Sillmann, J. (2019). Asking the right questions in adaptation research and practice: Seeing beyond climate impacts in rural Nepal. *Environmental Science & Policy*, 94, 227–236. <https://doi.org/10.1016/j.envsci.2019.01.013>
- Eriksen, C., Simon, G. L., Roth, F., Lakhina, S. J., Wisner, B., Adler, C., Thomalla, F., Scolobig, A., Brady, K., Bründl, M., Neisser, F., Grenfell, M., Maduz, L., & Prior, T. (2020). Rethinking the interplay between affluence and vulnerability to aid climate change adaptive capacity. *Climatic Change*, 162(1), 25–39. <https://doi.org/10.1007/s10584-020-02819-x>

- Eriksen, S. H., Nightingale, A. J., & Eakin, H. (2015). Reframing adaptation: The political nature of climate change adaptation. *Global Environmental Change, 35*, 523–533. <https://doi.org/10.1016/j.gloenvcha.2015.09.014>
- Eriksen, S., Schipper, E. L. F., Scoville-Simonds, M., Vincent, K., Adam, H. N., Brooks, N., Harding, B., Khatri, D., Lenaerts, L., Liverman, D., Mills-Novoa, M., Mosberg, M., Movik, S., Muok, B., Nightingale, A., Ojha, H., Sygna, L., Taylor, M., Vogel, C., & West, J. J. (2021). Adaptation interventions and their effect on vulnerability in developing countries: Help, hindrance or irrelevance? *World Development, 141*, 105383. <https://doi.org/10.1016/j.worlddev.2020.105383>
- Farbotko, C., Boas, I., Dahm, R., Kitara, T., Lusama, T., & Tanielu, T. (2023). Reclaiming open climate adaptation futures. *Nature Climate Change, 13*(8), 750–751. <https://doi.org/10.1038/s41558-023-01733-1>
- Farbotko, C., & Campbell, J. (2022). Who defines atoll ‘uninhabitability’? *Environmental Science & Policy, 138*, 182–190. <https://doi.org/10.1016/j.envsci.2022.10.001>
- Fincher, R., Barnett, J., & Graham, S. (2015). Temporalities in Adaptation to Sea-Level Rise. *Annals of the Association of American Geographers, 105*(2), 263–273.
- Fisher, S. (2024). Much ado about nothing? Why adaptation measurement matters. *Climate and Development, 16*(2), 161–167. <https://doi.org/10.1080/17565529.2023.2204070>
- Flick, U. (2022). *The SAGE Handbook of Qualitative Research Design*. 1–100.
- Flyvbjerg, B. (2006). Five misunderstandings about case-study research. *Qualitative Inquiry, 12*(2), 219–245.
- Forsyth, T., & McDermott, C. L. (2022). When climate justice goes wrong: Maladaptation and deep co-production in transformative environmental science and policy. *Political Geography, 98*, 102691. <https://doi.org/10.1016/j.polgeo.2022.102691>
- Forsyth, T., McDermott, C. L., & Dhakal, R. (2022). What is equitable about equitable resilience? Dynamic risks and subjectivities in Nepal. *World Development, 159*, 106020. <https://doi.org/10.1016/j.worlddev.2022.106020>
- Friedman, E. (2023). Constructing the adaptation economy: Climate resilient development and the economization of vulnerability. *Global Environmental Change, 80*, 102673. <https://doi.org/10.1016/j.gloenvcha.2023.102673>
- Friedman, E. (2024). Climate resilient development pathways boost inclusive national adaptation action. *Npj Climate Action, 3*(1), 1–4. <https://doi.org/10.1038/s44168-024-00166-6>
- Fukuda-Parr, S., & McNeill, D. (2019). Knowledge and Politics in Setting and Measuring the SDGs: Introduction to Special Issue. *Global Policy, 10*(S1), 5–15. <https://doi.org/10.1111/1758-5899.12604>
- Fünfgeld, H., & McEvoy, D. (2014). Frame Divergence in Climate Change Adaptation Policy: Insights from Australian Local Government Planning. *Environment and Planning C: Government and Policy, 32*(4), 603–622. <https://doi.org/10.1068/c1234>
- Gahman, L., Thongs, G., & Greenidge, A. (2021). Disaster, Debt, and ‘Underdevelopment’: The Cunning of Colonial-Capitalism in the Caribbean. *Development, 64*(1–2), 112–118. <https://doi.org/10.1057/s41301-021-00282-4>

- Gaillard, J. C. (2021). *The Invention of Disaster: Power and Knowledge in Discourses on Hazard and Vulnerability*. Routledge. <https://doi.org/10.4324/9781315752167>
- Galaitsi, S. E., Corbin, C., Cox, S.-A., Joseph, G., McConney, P., Cashman, A., Springer, C., Keenan, J., Cummings, C. L., Trump, B. D., & Linkov, I. (2024). Balancing climate resilience and adaptation for Caribbean Small Island Developing States (SIDS): Building institutional capacity. *Integrated Environmental Assessment and Management*, 20(5), 1237–1255. <https://doi.org/10.1002/ieam.4860>
- Gaonkar, D. P. (2002). Toward New Imaginaries: An Introduction. *Public Culture*, 14(1), 1–19. <https://doi.org/10.1215/08992363-14-1-1>
- Ghimire, R., & Chhetri, N. (2023). Coproductive Imaginaries for Climate Change Adaptation: A Case of Adaptation Initiatives in the Gandaki River Basin, Western Nepal. *Professional Geographer*, 75(2), 324–334. <https://doi.org/10.1080/00330124.2021.1996249>
- Girvan, Norman. 2015. Assessing Westminster in the Caribbean: Then and Now. *Commonwealth & Comparative Politics* 53 (1): 95–107.
- Government of Barbados. (2023). Barbados physical development plan amendment: Toward a green, prosperous, healthy & resilient nation, Part A national policies. <http://townplanning.gov.bb/draft-physical-development-plan-2023/>
- Government of Barbados. (2021). Update of the first nationally determined contribution (NDC) under the United Nations Framework Convention on Climate Change (UNFCCC). <https://unfccc.int/sites/default/files/NDC/2022-06/2021%20Barbados%20NDC%20update%20-%202021%20July%202021.pdf>
- Government of Barbados. (2020). Integrated coastal zone management: The Barbados policy framework (2020 to 2030). ICZM Plan Vol.1 <https://example-link.com>
- Government of Barbados. (2018). Barbados' second national communication under the United Nations Framework Convention on Climate Change (UNFCCC). https://www4.unfccc.int/sites/SubmissionsStaging/NationalReports/Documents/4693851_Barbados-NC2-1-Barbados%20SNC%20FINAL%20April%202018.pdf
- Goldman, M. J., Turner, M. D., & Daly, M. (2018). A critical political ecology of human dimensions of climate change: Epistemology, ontology, and ethics. *WIREs Climate Change*, 9(4), e526. <https://doi.org/10.1002/wcc.526>
- Goodwin, S., Olazabal, M., Castro, A. J., & Pascual, U. (2025). A relational turn in climate change adaptation: Evidence from urban nature-based solutions. *Ambio*, 54(3), 520–535. <https://doi.org/10.1007/s13280-024-02090-9>
- Gorddard, R., Colloff, M. J., Wise, R. M., Ware, D., & Dunlop, M. (2016). Values, rules and knowledge: Adaptation as change in the decision context. *Environmental Science & Policy*, 57, 60–69. <https://doi.org/10.1016/j.envsci.2015.12.004>
- Granderson, A. A. (2014). Making sense of climate change risks and responses at the community level: A cultural-political lens. *Climate Risk Management*, 3, 55–64. <https://doi.org/10.1016/j.crm.2014.05.003>
- Grant, J. (2014). On the critique of political imaginaries. *European Journal of Political Theory*, 13(4), 408–426. <https://doi.org/10.1177/1474885113519259>

- Griswold, D. (2021). Growing Hope: Island Agriculture and Refusing Catastrophe in Climate Change Adaptation in Fiji. *Island Studies Journal*, 16, 136–155. <https://doi.org/10.24043/isj.181>
- Haraway, D. (1988). Situated Knowledges: The Science Question in Feminism and the Privilege of Partial Perspective. *Feminist Studies*, 14(3), 575–599. <https://doi.org/10.2307/3178066>
- Haverkamp, J., & Snorek, J. (2026). The ‘Single Adaptation Imaginary’ (SAI): Mapping the contours of dominant adaptation. *Climate and Development*, 1–17. <https://doi.org/10.1080/17565529.2025.2604301>
- Heath, S. C. (2025). Navigating psychosocial dimensions: Understanding the intersections of adaptation strategies and well-being outcomes in the context of climate change. *Current Opinion in Environmental Sustainability*, 72, 101493. <https://doi.org/10.1016/j.cosust.2024.101493>
- Helgesson, S. (2014). 3. Radicalizing Temporal Difference: Anthropology, Postcolonial Theory, and Literary Time. *History and Theory*, 53(4), 545–562. <https://doi.org/10.1111/hith.10730>
- Hermann, E. & Kempf, W. (2019): Adaptation and the question of migration: Directions in dealing with climate change in Kiribati. In: Klöck, C. & Fink, M. (eds.): Dealing with climate change on small islands: Towards effective and sustainable adaptation? (pp. 293–312). Göttingen: Göttingen University Press. <https://doi.org/10.17875/gup2019-1221>
- Hermann, E. (2020). Climate Change, Emotions and Religion: Imagining the Future in Central Oceania. *Anthropological Forum*, 30(3), 274–291. <https://doi.org/10.1080/00664677.2020.1812051>
- Hofman, C. L., Stancioff, C. E., Richards, A., Nanichi Auguste, I., Sutherland, A., & Hoogland, M. L. P. (2021). Resilient Caribbean Communities: A Long-Term Perspective on Sustainability and Social Adaptability to Natural Hazards in the Lesser Antilles. *Sustainability*, 13(17), Article 17. <https://doi.org/10.3390/su13179807>
- Hopf, T. (1998). The Promise of Constructivism in International Relations Theory. *International Security*, 23(1), 171–200. <https://doi.org/10.1162/isec.23.1.171>
- Horowitz, C. A. (2016). Paris Agreement. *International Legal Materials*, 55(4), 740–755. <https://doi.org/10.1017/S0020782900004253>
- Hulme, M. (2011). Reducing the Future to Climate: A Story of Climate Determinism and Reductionism. *Osiris*, 26(1), 245–266. <https://doi.org/10.1086/661274>
- Hunfeld, K. (2022). The coloniality of time in the global justice debate: De-centring Western linear temporality. *Journal of Global Ethics*, 18(1), 100–117. <https://doi.org/10.1080/17449626.2022.2052151>
- Iniesta-Arandia, I., & Ravera, F. (2025). Opening Editorial: The contested nature of climate change: Feminist and decolonial perspectives for transformative adaptation. *Environmental Science & Policy*, 169, 104082. <https://doi.org/10.1016/j.envsci.2025.104082>

- IPCC (2023). Climate Change 2023: Synthesis Report. Contribution of Working Groups I, II and III to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change [Core Writing Team, H. Lee and J. Romero (eds.)]. IPCC, Geneva, Switzerland, pp. 1–184. doi: 10.59327/IPCC/AR6-9789291691647
- Ishtiaque, A., Estoque, R. C., Eakin, H., Parajuli, J., & Rabby, Y. W. (2022). IPCC's current conceptualization of 'vulnerability' needs more clarification for climate change vulnerability assessments. *Journal of Environmental Management*, 303, 114246. <https://doi.org/10.1016/j.jenvman.2021.114246>
- Iwama, A. Y., Araos, F., Anbleyth-Evans, J., Marchezini, V., Ruiz-Luna, A., Ther-Ríos, F., Bacigalupe, G., & Perkins, P. E. (2021). Multiple knowledge systems and participatory actions in slow-onset effects of climate change: Insights and perspectives in Latin America and the Caribbean. *Current Opinion in Environmental Sustainability*, 50, 31–42. <https://doi.org/10.1016/j.cosust.2021.01.010>
- Jackson, G. (2021). Perceptions of disaster temporalities in two Indigenous societies from the Southwest Pacific. *International Journal of Disaster Risk Reduction*, 57, 102221. <https://doi.org/10.1016/j.ijdrr.2021.102221>
- Jarillo, S., & Barnett, J. (2022). Repositioning the (Is)land: Climate Change Adaptation and the Atoll Assemblage. *Antipode*, 54(3), 848–872. <https://doi.org/10.1111/anti.12814>
- Jarillo, S., & Barnett, J. (2024). The political economy of the social constraints to adaptation. *Current Opinion in Environmental Sustainability*, 71, 101475. <https://doi.org/10.1016/j.cosust.2024.101475>
- Jasanoff, S. (Ed.). (2004). *States of knowledge: The co-production of science and social order*. Routledge.
- Jessop, B., Brenner, N., & Jones, M. (2008). Theorizing Sociospatial Relations. *Environment and Planning D: Society and Space*, 26(3), 389–401. <https://doi.org/10.1068/d9107>
- Jones, L., & Tanner, T. (2017). 'Subjective resilience': Using perceptions to quantify household resilience to climate extremes and disasters. *Regional Environmental Change*, 17(1), 229–243. <https://doi.org/10.1007/s10113-016-0995-2>
- Jönsson, C. H. (2018). Impacts of tourism-related foreign direct investment in Barbados: Local experienced "realities" [Doctoral thesis, Sheffield Hallam University]. Sheffield Hallam University Research Archive. <https://doi.org/10.7190/shu-thesis-00215>
- Juhola, S., Glaas, E., Linnér, B.-O., & Neset, T.-S. (2016). Redefining maladaptation. *Environmental Science & Policy*, 55, 135–140. <https://doi.org/10.1016/j.envsci.2015.09.014>
- Kanan, A. H., & Giupponi, C. (2024). Coastal Socio-Ecological Systems Adapting to Climate Change: A Global Overview. *Sustainability*, 16(22). <https://doi.org/10.3390/su162210000>
- Kanarp, G. C. S., Böhm, S., & Löf, A. (2025). Contested adaptation futures: The role of global imaginaries in climate adaptation governance. *Sustainability Science*, 20(2), 525–545. <https://doi.org/10.1007/s11625-024-01608-0>

- Kanarp, G. C. S., & Westberg, L. (2024). Adapting climate change – how government authorities in Sweden make sense of adaptation through a network practice. *Journal of Environmental Planning and Management*, 67(9), 1977–1997. <https://doi.org/10.1080/09640568.2023.2171278>
- Karlsson, L., Naess, L. O., Nightingale, A., & Thompson, J. (2023). ‘Triple wins’ or ‘triple faults’? *Analysing the equity implications of policy discourses on climate-smart agriculture (CSA)*. [%5D](https://doi.org/10.1080/03066150.2017.1351433)
- Kate Weatherill, C. (2023). Sinking Paradise? Climate change vulnerability and Pacific Island extinction narratives. *Geoforum*, 145, 103566. <https://doi.org/10.1016/j.geoforum.2022.04.011>
- Kates, R. W., Clark, W. C., Corell, R., Hall, J. M., Jaeger, C. C., Lowe, I., McCarthy, J. J., Schellnhuber, H. J., Bolin, B., Dickson, N. M., Faucheux, S., Gallopin, G. C., Grübler, A., Huntley, B., Jäger, J., Jodha, N. S., Kaspersen, R. E., Mabogunje, A., Matson, P., ... Svedin, U. (2001). Sustainability Science. *Science*, 292(5517), 641–642. <https://doi.org/10.1126/science.1059386>
- Kause, A., Townsend, T., & Gaissmaier, W. (2019). Framing Climate Uncertainty: Frame Choices Reveal and Influence Climate Change Beliefs. *Weather, Climate, and Society*, 11(1), 199–215. <https://doi.org/10.1175/WCAS-D-18-0002.1>
- Kehler, S., & Birchall, S. J. (2025). Why history matters to planning: Climate change, colonialism & maladaptation. *Environmental Science & Policy*, 169, Article 104076. doi: 10.1016/j.envsci.2025.104076
- Kelman, I. (2014). No change from climate change: Vulnerability and small island developing states. *The Geographical Journal*, 180(2), 120–129. <https://doi.org/10.1111/geoj.12019>
- Klepp, S., & Fünfgeld, H. (2022). Tackling knowledge and power: An environmental justice perspective on climate change adaptation in Kiribati. *Climate and Development*, 14(8), 757–769. <https://doi.org/10.1080/17565529.2021.1984866>
- Klöß, C., Castro, P., Chin-Yee, S., B. Gurræsø, C., Desmases, C., Bouly, E., Carrillo Risi, D., & de Pryck, K. (2024). Beyond AOSIS: Small island states’ presence and participation at COP27. *Climate and Development*, 0(0), 1–12. <https://doi.org/10.1080/17565529.2023.2298780>
- Klöß, C., & Fink, M. (Eds). (2019). *Dealing with climate change on small islands: Towards effective and sustainable adaptation?* University Press. <https://doi.org/10.17875/gup2019-1208>
- Kothari, U., & Arnall, A. (2017). Contestation over an island imaginary landscape: The management and maintenance of touristic nature. *Environment and Planning A: Economy and Space*, 49(5), 980–998. <https://doi.org/10.1177/0308518X16685884>
- Kothari, U., & Arnall, A. (2019). Everyday life and environmental change. *The Geographical Journal*, 185(2), 130–141. <https://doi.org/10.1111/geoj.12296>
- Kothari, U., & Wilkinson, R. (2010). Colonial Imaginaries and Postcolonial Transformations: Exiles, bases, beaches. *Third World Quarterly*, 31(8), 1395–1412.

- Lau, J. D., Song, A. M., Morrison, T., Fabinyi, M., Brown, K., Blythe, J., Allison, E. H., & Adger, W. N. (2021). Morals and climate decision-making: Insights from social and behavioural sciences. *Current Opinion in Environmental Sustainability*, 52, 27–35. <https://doi.org/10.1016/j.cosust.2021.06.005>
- Laurent, C., & Duvat, V. K. E. (2024). Addressing the climate adaptation tracking gap: An assessment method and its application to the Caribbean region. *Regional Environmental Change*, 24(4), 147. <https://doi.org/10.1007/s10113-024-02301-9>
- Lejano, R. P. (2019). Relationality and Social–Ecological Systems: Going Beyond or Behind Sustainability and Resilience. *Sustainability*, 11(10). <https://doi.org/10.3390/su11102760>
- Lennon, M., & Tubridy, F. (2023). ‘Time’ as a focus for planning research: Exploring temporalities of coastal change. *Journal of Environmental Policy & Planning*, 25(3), 301–313. <https://doi.org/10.1080/1523908X.2022.2122420>
- Leon Sealey-Huggins. (2017). ‘1.5°C to stay alive’: Climate change, imperialism and justice for the Caribbean. *Third World Quarterly*, 38(11), 2444–2463. <https://doi.org/10.1080/01436597.2017.1368013>
- Levy, D. L., & Spicer, A. (2013). Contested imaginaries and the cultural political economy of climate change. *Organization*, 20(5), 659–678. <https://doi.org/10.1177/1350508413489816>
- Lindgaard, L. S. (2018). Adaptation as a political arena: Interrogating sedentarization as climate change adaptation in Central Vietnam. *Global Environmental Change*, 49, 166–174. <https://doi.org/10.1016/j.gloenvcha.2018.02.012>
- Liu, J., Dietz, T., Carpenter, S. R., Alberti, M., Folke, C., Moran, E., Pell, A. N., Deadman, P., Kratz, T., Lubchenco, J., Ostrom, E., Ouyang, Z., Provencher, W., Redman, C. L., Schneider, S. H., & Taylor, W. W. (2007). Complexity of Coupled Human and Natural Systems. *Science*, 317(5844), 1513–1516. <https://doi.org/10.1126/science.1144004>
- Llanos, M. B. (n.d.). *Co-Producing Knowledge and Politics for Climate Change Adaptation The Case of Colombia’s Capital Region*.
- Loch, T. K., & Riechers, M. (2021). Integrating indigenous and local knowledge in management and research on coastal ecosystems in the Global South: A literature review. *Ocean & Coastal Management*, 212, 105821. <https://doi.org/10.1016/j.ocecoaman.2021.105821>
- Luederitz, C., Meyer, M., Abson, D. J., Gralla, F., Lang, D. J., Rau, A.-L., & von Wehrden, H. (2016). Systematic student-driven literature reviews in sustainability science – an effective way to merge research and teaching. *Journal of Cleaner Production*, 119, 229–235. <https://doi.org/10.1016/j.jclepro.2016.02.005>
- Lund, C. (2014). Of What is This a Case?: Analytical Movements in Qualitative Social Science Research. *Human Organization*. (world). <https://doi.org/10.17730/humo.73.3.e35q482014x03314>
- Lundberg, A., Vital, A. V., & Das, S. (2021). Tropical Imaginaries and Climate Crisis: Embracing Relational Climate Discourses. *eTropic*, 20(2), 1–31. Scopus. <https://doi.org/10.25120/etropic.20.2.2021.3803>

- Mabon, L., Barkved, L., de Bruin, K., & Shih, W.-Y. (2022). Whose knowledge counts in nature-based solutions? Understanding epistemic justice for nature-based solutions through a multi-city comparison across Europe and Asia. *Environmental Science & Policy*, 136, 652–664. <https://doi.org/10.1016/j.envsci.2022.07.025>
- Macleod, G., & Jones, M. (2007). Territorial, Scalar, Networked, Connected: In What Sense a ‘Regional World’? *Regional Studies*, 41(9), 1177–1191. <https://doi.org/10.1080/00343400701646182>
- Magnan, A. K., Bell, R., Duvat, V. K. E., Ford, J. D., Garschagen, M., Haasnoot, M., Lacambra, C., Losada, I. J., Mach, K. J., Noblet, M., Parthasarathy, D., Sano, M., Vincent, K., Anisimov, A., Hanson, S., Malmström, A., Nicholls, R. J., & Winter, G. (2023). Status of global coastal adaptation. *Nature Climate Change*, 13(11), 1213–1221. <https://doi.org/10.1038/s41558-023-01834-x>
- Magnan, A. K., Schipper, E. I. f., Burkett, M., Bharwani, S., Burton, I., Eriksen, S., Gemenne, F., Schaar, J., & Ziervogel, G. (2016). Addressing the risk of maladaptation to climate change. *WIREs Climate Change*, 7(5), 646–665. <https://doi.org/10.1002/wcc.409>
- Mahony, M. (2023). Geographies of science and technology III: Careful entanglements, responsible futures. *Progress in Human Geography*, 47(4), 613–623. <https://doi.org/10.1177/03091325231165965>
- Malik, I. H., Ford, J. D., Way, R. G., & Barrand, N. E. (2025). Political ecology of climate change adaptation in the Arctic: Insights from Nunatsiavut, Canada. *Humanities and Social Sciences Communications*, 12(1), 1790. <https://doi.org/10.1057/s41599-025-06058-2>
- Manzo, L. C., Williams, D. R., Di Masso, A., Raymond, C. M., & Gulsrud, N. (2023). Using Senses of Place to Help Communities Navigate Place Disruption and Uncertainty. *Landscape Journal*, 42(1), 37–52. <https://doi.org/10.3368/lj.42.1.37>
- March, J. G., & Olsen, J. P. (1989). *Rediscovering institutions: The organizational basis of politics*. Free Press.
- Marlon, J. R., Bloodhart, B., Ballew, M. T., Rolfe-Redding, J., Roser-Renouf, C., Leiserowitz, A., & Maibach, E. (2019). How Hope and Doubt Affect Climate Change Mobilization. *Frontiers in Communication*, 4. <https://doi.org/10.3389/fcomm.2019.00020>
- McMichael, C., & Katonivaliku, M. (2020). Thick temporalities of planned relocation in Fiji. *Geoforum*, 108, 286–294. <https://doi.org/10.1016/j.geoforum.2019.06.012>
- McNamara, K. E., Clissold, R., Westoby, R., Piggott-McKellar, A. E., Kumar, R., Clarke, T., Namoumou, F., Areki, F., Joseph, E., Warrick, O., & Nunn, P. D. (2020). An assessment of community-based adaptation initiatives in the Pacific Islands. *Nature Climate Change*, 10(7), 628–639. <https://doi.org/10.1038/s41558-020-0813-1>
- Mehta, L., & Srivastava, S. (2020). Uncertainty in modelling climate change: The possibilities of co-production through knowledge pluralism 1. In *The Politics of Uncertainty*. Routledge.

- Merriam, S. B., Johnson-Bailey, Juanita, Lee, Ming-Yeh, Kee, Youngwha, Ntseane, Gabo, & and Muhamad, M. (2001). Power and positionality: Negotiating insider/outsider status within and across cultures. *International Journal of Lifelong Education, 20*(5), 405–416. <https://doi.org/10.1080/02601370120490>
- Merry, S., Davis, K., & Kingsbury, B. (Eds.). (2015). *The quiet power of indicators: Measuring governance, corruption, and rule of law* (Cambridge studies in law and society). Cambridge University Press.
- Mikulewicz, M. (2021). Disintegrating labour relations and depoliticised adaptation to climate change in rural São Tomé and Príncipe. *Area, 53*(3), 422–430. <https://doi.org/10.1111/area.12630>
- Miles, M. B., Huberman, A. M., & Saldana, J. (2013). *Qualitative Data Analysis: A Methods Sourcebook*. SAGE Publications.
- Milkoreit, M. (2017). Imaginary politics: Climate change and making the future. *Elementa: Science of the Anthropocene, 5*, 62. <https://doi.org/10.1525/elementa.249>
- Miller, C. A., & Wyborn, C. (2020). Co-production in global sustainability: Histories and theories. *Environmental Science & Policy, Into the Fray. Strategic Perspectives on Biodiversity Sciences and Politics, 113*, 88–95. <https://doi.org/10.1016/j.envsci.2018.01.016>
- Mohan, P. S. (2022). Implementing nationally determined contributions under the Paris agreement: An assessment of climate finance in Caribbean small island developing states. *Climate Policy, 22*(9–10), 1281–1289. <https://doi.org/10.1080/14693062.2022.2101978>
- Mohan, P. S. (2023). Financing needs to achieve Nationally Determined Contributions under the Paris Agreement in Caribbean Small Island Developing States. *Mitigation and Adaptation Strategies for Global Change, 28*(5), 26. <https://doi.org/10.1007/s11027-023-10062-9>
- Mohan, P. S. (2025). Climate change adaptation in small island developing states: Evidence from the nationally determined contributions of Caribbean States. *Regional Environmental Change, 25*(1), 32. <https://doi.org/10.1007/s10113-025-02369-x>
- Mortreux, C., Barnett, J., Jarillo, S., & Greenaway, K. H. (2025). Hope as an enabler of climate change adaptation. *Communications Psychology, 3*(1), 147. <https://doi.org/10.1038/s44271-025-00291-w>
- Mortreux, C., O'Neill, S., & Barnett, J. (2020). Between adaptive capacity and action: New insights into climate change adaptation at the household scale. *Environmental Research Letters, 15*(7), 074035. <https://doi.org/10.1088/1748-9326/ab7834>
- Muiderman, K., Gupta, A., Vervoort, J., & Biermann, F. (2020). Four approaches to anticipatory climate governance: Different conceptions of the future and implications for the present. *WIREs Climate Change, 11*(6), e673. <https://doi.org/10.1002/wcc.673>
- Mycoo, M. (2025). Cities and climate change adaptation solutions for the Caribbean: Tracing history, shaping the future. *Environmental Research: Climate, 5*(1), 015004. <https://doi.org/10.1088/2752-5295/ae26bd>
- Mycoo, M., Robinson, S.-A., Nguyen, C., Nisbet, C., & Tonkel, R. (2021). Human Adaptation to Coastal Hazards in Greater Bridgetown, Barbados. *Frontiers in Environmental Science, 9*, 647788. <https://doi.org/10.3389/fenvs.2021.647788>

- Nagoda, S., & Nightingale, A. J. (2017). Participation and Power in Climate Change Adaptation Policies: Vulnerability in Food Security Programs in Nepal. *World Development*, 100, 85–93. <https://doi.org/10.1016/j.worlddev.2017.07.022>
- Nalau, J. (2025). Decision-making about climate change adaptation. *Dialogues on Climate Change*, 2(1), 66–70. <https://doi.org/10.1177/29768659241297761>
- Nalau, J., & Cobb, G. (2022). The strengths and weaknesses of future visioning approaches for climate change adaptation: A review. *Global Environmental Change*, 74, 102527. <https://doi.org/10.1016/j.gloenvcha.2022.102527>
- Neal, S., & McLaughlin, E. (2009). Researching Up? Interviews, Emotionality and Policy-Making Elites. *Journal of Social Policy*, 38(4), 689–707. <https://doi.org/10.1017/S0047279409990018>
- Newell, P., Srivastava, S., Naess, L. O., Torres Contreras, G. A., & Price, R. (2021). Toward transformative climate justice: An emerging research agenda. *WIREs Climate Change*, 12(6), e733. <https://doi.org/10.1002/wcc.733>
- Nguyen, C., & Robinson, S.-A. (2019). Differential climate change impacts and adaptation responses in the Caribbean Lesser Antilles. *Caribbean Geography*, 24.
- Nightingale, A. J. (2016). Adaptive scholarship and situated knowledges? Hybrid methodologies and plural epistemologies in climate change adaptation research. *Area*, 48(1), 41–47. <https://doi.org/10.1111/area.12195>
- Nightingale, A. J. (2017). Power and politics in climate change adaptation efforts: Struggles over authority and recognition in the context of political instability. *Geoforum*, 84, 11–20. <https://doi.org/10.1016/j.geoforum.2017.05.011>
- Nightingale, A. J. (2018). Nepal’s Towering Climate Adaptation Challenges. *Current History*, 117(798), 135–141. <https://doi.org/10.1525/curh.2018.117.798.135>
- Nightingale, A. J., Eriksen, S., Taylor, M., Forsyth, T., Pelling, M., Newsham, A., Boyd, E., Brown, K., Harvey, B., Jones, L., Bezner Kerr, R., Mehta, L., Naess, L. O., Ockwell, D., Scoones, I., Tanner, T., & Whitfield, S. (2020). Beyond Technical Fixes: Climate solutions and the great derangement. *Climate and Development*, 12(4), 343–352. <https://doi.org/10.1080/17565529.2019.1624495>
- Nightingale, A. J., Gonda, N., & Eriksen, S. H. (2022). Affective adaptation = effective transformation? Shifting the politics of climate change adaptation and transformation from the status quo. *WIREs Climate Change*, 13(1), e740. <https://doi.org/10.1002/wcc.740>
- Nissinen, V. (2001). Military leadership: Critical constructivist approach to conceptualizing, modeling and measuring military leadership in the Finnish Defence Forces. National Defence College. <https://www.doria.fi/handle/10024/125761>
- Nolet, E. (2016). ‘Are you prepared?’ Representations and management of floods in Lomanikoro, Rewa (Fiji). *Disasters*, 40(4), 720–739. <https://doi.org/10.1111/disa.12175>
- Noy, C. (2008). Sampling Knowledge: The Hermeneutics of Snowball Sampling in Qualitative Research. *International Journal of Social Research Methodology*, 11(4), 327–344. <https://doi.org/10.1080/13645570701401305>

- Nunn, P. D., Kumar, R., Barrowman, H. M., Chambers, L., Fifita, L., Gegeo, D., Gomese, C., McGree, S., Rarai, A., Cheer, K., Esau, D., Fa'anunu, 'Ofa, Fong, T., Fong-Lomavatu, M., Geraghty, P., Heorake, T., Kekeubata, E., Korovulavula, I., Kubunavanua, E., ... Waiwai, M. (2024). Traditional knowledge for climate resilience in the Pacific Islands. *WIREs Climate Change*, *15*(4), e882. <https://doi.org/10.1002/wcc.882>
- Nunn, P. D., Mulgrew, K., Scott-Parker, B., Hine, D. W., Marks, A. D. G., Mahar, D., & Maebuta, J. (2016). Spirituality and attitudes towards Nature in the Pacific Islands: Insights for enabling climate-change adaptation. *Climatic Change*, *136*(3), 477–493. <https://doi.org/10.1007/s10584-016-1646-9>
- Nunn, P., & Kumar, R. (2017). Understanding climate-human interactions in Small Island Developing States (SIDS): Implications for future livelihood sustainability. *International Journal of Climate Change Strategies and Management*, *10*(2), 245–271. <https://doi.org/10.1108/IJCCSM-01-2017-0012>
- Nurse-Bray, M., Palmer, R., Stuart, A., Arbon, V., & Rigney, L.-I. (2020). Scale, colonisation and adapting to climate change: Insights from the Arabana people, South Australia. *Geoforum*, *114*, 138–150. <https://doi.org/10.1016/j.geoforum.2020.05.021>
- O'Brien, K. L., & Wolf, J. (2010). A values-based approach to vulnerability and adaptation to climate change. *WIREs Climate Change*, *1*(2), 232–242. <https://doi.org/10.1002/wcc.30>
- Oculi, N., & Stephenson, S. R. (2018). Conceptualizing climate vulnerability: Understanding the negotiating strategies of Small Island Developing States. *Environmental Science & Policy*, *85*, 72–80. <https://doi.org/10.1016/j.envsci.2018.03.025>
- Ojha, H. R., Ghimire, S., Pain, A., Nightingale, A., Khatri, D. B., & Dhungana, H. (2016). Policy without politics: Technocratic control of climate change adaptation policy making in Nepal. *Climate Policy*, *16*(4), 415–433. <https://doi.org/10.1080/14693062.2014.1003775>
- Olazabal, M., Amorim-Maia, A. T., Alda-Vidal, C., & Goodwin, S. (2024). What is limiting how we imagine climate change adaptation? *Current Opinion in Environmental Sustainability*, *71*, 101476. <https://doi.org/10.1016/j.cosust.2024.101476>
- Orlove, B. (2022). The Concept of Adaptation. *Annual Review of Environment and Resources*, *47*(1), 535–581. <https://doi.org/10.1146/annurev-environ-112320-095719>
- Otoara Ha'apio, M., Wairiu, M., Gonzalez, R., & Morrison, K. (2018). Transformation of rural communities: Lessons from a local self-initiative for building resilience in the Solomon Islands. *Local Environment*, *23*(3), 352–365. <https://doi.org/10.1080/13549839.2017.1420640>
- Pahl, S., Sheppard, S., Boomsma, C., & Groves, C. (2014). Perceptions of time in relation to climate change. *WIREs Climate Change*, *5*(3), 375–388. <https://doi.org/10.1002/wcc.272>

- Paprocki, K. (2018). Threatening Dystopias: Development and Adaptation Regimes in Bangladesh. *Annals of the American Association of Geographers*, 108(4), 955–973. <https://doi.org/10.1080/24694452.2017.1406330>
- Pelling, M., Comelli, T., Cordova, M., Kalaycıoğlu, S., Menoscal, J., Upadhyaya, R., & Garschagen, M. (2024). Normative future visioning for city resilience and development. *Climate and Development*, 16(4), 335–348. <https://doi.org/10.1080/17565529.2023.2223564>
- Pérez-Hämmerle, K.-V., Moon, K., & Possingham, H. P. (2024). Unearthing assumptions and power: A framework for research, policy, and practice. *One Earth*, 7(2), 199–210. <https://doi.org/10.1016/j.oneear.2024.01.003>
- Perry, K. K. (2022). *From the Plantation and the Deep Blue Sea: Naturalizing Debt, Ordinary Disasters and Postplantation Ecologies in the Caribbean* (SSRN Scholarly Paper No. 4172399). <https://doi.org/10.2139/ssrn.4172399>
- Perry, K. K. (2024). Epistemic silences, subversive politics: Post-disaster economic assessments as technologies of persistent coloniality and route to an emancipatory climate justice agenda in the Caribbean. *Climate and Development*, 0(0), 1–13. <https://doi.org/10.1080/17565529.2024.2370926>
- Petzold, J., Joe, E. T., Kelman, I., Magnan, A. K., Mirbach, C., Nagle Alverio, G., Nunn, P. D., Ratter, B. M. W., & The Global Adaptation Mapping Initiative Team. (2023). Between tinkering and transformation: A contemporary appraisal of climate change adaptation research on the world’s islands. *Frontiers in Climate*, 4. <https://doi.org/10.3389/fclim.2022.1072231>
- Porcuna-Ferrer, A., Calvet-Mir, L., Guillerminet, T., Alvarez-Fernandez, S., Labeyrie, V., Porcuna-Ferrer, E., & Reyes-García, V. (2023). “So many things have changed”: Situated understandings of climate change impacts among the Bassari, south-eastern Senegal. *Environmental Science & Policy*, 148, 103552. <https://doi.org/10.1016/j.envsci.2023.103552>
- Pörtner, H.-O., & Roberts, D. C. (n.d.). *Climate Change 2022: Impacts, Adaptation and Vulnerability*. 3068.
- Puig, D. (2025). Editorial overview: Social limits to climate change adaptation revisited. *Current Opinion in Environmental Sustainability*, 77, 101591. <https://doi.org/10.1016/j.cosust.2025.101591>
- Ragin, C. C., & Amoroso, L. M. (2019). *Constructing social research: The unity and diversity of method* (3rd ed.). SAGE Publications.
- Rarai, A., Parsons, M., Nursey-Bray, M., & Crease, R. (2022). Situating climate change adaptation within plural worlds: The role of Indigenous and local knowledge in Pentecost Island, Vanuatu. *Environment and Planning E: Nature and Space*, 5(4), 2240–2282. <https://doi.org/10.1177/25148486211047739>
- Rasheed, A. A. (2019). Role of Small Islands in UN Climate Negotiations: A Constructivist Viewpoint. *International Studies*, 56(4), 215–235. <https://doi.org/10.1177/0020881719861503>
- Reith, G. (2004). Uncertain times: The notion of “risk” and the development of modernity. *Time & Society*, 13(2–3), 383–402. <https://doi.org/10.1177/0961463X04045672>

- Remling, E. (n.d.). *Adaptation, now? Exploring the Politics of Climate Adaptation through Poststructuralist Discourse Theory*.
- Remling, E. (2023). Exploring the affective dimension of climate adaptation discourse: Political fantasies in German adaptation policy. *Environment and Planning C: Politics and Space*, 41(4), 714–734. <https://doi.org/10.1177/23996544231154368>
- Rhiney, K., & Baptiste, A. K. (2019). Adapting to Climate Change in the Caribbean: Existential Threat or Development Crossroads? *Caribbean Studies*, 47(2), 59–80.
- Rickards, L., Ison, R., Fünfgeld, H., & Wiseman, J. (2014). Opening and Closing the Future: Climate Change, Adaptation, and Scenario Planning. *Environment and Planning C: Government and Policy*, 32(4), 587–602. <https://doi.org/10.1068/c3204ed>
- Risse, T. (n.d.). 7. Social Constructivism and European Integration. In *European Integration Theory* (pp. 128–148). Oxford University Press. Retrieved 31 March 2025, from <https://www.oxfordpoliticalstrove.com/display/10.1093/hepl/9780198737315.001.0001/hepl-9780198737315-chapter-7>
- Robinson, S. (2017). Climate change adaptation trends in small island developing states. *Mitigation and Adaptation Strategies for Global Change*, 22(4), 669–691. <https://doi.org/10.1007/s11027-015-9693-5>
- Robinson, S. (2018a). Adapting to climate change at the national level in Caribbean small island developing state. *Island Studies Journal*, 13(1), 79–100. <https://doi.org/10.24043/isj.59>
- Robinson, S. (2018b). Climate Change Adaptation Limits in Small Island Developing States. In W. Leal Filho & J. Nalau (Eds), *Limits to Climate Change Adaptation* (pp. 263–281). Springer International Publishing. https://doi.org/10.1007/978-3-319-64599-5_15
- Robinson, S., Douma, A., Poore, T., & Singh, K. (2023). The role of colonial pasts in shaping climate futures: Adaptive capacity in Georgetown, Guyana. *Habitat International*, 139, 102902. <https://doi.org/10.1016/j.habitatint.2023.102902>
- Russell, C. D. (2020). Addressing leakages between the tourism hotel sector and other sectors in The Bahamas [Doctoral dissertation, Walden University]. Walden Dissertations and Doctoral Studies. <https://scholarworks.waldenu.edu/dissertations/9638/>
- Rühlemann, A., & Jordan, J. C. (2021). Risk perception and culture: Implications for vulnerability and adaptation to climate change. *Disasters*, 45(2), 424–452. <https://doi.org/10.1111/disa.12429>
- Saddington, L. (2023). Geopolitical imaginaries in climate and ocean governance: Seychelles and the Blue Economy. *Geoforum*, 139, 103682. <https://doi.org/10.1016/j.geoforum.2023.103682>
- Schipper, E. L. F. (2020). Maladaptation: When Adaptation to Climate Change Goes Very Wrong. *One Earth*, 3(4), 409–414. <https://doi.org/10.1016/j.oneear.2020.09.014>
- Schipper, E. L. F., & Mukherji, A. (2024). Misguided negative adaptation narratives are hurting the poor. *Science*, 386(6722), 624–626. <https://doi.org/10.1126/science.adq7821>

- Schipper, E. L. F., Revi, A., Preston, B. L., Carr, E. R., Eriksen, S. E. H., Fernandez-Carril, L. R., Glavovic, B., Hilmi, N., Ley, D., Mukerji, R., Silvia Muylaert de Araujo, M., Perez, R., Rose, S. K., Singh, P., & Tebboth, M. (2022). *Chapter 18: Climate Resilient Development Pathways*. <https://ueaeprints.uea.ac.uk/id/eprint/84027/>
- Schlosberg, D. (2004). Reconceiving Environmental Justice: Global Movements And Political Theories. *Environmental Politics*, 13(3), 517–540. <https://doi.org/10.1080/0964401042000229025>
- Schoch, K. (2020). Case study research. *Research Design and Methods: An Applied Guide for the Scholar-Practitioner*, 31(1), 245–258.
- Schueler, K. (2017). Nature-based Solutions to Enhance Coastal Resilience. *IDB Publications*. (Bahamas). <https://doi.org/10.18235/0000824>
- Scoones, I. (2019). *What is Uncertainty and Why Does it Matter?* [Report]. The Institute of Development Studies and Partner Organisations. https://opendocs.ids.ac.uk/articles/report/What_is_Uncertainty_and_Why_Does_it_Matter_/26432353/1
- Scoville-Simonds, M., Jamali, H., & Hufty, M. (2020). The Hazards of Mainstreaming: Climate change adaptation politics in three dimensions. *World Development*, 125, 104683. <https://doi.org/10.1016/j.worlddev.2019.104683>
- Sealy, W. (2018). *From Colonialism to Transnationalism: The Neo-Colonial Structure of Caribbean Tourism*. 81–92. <http://www.ontourism.online/index.php/jots/article/view/30>
- Seawright, J., & Gerring, J. (2008). Case Selection Techniques in Case Study Research: A Menu of Qualitative and Quantitative Options. *Political Research Quarterly*, 61(2), 294–308. <https://doi.org/10.1177/1065912907313077>
- Serdeczny, O., Andrijevic, M., Fyson, C., Lissner, T., Menke, I., Schleussner, C.-F., Theokritoff, E., & Thomas, A. (2024). Climatic risks to adaptive capacity. *Mitigation and Adaptation Strategies for Global Change*, 29(1), 10. <https://doi.org/10.1007/s11027-023-10103-3>
- Sharma, J., & Ravindranath, N. H. (2019). Applying IPCC 2014 framework for hazard-specific vulnerability assessment under climate change. *Environmental Research Communications*, 1(5), 051004. <https://doi.org/10.1088/2515-7620/ab24ed>
- Sheller, M. (2018). Caribbean futures in the offshore Anthropocene: Debt, disaster, and duration. *Environment and Planning D: Society and Space*, 36(6), 971–986. <https://doi.org/10.1177/0263775818800849>
- Sheller, M. (2019). Caribbean Reconstruction and Climate Justice: Transnational Insurgent Intellectual Networks and Post-Hurricane Transformation. *Journal of Extreme Events*. (world). <https://doi.org/10.1142/S2345737618400018>
- Sheller, M. (2021). Reconstructing tourism in the Caribbean: Connecting pandemic recovery, climate resilience and sustainable tourism through mobility justice. *Journal of Sustainable Tourism*, 29(9), 1436–1449. <https://doi.org/10.1080/09669582.2020.1791141>
- Siders, A., & Pierce, A. L. (2021). Deciding how to make climate change adaptation decisions. *Current Opinion in Environmental Sustainability*, 52, 1–8. <https://doi.org/10.1016/j.cosust.2021.03.017>

- Siders, A. r. (2019). Adaptive capacity to climate change: A synthesis of concepts, methods, and findings in a fragmented field. *WIREs Climate Change*, 10(3), e573. <https://doi.org/10.1002/wcc.573>
- Silverman, D. (2021). *Doing Qualitative Research*. 1–100.
- Simpson, N. P., Williams, P. A., Mach, K. J., Berrang-Ford, L., Biesbroek, R., Haasnoot, M., Segnon, A. C., Campbell, D., Musah-Surugu, J. I., Joe, E. T., Nunbogu, A. M., Sabour, S., Meyer, A. L. S., Andrews, T. M., Singh, C., Siders, A. R., Lawrence, J., van Aalst, M., & Trisos, C. H. (2023). Adaptation to compound climate risks: A systematic global stocktake. *iScience*, 26(2), 105926. <https://doi.org/10.1016/j.isci.2023.105926>
- Singh, C. (2025). Human dimensions of climate change adaptation: Gaps and knowledge frontiers. *Dialogues on Climate Change*, 2(1), 71–81. <https://doi.org/10.1177/29768659241297772>
- Singh, C., Iyer, S., New, M. G., Few, R., Kuchimanchi, B., Segnon, A. C., & Morchain, D. (2022). Interrogating ‘effectiveness’ in climate change adaptation: 11 guiding principles for adaptation research and practice. *Climate and Development*, 14(7), 650–664. <https://doi.org/10.1080/17565529.2021.1964937>
- Sou, G., & Corbett, J. (2026). Worldmaking the Global Climate Order: Self-Determination, Reparative Politics, and Climate Justice in Small Island Developing States. *Annals of the American Association of Geographers*, 0(0), 1–18. <https://doi.org/10.1080/24694452.2026.2634789>
- Stanišić, L. K., Luša, Đ., & Zgurić, B. (2021). *Climate Challenges of Small Island Developing States: Cases of Tuvalu, Seychelles and Barbados*. 220–230. <https://doi.org/10.2991/assehr.k.211206.031>
- Steele, M. (2017). Social imaginaries and the theory of the normative utterance. *Philosophy & Social Criticism*, 43(10), 1045–1071. <https://doi.org/10.1177/0191453717715294>
- Sultana, F. (2011). Suffering *for* water, suffering *from* water: Emotional geographies of resource access, control and conflict. *Geoforum, Themed Issue: New Feminist Political Ecologies*, 42(2), 163–172. <https://doi.org/10.1016/j.geoforum.2010.12.002>
- Symons, K. (2014). Anti-politics, Apocalypse and Adaptation in Kenya’s National Climate Change Response Strategy. *Scottish Geographical Journal*, 130(4), 266–278. <https://doi.org/10.1080/14702541.2014.907442>
- Taylor, C. (2004). *Modern social imaginaries*. Duke University Press.
- Taylor, M. (2015). *The political ecology of climate change adaptation*.
- Taylor, M., Eriksen, S., Vincent, K., Scoville-Simonds, M., Brooks, N., & Schipper, E. L. F. (2025). Integrating power, justice and reflexivity into transformative climate change adaptation. *Global Environmental Change*, 91, 102981. <https://doi.org/10.1016/j.gloenvcha.2025.102981>
- Teariki, M. A., & Leau, E. (2024). Understanding Pacific worldviews: Principles and connections for research. *Kōtuitui: New Zealand Journal of Social Sciences Online*, 19(2), 132–151. <https://doi.org/10.1080/1177083X.2023.2292268>

- Termeer, C. J. A. M., Dewulf, A., Karlsson-Vinkhuyzen, S. I., Vink, M., & Vliet, M. van. (2016). Coping with the wicked problem of climate adaptation across scales: The Five R Governance Capabilities. *Landscape and Urban Planning, Special Issue Working with Wicked Problems in Socio-Ecological Systems: More Awareness, Greater Acceptance, and Better Adaptation*, 154, 11–19. <https://doi.org/10.1016/j.landurbplan.2016.01.007>
- Thomas, A. (2025). Transformational Adaptation to Climate Change in the Caribbean. In *Routledge Handbook of Caribbean Studies*. Routledge.
- Thomas, A., Baptiste, A., Martyr-Koller, R., Pringle, P., & Rhiney, K. (2020). Climate Change and Small Island Developing States. *Annual Review of Environment and Resources*, 45(1), 1–27. <https://doi.org/10.1146/annurev-environ-012320-083355>
- Treichel, P., Robertson, M., Wilkinson, E., & Corbett, J. (2024). “Scale and access to the Green climate Fund: Big challenges for small island developing States”. *Global Environmental Change*, 89, 102943. <https://doi.org/10.1016/j.gloenvcha.2024.102943>
- Tschakert, P., Barnett, J., Ellis, N., Lawrence, C., Tuana, N., New, M., Elrick-Barr, C., Pandit, R., & Pannell, D. (2017). Climate change and loss, as if people mattered: Values, places, and experiences. *WIREs Climate Change*, 8(5), e476. <https://doi.org/10.1002/wcc.476>
- United Nations Environment Programme (2024). Adaptation Gap Report 2024: Come hell and high water — As fires and floods hit the poor hardest, it is time for the world to step up adaptation actions. Nairobi: UNEP. <https://doi.org/10.59117/20.500.11822/46497>
- Vaughn, S. E. (2020). Caribbean Technological Thought and Climate Adaptation. *Small Axe: A Caribbean Journal of Criticism*, 24(2), 110–121. <https://doi.org/10.1215/07990537-8604526>
- Visvanathan, Shiv (2005). Knowledge, Justice And Democracy. The Institute of Development Studies and Partner Organisations. Chapter. <https://hdl.handle.net/20.500.12413/12481>
- Vogel, C., & O’Brien, K. (2022). Getting to the heart of transformation. *Sustainability Science*, 17(2), 653–659. <https://doi.org/10.1007/s11625-021-01016-8>
- Vries, B. J. M. de. (2023, December 7). *Sustainability Science*. Cambridge University Press. Cambridge Aspire Website. <https://doi.org/10.1017/9781009300230>
- Walsh, Z., Böhme, J., & Wamsler, C. (2021). Towards a relational paradigm in sustainability research, practice, and education. *Ambio*, 50(1), 74–84. <https://doi.org/10.1007/s13280-020-01322-y>
- Wamsler, C., & Bristow, J. (2022). At the intersection of mind and climate change: Integrating inner dimensions of climate change into policymaking and practice. *Climatic Change*, 173(1), 7. <https://doi.org/10.1007/s10584-022-03398-9>
- Wamsler, C., Mulligan, J., Bukachi, V., & Mumbi, C. (2023). Activating transformation: Integrating interior dimensions of climate change in adaptation planning. *Climate and Development*, 15(5), 366–378. <https://doi.org/10.1080/17565529.2022.2089089>

- Wamsler, C., Osberg, G., Panagiotou, A., Smith, B., Stanbridge, P., Osika, W., & Mundaca, L. (2023a). Meaning-making in a context of climate change: Supporting agency and political engagement. *Climate Policy*, 23(7), 829–844. <https://doi.org/10.1080/14693062.2022.2121254>
- Wamsler, C., Osberg, G., Panagiotou, A., Smith, B., Stanbridge, P., Osika, W., & Mundaca, L. (2023b). Meaning-making in a context of climate change: Supporting agency and political engagement. *Climate Policy*, 23(7), 829–844. <https://doi.org/10.1080/14693062.2022.2121254>
- Wang, S., Leviston, Z., Hurlstone, M., Lawrence, C., & Walker, I. (2018). Emotions predict policy support: Why it matters how people feel about climate change. *Global Environmental Change*, 50, 25–40. <https://doi.org/10.1016/j.gloenvcha.2018.03.002>
- Wang, Z., Zhao, Y., & Wang, B. (2018). A bibliometric analysis of climate change adaptation based on massive research literature data. *Journal of Cleaner Production*, 199, 1072–1082. <https://doi.org/10.1016/j.jclepro.2018.06.183>
- Wardekker, A., Bremer, S., & Jensen, M. H. (2025). *Framing time: A review of how temporalities shape climate change adaptation* (SSRN Scholarly Paper No. 5225982). Social Science Research Network. <https://doi.org/10.2139/ssrn.5225982>
- Watkins, J. (2015). Spatial Imaginaries Research in Geography: Synergies, Tensions, and New Directions. *Geography Compass*, 9(9), 508–522. <https://doi.org/10.1111/gec3.12228>
- Watts, M. J. (2015). Now and Then: The origins of political ecology and the rebirth of adaptation as a form of thought. In *The Routledge Handbook of Political Ecology*. Routledge.
- Weatherill. (2023). Sinking Paradise? Climate change vulnerability and Pacific Island extinction narratives. *Geoforum*, 145, Article 103566. <https://doi.org/10.1016/j.geoforum.2022.04.011>
- Weatherill, C. K. (2024). Resisting climate change vulnerability: Feminist and decolonial insights. *International Politics*, 61(4), 661–682. <https://doi.org/10.1057/s41311-023-00523-y>
- Weisser, F., Bollig, M., Doevenspeck, M., & Müller-Mahn, D. (2014). Translating the ‘adaptation to climate change’ paradigm: The politics of a travelling idea in Africa: Translating the ‘adaptation to climate change’ paradigm. *The Geographical Journal*, 180(2), 111–119. <https://doi.org/10.1111/geoj.12037>
- Weldes, J. (1999). *Cultures of Insecurity: States, Communities, and the Production of Danger*. U of Minnesota Press.
- Weldes, J., LAFFEY, M., GUSTERSON, H., & DUVALL, R. (1999). Introduction: Constructing insecurity. In J. Weldes, M. Laffey, H. Gusterson, & R. Duvall (Eds), *Cultures of Insecurity* (pp. 1–33). University of Minnesota Press.
- West, S., Haider, L. J., Hertz, T., Mancilla Garcia, M., & Moore, M.-L. (2024). Relational approaches to sustainability transformations: Walking together in a world of many worlds. *Ecosystems and People*, 20(1), 2370539. <https://doi.org/10.1080/26395916.2024.2370539>

- West, S., Haider, L. J., Stålhammar, S., & Woroniecki, S. (2020). A relational turn for sustainability science? Relational thinking, leverage points and transformations. *Ecosystems and People*, *16*(1), 304–325. <https://doi.org/10.1080/26395916.2020.1814417>
- Westoby, R., McNamara, K. E., Kumar, R., & Nunn, P. D. (2020). From community-based to locally led adaptation: Evidence from Vanuatu. *Ambio*, *49*(9), 1466–1473. <https://doi.org/10.1007/s13280-019-01294-8>
- Wibeck, V., Hansson, A., & Anshelm, J. (2015). Questioning the technological fix to climate change – Lay sense-making of geoengineering in Sweden. *Energy Research & Social Science*, *7*, 23–30. <https://doi.org/10.1016/j.erss.2015.03.001>
- Woroniecki, S. (2019). Enabling Environments? Examining Social Co-Benefits of Ecosystem-Based Adaptation to Climate Change in Sri Lanka. *Sustainability*, *11*(3), Article 3. <https://doi.org/10.3390/su11030772>
- Woroniecki, S., Wamsler, C., & Boyd, E. (2019). The promises and pitfalls of ecosystem-based adaptation to climate change as a vehicle for social empowerment. *Ecology and Society*, *24*(2). <https://doi.org/10.5751/ES-10854-240204>
- Woroniecki, S., Wibeck, V., Zeiler, K., & Linnér, B.-O. (2024). The lived experiences of transformations: The role of sense-making and phenomenology analyses. *Environmental Science & Policy*, *159*, 103797. <https://doi.org/10.1016/j.envsci.2024.103797>
- Yee, M., Piggott-McKellar, A. E., McMichael, C., & McNamara, K. E. (2022). Climate Change, Voluntary Immobility, and Place-Belongingness: Insights from Togoru, Fiji. *Climate*, *10*(3), Article 3. <https://doi.org/10.3390/cli10030046>
- Yee, M., Piggott-McKellar, A., McMichael, C., & McNamara, K. E. (2025). Framing locally led adaptation in a planned relocation in Fiji. *Geoforum*, *159*, 104196. <https://doi.org/10.1016/j.geoforum.2024.104196>
- Yin, R. K. (2009). *Case Study Research: Design and Methods*. SAGE.
- Yusoff, K., & Gabrys, J. (2011). Climate change and the imagination. *WIREs Climate Change*, *2*(4), 516–534. <https://doi.org/10.1002/wcc.117>
- Zwarteveen, M., Kuper, M., Olmos-Herrera, C., Dajani, M., Kemerink-Seyoum, J., Frances, C., Beckett, L., Lu, F., Kulkarni, S., Kulkarni, H., Aslekar, U., Börjeson, L., Verzijl, A., Dominguez Guzmán, C., Oré, M. T., Leonardelli, I., Bossenbroek, L., Ftouhi, H., Chitata, T., ... De Bont, C. (2021). Transformations to groundwater sustainability: From individuals and pumps to communities and aquifers. *Current Opinion in Environmental Sustainability*, *49*, 88–97. <https://doi.org/10.1016/j.cosust.2021.03.004>