

TOWARDS SUSTAINABILITY IN THE COASTAL BLUE ECONOMY
Navigating institutional change for coastal resource co-management in Ghana

A thesis submitted for the degree of
Doctor of Philosophy
in
Economics

by
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Defended on November 18, 2024

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Acknowledgements

Many people have contributed to the success of this PhD. First of all, I would like to express my deepest gratitude to my supervisors, Prof. Dr. Achim Schlüter, Prof. Dr. Marco Verweij and Dr. Aisa O. Manlosa, thank you for your guidance. I am greatly indebted to you, Achim. You offered me the opportunity to embark on this PhD journey. I am utterly grateful for going through this journey with your confidence and support. Your timely suggestions and guidance have made the PhD process a valuable learning experience. Thank you for your unwavering support to me and my family throughout this PhD amidst several challenges. The completion of this PhD journey would not have been possible without your support. I am also grateful to you, Aisa, for your guidance. Your valuable pieces of advice and suggestions during the initial stages of the PhD brought clarity and were helpful in reshaping my approach to this thesis. Marco, thank you for your valuable advice and suggestions on the earlier versions of the papers of this thesis.

I would like to extend my gratitude to the Leibniz Centre for Tropical Marine Research (ZMT) for funding my doctoral research. I am also grateful to BIGSSS for providing scientific training and other forms of financial and administrative support to me during the course of this PhD. I would also like to appreciate all my working group colleagues at ZMT for the valuable discussions and the valuable feedback provided on the various papers of this dissertation during our IBE meetings. Thank you, Dr. Raymond Ayilu for reviewing and editing draft versions of this dissertation.

Additionally, I am very appreciative of all the research participants who spent their valuable time to provide me with information for this research. I am also grateful to my research assistant, Mr. Atsu-Brown Kporxah for helping with interpretations during the fieldwork in Ghana. My appreciation also goes to Torgbui Seth Agbo Kedey, who provided me with valuable documents for this research.

Finally, my heartfelt appreciation goes to my family, especially my lovely wife for supporting me throughout this PhD journey. You and my lovely daughters were the inspiration for the success of this thesis. I would also like to thank the entire Banikoi family for supporting my educational journey. This thesis is dedicated to my late father, Bukari Banikoi, and my mother, Abibata Baluri, who, despite not being in school, put me through formal education..

List of research papers of the dissertation

This cumulative dissertation consists of the following papers:

Paper 1: **Banikoi, Hudu**, Schlüter, Achim and Manlosa, Aisa O. (2023) Understanding transformations in the marine coastal realm: The explanatory potential of theories of institutional change. *Marine Policy*,

Status: published

Paper 2: **Banikoi, Hudu** (forthcoming) Legal pluralism, ideology and institutional change: The evolution of institutions for coastal resource governance in Ghana. *Journal of Institutional Economics*

Status: accepted

Paper 3: **Banikoi, Hudu**, Ayilu, Raymond K. (submitted) The political economy of institutional change in the coastal blue economy: challenges and potential for co-management in Ghana. *World Development*

Status: submitted

Acronyms and Abbreviations

CBFMC	Community-Based Fisheries Management Committees
DA	District Assembly
EEZ	Exclusive Economic Zone
FAO	Food and Agriculture Organisation
FC	Fisheries Commission
FGD	Focus Group Discussion
FSCBP	Fisheries Sub-sector Capacity Building Project
GDP	Gross Domestic Product
GNCFC	Ghana National Canoe Fishermen Council
ITQ	Individual Transferable Quota
KEEA	Komenda-Edina-Eguafo-Abrem
KII	Key Informant Interview
LBC	Landing Beach Committees
MoFAD	Ministry of Fisheries and Aquaculture Development
MTADS	Medium-Term Agricultural Development Strategy
NDC	National Democratic Congress
NGO	Non-Governmental Organisation
NPP	New Patriotic Party
PT	Process Tracing
UNCLOS	United Nations Convention on the Law of the Sea
WB	World Bank

Abstract

Sustainable use of common-pool resources has been an issue of global concern in recent decades. In the marine coastal realm, this concern is accentuated by the onset of discourses around the blue economy, which brings competitive pressure on coastal marine resources such as fisheries. The blue economy paradigm advocates sustainable exploitation of marine and coastal resources for economic growth and social development. This requires institutional change and the assessment of the sustainability potential of various institutional arrangements. While no institutional solution is a panacea, co-management has emerged as a preferred institutional innovation for sustainable coastal resource governance. However, the transition to co-management regimes has faced challenges in many tropical countries. In Ghana, efforts to transition from centralised management to a co-management regime for coastal fisheries have not been successful despite the existence of enabling conditions. This thesis examined the challenges of the governance change in coastal fisheries in Ghana. It investigated the role of contextual and process dynamics in the outcomes of the fisheries co-management regime. Specifically, it examined the process through which the transition to coastal fisheries co-management regime occurred in Ghana, and why the institutional arrangement could not be sustained. This included examining how the co-management regime interacted with the socio-political context and institutional environment within which it was implemented, and how these contextual factors influenced the outcomes (institutional sustainability) of the co-management regime. The thesis then explored what the findings mean for developing effective and sustainable co-management arrangements for coastal fisheries in Ghana.

The thesis is presented as a cumulative dissertation made up of three interrelated papers. The first paper (paper 1) is conceptual, reviewing theories of institutional change and their applicability to the study of governance change in coastal marine systems. The second paper (paper 2) is an empirical paper that examined the process of institutional development for collaborative coastal resource governance. Paper 3 examined the role of contextual socio-political dynamics in the challenges of developing and sustaining co-management arrangements in coastal fisheries. While the conceptual paper provided an analytical framework for the institutional analysis, the two proceeding papers provided empirical evidence based on fieldwork for answering the overall research question of the thesis. The thesis adopted analytical perspectives from three institutional theories: ideational theory, legal pluralism and the political settlements theory. Methodologically, the research adopted a qualitative approach, using semi-structured interviews and focus group discussions to collect data from relevant stakeholders in coastal fisheries in Ghana. Secondary data was also a valuable source of information especially for paper 1 and paper 2, to a large extent.

Research paper 1 assessed the analytical potential of seven theories of institutional change in relation to the contextual features of marine and coastal systems. The analysis revealed that all the theories have some relevance for understanding institutional change in the marine coastal realm, but the analytical strength of each theory depends on the specific institutional features, resource system, context, and scale of governance. Due to the material and institutional characteristics of the marine coastal area, no single theory is sufficient for understanding institutional change in this realm. It concludes that the combination of multiple complementary theories or the use of analytical frameworks provides a better theoretical lens

to illuminate institutional change in marine and coastal systems. In paper 2, I traced the institutional development process for the coastal fisheries co-management regime in Ghana. The findings indicate that the institutional change was driven by donor ideologies and that the institutional environment (legal pluralism) hampered successful governance transition to the coastal fisheries co-management regime. Paper 3 explored the role of the social context in the challenges of sustaining co-management and if there exists any potential for a successful co-management regime in the light of the contextual socio-political dynamics of coastal fisheries. The analysis shows that political interference in rule enforcement and clientelistic political incentives hindered the sustainability of the coastal fisheries co-management regime. The paper concludes that the potential for a successful co-management regime in coastal fisheries depends on how institutional design and implementation processes account for these broader socio-political dynamics both at national and local levels. Particularly, strong political will from political actors at the national and local levels to support co-management and to provide sustainable funding is required for the effectiveness and sustainability of co-management arrangements. At the community level, concerns of local power structures need to be addressed by providing the right incentives to enhance their active participation and support for co-management.

In conclusion, the thesis finds that a concatenation of contextual socio-political dynamics, institutional and ideological path-dependencies hindered the governance transformation in coastal fisheries in Ghana. It makes a theoretical contribution to the institutional analysis of co-management, making the argument that outcomes of co-management regimes should not only be evaluated in terms of how such institutional arrangements produce socio-economic and ecological sustainability outcomes, but also in terms of institutional sustainability. It emphasises that to understand the challenges of sustaining co-management regimes to produce sustainable governance outcomes, particular attention should be paid to the process of institutional change and the contextual socio-political, ideological and institutional dynamics within which co-management arrangements are designed and implemented. The thesis underscores the need for a broader consideration of the socio-political and institutional dynamics of the resource context in governance transformation processes for sustainability in the coastal blue economy.

1. Introduction

The sustainable use of common-pool resources has been an issue of global concern in the last decades. In the marine coastal realm, this concern is accentuated by the onset of discourses around the blue economy/blue growth which brings competitive pressure on marine coastal resources such as fisheries. The blue economy paradigm advocates the sustainable exploitation of marine and coastal resources for economic growth and social development (Silver et al. 2015; Voyer et al. 2018b). The debates within the blue economy discourses have taken various forms with varied emphasis on different elements of marine and coastal development. On one hand, there is the socioeconomic development emphasis, similar to business-as-usual development, that envisions the resource development potential of marine and coastal systems, favouring the industrial expansion of its various sectors for economic growth and poverty alleviation (Silver et al. 2015; Cisneros-Montemayor et al. 2021). On the other hand, there is a concern for the sustainability and viability of coastal marine common-pool resources such as coastal fisheries which are important for coastal livelihoods, food security, nutrition and employment, and thus form an important part of the blue economy (Bennett et al. 2015; Bennett et al. 2019; Cohen et al. 2019). However, in all these debates, there is a demand for institutional change and governance transformations that can facilitate the actualisation of the blue economy paradigm in its socioeconomic development and ecological sustainability dimensions (Silver et al. 2015; Voyer et al. 2018a; Bennett et al. 2019; Cisneros-Montemayor et al. 2021).

Extant studies on the institutionalisation of the blue economy paradigm have found varying degrees of institutional innovations (Voyer et al. 2022). Amidst these processes of institutionalisation and transformations, a prominent concern is the impacts the industrialisation of the ocean are having and will have on vulnerable resource-dependent communities whose livelihoods revolve around coastal fisheries (Bennett et al. 2015; Cohen et al. 2019; Ayilu et al. 2023). Thus, an important question of scientific interest in the blue economy paradigm is how coastal common-pool resources can be sustainably developed and managed to contribute to the blue economy aspirations (Bennett et al. 2019; Cohen et al. 2019; Ganseforth 2023). In other words, a sustainable coastal blue economy debate has emerged within the blue economy discourse (Bax et al. 2022). Scholars have argued that achieving a sustainable and equitable blue economy requires institutional approaches that foster participatory and collaborative management of marine coastal spaces and resources with relevant stakeholders and coastal communities (Bennett et al. 2019; Cisneros-Montemayor et al. 2021). Thus, the sustainability transformation advocates within the blue economy discourse emphasize the adoption of collaborative governance as an integral pillar

for building a sustainable coastal blue economy (Bennett et al. 2019; Bax et al. 2022; Evans et al. 2023).

Therefore, in the search for institutional and governance solutions towards sustainability in the coastal blue economy, co-management regimes are now considered mainstream and favoured institutional arrangements for governing coastal commons such as fisheries in both academic and policy circles (Cohen et al. 2021). Collaborative governance regimes have long been advocated for the governance of terrestrial and aquatic common-pool resources since the late 1980s (Berkes et al. 1989; Pinkerton 1989; Ostrom 1990; Nielsen et al. 2004). Such institutional arrangements are often argued to have the potential to achieve sustainable resource governance for both normative and efficiency reasons: user participation in governance enhances legitimacy and compliance, reduces ex-post transaction costs, and improves resource management outcomes (McCay & Jentoft 1996; Nielsen et al. 2004; Pinkerton 2018). This has led to governance transformations towards co-management regimes in complex social-ecological systems, including coastal fisheries since the early 1990s (Hara & Nielsen 2003; Cinner et al. 2012a; Cohen et al. 2021). These governance transformations in developing countries have often been instigated and supported by external actors as part of donor development assistance programmes (Chuenpagdee & Jentoft 2007; Cinner et al. 2012a; Orach & Schlüter 2021; Fabinyi & Barclay 2022).

Consequently, an important field of scholarly interest in the sustainability transformation discourse in the coastal marine realm is to examine the processes and outcomes of such institutional regimes to facilitate sustainable governance transitions (Armitage et al. 2017; Cumming et al. 2020; Herrfahrdt-Pähle et al. 2020; Fabinyi & Barclay 2022). A lot of scholarly work has thus gone the way of examining the outcomes of such governance transformations in coastal commons (Gelcich et al. 2010; Armitage et al. 2011; Evans et al. 2011; Cinner & McClanahan 2015; Defeo et al. 2016; d'Armengol et al. 2018; Cohen et al. 2021). The research has shown that while successes have been achieved in some contexts, many such governance changes have faced challenges in many countries (Hara & Nielsen 2003; Béné et al. 2009; Levine 2016; Orach & Schlüter 2021). Successful governance outcomes in the transition to co-management regimes are attributed to institutional design and the existence of local leadership, social capital and community organising structures in the resource context (Gutiérrez et al. 2011; Cinner et al. 2012b; Levine & Richmond 2014; Levine 2016). On the other hand, the co-management literature in marine coastal resource systems has identified a myriad of reasons for failure, such as lack of participation, unclear definition of roles among stakeholders, power struggles, institutional incapacity, and unsustainable funding mechanisms, weak social capital and lack of prior community organising experiences in the

resource context (Hara & Nielsen 2003; Nielsen et al. 2004; Chuenpagdee & Jentoft 2007; Béné et al. 2009; Levine 2016; Murunga et al. 2021).

Despite the vast literature assessing the outcomes of co-management regimes, it is still unclear why co-management regimes with similar institutional designs succeed in some countries but fail in other contexts with strong social capital and prior community organising experiences. This suggests that there is the need for more context specific analysis of the outcomes of such institutional arrangements (Nunan 2020). Attention has been drawn to the role of the institutional environment, as well as, the socio-political, and ideational dynamics of the resource governance context (Clement & Amezaga 2013), which have until now been under-researched in the institutional analysis of co-management regimes (Clement 2010; d'Armengol et al. 2018; Nunan 2020). In particular, the link between the processes of institutional transformation and the outcomes of the collaborative governance regimes has received less attention in the institutional analysis of common-pool resource governance (Cumming et al. 2020; Epstein et al. 2020). The evolving scholarly discourses and the demand for institutional change and governance transformation to enhance the sustainability and contribution of coastal resources to the blue economy aspirations, offers grounds for examining the outcomes of institutional and governance approaches which are being promoted in development policy and pursued by governments, funding organisations and resource custodians (Cohen et al. 2021).

This thesis contributes to the research on institutional analysis of governance transformations towards sustainability in the coastal blue economy. The focus of this thesis is on examining the outcomes of a governance transformation to co-management arrangements aimed at the sustainable governance of coastal fisheries in Ghana. The country has unsuccessful experiences with establishing a formal coastal fisheries co-management regime. In the late 1990s, a process of institutional change was initiated in coastal fisheries through the fisheries sub-sector capacity building project (FSCBP), leading to the development of co-management structures across the coast of Ghana. However, this institutional arrangement was ineffective and could not be sustained – most of the governance structures collapsed a few years after the project ended (Finegold et al. 2010; Abane et al. 2013). The main objective is thus to understand why governance transformation to a co-management regime was unsuccessful in coastal fisheries in Ghana despite the existence of strong social capital, local leadership and prior community organizing structures in the resource context which are considered enabling conditions for successful co-management regimes (Gutiérrez et al. 2011; Levine & Richmond 2014; Levine 2016). In addition, processes are currently underway to develop new co-management arrangements for coastal fisheries in Ghana, with the approval of a new co-

management policy in 2020 (Ministry of Fisheries and Aquaculture Development 2020). From this perspective, the findings of this study are relevant for current processes to develop co-management arrangements for coastal fisheries in Ghana, as well as, the processes of institutional change for sustainable resource governance in similar contexts.

The thesis is situated within the research on institutional analysis of governance transformation for sustainable common-pool resource governance, specifically dealing with hybrid institutional regimes that integrate elements of state and common property institutions for governing coastal commons. The thesis draws analytical perspectives from institutional economics and the broader institutional theory in resource governance. From this position, the thesis explores the challenges of transitioning to such hybrid property regimes, contributing to the broader literature on governance transitions and the current interest in institutional change and governance transformation for building a sustainable coastal blue economy. In the common-pool resource governance literature, the evaluation of the outcomes of resource governance regime has persistently focused on several outcome dimensions including institutional sustainability (institutional longevity/resilience), resource sustainability (ecological resilience), well-being (contribution to livelihoods) and equity (access, gender, income disparities) (Agrawal & Benson 2011; Cumming et al. 2020; Agrawal et al. 2023). This thesis focuses on the institutional sustainability outcome dimension of co-management regimes. While positive institutional sustainability outcomes do not necessarily translate into positive ecological sustainability, livelihoods and equity outcome dimensions, institutional sustainability is a prerequisite for positive outcomes to be achieved in these outcome dimensions (Agrawal & Benson 2011). That is, for institutions to constrain users to protect resources and produce equitable outcomes, such institutional arrangements should last over time (Agrawal 2002).

The thesis is structured as follows. The next section contextualises the research (section 1.1) and provides the state of art of the co-management literature (section 2). It also provides an overview of the theoretical framework guiding the research (section 3) as well as the research aims (section 4) and methodology (section 5). This is followed by reflections on the ethical considerations and positionality (section 6) and the challenges and limitations of the research (section 7). The chapter ends with an overview of the research papers that form the cumulative dissertation (section 8) and the overall conclusions and reflections of the research (section 9). The individual research papers are then presented starting with the conceptual paper (paper 1) which has been published in *Marine Policy*, followed by the first empirical paper (paper 2) which has been accepted for publication in the *Journal of Institutional Economics*, and the third paper which has been submitted to *World Development*.

1.1. Contextualising the research

The sustainable use and management of coastal marine resources is a critical challenge in many coastal developing countries who are seeking to leverage these resources for their developmental aspiration under the banner of the blue economy paradigm. This thesis was conducted in the coastal communities of Ghana. Coastal fisheries are important for economic development, coastal livelihoods and development of coastal communities in Ghana. The fisheries sector accounts for 3.5% of the national GDP, employs approximately 2 million people, and provides 60% of the animal protein needs of Ghanaians (Ministry of Fisheries and Aquaculture Development 2020). Artisanal (small-scale) fisheries sub-sector forms the engine of the fisheries sector. This coastal fishery is dominated by artisanal fishermen in over 200 coastal fishing communities along the 550km coastline, contributing about 70% of annual marine fish landings in Ghana (Finegold et al. 2010; Okyere et al. 2023).

The *de jure* responsibility for the sustainable use and development of the fisheries sector rests with the government of Ghana. The government of Ghana carries out its responsibilities through the Ministry of Fisheries and Aquaculture (MoFAD) and the Fisheries Commission (FC). The governance approach adopted by governments since the colonial era has been a centralised governance regime where the state governs the fisheries through access control regulations and mechanisms such as fishing permits/licenses for the industrial and semi-industrial sectors, and gear regulation for the artisanal sector. The FC is responsible for developing fisheries management plans, as well as, monitoring, rule enforcement and compliance in all the sectors of the fishery. However, the artisanal fisheries sector has a dual governance structure. Parallel to statutory governance structures, the artisanal fisheries sector is also governed by customary institutions enacted by the chief fisherman (*apofohene*) and the chief fishmonger (*konkohemaa*) in coastal fishing communities. This traditional fisheries governance existed centuries before the modern statutory fisheries governance regime (Walker 1998).

Nevertheless, coastal fisheries governance suffers from many challenges that undermine sustainable resource use and development in the coastal blue economy of Ghana. Resource scarcity, resource degradation, resource use conflicts between industrial and artisanal fishers, non-compliance, weak enforcement of regulations, low economic returns and the decline in capture fisheries production since the year 2000 are some of the main challenges symptomatic of deficiencies in coastal marine fisheries governance in Ghana (Abobi 2023; Okyere et al. 2023). These challenges have long manifested in fisheries governance since the early 1990s but the focus of the central government was providing fishing input to fishermen to increase

production (Kwadjosse 2009). Continuous governance and sustainability challenges within the sector led to various efforts by the government and development organisations to strengthen fisheries governance, including major institutional and governance changes.

In the mid-1990s, the government of Ghana sought funding opportunities and collaborated with donor organisations to undertake institutional changes that would strengthen both industrial and artisanal fisheries governance. This led to the implementation of the Fisheries Sub-sector Capacity Building Project (FSCBP) in 1997 which was funded by the World Bank (World Bank 1995). This project resulted in the development of a new national fisheries law, the Fisheries Act 2002 (Act 625) and the strengthening of the fisheries department to undertake monitoring and surveillance to enhance compliance with fisheries regulations. As part of project, and in line with the global paradigmatic shift towards participation in development practice and resource governance in the 1990s, the government of Ghana identified co-management as the governance regime to achieve sustainability in coastal fisheries and to enhance the contribution of coastal fisheries to the economic development of Ghana (World Bank 2003). As a result, co-management structures – community-based fisheries management committees (CBFMCs) – were established in 133 coastal fishing communities across the four coastal regions of Ghana between 1997 and 2002 (World Bank 2003). These local organisational structures were entrusted with fisheries management responsibilities, including the development of their own local rules and the enforcement of the rules and regulations of fisheries management. Many of the CBFMCs had their bye-laws approved and gazetted by the local district assemblies, had achieved some successes in fisheries management during the project period and the early ensuing years after the project ended (Finegold et al. 2010).

However, the co-management regime could not be sustained, as the governance structures collapsed only a few years after the project ended (Finegold et al. 2010; Abane et al. 2013). This failure to transition to a successful co-management regime occurred despite the pre-existence of local leadership and community organizing structures in coastal fishing communities, which are considered key enabling conditions for a successful co-management regime (Pomeroy et al. 2001; Gutiérrez et al. 2011). Some have attributed the failure of the co-management regime to inadequate funding and the necessary institutional support (Finegold et al. 2010; Abane et al. 2013), lack of clear delineation of authority or jurisdiction, ambiguous administrative clarity to draw the interest of key stakeholders, and insufficient capacity development and resources (including logistical and technical aspects) (Ministry of Fisheries and Aquaculture Development 2020). However, the institutional development process and the role of contextual socio-political dynamics of coastal fisheries have not been

extensively examined. Examining the socio-political context is critical to understand if and to what extent co-management can be effective and/or sustained as an institutional regime for resource governance (Clement & Amezaga 2013; Cumming et al. 2020; Nunan 2020).

There is currently a renewed interest in developing a co-management arrangement for coastal fisheries in Ghana; a new co-management policy has been enacted to this effect (Ministry of Fisheries and Aquaculture Development 2020). Because of this renewed interest and its unsuccessful experiences in the past with developing and sustaining coastal fisheries co-management regime, Ghana was deemed the most appropriate study context for answering the research question of the thesis. This thesis examines why the initial co-management arrangement was unsuccessful and what potential exists for the implementation of a new co-management regime. The focus here is on the outcomes of the co-management regime that resulted from the FSCBP between 1997 and 2002, taking a process approach to institutional analysis that accounts for the role of contextual socio-political dynamics in the challenges of developing and sustaining co-management arrangements for coastal fisheries governance in Ghana. The findings of the research will contribute empirical knowledge that is relevant for current and future institutional development processes for coastal resource governance in Ghana and similar contexts.

2. Sustainability in the coastal blue economy: institutional regimes for sustainable resource governance

There is consensus that the fundamental basis of sustainable resource use and management is institutional – if we get the rules and governance structures right, coastal resources can be wisely used to achieve sustainability goals (Acheson 2006). This thesis is situated within the discourse on the sustainability of coastal marine systems in the current context and discussions on the blue economy paradigm. Coastal resource systems such as fisheries are expected to contribute significantly to the blue economy aspirations of many countries in the global south (March et al. 2024). To ensure the sustainability and contribution of such resource systems in the coastal blue economy, there is the need for institutional innovation and change of existing institutions for sustainable governance outcomes (Bennett et al. 2019; Voyer et al. 2022). Institutional change is integral to environmental and resource governance, regardless of the scale and level of operation since resource use dynamics change with time and the governance of the resource use is expected to change accordingly (Paavola & Adger 2005; Vatn 2005; Paavola 2007). Institutions are “systems of established and prevalent social rules that structure social interactions” (Hodgson 2006: 2). These include formal rules (statute law, common law,

and regulations), informal rules (conventions, norms of behavior and self-imposed rules of behaviour), and their enforcement characteristics (North 1990).

While the need for institutional change for sustainability in the coastal blue economy is widely recognized, the institutional basis for sustainable resource governance has been a contentious issue that has attracted diverse scholarly perspectives. Most natural resources are inherently common pool resources – natural or man-made resource systems that are sufficiently large that it becomes too costly to exclude others from obtaining benefits from their use (Ostrom 1990). Such resource systems are susceptible to collective action problems (Ostrom 1990; Vatn 2005; Paavola 2007), making it difficult to prescribe one specific institutional regime for their sustainable use and management (Ostrom 2007, 2009; Young et al. 2018). State property (centralisation), private property (markets), common property and hybrid property (co-management) regimes have all been advanced as institutional regimes for achieving sustainability in the use and management of common-pool resources (Gordon 1954; Hardin 1968; Jentoft 1989; Pinkerton 1989; Ostrom 1990, 2005). Because of the rivalrous nature of common-pool resources, Hardin (1968) envisaged that “the tragedy of the commons” – the degradation of the resource – will happen because of the self-interests of rational resource users who will try to maximize individual utility by choosing the dominant strategy of free-riding. He therefore proposed a governance regime that is based on exogenously enforceable rules such as state-led institutional arrangements or a private property regime. Institutional prescriptions for sustainable common-pool resource governance until the late 1980s thus favoured state property (centralisation) and private property (markets) regimes (see Hardin 1968).

However, it was soon realised that centralised resource governance regimes have not only failed to achieve sustainable outcomes, such governance systems have also led to *de facto* open access regimes in resource systems in some contexts (Cinner et al. 2012a; Kosamu 2015). Scholars began to explore the existence and viability of self-governance arrangements based on common property institutional regimes. This work was led by (new) institutional economists who espoused the sustainable governance potential of participatory or community-based resource management regimes (see McCay & Acheson 1987; Wade 1987; Berkes et al. 1989; Ostrom 1990; Baland & Platteau 1996; McCay 2002). The empirical evidence pointed to the fact that, under certain conditions, many common property regimes tend to achieve better resource management outcomes than centralised and market-based governance regimes (Ostrom 1990; Agrawal 2001; Agrawal & Chhatre 2006). Since the late-1980s therefore, there has been a paradigmatic shift in the scholarly discourse of the institutional basis of sustainable resource governance. This shift was largely inspired by the emergence of these nuanced

theoretical perspectives on common property and common-pool resource theory. Concepts such as community-based natural resource management and co-management regimes then became very prominent institutional regimes advanced for the sustainable governance of common-pool resources in both academic research and policy circles (Baird et al. 2019).

A great deal of the research has gone the way of investigating the variety of institutional arrangements that emerge to govern natural and environmental resources including coastal and marine resource systems (Ostrom 1990; Bromley 1992; Agrawal 2001; Vatn 2005). This research has focused on why and how institutions emerge and change, and the performance of such institutional arrangements in sustainably governing resource systems (Cumming et al. 2020; Epstein et al. 2020). Four main competing institutional arrangements have been studied in the coastal marine systems – centralised/bureaucratic (state property) arrangements based on government regulation; market-based (private property) arrangements; community-based (common property) arrangements based on self-regulation; and co-management (hybrid property) regimes based on shared management between government agencies and resource users. The latter two are decentralised (local) institutional regimes that involve some local participation and cooperation of resource users and often operate as common property regimes over common-pool resources such as fisheries and other marine coastal resource systems.

While all these institutional regimes can fail to achieve sustainable resource management under certain conditions (Acheson 2006), community-based and co-management regimes have been advocated and used frequently for governing common-pool resources since the early 1990s (Pomeroy 1995; Plummer & Fitzgibbon 2004; Cohen et al. 2021). In coastal resource governance, co-management regimes have become mainstreamed and preferred institutional arrangements for achieving sustainability in the coastal blue economy (McLain et al. 2018; Cohen et al. 2021). Institutions can be considered as both outcome and explanatory variables in resource co-management depending on the level of analysis (Sandström et al. 2013). Institutions influence and define the initial conditions for collaboration in the process of developing a co-management regime. As an outcome variable, co-management is an institutionalization process in itself – that is, an institutional building process involving the design and change of rules and organizational structures for the governance of a resource system through processes of dialog trust building, and contestations (Sandström et al. 2013: 62). The development of co-management regimes often requires institutional change including the restructuring of government administrative arrangements and enactment of fisheries laws and policies (Pomeroy & Williams 1994).

2.1. Co-management as a sustainable resource governance regime

Co-management has been touted as the “only realistic solution for majority of world’s fisheries” (Gutiérrez et al. 2011: 386). Co-management is now at the core of coastal and marine resource governance discussions in the search for sustainable resource governance solutions (Puley & Charles 2022). Co-management regimes are often argued to have the potential for achieving sustainable resource governance for both normative and efficiency reasons: user participation in governance enhances legitimacy, sense of ownership, and compliance, as well as, reduces ex-post transaction costs (management and enforcement costs), and improves resource management outcomes, social cohesion and community development (Pomeroy & Williams 1994; McCay & Jentoft 1996; Abdullah et al. 1998; Castro & Nielsen 2001; Gutiérrez et al. 2011; Pinkerton 2018). The wide appeal of co-management and its sustainable governance potential has spawned a great deal of institutional change towards co-management regimes in marine coastal resource systems in many countries since the early 1990s (Cinner et al. 2012a).

There is no one definition for co-management but it often involves sharing of authority and responsibilities (Pomeroy & Williams 1994). In this research a co-management regime is conceptualized as an institutional arrangement – property rights, rules, norms, policies and associated organizational structures – in which power, decision-making rights and responsibilities over resource management are shared, usually between state-level actors and resource users (Nielsen et al. 2004). In this sense, co-management arrangements are resource regimes that allocate access to resources and manage human interactions with resource systems (Hanna 2003). They represent a blend of ‘pure’ bureaucracy-based management (based on centralised regulation and scientific knowledge) and ‘pure’ community-based management regimes (based on self-regulation and traditional knowledge) (Berkes et al. 1991). Co-management regimes can take various forms including the integration of local- and government-level management systems, the recognition and legitimization of traditional local-level management systems, or the granting of concessions to recognized groups of fishers or an organisation which establishes and enforces rules, norms and regulations for resource use and management with the support of the government (Pomeroy & Williams 1994).

There are two fundamental dimensions of co-management which have been the subject of scholarly attention: the ‘ladder of participation’ which focuses on the degree to which decision-making power is shared between government and resource users, and how co-management is implemented in its functional components of management (Puley & Charles 2022). These functional elements of co-management include: 1) direction-setting, planning and policy

development; 2) harvest management; 3) compliance and enforcement; 4) ecosystem stewardship, conservation, rehabilitation; 5) research; and 6) organisational management and development (ibid). The literature on fisheries co-management has examined various aspects of co-management practice, spanning studies on how sustainable co-management institutions can be crafted (Leopold et al. 2019) and the process of transition to co-management regimes (Gelcich et al. 2010; Cinner et al. 2012a; Ayers & Kittinger 2014; Orach & Schlüter 2021) to the outcomes of co-management regimes (Evans et al. 2011; Gutiérrez et al. 2011; Defeo et al. 2016; d'Armengol et al. 2018) and conditions for success (Pomeroy & Williams 1994; Sen & Nielsen 1996; Pomeroy et al. 2001; Chuenpagdee & Jentoft 2007; Rivera et al. 2021). Nevertheless, the link between the process of transition to co-management and the outcomes of co-management regimes is still under-researched (Nunan 2020). This thesis deals with the practice of co-management regimes, focusing on the process of institutional development/implementation and the outcomes of co-management in terms of institutional sustainability. This section first reviews the literature on causal mechanisms for transition to co-management, followed by outcomes and conditions for successful co-management regimes.

2.2. The transition process to co-management regimes in coastal resource systems

Several causal mechanisms have been identified as drivers of transition to co-management regimes in coastal resource governance (see table 1). The literature on resource governance evolutions to co-management regimes emphasizes the role of socioeconomic, ecological, and political drivers of change. Drivers of transitions towards co-management regimes for the governance of coastal social-ecological systems have been argued to range from the quest to improve local participation and empowerment to issues of legitimacy and compliance (Jentoft 1989; Pomeroy & Berkes 1997; Jentoft 2000; Nielsen 2003; Plummer & Fitzgibbon 2004). Co-management regimes are argued to have the potential to achieve better resource management outcomes since the cooperation and participation of resource users engenders "greater procedural legitimacy and enhances the quality of regulations due to better information about the resource and distributional consequences of regulations" (Beem 2007: 540). The potential of co-management regimes to minimise transaction costs has also been noted as a key driver of governance transformation in coastal fisheries and mangroves (Plummer & Fitzgibbon 2004; Kuperan et al. 2008). In many cases however, the transition toward co-management regimes is "partly a response to the perceived failures of many top-down governance institutions in the midst of growing competition for resources, resource scarcity, and efforts to reduce the rate of resource decline" (Wamukota et al. 2012: 481).

Co-management regimes may emerge through an evolutionary process where long-standing traditional management regimes become interwoven with that of central government, or through a designed-based functional response to changing socio-economic, political and ecological conditions (Yandle 2006: 253). Pinkerton (1989: 27) argues that, "co-management is most likely to develop out of a real or imagined crisis in stock depletion or a problem of comparable magnitude". However, the emergence of co-management institutional arrangements can also be occasioned by other factors including "growing perception of scarcity, the restrengthening of traditional village-based authority, and marine tenure by means of legal recognition and government support, better conservation education, and increasingly effective assistance, and advice from regional and national governments and NGOs" (Johannes 2002: 317). The spontaneous emergence of co-management regimes have also been studied in coastal systems, indicating that co-management does not only develop through designed-based approaches but through a bottom-up process of experimentation and evolution (Galappaththi & Berkes 2015).

Conditions such as "resource deterioration, conflict between stakeholders, conflict between management agencies and the local [resource users], and governance problems in general" may also serve as impetus for the emergence of co-management regimes (Pomeroy & Berkes 1997: 476). Co-management may therefore develop in response to distributional conflicts in relation to the use and management of resource systems (Acheson et al. 2000; Castro & Nielsen 2001; Kearney 2002; Beem 2007; Acheson 2013; Ayers & Kittinger 2014). The role of international discourses and donor ideologies has also been argued to play a key role in the development of co-management regimes in the context of the global south (Hara & Nielsen 2003; Kuperan et al. 2008; Cinner et al. 2012a). Studies have also shown that co-management regimes may emerge to clarify property rights, and are more likely to develop in coastal marine systems when there is an enabling legal and institutional framework (d'Armengol et al. 2018). That is, changes in the institutional environment may serve as exogenous parameters that foster the emergence of co-management regimes. While any of these causal mechanisms can trigger the emergence of co-management on its own, the institutional development process in marine coastal systems in many instances is often triggered by a concatenation of causal mechanisms (see table 1).

Table 1. Summary of causal mechanisms of transition to co-management regimes

Potential causal mechanism	Assessment criteria	Relevant literature
Ideational change/ diffusion	Evidence that international/donor ideologies of resource governance were promoted or new ideas were experimented in the context A clear indication that the promotion of such ideologies or new ideas triggered the transition to a co-management regime	Hara & Nielsen 2003; Chuenpagdee & Jentoft 2007; Cinner et al. 2009; Cinner et al. 2012a; Ho et al. 2016; Orach & Schlüter 2021
Resource use conflicts	Evidence that resource use conflicts exist in the resource context A clear indication that resource use conflicts caused the initiation of processes for developing a co-management regime	Hara & Nielsen 2003; Beem 2007; Chuenpagdee & Jentoft 2007; Ayers & Kittinger 2014; Orach & Schlüter 2021
Major socio-political changes	Evidence that major socio-political change occurred in the resource context A clear indication that the sociopolitical change triggered the transition to a co-management regime	Gelcich et al. 2010; Armitage et al. 2011; Herrfahrdt-Pähle et al. 2020; Orach & Schlüter 2021
Resource depletion & crisis	A clear recognition that resource depletion and/or resource crisis occurred Evidence that the initiation of co-management processes is a result of the resource crisis	Hara & Nielsen 2003; Chuenpagdee & Jentoft 2007; Gelcich et al. 2010; Armitage et al. 2011; Baird et al. 2019
Changes in market dynamics	Evidence that the change in market dynamics related to the resource occurred A clear indication that the change in market dynamics triggered the emergence of a co-management regime	Gelcich et al. 2010; Cinner et al. 2012a; Orach & Schlüter 2021
Weak centralized regimes & inefficiency	An indication that the recognition of weak centralized arrangements or transaction cost-minimizing opportunities occurred Evidence that this recognition was the key factor in establishing co-management	Hara & Nielsen 2003; Chuenpagdee & Jentoft 2007; McClanahan et al. 2016

Source: author (based on literature)

2.3. Outcomes, challenges and conditions for successful fisheries co-management regimes

A corpus of literature has gone beyond evaluating the process of transition to co-management regimes to assessing the performance and outcomes of such institutional arrangements (Gutiérrez et al. 2011; Cinner et al. 2012b; Cinner et al. 2012a; Kosamu 2015; d'Armengol et

al. 2018). The literature evaluating the outcome of co-management can be grouped into three domains of process and outcome variables: 'Natural Systems'; 'Governance and Institutions'; and 'People and Livelihoods' (Evans et al. 2011). These studies have mainly focused on socio-economic (e.g. efficiency and equity), ecological (e.g. sustainable conservation, resource abundance and species diversity) and process (e.g. participation, legitimacy, rule compliance and conflict resolution) outcomes of co-management arrangements (Evans et al. 2011; Gutiérrez et al. 2011; Wamukota et al. 2012; d'Armengol et al. 2018). Review of literature on the outcomes of co-management regimes in coastal common-pool resource systems shows that the establishment of such institutional regimes in many cases produce positive ecological and socioeconomic outcomes such as efficiency, equity, compliance and sustainable conservation (Wamukota et al. 2012). However, it has also been reported that the implementation of co-management in many cases reduced fishers' access to resources (Cohen et al. 2021; Smallhorn-West et al. 2022)

Recent studies have taken an integrative approach to evaluating co-management outcomes – exploring how fisheries co-management promotes the sustainable development goals (SDGs) (Smallhorn-West et al. 2022). The research concluded that while small-scale fisheries co-management is useful for securing fisher access rights and improving the stock status of particular marine resources, there is limited evidence of improved livelihoods, consumption and nutrition in the South Pacific region (ibid). Nevertheless, co-management of small scale fisheries has “a great potential to help, or hinder, progress toward SDG 5, depending on the processes through which it is implemented” (Smallhorn-West et al. 2022: 13). A broader evaluation of the performance of fisheries co-management regimes in Asia also indicates that there is little evidence of impact of co-management on food and nutrition security and weak outcomes in terms of gender and social inclusion (Cohen et al. 2021). The research concluded that while the social, ecological and governance outcomes of fisheries co-management are generally positive in the region, the outcomes are influenced by shifts in macro-level environmental, institutional, and social factors beyond the co-management governing system (ibid).

However, the research has also identified many challenges that hinder the success of co-management regimes. Factors that lead to failure of co-management regimes may emanate from high transaction and transformation costs (Kuperan et al. 2008; Ayers et al. 2017), lack of institutional legitimacy and compliance (Jentoft 2000; Arias 2015; Nunan et al. 2018), the nature of institutional interaction in the context of legal pluralism (Jentoft et al. 2009; De la Torre-Castro & Lindström 2010), institutional misfit (Epstein et al. 2015; Ishihara et al. 2021), lack of self-sustaining funding mechanisms (Njaya et al. 2018; Kaluma & Umar 2021; Rivera

et al. 2021), elite capture, corruption among rule enforcement agents and weak enforcement (Sundström 2013; Nunan et al. 2018; Cohen et al. 2021; Kaluma & Umar 2021). Other factors that hinder the successful implementation of co-management include weak institutions, low group cohesion, and inadequate coordination between government and local stakeholders (Rivera et al. 2021). In many cases of externally funded co-management schemes, the shifts in the performance of co-management are found to be associated with project cycles and project completion (Cohen et al. 2021). Exogenous parameters such as globalisation, market access, population dynamics, technological change, state policy, and the endogenous characteristics of the resource system and institutional inflexibility to adapt to changes in the institutional environment have also been argued to be key factors undermining the success of co-management regimes (Agrawal 2002; Selig et al. 2017; Cohen et al. 2021; Smallhorn-West et al. 2022). The analysis of contextual conditions on the outcomes of co-management also indicate that the effectiveness and sustainability of co-management can be hindered by political economy dynamics such as political interference, especially during election years and a general lack of political will to support co-management in some cases (Nunan 2020; Cohen et al. 2021).

While challenges exist in the implementation of co-management regime in marine coastal systems, studies have also explored conditions that facilitate the successful development, effectiveness and sustainability of co-management regimes (Pomeroy & Williams 1994; Pomeroy et al. 2001; Chuenpagdee & Jentoft 2007; Gutiérrez et al. 2011). The literature suggests that institutional characteristics (Cinner et al. 2012b), strong enforcement mechanisms, social capital, local leadership (Acheson 2006; Gutiérrez et al. 2011; Rivera et al. 2019; Cohen et al. 2021) and the mode of interaction of regulative institutions with other normative and cognitive-cultural institutions (De la Torre-Castro & Lindström 2010; Kosamu 2015) influence the outcomes of local institutional regimes. The literature indicates that strong local leadership, social capital, cooperation, conflict resolution, compliance and effective rule enforcement mechanisms are key conditions for successful co-management regimes (Gutiérrez et al. 2011; Rivera et al. 2019; Rivera et al. 2021). Pomeroy et al. (Pomeroy & Williams 1994; 2001) have synthesised a broad range of key conditions for successful fisheries co-management, including: clearly defined boundaries; clearly defined membership; group cohesion; participation of affected individuals; monitoring and enforcement of management rules; fisher groups legal rights to organised are recognised; cooperation and leadership at community level exist; prior community-based organising experience; and the benefits of participation exceed costs. These enabling conditions have been applied to examine outcomes of transition to co-management in varied ways (Levine 2016; Cohen et al. 2021; Rivera et al.

2021). While these enabling conditions may not be exhaustive, they provide a framework for evaluating why co-management may be successful or unsuccessful in different contexts.

The review of literature on co-management shows clearly that a great deal of scholarship has been dedicated to the factors that facilitate the emergence of co-management regimes and the conditions under which co-management institutional arrangements produce positive and negative resource management outcomes. The corpus of existing co-management literature has focused on examining the social, economic, and ecological outcomes of such institutional regimes in coastal fisheries. However, insufficient attention has been given to other aspects of institutional performance, such as, the extent to which co-management regimes resolve existing and potential new conflicts, power and resource distributional asymmetries, the role of interaction between co-management regimes and pre-existing institutional regimes, and how the involvement of third party actors affect co-management outcomes (d'Armengol et al. 2018: 223). The success or failure of local institutional regimes depends on the institutional design and the social context within which institutions are embedded (Ostrom 1990; Wamukota et al. 2012). When institutional arrangements for managing common-pool resource are designed according certain principles (Cox et al. 2010) and taking into consideration the socioeconomic and biophysical context, it enhances institutional fit (Vatn & Vedeld 2012; Epstein et al. 2015) and legitimacy (Jentoft 2000), thereby ensuring institutional effectiveness and sustainability, as associated transaction and transformation costs (cost of implementation and monitoring) are minimized (Ostrom 1990; Agrawal 2002).

The literature on co-management has also paid insufficient attention to institutional sustainability (Agrawal 2002). There are situations where co-management regimes fail to persist long enough to produce any measurable outcomes. For institutional arrangements to achieve sustainable socioeconomic and ecological outcomes in common-pool resource governance, such arrangements should function as viable institutions and stand the test of time (Noble 2000; Agrawal 2002). Successful institutional regimes in common literature are often defined as those institutions that "last over time, constrain users to safeguard the resource, and fair outcomes" (Agrawal 2002: 44). However, the process by which co-management institutions emerge and the extent to which institutional sustainability is linked to the institutional change process is still under-researched (Beem 2007; Acheson 2013; Cumming et al. 2020). Little research has examined the role of the dynamics of the institutional development process and the social context in the success of transitions to co-management and the sustainability of such governance regimes. Taking a process approach to institutional performance will enable us to understand why different institutional outcomes may be recorded in governance regimes that have similar attributes of resource users and resource

systems. A process approach will examine the dynamics of the institutional development process and the role of the socio-political context in the practice and outcomes of co-management (Nunan 2020). This thesis does not focus on the socioeconomic and ecological outcomes of co-management but rather the challenges of developing and sustaining co-management regimes. It traces the institutional development process for co-management in Ghana to understand the role of the process and contextual dynamics in the challenges or struggles to sustain co-management arrangements.

3. Theoretical framework

This thesis draws from three theoretical perspectives within the field of institutional economics and the broader field of institutional theory to understand institutional change in coastal resource governance. More specifically, the theoretical perspectives are rooted in the academic fields of institutional economics/political economy (ideational theory of institutional change and the political settlements theory) and legal anthropology (legal pluralism). To understand why a particular institutional arrangement is effective or ineffective, it is important to examine how the institutional regime emerged (institutional change) and the outcome of the institutional regime. Therefore, this thesis adopted perspectives from institutional theory that focus on why and how institutions emerge and why institutions become ineffective and unable to endure. Because the thesis examines the outcomes of a coastal resource governance regime from an institutional perspective, I apply theoretical approaches that can help explain the dynamics of institutional change and the outcomes of the resultant co-management institutional arrangement. Thus, the ideational theory of institutional change is used in the thesis to examine the drivers and mechanisms of institutional change.

However, ideational theory alone is unable to examine holistically the contextual dynamics that hinder the implementation of an institutional solution for governance of complex social-ecological systems like coastal fisheries. Therefore, I complemented this theory of institutional change with two other theoretical approaches which provide a holistic lens for unearthing the contextual dynamics that are important for understanding the outcomes of resource governance regimes – the political-economy analysis approach (political settlement theory) and legal pluralism. The political settlements approach is a theoretical perspective for examining why institutions perform differently in different contexts from the perspective of holding-power and distributional conflict. It thus serves as a useful framework for examining the role of contextual political-economic dynamics in the outcomes of co-management institutions. On the other hand, the legal pluralism perspective is a strong analytical tool for examining the co-existence of multiple institutional orders in a particular context of governance

and how their interactions can produce differential governance outcomes. This theoretical approach is adopted in this thesis to examine the role of the broader institutional environment in evolution and outcomes of governance change to coastal resource co-management regime.

3.1. Ideational theory

Understanding institutional change in contexts of uncertainty and complexity has been a general challenge for conventional economic theories of institutional change which emphasises the efficiency function of institutions which are produced through competitive processes of choice. Other theoretical approaches exist within the broader field of institutional economics which have been comprehensively reviewed elsewhere (see Kingston & Caballero 2009; Banikoi et al. 2023). In recent times however, institutional economists have broadened their scope to theorizing the role of ideational factors in institutional change in contexts of uncertainty (Denzau & North 1994; Knight & North 1997; Blyth 2002; Campbell 2004; North 2005; Higgs 2008). The ideational theory of institutional change emphasises the role of ideational elements in shaping the development and transformation of institutions. Such ideational elements may include beliefs, discourses, frames, narratives, ideologies, mental models, myths, dogmas and ideas in various forms (Blyth 2001; Campbell 2004; Carstensen & Schmidt 2016). Ideas and ideologies are central to this theoretical approach, illuminating the role of agency in institutional change. Ideologies refer to “the shared framework of mental models that groups of individuals possess that provide both an interpretation of the environment and a prescription as to how that environment should be structured” (Denzau & North 1994: 4).

Ideologies have cognitive (help in interpreting environment), normative (define what is right), programmatic (condition one to act in a certain way) and solidary (instigate one to act in solidarity with others) dimensions (Higgs 2008). They are the underlying logical structure of institutions in a society; a change in ideologies may thus trigger a co-evolutionary change in institutions (Sauerland 2015). Ideational elements can change through learning from the environment and culture (North 2005). This learning can occur within the internal environment (Denzau & North 1994), but mental models can also be shaped by exogenous discourses, ideas or ideologies (Higgs 2008). Ideological change can also be theory-driven, where influential academic scholarship changes worldviews and paradigms, or event-driven, where events such as crises can provide opportunities for ideological change through the supply of ideas (Higgs 2008). Campbell (2004) identified four typologies of cognitive and normative ideas that influence institutional change: paradigms (background assumptions or mental models that constrain the cognitive range of useful programs); programs (prescriptions that enable actors

to chart a particular path of institutional change); frames (discourses, narratives and symbol actors use to legitimize programs or institutions); and public sentiments (public assumptions that constrain the normative range of legitimate programs available to actors).

Ideas do not often emerge and proliferate spontaneously – the role of ideational brokers is crucial for ideational change in one ideational realm to influence institutional change in another realm (Campbell 2004). An important line of inquiry in ideational theories is thus, how ideas influence the emergence or change of institutions. Eggertsson (2015: 18) notes that “ideas have three roles in the process: as social innovations that overcome previous constraints; as instrumental models, often contested, for guiding material interests; and as moral models for evaluating the legitimacy of new institutions”. Ideas do not emerge spontaneously to influence institutional change; thus, the role of institutional entrepreneurs in transmitting new ideas, beliefs, values, norms and mental models to drive institutional change is critical (North 1990; Campbell 2004). In a transnational diffusion of new ideas, ideational brokers could be individual actors, epistemic communities, or international organisations who broker the flow of these ideas to actively influence ideational and institutional change at the national level through various mechanisms of diffusion.

Ideational theory provides a framework for understanding how shifts in ideas and ideologies can lead to significant changes in institutional arrangements. The role of ideology and ideational change in the emergence of fisheries co-management regimes, especially in tropical developing countries have been noted in literature (Hara & Nielsen 2003; Chuenpagdee & Jentoft 2007; Cinner et al. 2009; Cinner et al. 2012a; Ho et al. 2016; Orach & Schlüter 2021). In this thesis, the ideational theory provided a framework for examining the process of governance transformation to coastal fisheries co-management regime in Ghana. Considering the important role played by international development organisations in developing the co-management regime, this theoretical approach was considered appropriate for understanding the institutional development process.

3.2. Legal pluralism theory

Legal pluralism denotes the situation where “within the same social order, or social or geographical space, more than one body of law, pertaining to more or less the same set of activities, may co-exist. (Benda-Beckmann & Benda-Beckmann 2006: 14). Legal pluralism distinguishes between state and non-state sources of law. That is, the rules and principles enacted by state organisations operate in parallel to rules and norms of other organisations and authorities whose sources of legitimation are non-statutory. These non-statutory sources of law may include international, transnational and local customary institutions (Benda-

Beckmann & Benda-Beckmann 2006). In resource governance, legal pluralism as an analytical concept denotes multiple legal systems – rules, norms, practices, regulations and their associated enforcement and decision-making authorities – with different sources of legitimation structure human-environment interactions (Meinzen-Dick & Pradhan 2001). Coastal fisheries governance in the tropics in particular, is a realm where constellations of legal pluralism are ubiquitous due to colonial legacies (Jentoft et al. 2009; Kraan 2009; Bavinck et al. 2013). In most contexts, customary institutions governing coastal resources developed much earlier than statutory rules. While these customary institutions have been weakened and eradicated in some contexts by colonial rule, there are still many countries in the global south where these institutions are strong and play an important role in the governance of coastal marine systems alongside statutory governance systems (Bavinck & Gupta 2014)

In such legal pluralistic contexts, the institutional domains of the state and customary legal systems may operate and interact in a myriad of ways in the governance of resource systems leading to varying governance outcomes. The ways in which these institutional orders interact may pose a challenge or may facilitate sustainable resource governance (Jentoft 2011; Jentoft & Bavinck 2014). The mode of institutional interaction or relationship between the legal systems in resource governance is referred to as “governance pattern” (Bavinck et al. 2013). Such governance patterns are conceptualised to include four distinct archetypes: indifference (combative), competition (competitive), accommodation (cooperative), and mutual support (complementary) legal pluralism (see Bavinck et al. 2013; Bavinck & Gupta 2014; Swenson 2018). *Indifference* refers to the situation where the two legal systems operate in parallel without operational overlap (e.g. if rules emanating from the national legal system are not implemented in coastal fisheries, while customary legal systems continue to operate). *Competition* occurs where there is a strong and contrary relationship between the legal systems and they compete for power to govern the same jurisdiction or situation (e.g. national regulations and customary rules competing to govern coastal fisheries). In *accommodation*, the legal systems interact in a non-conflictual manner and there is a recognition of each other’s legitimacy and a measure of reciprocal adaptation but little formal institutional or jurisdictional integration (e.g. national policy processes provide for local participation). In the *mutual support* type, there is a formal recognition of the legitimacy of both legal systems and arrangements are made to enhance the mutual interaction and joint governance of resources under a hybrid institutional arrangement. For instance, when the national legal system builds upon and reinforces existing rights and responsibilities at the local level, ideally through processes of fisheries co-management (Bavinck & Gupta 2014).

The four ideal types of governance patterns are determined by the quality and intensity of relationship between the plural legal systems (Bavinck et al. 2013). The quality of relationship refers to whether the authorities (leaders who bear decision-making and enforcement responsibilities) in the respective legal systems perceive the other system as valid and useful, whilst intensity indicates the degree to which the systems are interconnected (Bavinck et al. 2013: 624). The extent to which the normative and institutional diversity leads to sustainable governance of marine coastal systems depends on the quality and intensity of institutional interaction (Jentoft 2011). Where conflicts exist between the institutional principles and underlying ideologies of the legal orders, there is likely to be unsustainable outcomes in resource governance. Thus, the legal pluralism perspective can be very useful for understanding the role of the broader institutional environment and the outcomes of governance regimes in a particular context. The legal pluralism has been used to study resource governance processes and outcomes of coastal marine systems in many contexts (Bavinck et al. 2013; Parlee & Wiber 2014; Scholtens & Bavinck 2014; Lindley & Techera 2017; Hubbard 2019; Rohe et al. 2019)

While the legal pluralism approach has largely been criticized to study static situations of institutional interaction, further theoretical development has shown that it has the potential for studying dynamic processes of institutional development (Benda-Beckmann & Benda-Beckmann 2006; Bavinck et al. 2013). It is also important to note that the constellations of legal pluralism or governance patterns are not static and can evolve in a multiple ways at various periods of governance leading to the emergence of new institutional arrangements (Benda-Beckmann & Benda-Beckmann 2006; Benda-Beckmann & Turner 2018). Such evolution in institutional interaction can be due to a myriad of factors. Globalisation and external influences can alter local economic and socio-political conditions or ideologies underlying the normative institutional orders (Benda-Beckmann & Benda-Beckmann 2006). From this dynamic perspective, legal pluralism can also be used as an analytical framework for studying institutional change – that is, what conditions lead to stability or evolution of the governance patterns. By examining the interactions between the legal systems and the ideologies that underpinned them, provides analytical insights on why frictions between the institutional orders produce changes in institutional arrangements. In this thesis, the analytical perspective of legal pluralism is drawn upon to examine the process of institutional change and governance outcomes. This is done by combining the legal pluralism perspective with ideational theory to elucidate the role of conflictual interactions between customary institutional principles and the modernist ideologies that underpinned the development of the co-management regime in coastal fisheries.

3.3. Political economy analysis of institutions: the political settlements theory

A political economy approach to institutional analysis brings into perspective the role of the socio-political and economic context in institutional change and institutional outcomes. Institutions and institutional changes are not implemented in a vacuum; they have distributional consequences on existing socio-economic incentives and political structure (Libecap 1989; Knight 1992; Schmid 2004; Robinson 2010; Acemoglu et al. 2021). A key concern is therefore recognising the distributional consequences and the extent to which political actors will have the incentive to undertake institutional changes considering the nature of the political equilibrium (Robinson 2010). The political economy approach emphasises that, because of the differential distributional implications of institutions, the distribution of *de facto* and *de jure* power in the society and the resultant set of interests strongly influence what institutions are chosen and whether institutions will persist (Acemoglu et al. 2005; Robinson 2010). In this framing, whether actors lend support to existing or new institutional arrangements or favour institutional change depends on the existing or expected incentives that the institutional arrangement will produce. While initial analysis focused on the micro-level strategic actions of actors in conflict over the *ex-ante* distributional benefits of institutional change in which relative bargaining power determine what institutional arrangements emerge or persist (Libecap 1989; Knight 1992), it has been extended to the macro-level political economy analysis of institutional outcomes in economic development studies (Acemoglu et al. 2005; North et al. 2007; Acemoglu & Robinson 2010; Khan 2010).

The political economy approach to institutional analysis has been developed into a robust analytical framework – the political settlements approach (Khan 2010; Khan 2017, 2018) – which has been empirically applied to study a variety of development outcomes including resource governance. The political settlements approach, a political economic variant of political settlements analysis, brings politics and distribution of power in society into institutional analysis (Kelsall et al. 2022). This political economy approach emphasizes that, because of the differential distributional consequences of institutions, the distribution of *de facto* and *de jure* power in the society and the resultant set of interests determine what institutions are chosen and whether such institutional arrangements will be effective and sustained (Acemoglu et al. 2005; Robinson 2010; Khan 2017; Acemoglu et al. 2021). At the heart of the political settlement approach is how the distribution of power across organisations – groups of individuals who work together in structured ways and are subject to rules of interaction – in a society shapes institutional and development outcomes (Khan 2017: 639). These organisations include elite and non-elite socio-political groups that hold power in a society (Behuria et al. 2017). The power of these different groups to contest, obstruct and

oppose rules that are against their interests clearly thus affect the effectiveness and enforceability of the institutions (Khan 2010: 18). Thus, the effectiveness of any institutional regime depends on the responses of the organisations that are affected by that regime (i.e. whether they will punish or isolate rule breakers to ensure compliance) (Khan 2019) or what is politically feasible in the political equilibrium (Robinson 2010). This also means that the level of compliance or enforcement of an institution will depend on the distribution of power across different types of organisations in a society referred to as the political settlement (Khan 2017).

The political settlement theory emphasizes the importance of analysing the relative holding power and capabilities of relevant organisations, as “organisations can be expected to support, resist, or distort particular institutions and policies depending on their interests and capabilities” (Khan 2017: 636). The relative holding power to resist or enforce institutional changes will depend on the type of clientelist political-settlement or patron-client coalition that exists in the country. Khan (2010) provides four ideal types of clientelist political settlements common to socio-political systems in developing economies: potential developmental coalition, (vulnerable) authoritarian coalition, (weak) dominant party, and competitive clientelism. In a dominant party political settlement, ruling coalitions are able to repress or co-opt alternative sources of power, while ruling coalitions face a credible challenge from excluded rival power sources (elite factions) and considerable pressures from the lower-level actors of the ruling coalition to maintain their support and loyalty in competitive clientelism (Hickey et al. 2020). Dominant party political settlements allow ruling coalitions to adopt a long-term time horizon to policies and institutional development because the threat of alternative sources of power outside and inside the ruling coalition is minimal (Khan 2010). Due to the perennial threat of losing power to rival coalitions in competitive clientelism, ruling coalitions tend to focus on short-term time horizons unless the political and bureaucratic institutions of resource allocation are sufficiently robust (Khan 2010; Hickey et al. 2020). In clientelist political settlements, intra-elite conflicts are also pivotal because the struggles between elite factions and lower-level followers will shape the kind of institutions that emerge and how such institutional arrangements will perform (Kelsall et al. 2022).

This theoretical approach has been widely used to examine institutional change and institutional outcomes in various sectors of development in the global south, including natural resource governance, especially in the extractive resource sector (Poteete 2009; Kjær 2015; Mohan et al. 2017; Hickey et al. 2020; Ayanoore & Hickey 2022; Benites & Ubillús 2022; Botlhale 2022; Atta-Quayson 2023). However, the application of this theoretical approach to the institutional analysis of the outcomes of collaborative resource governance regimes in fisheries is still scant (however, see Khan 2015; Poteete 2019; Nunan 2020; Sarr et al. 2022).

The political settlement approach has been criticized for lacking a clear definition and predictive power, as well as, for being inherently elite-bias with less comparative attention to non-elite (Kelsall et al. 2022). Nevertheless, the political settlement approach provides analytical tools for evaluating the sustainability of institutions and policies in a governance domain and thus has strong interpretive power (Khan 2018). The extant studies on resource governance have shown that the political settlements approach provides a useful analytical lens for illuminating the role of the socio-political context in the outcomes of institutional regimes. They show how political interference in rule enforcement, the choice of institutional regimes, and lack of political will to implement policies for effective resource governance are linked to the political incentives that are produced by the contextual political settlement. The institutional analysis of the outcomes of local institutional regimes for common-pool resource governance has shown that the role of the wider political-economic structures and socio-institutional environment have been neglected (Agrawal 2002; Clement & Amezaga 2013; d'Armengol et al. 2018; Nunan 2020). In this thesis, I draw from Khan's political settlements theory to examine the role of the political-economic context in the challenges of sustaining coastal fisheries co-management arrangements in Ghana.

The political settlement theory emphasizes the importance of analysing the relative holding-power¹ and capabilities of relevant organisations, as organizations will support, resist or distort particular institutions and policies depending on their interests. Two dimensions of holding-power distribution across political organizations are distinguished: horizontal power and vertical power. Vertical distribution of power defines the relative power of the higher factions compared to the lower factions of the same ruling coalition. In this distribution, the stronger the relative power of the higher over the lower factions, the stronger the coalition's implementation and enforcement capacities. Horizontal distribution of power, on the other hand, refers to the relative power of excluded factions compared to the ruling coalition. The holding-power of political organisations depends on the type of political settlement².

Where excluded coalitions are strong like in competitive clientelism, the ruling coalitions tend to engage in short-term survival strategies, as opposed to making institutional and policy choices with longer time horizons, which is more likely in dominant party political settlements

¹ Holding power represents "how long a particular organization can hold out in actual or potential conflicts against other organizations or the state" Khan (2010: 20).

² A political settlement is a description of the 'social order' of socio-political system, defined as 'an interdependent combination of a structure of power and institutions at a level of a society that is mutually 'compatible' and also 'sustainable' in terms of economic and political viability" Khan (2010: 20).

when excluded factions are weak (Khan 2010). In clientelistic political settlements, therefore, the commitment or capacity of ruling coalitions to implement sustainable institutional changes to deliver development strongly depends on the strength of excluded factions and lower-level factions of the ruling coalition (Khan 2010; Khan 2017). Where these factions have significant holding power, the ruling coalition is unlikely to commit to long-term institutional changes. In the context of institutions and governance, “the enforcement of a particular institutional rule is likely to be more effective if the distribution of benefits under that institution is not contested by groups with ‘holding-power’, and conversely its enforcement is likely to be weaker if powerful groups contest its enforcement” (Khan 2010: 6).

4. Research aims and questions

The research has two main objectives: 1) To investigate the process through which coastal fisheries co-management regime was implemented and the role of the process in the outcome of the co-management regime; 2) To examine why the co-management regime could not be sustained and the potential for coastal fisheries co-management regime in Ghana. The study thus, traces the institutional development process for the co-management regime and examines the challenges of sustaining the resultant institutional arrangement through the theoretical lens of institutional change. The thesis asks the following specific research questions:

- I. What is the analytical potential of theories of institutional change for studying the diversity of governance transformations in the coastal marine realm?
- II. Why and how did co-management emerge as an institutional arrangement for the governance of coastal fisheries in Ghana? What role did international ideologies play in the institutionalisation process?
- III. What factors hindered the effectiveness and sustainability of the coastal fisheries co-management regime in Ghana? What is the role of the socio-political context in the challenges of developing and sustaining the co-management regime?

5. Research methodology

This section elaborates the research approach and methods adopted for the study. This includes an introduction into the ontological and epistemological considerations or philosophical assumptions that undergird this research and the research design and methods adopted for data collection and analysis, as well as, the rationale for the choice of these approaches. Each of the individual papers has specific descriptions of methods of data

collection and analysis. Here, I will provide a broader overview of the research approach and design, the case study context and methods of data collection.

5.1. Research approach and design

Before expanding on the research methods, it is important to make explicit the philosophical underpinnings of this research. Research philosophy – the system of beliefs and assumptions underpinning knowledge development – is an important element in the research design because it influences the choice of research question, methodological choice, research strategy, data collection procedures and how the data is interpreted and reported (Saunders et al. 2023). Making explicit the ontological and epistemological considerations or philosophical paradigms or worldviews that underpin a research is also important for the reader to understand the rationale behind the choice of methods and the conclusions of the study (Braun & Clarke 2006). Ontological and epistemological claims to knowledge in social science research have been classified into four major philosophical worldviews – post-positivism, constructivism, pragmatism and the transformative worldview (Creswell & Creswell 2018). The constructivist and positivist/post-positivist worldviews have dominated much of social science research, but pragmatism and the transformative approach have gained prominence in contemporary research (Creswell & Creswell 2018). This thesis is underpinned by the pragmatism philosophical worldview. Pragmatist research “starts with a problem, and aims to contribute practical solutions that inform future practice” (Saunders et al. 2023: 153). As this thesis is concerned with understanding practical challenges of implementing institutional solutions in resource governance, the research problem and research question mainly determined the research design and strategy used. However, the interpretation of the findings, and the theoretical approaches adopted to guide the analysis have constructivist orientation. Therefore, the research is situated within the boundaries of pragmatism and constructivism.

5.2. Qualitative research approach

In line with the pragmatic paradigm, the qualitative research approach is adopted in this thesis to examine the process and outcome of institutional change towards co-management. Some institutional economists have argued that to properly examine and understand institutions and institutional change, economists need to go beyond quantitative evidence and statistical estimations to engage more with qualitative evidence using qualitative methods, as many important aspects of institutions and institutional change can be better explained with qualitative evidence (Schlüter 2010; Skarbek 2020). Institutional change and outcomes of institutional arrangements are often context dependents and involve several dynamics entailing multiple rationalities, cognitions and cultural dimensions that can mainly be explained

by qualitative evidence (Schlüter 2007). A qualitative approach provides analytical tools for examining context-dependent processes that deal with social complexities such as values, ideologies, personal experiences, and human actions (Creswell 2007). As this research aims to understand the process and outcomes of institutional arrangements in resource governance, the qualitative approach was deemed more appropriate to provide a thick description of the process and contextual institutional and socio-political histories through the interpretation of narratives and account evidence of social actors' experiences with co-management in coastal fisheries.

5.3. Case study research

The thesis adopted a case study research strategy, using multiple case elements (Yin 2003). A case study is "an empirical inquiry that investigates a contemporary phenomenon within its real-life context, especially when the boundaries between phenomenon and context are not clearly evident" (Yin 2003: 13). It is therefore a very suitable approach for research that is concerned with "why" and "how" questions and the most appropriate research approach for understanding important contextual conditions pertinent to a real-world case (Yin 2018). A case study relies on multiple sources of data and may "benefit from prior development of theoretical propositions to guide data collection and analysis" (Yin 2003: 14). The unique strength of a case study is "its ability to deal with a full variety of evidence – documents, interviews and observations" (Yin 2003: 8); thus, in line with the pragmatic philosophical assumptions underpinning this research. The case study approach was chosen for this study because it presents a better way of collecting detailed data for explanatory or exploratory research (Yin 2003). This thesis examines the "how" and "why" questions relating the processes and outcomes of co-management institutional arrangements in coastal fisheries in which the context is very important. Answering these questions requires a research approach that is context specific. The use of case study was, therefore, necessary to be able to account for any contextual peculiarities, such as geographical and socio-ecological factors.

This study is an embedded case study in which coastal fisheries governance in Ghana was the case study with specific coastal fishing communities as units of analysis. Eight coastal fishing communities were selected as the case study elements (see table 1 for detailed characteristics of case study units). The case study elements were selected from two of the four coastal regions of Ghana: the Central and Volta regions (see figure 1 study for locations). These two regions were chosen because they had the strongest commitment to and actively participated in the co-management project (Bennett 2002). The regions also differ regarding coastal fishing history and methods, socio-cultural practices, and political characteristics. The specific

communities were selected based on their history of co-management and importance in the coastal artisanal fisheries sector. In the central region, three fishing communities in three different districts were selected: Cape Coast, Elmina, and Mumford. In the Volta region, the communities studied include Dzelukope, Abutiakope, Woe, Tegbi, Anloga, and Adina.

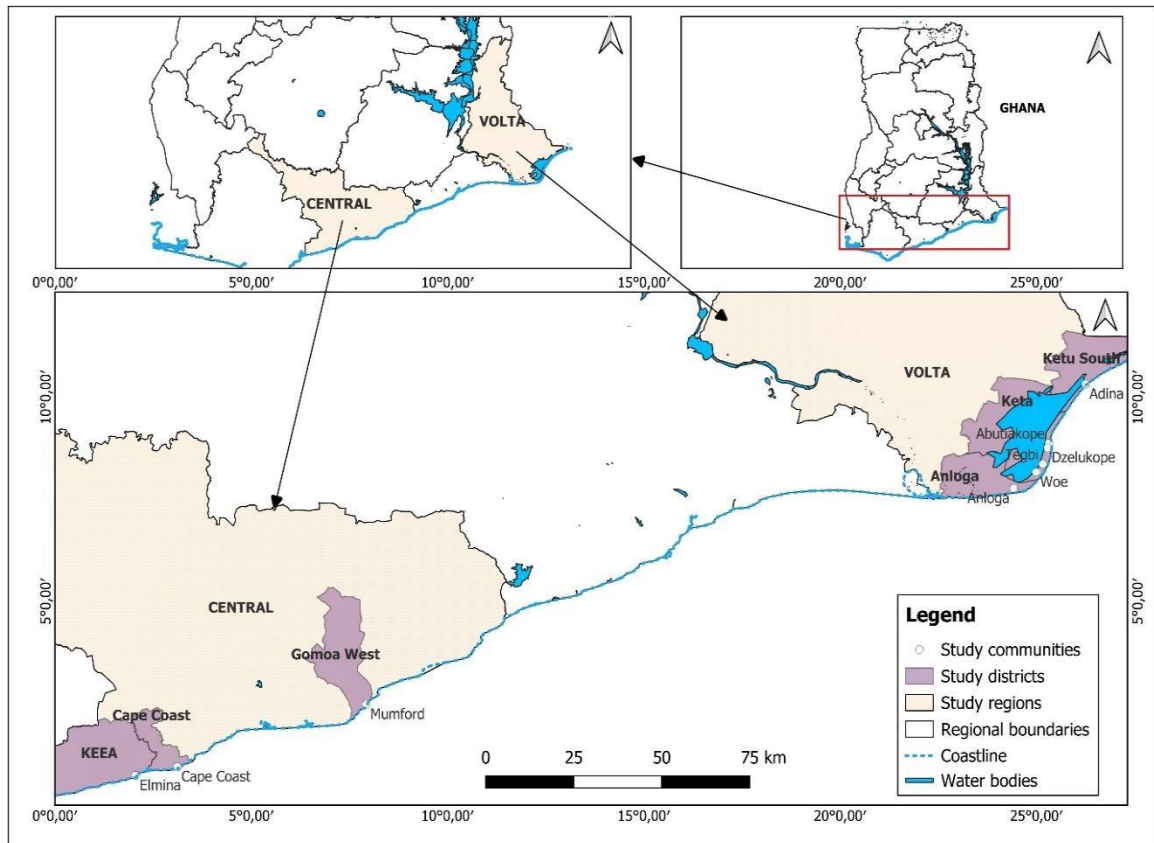


Figure 1. Study area map

Table 2. Study area characteristics

Study District	Total Fishermen Population	Selected Fishing community	Fishermen population in Selected Communities	Fishing/ gear type	Number of Canoes
Cape Coast Metropolitan	2227	Cape Coast	1960	Purse seine, beach seine, ali & other set nets	277
Komenda-Edina-Eguafo-Abirem (KEEA) Municipal	7815	Elmina	2239	Purse seine, line, ali, drift & other set nets	255
Gomoa West District	4676	Mumford	592	Hook & line, beach sein & other set nets	128

Anloga District	2199	Anloga	213	Beach seine nets	28
		Woe	183	Beach seine & other set nets	28
		Tegbi	741	Beach seine & other set nets	73
Keta Municipal	3442	Abutiakope	689	Beach seine & set nets	141
		Dzelukope	572	Beach seine & set nets	67
Ketu South Municipal	6176	Adina	1745	Beach seine, purse seine & lobster nets	94

Source: (Dovlo, et al, 2016; MoFAD, 2022)

5.4. Methods of data collection and analysis

Empirical data for this research was collected through semi-structured interviews. This includes the use of key informant interviews and focus group discussions (FGDs) to collect qualitative data from a diversity of social actors in coastal fisheries governance. Interviews were chosen for this study over other primary data collection methods because interviews provide much more flexibility in data collection (Gill et al. 2008). Interview is a more suitable primary data collection method for a qualitative study, as interviews provide a much deeper understanding of a social phenomenon than these purely quantitative methods (Gill et al. 2008). Thus, semi-structured interviews were used because they allow for a comparison of the responses of the interviewees, whilst also permitting the researcher to probe further and the respondents to elaborate and qualify their responses. The drawback in the use of interviews is their time consuming nature but this was mitigated in this study by focusing on a limited but relevant number of interviewees. However, this did not affect the quality or reliability of the data as the respondents were purposely selected for relevance.

The participant groups were purposely selected because of the peculiarity of the information sought, which could only be provided by experienced fishers and actors who knew what transpired in the co-management processes between 1997 and 2008. A snowballing approach was adopted to identify individual participants. Of the nine communities, six FGDs comprising 30 participants were held in-person with co-management committees in six fishing communities: Dzelukope, Woe, Adina, Elmina, Mumford, and Cape Coast. In total, 63 participants were involved in the study through face-to-face interviews and FGDs during a three-month period of fieldwork (January-March 2022). The participant groups included traditional leaders in fisheries governance: the chief fishermen known as *Apofohene* (n= 9) and chief fishmongers/women leaders known as *Konkohemaa* (n=6), experienced

fishermen/canoe owners (n=6), co-management committee members (n=30), representatives of fishers associations (n=2), current and retired fisheries officers at zonal, regional, and national offices of the Fisheries Commission (n=8), and representatives from civil society organizations working in the coastal fisheries sector (n=2). The participants included both men (n=49) and women (n=14). The unequal representation of women in the research is due to the focus of the research and the structure of coastal fisheries governance in Ghana. While the traditional leaders of women (*Konkohemaa*) represent the voice of women in traditional fisheries governance, men have majority representation in the co-management committees, with only one woman in each committee. Two of the women are senior fisheries officers at the Fisheries Commission.

The FGDs could not be held with co-management committees in three communities due to difficulties in organising committee members who were not readily available during the fieldwork period. However, in-depth interviews were conducted with chief fishermen and their governing councils in all nine fishing communities. In addition, in-depth interviews were conducted with traditional women leaders in six communities. In the other communities, new *konkohemaa* were yet to be installed. All interviews were conducted in the local languages (*Fante* and *Ewe*) spoken in the regions with the help of interpreters, and using English only when the respondent could understand and speak English. The topics covered in the interviews and FGDs centered on why the governance change in coastal fisheries occurred, how the development of co-management arrangements occurred, why co-management was unsuccessful, and the potential for a co-management regime in coastal fisheries. This included probing issues of legal pluralism, potential ideological conflicts, and the political-economy context of coastal fisheries governance.

Most of the interviews were recorded except when participants objected during the interviews. The recorded interviews were not transcribed verbatim. Detailed and observational notes were taken during and after the interviews to grasp the salient points of the conversations. The interview notes were complemented with audio recordings of the interviews, which were replayed to ensure that nothing important was missed in the data analysis. Due to limitations regarding how accurately participants could recall events that occurred over two decades, the interview data was complemented with secondary data (grey and scholarly literature) on the historical institutional, socio-political and ideological features of coastal fisheries governance in Ghana. The thematic analysis method was adopted for analysing the data collected through semi-structured interviews. Thematic analysis is "a method for identifying, analysing and reporting patterns (themes) within data" (Braun & Clarke 2006: 79).

Thematic analysis is not tied to any particular theoretical position or philosophical paradigm and thus can be applied across a range of theoretical and epistemological approaches (Braun & Clarke 2006). The thematic analysis method thus fits into the pragmatic philosophical worldview of this research. Owing to its theoretical independence which makes it a flexible data analysis technique that can “potentially provide a rich and detailed, yet complex, account of data” (Braun & Clarke 2006: 78), the thematic analysis was chosen for analysing the interview data. Thematic analysis could be done using predetermined categories (theoretical framework) as a guide (deductive approach) or could begin without any preconceived categories, where the themes are identified (coded) from the data through an inductive approach (Braun & Clarke 2006; Vaismoradi et al. 2013). This study adopted an abductive approach to data analysis and thus used predetermined variables (categories) to guide coding of the data but also generating categories from the empirical data. The data coding process was performed with the assistance of the MAXQDA software.

6. Ethical considerations and positionality

Before going to the field, the ZMT ethical protocols were followed and approval granted for this research. During the data collection, attention was paid to informed consent of interview participants and confidentiality of the information provided. Participants were assured of confidentiality of the information and were made aware that they could skip answering questions that they did not feel comfortable with or even opt out of the interview at any point in time during the interview. Oral consent was sought from all participants by explaining to them beforehand what the purpose of the research is, what the interview will entail, the duration of the interview and how data will be collected including electronic recordings of the interviews. Participants were given permission to object to audio recordings of the interviews if they did not feel it was right. The identity of participants has been concealed in the data analysis with pseudonyms to ensure anonymity. All community entry protocols including presenting customary items to the traditional authorities who acted as gatekeepers were observed.

As qualitative researchers, our own values cannot be completely detached from the research and could therefore bias the arguments and conclusions of the research. It is thus important to be reflective of my own subjective values and how they affected the research. Positionality or axiological assumptions refers to the extent and ways in which one’s own values influence the research (Saunders et al. 2023). Institutional arrangements for resource governance can vary and we all have our own perspectives which might have been developed from our own experiential learning within our social environment or through the process of academic

training. Before this research, I had no prior experiences or interactions with coastal fisheries and their governance dynamics. However, I have had academic training and research experience on land and resource governance and the institutional dimensions of sustainable resource governance. I am a believer in the potential of local institutions in sustainable resource governance. While coastal resource systems are different from terrestrial resource systems, the institutional and governance dimensions are similar in the context of Ghana. There are similarities in the role of customary institutions in coastal resource governance, land and terrestrial resource governance in Ghana. I am therefore aware that my academic training and personal experiences may bias the arguments and conclusions I put forward in this thesis. Throughout the research, I consciously strived to maintain objectivity by focusing more on the data collected to allow for empirically-grounded arguments and conclusions devoid of my subjective and preconceived worldviews on resource governance. During field data collection, I was very conscious about my own subjective views and ensured that I did not unduly influence the responses of the interviewees.

7. Challenges and limitations

There are a number of limitations to this study that should be made explicit. First, the study examined an empirical phenomenon that required participants to recollect events that happened decades ago. This raises the question of whether participants could accurately recount what happened. To ameliorate this limitation, I recruited experienced fishers who were involved in the process and used prompts from the review of reports and literature to guide the participants during the interviews. I also triangulated their responses with secondary data from the FSCBP reports and published literature on the co-management experiences. This triangulation gave me confidence, as the responses were found to corroborate the secondary data. Secondly, the field data for this research was collected within a short time frame (3 months). While spending more time could have offered deeper connection with respondents in the field, time and resource constraints did not allow for a longer field stay. However, sufficient participants were recruited who provided quality response and data saturation began to occur at some point. The third limitation has to do with the research design. The thesis is a case study and as such, the conclusions and recommendations cannot be easily generalised. This is a general limitation of case study research, but the findings in this study can also be useful for institutional development for resource governance in similar contexts. Notwithstanding, the intention of this study was not to achieve generalisation. The aim was to understand an empirical governance problem through the examination of contextual complexities to provide a detailed description of the phenomena.

8. Overview of research papers

This section provides an introductory overview of the papers of the cumulative dissertation and their distinct contribution to the overall objective of the thesis. The thesis is a cumulative dissertation made up of three papers. The first paper is conceptual, reviewing theories of institutional change and their applicability to the study of governance change in coastal marine systems. The second paper is an empirical paper that examined the process of institutional development for collaborative coastal resource governance. Paper three examined the role of contextual political-economic dynamics in the challenges of developing and sustaining co-management arrangements in coastal fisheries. While the conceptual paper provided an analytical framework for the institutional analysis, the two empirical papers provided empirical evidence for answering the overall research question of the thesis.

8.1. Understanding transformations in the coastal marine realm: the explanatory potential of theories of institutional change (Paper 1)

This is the first paper of the cumulative dissertation published in *Marine Policy* in co-authorship with Achim Schlüter and Aisa Manlosa. It is a conceptual paper that reviewed theories of institutional change to understand their explanatory potential for understanding the emergence of various institutional innovations in the coastal and marine systems. The coastal marine realm is currently undergoing a great deal of transformation caused by direct and indirect human-induced drivers of change. While the coastal marine realm has historically received less attention in relation to institutional changes, various institutional forms have emerged substantially for the governance of coastal and marine resources (Schlüter et al. 2013). The blue economy paradigm and its institutionalisation will further increase the spate of institutional change in this realm (Voyer et al. 2022). To understand these transformative processes requires a clearer understanding of the complexity of institutional change. This task requires marine social scientists to study the diversity of theories of institutional change to be able to contribute sustainable transformations in marine and coastal systems (Caballero & Soto-Oñate 2015). While a diversity of theories of institutional change exists for studying broader socio-economic systems, their analytical strengths have not been contextualised in the coastal marine realm, which has inherent properties of uncertainty, complexity and interdependencies. Motivated by the growing interest in institutional change in the marine-coastal realm, this paper fills the gap by reviewing various theories of institutional change and their explanatory potential for understanding the distinct processes of institutional change in the coastal marine realm.

The paper assessed the analytical potential of seven theories of institutional change in relation to the contextual features of coastal marine systems. The paper had three objectives. First, it aimed to understand if and to what extent the institutional theories developed within institutional economics can provide analytical purchase for understanding institutional change in the coastal marine context. The rationale is that these theories were not specifically developed to study the coastal marine context. The goal was thus to understand if the various theories are also useful for studying institutional change in marine and coastal systems. Secondly, the paper aimed to provide a repertoire of theories of institutional change to help marine social scientists, especially students and earlier career scientists, to study and guide institutional change in the coastal marine arena. The third goal of the paper was to provide a theoretical framework for the research design and interpretation of the empirical finding of this thesis, which aimed to understand processes and outcomes of changes in resource governance regimes in coastal resource systems in Ghana.

To achieve these objectives, the diversity of theories of institutional change in the social sciences are first reviewed regarding their key assumptions and analytical focus. Empirical studies of institutional change in coastal and marine systems are then used to illustrate the relevance of the theories to the coastal marine realm. The findings were discussed in relation to the contextual features of the marine coastal realm. The analysis revealed that all the theories of institutional change have analytical potential and have been used implicitly and explicitly to study institutional change in the marine coastal arena. However, the analytical strength of each theory is dependent on the specific institutional form, resource system and scale of governance. The aim was not to demonstrate the superiority of one theory over the other or to do systematic literature review, but to illustrate the conditions under which a particular theory has analytical utility for understanding institutional change in the coastal and marine systems. The paper concludes that due to the material characteristics of the marine coastal realm, the use of complementary theoretical approaches or analytical frameworks provides stronger analytical potential for holistic understanding of institutional change in marine and coastal systems.

The contribution of the paper to the overall goals of the thesis is that it directly answers the first research question of the thesis: What is the analytical potential of theories of institutional change for studying the diversity of governance transformations in the coastal marine realm? While the contribution of this paper to the thesis is rather theoretical, the review of the theories provided initial ideas for conceptualising the two empirical papers as it provides a theoretical frame for guiding the analysis and interpretation of the empirical findings of the research. The paper also brought into the foray of marine social science, what theoretical approaches are

available and the extent to which these theoretical approaches can help understand the transformations ongoing currently in marine and coastal systems. This is helpful for researchers, especially early career scientists whose research focuses on understanding institutional change in resource governance even beyond the marine and coastal system. In doing so, it fills a significant gap in the literature on the institutional analysis of governance transformations in coastal and marine systems.

8.2. Legal pluralism, ideology and institutional change: the evolution of institutions for coastal resource governance (Paper 2)

This is the first empirical paper of the thesis and it focused on examining the process of governance transformation to co-management arrangements in coastal fisheries in Ghana. Co-management is considered an institutional regime that can provide solutions to collective action problems and promote sustainable governance of natural and environmental resources (Wamukota et al. 2012). The adoption of co-management regimes for the governance of coastal and marine resource systems has been significant over the last decades (Cinner et al. 2012a). While governance transitions to co-management regimes have succeeded in some contexts, unsuccessful experiences have also been recorded in many coastal and marine systems across the global south (Hara & Nielsen 2003). The challenge for co-management scholarship then is to provide explanations for why co-management succeeds in some contexts but fails in other contexts. A substantial body of literature has also emerged to comparatively evaluate the performance of co-management regimes in coastal marine systems, focusing on the socioeconomic and ecological outcomes (Gutiérrez et al. 2011; Cinner et al. 2012b; Wamukota et al. 2012; Cinner & McClanahan 2015; d'Armengol et al. 2018). The literature suggests that institutional characteristics (Cinner et al. 2012b), social capital and leadership (Acheson 2006; Gutiérrez et al. 2011) and the mode of interaction of regulative institutions with other normative and cognitive-cultural institutions (De la Torre-Castro & Lindström 2010; Kosamu 2015) influence the outcomes of such decentralised institutional regimes. Co-management regimes may also produce disappointments and fail to protect resources, resolve social conflicts or reduce transaction costs (Jentoft 2000; Castro & Nielsen 2001).

Nevertheless, insufficient attention has been paid to the link between the processes through which co-management regimes emerge and their functional viability to govern resource use in the context of social, economic and ecological changes (Ayers & Kittinger 2014; Cumming et al. 2020). While some studies have examined the process of transitions to co-management regimes in marine and coastal resource governance (Gelcich et al. 2010; Cinner et al. 2012a; Ho et al. 2016), most co-management literature has focused on explaining the socioeconomic

and ecological outcomes of co-management without probing the causal mechanisms that link the drivers of institutional change to the effectiveness and sustainability of the resultant institutional arrangements. It is unclear if and to what extent the processes and mechanisms that produce the development and implementation of co-management arrangements may influence institutional interactions that facilitate or hinder the effectiveness and sustainability of co-management regimes. This paper fills the gap by analysing the institutional development process to understand how contextual ideological and institutional histories mediated the institutional change for the governance of coastal social-ecological systems in Ghana.

The paper began with identifying theoretical causal mechanisms from institutional theory and co-management literature on the drivers of the emergence of co-management regimes in coastal marine resource systems. The relevant theoretical components identified were then used to analyse the empirical case of transition to co-management in coastal fisheries in Ghana. Combining theoretical perspectives from legal pluralism and ideational theory of institutional change, the paper relied on data collected through interviews and secondary sources of literature to examine the institutional change process. The findings indicate that the development of the co-management regime was driven by donor ideologies which were diffused through funding mechanisms, mirroring the coercion mechanism of ideational diffusion theorized in the literature on institutional change (Campbell 2004). Much similar to processes of transition to co-management regimes in other African countries (Hara & Nielsen 2003; Cinner et al. 2012a), the government of Ghana adopted the paradigm of participatory governance promoted by donor organisations in order to access funding opportunities. However, the normative ideals of participatory resource governance resulted in the creation of new local fisheries governance structures with a diversity of actors different from the existing customary governance structure. These ideals of participatory (good) governance clashed with the ideological foundation of customary fisheries governance, which is not based on elected representation but rather inherited positions. The traditional authorities in fisheries governance (chief fishermen), therefore did not support the co-management structures which were considered as government imposition to usurp the positions and power of the traditional authorities.

The contribution of this paper to the overall objective of this thesis is providing empirical evidence on how the process of institutional development is connected to the outcomes of co-management institutional regimes. To understand the link between the dynamics of the institutional development process and institution performance, it is necessary to examine the initial conditions and institutional emergence process (Chuenpagdee & Jentoft 2007). Thus, this paper contributes to answering the first empirical question of the research: Why and how

did co-management emerge as an institutional arrangement for the governance of coastal fisheries in Ghana? What role did international ideologies play in the institutionalisation process? These findings are also significant for the practice of co-management, especially in coastal fisheries in Ghana and similar contexts. Studies in other regions have also shown that where legal pluralism is strong and traditional authorities did not support co-management, the institutional regime tends to perform poorly (Njaya et al. 2012; Nunan et al. 2015; Etiegni et al. 2017). This implies that externally-driven institutional changes for the sustainability in the coastal blue economy such contexts need to take contextual ideologies and institutional histories into account in the institutional development process. These findings provide empirical lessons for current and future processes to design of new institutional arrangements for the sustainable governance of coastal commons in Ghana and similar contexts

From a theoretical point of view, this paper makes explicit the link between ideology and legal pluralism in the evaluation of institutional outcomes. The paper makes an empirical contribution to a key challenge in the institutional analysis of co-management regimes – how dynamics of the institutional development process are linked to the outcomes of common-pool resource co-management regimes (Epstein et al. 2020). While extant studies have examined the outcomes of co-management and the process of transition to co-management in resource governance, they have tended to evaluate these two dimensions separately. This paper used a process tracing approach to examine the process of institutional change, connecting the initial conditions of institutional development to the outcomes of the co-management regime. The paper shows that the transition to co-management was externally-imposed and that the ideological foundations of the institutional development clashed with the contextual ideologies that underpinned customary governance of coastal fisheries. While ideologies are the foundation of institutions and thus underpin the respective legal systems in the pluralistic legal contexts, the empirical applications of legal pluralism to study resource governance outcomes have often not accounted for its ideological dimensions.

This paper argues that if we are to understand why and when legal pluralism will facilitate or hinder successful institutional change in coastal resource governance, we need to consider the normative underpinnings of the respective legal systems. Such ideological dimensions should also be analysed from an evolutionary perspective i.e. how the institutional interaction between the legal systems have evolved and what drives the evolution. This paper thus brings this evolutionary perspective to the theoretical conceptualisation of legal pluralism in resource governance beyond its static application to study of governance outcomes. This ideational perspective does not discount other driving factors of the evolution of legal pluralism such as change in material incentives. In many cases, it is difficult to clearly delineate ideological

concerns from material incentives in examining the patterns of interactions between the legal systems, especially if new institutional arrangements are likely to redistribute material incentives in a particular resource context.

8.3. The political economy of institutional change in the coastal blue economy: challenges and potential for co-management in Ghana (Paper 3)

This is the third paper of the cumulative dissertation and it examined the challenges and potential for coastal fisheries co-management in the light of the prevailing socio-political context. Following from the examination of the process of institutional development and its role in the failure of the co-management regime (paper 2), this paper delves deeper into the role of the socio-political context of Ghana in the challenges of developing and sustaining co-management arrangements in coastal fisheries, providing a prognosis of the potential for effective and sustainable co-management regime in this context. Transitioning from centralised regimes to co-management can become a challenge especially in situations where social conflicts manifest in the process (Castro & Nielsen 2001). Many factors have been argued to stifle effective enforcement of rules and the success of resource co-management regimes. In coastal fisheries, a recurring theme has often been the mobility and unstable boundary characteristics of the marine realm, which makes rule enforcement costly and hence lack of compliance among fishers (Hanna 1995; Schlüter et al. 2020). Other factors identified as having a significant impact on the rule enforcement and compliance include issues of legitimacy of the rules and governance system (Jentoft 1989; Dietz et al. 2003), and the ecological conditions of the resource system (Kaplan et al. 2015).

However, the failure of co-management regimes to deliver intended results due to constraints of the broader institutional and governance context has been recognised as a central theme of 'second-generation' challenges of co-management in many other places (Ratner et al, 2012). The institutional analysis of co-management in the literature has shown that the success or failure of co-management can be strongly influenced by political economy dynamics and the institutional environment with which it is implemented (Clement 2010; Njaya et al. 2012; Nunan et al. 2015; Etiegni et al. 2017; Nunan 2020). Yet, research on the broader socio-political and institutional environment on the sustainability of resource governance institutions is still scant. This paper examined the role of the socio-political context in the challenges of developing and sustaining co-management regimes. It adopted a political economy perspective to institutional analysis, applying theoretical insights from political settlements theory to examine the institutional viability of co-management for coastal fisheries in Ghana.

The findings indicate that the long history of traditional fisheries governance in Ghana shows that social capital, local leadership and community-organising structures are not lacking for the implementation of co-management. These are key enabling conditions that have been identified in the literature on co-management (Pomeroy & Williams 1994; Pomeroy et al. 2001; Gutiérrez et al. 2011). However, the mere presence of these enabling conditions does not guarantee that transition to co-management regimes can be successful. The role of contextual socio-political dynamics has been recognised as important mediating factors for implementing and sustaining co-management regimes (Clement & Amezaga 2013; Khan 2015; Nunan 2020). The findings of this paper have shown that the political-economy context of Ghana is a crucial factor that has impeded the effectiveness and sustainability of the initial co-management arrangements in coastal fisheries. Due to the competitive clientelistic political settlement of the country, political elites interfered with rule enforcement and distributed resources to their lower level factions through informal clientelistic mechanisms that deprived co-management committees of the needed funding for co-management activities. The desire to achieve such political incentives thus misaligned incentives for resource management, which not only disincentivized co-management committees, but also disgruntled the traditional authorities who have a lot of holding-power in coastal fisheries. The paper concludes that there is potential for the development of co-management but the sustainability of any co-management regime will depend on how it is designed to be resilient to these socio-political dynamics, political will and how key concerns of local power-holding groups such as the traditional authorities are addressed to get their support for the institutional regime.

The contribution of this last paper is central to achieving the overall objective of the thesis is twofold. Firstly, the paper helps to connect the process of institutional development to governance outcomes, illuminating the role of the dynamic resource context in mediating successful or unsuccessful governance changes. This is a central part of the overall goal of the thesis. Secondly, this paper contributes directly to answering the third question of the thesis: what factors hindered the effectiveness and sustainability of the coastal fisheries co-management regime in Ghana? And what is the role of the socio-political and economic context in the failure to sustain the co-management regime? The findings illuminate the challenges contextual socio-political factors present for sustaining co-management arrangements in coastal fisheries. The findings of this paper have value for the practice of co-management regimes and the current processes to develop co-management arrangements for coastal fisheries in Ghana. It raises the question of how we can develop co-management regimes to be sustainable and resilient to the broader socio-political dynamics. For instance, in competitive clientelistic political settlements like that of Ghana, where frequent changes in political power

are very probable at election intervals, there is the challenge that co-management becomes less of a policy priority for ruling coalitions. A sustainable co-management regime for coastal fisheries in Ghana will thus be one that is resilient to these broader socio-political dynamics.

Theoretically, the findings of this paper are relevant for the current scientific discourse on the viability of co-management regimes in coastal and aquatic systems, contributing to filling a significant gap in the institutional analysis literature. The lack of attention to the effect of contextual factors in the effectiveness and sustainability the institutions has been recognised as a long-standing gap in commons scholarship (Agrawal 2002; Clement 2010; Clement & Amezaga 2013; Torres-Guevara et al. 2016; Cumming et al. 2020; Agrawal et al. 2023). By bringing into perspective the effect of broader socio-political context in the quest to understand what factors sustain co-management institutional arrangements, this paper provides theoretical value for the institutional analysis of co-management regimes. The use of the political settlements approach (Khan 2010) in this paper brings to light the usefulness of a theoretical lens within the new institutional economics, which has been used in studying various institutional outcomes in development studies but has not yet been applied significantly in the co-management and common-pool resource governance literature in general. Thus, the paper also has a theoretical value in expanding the disciplinary application of analytical tools of the new institutional economics to the study of common-pool resource governance outcomes. There is the need for attention to the contextual socio-political and institutional dynamics and how changes in these can undermine the sustainability of co-management regimes. This aspect of research is still lacking in the literature evaluating the implementation and outcomes of co-management regimes.

9. Discussion and conclusions

This thesis set out to investigate the outcomes and challenges of governance transformation such as co-management in coastal fisheries in Ghana. Specifically, it examined the process through which the transition to co-management was instigated and implemented in coastal fisheries in Ghana, and why the institutional arrangement could not be sustained. This includes examining how co-management interacted with the socio-political context and the institutional environment within which it was implemented, and how these contextual factors influenced the outcomes of the co-management regime. The thesis focused on the institutional sustainability outcome dimensions of co-management regimes. It then explored what the findings mean for developing a co-management regime for coastal fisheries in Ghana. The thesis adopted analytical perspectives from institutional theory to examine the processes and outcomes of institutional change in coastal resource governance. Paper 1, which is a

conceptual paper, contributed the analytical tools to guide the empirical aspects of the research. The empirical aspects of the thesis examined two dimensions of co-management: the process of institutional development and the outcomes of the co-management regime. Paper 2 examined the institutional change process through a process-tracing approach, enabling us to connect the initial conditions and processes leading to the development of the co-management regime to its institutional outcomes. Paper 3 brought a contextual perspective to the institutional analysis of co-management by unearthing the role of the social context in the effectiveness and sustainability of co-management institutional arrangements in coastal fisheries.

The findings of the thesis have implications for science and the practice of co-management. The analysis of the process and the outcomes of the co-management regime revealed that the institutional change was donor-driven and implemented through a top-down approach. This approach to the development of fisheries co-management regimes has been widely reported in literature (Béné et al. 2009; Cinner et al. 2012a; Njaya et al. 2012; Etiegni et al. 2017; Islam et al. 2020; Ho 2023). While donor interventions and funding mechanisms have led to institutional changes and improvements in resource governance in many countries in the global south, this has not necessarily led to a massive success in the implementation of co-management in coastal fisheries (Hara & Nielsen 2003; Orach & Schlüter 2021). In the case of Ghana, the donor-driven development of co-management in coastal fisheries was unsuccessful due to ideological issues in the institutional design and the dynamics of the socio-political and institutional context of coastal fisheries. Institutional changes are driven by specific incentives and are often underpinned by ideologies. These incentives and ideologies in the development of resource co-management regimes may emanate from international, national, or local levels. Where institutional changes are externally instigated, how new institutional innovations interact with contextual ideologies, existing institutional repertoire and socio-political dynamics of the resource context will determine the success of governance transitions and the effectiveness and sustainability of institutional arrangements. This is especially relevant in coastal fisheries where legal pluralism is ubiquitous (Jentoft et al. 2009).

9.1. Legal pluralism, ideology and transition to co-management

The findings of this thesis (paper 2) show how legal pluralism can complicate institutional development and the practice of co-management in coastal fisheries, necessitating nuanced approaches to the development of co-management regimes that consider the interaction between legal systems and norms in the given resource governance context. Due to the existence of strong legal pluralism in Ghana's coastal fisheries, there is a pre-existing incentive

structure and ideological perspectives on governance in the local context which clashed with the ideologies that underpinned the development of the co-management regime. This thesis (paper 2) illuminated the role of these dynamics in the failure of the co-management regime. This research has shown that modernist ideals of good governance do not often work as intended in contexts where legal pluralism is strong. This is because ideologies within the customary systems most often diverge regarding how governance arrangements are designed and practiced. For example, elections as a good governance tool of decision- and choice-making may not fit into the contextual procedures of decision-making in the customary governance system. The customary authorities perform supportive and enforcement roles for the statutory institutions as well as, resource management roles in terms of regulating access to coastal fisheries and resolving conflicts among resource users. These roles cannot just be replaced with new modern governance structures in which the traditional authorities are not properly integrated or where their power or role is diminished. This is a widely reported challenge that has been observed with donor-driven governance transitions to co-management regimes in coastal and aquatic systems in Africa where lack of support from traditional authorities led to failure of co-management (Njaya 2007; Russell & Dobson 2011; Hara et al. 2015; Nunan et al. 2015).

The literature on collaborative governance regimes emphasises the role of shared motivation in the success of such institutional regimes (Emerson & Nabathi, 2015; Avoya 2021). Important local actors must have the incentive to participate in the collaborative governance regime to ensure success. This is particularly important in the context of coastal fisheries, where pre-existing customary institutions might already have structured power and incentives that may be incompatible with the transformative requirements of new institutional arrangements. In Ghana and many post-colonial developing countries, legal pluralism is an integral part of resource governance systems. In Ghana, customary governance is enshrined in the constitution and a dual system of governance – traditional and statutory governance – exists in Ghana's communities with chiefs as the custodians of the traditional norms and rules. The consequences these pre-existing institutions and organisations might have on the success of the governance transition to co-management were not properly integrated into the development of the coastal fisheries co-management regime. Considering the power and respect commanded by traditional governance structures in coastal fisheries, their support for new institutional arrangements such as co-management regimes is vital for successful resource governance change.

This thesis emphasises that customary institutions play a critical role in coastal resource governance and that traditional authorities cannot be alienated in coastal environmental

governance if governance transformation towards sustainable coastal blue economy is to be realised. Therefore, the implementation of any co-management arrangement needs to properly integrate the customary authorities both institutionally and ideologically. The positive role of customary authorities in environmental governance in sub-Saharan Africa has been recognised in the broader environmental governance literature (Schwaiger et al. 2024). While traditional authorities need to be integrated in collaborative governance arrangements, their roles need to be clearly defined, as there is the risk of elite capture. Elite capture is generally a problem in the collaborative governance of many common-pool resources in Africa (Russell & Dobson 2011; Schwaiger et al. 2024). Context appropriate institutional designs and clear definition of roles and incentives for powerful local level actors can mitigate the challenges of elite capture. This research thus emphasises that understanding the institutional context and how new institutional innovations fit into the prevailing incentive structure and the cognitive and normative parameters within the resource context is important for the development of durable institutional regimes for resource governance in legal pluralistic contexts. Designing effective and sustainable collaborative governance regimes thus becomes a balancing act in which compromises have to be made in both statutory (or modern) and customary dimensions of governance.

9.2. Socio-political context, distributional issues and the sustainability of co-management regimes

Scholars have observed that, apart from group and resource system characteristics, the sustainability of local institutions can also be undermined by external factors such as emergence of new markets, technologies, demographic pressures and state policies (Agrawal 2002; Agrawal & Benson 2011). However, research on the broader socio-political and institutional environment on the sustainability of resource governance institutions is still scant. The broader socio-political and institutional environment can influence the internal dynamics of the institutional regime such as, the ease of rule enforcement and level of compliance, because it not only increases the transaction cost of rule enforcement, it may also influence the incentives and preferences of resource users and political actors in resource governance. The level of monitoring and enforcement is a crucial factor in determining the sustainability of institutional regimes for the governance of common-pool resources (Agrawal, 2002). Therefore, to understand why co-management institutional arrangements may not be sustained, we have to understand the factors that influence the level of enforcement. The nature of the socio-political context also affects the extent to which political actors will have the incentive, political will and commitment to support the implementation and sustainability of co-management arrangements when there is a change in political power. This is why

attention to the contextual socio-political and institutional environment is crucial for developing effective and sustainable co-management regimes. In paper 3, I have shown how the contextual political settlement hindered the effectiveness and sustainability of the coastal fisheries co-management regime in Ghana. Political incentives led to the political interference in rule enforcement, increasing non-compliance among resource users. The distribution of resources to political factions who have no resource management responsibilities also caused distributional concerns and served as a disincentive to co-management committees, leading to the abandonment of their co-management responsibilities and the eventual collapse of the governance structure.

Issues of distributional benefits as precondition for legitimacy in co-management has also been noted in the study of coastal resource co-management regimes in other parts of Africa. Minja et al. (2023) study of legitimacy of such governance regimes in Tanzania finds that coastal resource co-management regimes struggled to gain and maintain legitimacy because they did not provide material incentives to resource users and local level stakeholders. Studies on coastal resource co-management regimes in other parts of the developing world have confirmed that contextual political dynamics and the failure to align the structure of co-management organisations with local norms and ideological conceptions of community hindered the success of coastal co-management (Siddique et al. 2024). While the literature on this aspects of co-management outcomes is still scant, this thesis (paper 2 and paper 3) has shown that where contextual ideologies, institutional structures and socio-political dynamics are disregarded in the design and implementation of co-management regimes, success is difficult to achieve in term of institutional effectiveness and sustainability. The role of these contextual dynamics cannot be generalised beyond the study area due to differences in socio-political dynamics of various countries, but the findings are significant for the academic literature and practice of co-management.

Institutional solutions introduced in a particular context need to fit into the existing institutional and socio-political context to enhance legitimacy and ensure their sustainability (Campbell, 2004). Externally engineered institutional solutions and top-down implementation of co-management regimes are challenging because every institutional solution has (re)distributional consequences in terms of economic incentives and socio-political dynamics including changing contextual power dynamics and cultural norms. While the political settlement of the country hindered the effectiveness and sustainability of the fisheries co-management regime in Ghana, the influence of the political settlement is a complex issue that can have both positive and negative impacts, depending on the specific circumstances and the manner in which power and resources are distributed within a given society. This thesis emphasises that implementing

institutional solutions for the sustainable governance of coastal resources is not straightforward. A critical examination of how contextual socio-political dynamics have shaped and will influence resource governance is important for understanding the challenges of sustaining co-management regimes in complex social-ecological systems such as coastal fisheries.

9.3. Implications for co-management practice

The findings of this study provide important insights for the practical development and implementation of co-management in Ghana and similar contexts. There are two critical factors that have to be addressed to ensure an effective and sustainable co-management regime in Ghana's coastal fisheries. The first is the issue of legal pluralism which has created an incentive structure in coastal fisheries governance that cannot be restructured without resistance. In legal pluralistic contexts, developing a sustainable co-management regime will necessarily involve a process of reasoned bricolage to bridge the institutional and ideological repertoire of the customary and statutory normative orders. While the pre-existing institutional landscape – existing rules, organizational structures, and collaboration structures – can lend trust and legitimacy to new co-management initiatives, divergence in ideologies underlying existing institutional orders of customary and statutory legal systems can stifle successful governance transitions and the sustainability of co-management regimes (Sandström et al. 2013). Co-management provides the ideal platform for negotiating hybrid institutional arrangements and designing interlegalities in the context of legal pluralism (Jentoft & Bavinck, 2019), but this will not occur automatically. Therefore, creative approaches that bridge the institutional orders and resolve ideological conflicts are required to ensure the effectiveness and sustainability of co-management regimes in such contexts.

In the context of coastal fisheries in Ghana, even if the challenges due to legal pluralism are overcome at the local level, the second vital issue is the political economy dynamics which may lead to misalignment of incentives for resource management. This is not only a local level challenge but an issue that is rooted in the broader political settlement of the country. This makes it a much more difficult challenge to deal with than the issue of legal pluralism which can be manoeuvred in ways that account sufficiently for the idiosyncratic interests of the traditional authorities in coastal fisheries by adopting bottom-up institutional development processes. The implementation of a co-management arrangement may be affected by contextual power dynamics and competing interests. The competitive clientelistic political settlement of Ghana led to political interference in rule enforcement by political elite at national and local level, and the redistribution of authority over fishing inputs to political factions which

created distributional concerns. These factors increased the cost of rule enforcement and led to under-resourced co-management structures, which undermined the sustainability of the co-management regime in coastal fisheries in Ghana. If a co-management regime is designed and implemented in a way that does not fit well with the customary institutional structures and ideologies of the resource context, there is little chance that the institutional arrangement will be effective and durable to achieve the sustainable resource governance goals. Understanding how such contextual dynamics will affect and co-evolve with the implementation of new institutional solutions such as co-management regimes is crucial for the long-term sustainability of such institutional arrangements. A successful implementation of effective and sustainable co-management regimes will thus involve a clever navigation of the contextual social dynamics that have the potential to hamper the success of co-management.

Strategies that could be adopted to enhance the compatibility of co-management institutions with the local context include engagement and communication with key and powerful stakeholders. In the context of legal pluralism where customary institutional structures exist like Ghana, this will include extensive engagement with traditional authorities to understand their perspectives and expectations, as well as, solicit their commitment to new institutional arrangement. Alternatively, the institutional development process could also be carried out through intentional institutional bricolage where the institutional design will draw from the perspectives and principles of the customary institutional structure. Building on the existing customary institutional principles may help economize on the transaction and transformation costs entailed in institutional engineering from scratch. In other words, this will involve designing the co-management regime in a way that it fits into existing social dynamics (ideologies and institutional structures) of the resource context.

Due to commitment issues, the distribution of incentives for resource management is linked to the effectiveness and sustainability of co-management regimes. For institutional regimes to be sustainable, "institutions and the distribution of power have to be *compatible* because if the powerful groups are not getting an acceptable distribution of benefits from an institutional structure they will strive to change it" (Khan 2010: 4). In legal pluralistic contexts like Ghana where dual governance systems exist, the role of non-political elite social groups such as traditional authorities is important. Traditional authorities wield strong holding-power in Ghanaian society and coastal fisheries in particular due to the legitimacy they enjoy as traditional governance structures. This implies that the traditional authorities cannot have their power and/or incentives reduced if co-management is to be effective and sustained for sustainable resource governance outcomes. This thesis (paper 2 and 3) has demonstrated the

role of these dynamics in the failure of the earlier co-management arrangement. These provide lessons for the development and implementation of co-management in Ghana and countries with similar socio-political and institutional context.

The institutional fit literature discusses the need to understand how new institutional regimes interplay with contextual policies, norms, power dynamics and the level of social organisation (Vatn & Vedeld 2012). Thus, for a co-management regime to fit into the resource context, it must be designed to not only incorporate the existing contextual social dynamics but also be adaptive enough to accommodate future changes in these social dynamics. This adaptive aspect is even more important in complex resource systems, as actors may not actually know what institutional solution will fit until they engage in an ongoing process of working out the created imaginings of a desired future (Bromley 2012; Bromley 2015). In conclusion, the successful implementation and sustainability of co-management regimes required careful examination of the broader institutional environment and political economy context of the country and local context within which co-management is implemented. International donors and development organisations who promote the development of co-management regimes for coastal fisheries will need to take into account these contextual dynamics to ensure lasting impacts of such funding activities on resource governance.

9.4. Theoretical reflections

Common-pool resource governance scholarship has paid less attention to institutional change and how institutional arrangements can facilitate transformations towards sustainability, with much of the studies focused on the stability of institutions and resources systems (Cumming et al. 2020; Agrawal et al. 2023). The analysis of the historical institutional dimensions and outcomes of coastal fisheries governance in this thesis has connected institutional theory to the practice of resource co-management. In doing so, this thesis contributed knowledge to three strands of institutional analysis literature: legal pluralism, institutional change, and resource co-management. This thesis makes a nuanced theoretical contribution to the institutional analysis of co-management outcomes, making the argument that outcomes of co-management regimes should not only be evaluated in terms of how such institutional arrangements produce socio-economic and ecological sustainability outcomes. There are cases where such institutional arrangements are not sustained enough to produce these tangible outcomes, as evidenced in this thesis. Therefore, we should also evaluate the outcomes of co-management regimes in terms of institutional sustainability, which has so far been insufficiently accounted for in the co-management literature.

The thesis (paper 1) has shown that institutional change in the coastal marine realm is quite complex that cannot be comprehensively understood with one theory of institutional change. This thesis has combined multiple theoretical perspectives to study the process of institutional development and co-management outcomes, demonstrating the productive value of combining interdisciplinary theoretical perspectives. While ideational theory provided analytical tools for understanding the role of external factors (donor ideologies) in driving institutional change, the legal pluralism perspective enabled an understanding of how external ideologies interacted with the contextual institutional environment to produce institutional development outcomes. The political settlement approach brought into perspective the role of socio-political context in the viability of co-management institutional arrangements. This complementary use of theories provided a much more holistic understanding of the challenges of institutional development in coastal resource systems. This suggests that the use of complementary theories of institutional change provides much richer theoretical frameworks for examining institutions and institutional change. This observation has been made in other scholarly works within institutional economics (Kingston & Caballero 2009; Caballero & Soto-Oñate 2015), but looking beyond disciplinary boundaries could be very productive. For instance, the legal pluralism approach within the field of legal anthropology has been used to study institutions and institutional outcomes in resource governance. This theoretical perspective however has not been explicitly recognised or applied within institutional economics to study institutional change and institutional outcomes.

This thesis has demonstrated that complementing such a theoretical approach provides useful theoretical tools for understanding the role of the institutional environment in the process of institutional development and the outcomes of institutional arrangements. A legal pluralism perspective also enables us to pay sufficient attention to non-statutory institutional repertoire. This is important in resource governance in the coastal marine realm where customary institutions have developed much earlier than statutory institutions for governing coastal commons. This thesis also calls for more attention to the political settlements approach which provides a strong theoretical lens for understanding institutional outcomes in developing countries. The political settlements theory is useful for the analysis of resource governance outcomes because it focuses on profound questions that are at the heart of modern institutional economic: what makes institutions enforceable and sustainable or the commitment to adhere to them credible (Khan 2018: 671)

This thesis also makes a suggestion that will enrich the political settlements theoretical approach and institutional theory more broadly. The political settlements approach has been criticised for being too focused on the political elite (Kelsall et al. 2022). The consideration of

elite factions or organisations with holding-power in the context of legal pluralism should be extended to include non-political elite social structures such as the institutions of the traditional authorities who, even though have no *de jure* political power, wield a lot of holding-power on issues of coastal resource governance. This thesis has shown that where new institutional arrangements threatened to unsettle the incentive structure of customary fisheries governance, the traditional authorities resisted the implementation of the new institutional arrangement. The mechanisms of resistance included withdrawing their support for co-management organisational structures which do not enjoy the same legitimacy as the traditional governance structures in coastal fisheries. This relates to the issue of legal pluralism in resource governance. In contexts where legal pluralism exists, the institutional analysis of the co-management regimes should probe issues of conflicts in institutional interactions and avenues that could potentially enhance mutual support for effective resource governance. This legal pluralism perspective has not been given sufficient attention in the broader field of institutional economics and the application of its theoretical approaches to the study of common-pool resource governance.

The findings of this research have contributed to knowledge on the role of the process and contextual dynamics in the outcomes of governance transformations towards sustainability in coastal resource systems. The thesis has shown that context matters in the outcomes of institutional changes that seek to achieve sustainable resource governance. The context is not limited to biophysical characteristics of the resource system but also the socio-political dynamics and broader institutional environment. This thus means that institutional analysis needs to adopt broader theoretical approaches that leverage interdisciplinarity to understand the outcomes of governance transformations, especially in coastal social-ecological systems in many countries of the Global South where legal pluralism and the socio-political context can complicate resource governance transformation.

9.5. Disciplinary contribution

This thesis draws theoretical perspectives largely from the field of institutional economics. Paper 1 provided a repertoire of theories of institutional change which were largely drawn from the theoretical perspectives of institutional economics. Paper 2 is more interdisciplinary, drawing perspectives from legal anthropology and the new institutional economics. Paper 3 adopted an analytical lens from contemporary theoretical development within the new institutional economic contemporary political economy. While these theoretical choices may seem to be biased towards the discipline of economics, there is a significant element of interdisciplinarity, as "scholars from various intellectual and social science backgrounds share

common conceptual, theoretical and methodological problems” in the study of institutional change (Campbell 2004: 2). Thus, while the thesis falls within the tradition of institutional economics, it also draws from institutional theory in sociology and political science. Specifically, the ideational theory of institutional change is a theoretical approach that has been espoused within political science, sociology and economics (see Denzau & North 1994; Blyth 2002; Campbell 2004; North 2005; Schmidt 2010; Eggertsson 2015; Carstensen & Schmidt 2016). Institutional analysis in resource governance regimes itself is very interdisciplinary. Nevertheless, this thesis makes theoretical and empirical contributions to the institutional change and resource governance literature from the perspective of institutional economics.

References

- Abane, H., Akonor, E., Ekumah, E. & Adjei, J. (2013) *Four Governance Case Studies and their Implications for Ghana Fisheries Sector*.
- Abdullah, N. M. R., Kuperan, K. & Pomeroy, R. S. (1998) Transaction Costs and Fisheries Co-Management. *Marine Resource Economics* **13**, 101–114.
- Abobi, S. M. (2023) Ghana Case Study One: Challenges and opportunities in marine fisheries governance in Ghana. In: Wolff, M., Ferse, S. C. & Govan, H. (eds.) *Challenges in Tropical Coastal Zone Management: Experiences and Lessons Learned*. Springer International Publishing, Cham, pp. 41–52.
- Acemoglu, D., Egorov, G. & Sonin, K. (2021) Institutional change and institutional persistence. In: Bisin, A. & Federico, G. (eds.) *The handbook of historical economics*. Academic Press, Amsterdam, pp. 365–389.
- Acemoglu, D., Johnson, S. & Robinson, J. A. (2005) Institutions as a Fundamental Cause of Long-Run Growth **1**, 385–472.
- Acemoglu, D. & Robinson, J. (2010) The Role of Institutions in Growth and Development. *Review of Economics and Institutions* **1** (2).
- Acheson, J. M. (2006) Institutional Failure in Resource Management. *Annual Review of Anthropology* **35** (1), 117–134.
- Acheson, J. M. (2013) Co-management in the Maine Lobster Industry: A Study in Factional Politics. *Conservation and Society* **11** (1), 60.
- Acheson, J. M., Stockwell & Wilson, J. A. (2000) Evolution of the Maine Lobster Co-management Law. *Maine Policy Review* **9** (2), 52–62.
- Agrawal, A. (2001) Common Property Institutions and Sustainable Governance of Resources. *World Development* **29** (10), 1649–1672.
- Agrawal, A. (2002) Common Resources and Institutional Sustainability. In: Ostrom, E., Dietz, T., Dolšak, N., Stern, P. C., Stonich, S. & Weber, E. U. (eds.) *The Drama of the Commons*. National Academies Press, Washington, D.C., pp. 41–85.
- Agrawal, A. & Benson, C. S. (2011) Common property theory and resource governance institutions: strengthening explanations of multiple outcomes. *Environmental Conservation* **38** (2), 199–210.
- Agrawal, A. & Chhatre, A. (2006) Explaining success on the commons: Community forest governance in the Indian Himalaya. *World Development* **34** (1), 149–166.
- Agrawal, A., Erbaugh, J. & Pradhan, N. (2023) The Commons. *Annual Review of Environment and Resources* **48** (1), 531–558.

- Arias, A. (2015) Understanding and managing compliance in the nature conservation context. *Journal of environmental management* **153**, 134–143.
- Armitage, D., Marschke, M. & van Tuyen, T. (2011) Early-stage transformation of coastal marine governance in Vietnam? *Marine Policy* **35** (5), 703–711.
- Armitage, D. R., Charles, A. T. & Berkes, F. (eds.) (2017) *Governing the coastal commons: Communities, resilience and transformation*. Routledge Taylor & Francis Group, London, New York.
- Atta-Quayson, A. (2023) The Impact of Institutions on the Salt Sector in Ghana. *Africa Today* **69** (3), 75–92.
- Ayanoore, I. & Hickey, S. (2022) Reframing the politics of natural resource governance in Africa: Insights from the local content legislation process in Ghana. *Politics & Policy* **50** (1), 119–136.
- Ayers, A. L. & Kittinger, J. N. (2014) Emergence of co-management governance for Hawai'i coral reef fisheries. *Global Environmental Change* **28**, 251–262.
- Ayers, A. L., Kittinger, J. N., Imperial, M. T. & Vaughan, M. B. (2017) Making the transition to co-management governance arrangements in Hawai'i: a framework for understanding transaction and transformation costs. *International Journal of the Commons* **11** (1).
- Ayilu, R. K., Fabinyi, M., Barclay, K. & Bawa, M. A. (2023) Industrial and small-scale fisheries relations in Ghana: A political ecology perspective on blue economy exclusion. *Journal of Rural Studies* **102**, 103085.
- Baird, J., Schultz, L., Plummer, R., Armitage, D. & Bodin, Ö. (2019) Emergence of Collaborative Environmental Governance: What are the Causal Mechanisms? *Environmental management* **63** (1), 16–31.
- Baland, J.-M. & Platteau, J.-P. (1996) *Halting degradation of natural resources: Is there a role for rural communities?* Oxford Univ. Press, Oxford.
- Banikoi, H., Schlüter, A. & Manlosa, A. O. (2023) Understanding transformations in the marine coastal realm: The explanatory potential of theories of institutional change. *Marine Policy* **155**, 1–12.
- Bavinck, M. & Gupta, J. (2014) Legal pluralism in aquatic regimes: a challenge for governance. *Current Opinion in Environmental Sustainability* **11**, 78–85.
- Bavinck, M., Johnson, D., Amarasinghe, O., Rubinoff, J., Southwold, S. & Thomson, K. T. (2013) From Indifference to Mutual Support – A Comparative Analysis of Legal Pluralism in the Governing of South Asian Fisheries. *The European Journal of Development Research* **25** (4), 621–640.

- Bax, N., Novaglio, C. & Maxwell, K. H. et al. (2022) Ocean resource use: building the coastal blue economy. *Reviews in Fish Biology and Fisheries* **32** (1), 189–207.
- Beem, B. (2007) Co-management from the top? The roles of policy entrepreneurs and distributive conflict in developing co-management arrangements. *Marine Policy* **31** (4), 540–549.
- Behuria, P., Buur, L. & Gray, H. (2017) Studying political settlements in Africa. *African Affairs* **116** (464), 508–525.
- Benda-Beckmann, F. von & Benda-Beckmann, K. von (2006) The Dynamics of Change and Continuity in Plural Legal Orders. *The Journal of Legal Pluralism and Unofficial Law* **38** (53-54), 1–44.
- Benda-Beckmann, K. von & Turner, B. (2018) Legal pluralism, social theory, and the state. *The Journal of Legal Pluralism and Unofficial Law* **50** (3), 255–274.
- Béné, C., Belal, E. & Baba, M. O. et al. (2009) Power Struggle, Dispute and Alliance Over Local Resources: Analyzing 'Democratic' Decentralization of Natural Resources through the Lenses of Africa Inland Fisheries. *World Development* **37** (12), 1935–1950.
- Benites, G. V. & Ubillús, A. V. (2022) The pendulum movement: Unstable political settlements for artisanal and small-scale mining in Peru. *Environmental Science & Policy* **136**, 78–90.
- Bennett, E. (2002) *The Challenges of managing small scale fisheries in West Africa*.
- Bennett, N. J., Cisneros-Montemayor, A. M. & Blythe, J. et al. (2019) Towards a sustainable and equitable blue economy. *Nature Sustainability* **2** (11), 991–993.
- Bennett, N. J., Govan, H. & Satterfield, T. (2015) Ocean grabbing. *Marine Policy* **57**, 61–68.
- Berkes, F., Feeny, D., McCay, B. J. & Acheson, J. M. (1989) The benefits of the commons. *Nature* **340** (6229), 91–93.
- Berkes, F., George, P. & Preston, R. J. (1991) Co-management: The Evolution in Theory and Practice of the Joint Administration of Living Resources. *Alternatives: Perspectives on Society, Technology and Environment* **18** (2), 12–18.
- Blyth, M. (2001) The Transformation of the Swedish Model: Economic Ideas, Distributional Conflict, and Institutional Change. *World Politics* **54** (1), 1–26.
- Blyth, M. (2002) *Great transformations: Economic ideas and institutional change in the twentieth century*. Cambridge University Press, New York.
- Botlhale, E. (2022) Political Settlements Analysis of Natural Resource Governance in Botswana. *Politikon* **49** (3), 274–290.
- Braun, V. & Clarke, V. (2006) Using thematic analysis in psychology. *Qualitative Research in Psychology* **3** (2), 77–101.

- Bromley (2015) Volitional Pragmatism: The Collective Construction of Rules to Live By. *The Pluralist* **10** (1), 6.
- Bromley, D. W. (1992) The commons, common property, and environmental policy. *Environmental and Resource Economics* **2** (1), 1–17.
- Bromley, D. W. (2012) Environmental Governance as Stochastic Belief Updating: Crafting Rules to Live by. *Ecology and Society* **17** (3).
- Caballero, G. & Soto-Oñate, D. (2015) The Diversity and Rapprochement of Theories of Institutional Change: Original Institutionalism and New Institutional Economics. *Journal of Economic Issues* **49** (4), 947–977.
- Campbell, J. L. (2004) *Institutional Change and Globalization*. Princeton University Press.
- Carstensen, M. B. & Schmidt, V. A. (2016) Power through, over and in ideas: conceptualizing ideational power in discursive institutionalism. *Journal of European Public Policy* **23** (3), 318–337.
- Castro, A. P. & Nielsen, E. (2001) Indigenous people and co-management: implications for conflict management. *Environmental Science & Policy* **4** (4-5), 229–239.
- Chuenpagdee, R. & Jentoft, S. (2007) Step zero for fisheries co-management: What precedes implementation. *Marine Policy* **31** (6), 657–668.
- Cinner, J. E., Daw, T. M. & McClanahan, T. R. et al. (2012a) Transitions toward co-management: The process of marine resource management devolution in three east African countries. *Global Environmental Change* **22** (3), 651–658.
- Cinner, J. E. & McClanahan, T. R. (2015) A sea change on the African coast? Preliminary social and ecological outcomes of a governance transformation in Kenyan fisheries. *Global Environmental Change* **30**, 133–139.
- Cinner, J. E., McClanahan, T. R. & MacNeil, M. A. et al. (2012b) Comanagement of coral reef social-ecological systems. *Proc Natl Acad Sci U S A* **109** (14), 5219–5222.
- Cinner, J. E., Wamukota, A., Randriamahazo, H. & Rabearisoa, A. (2009) Toward institutions for community-based management of inshore marine resources in the Western Indian Ocean. *Marine Policy* **33** (3), 489–496.
- Cisneros-Montemayor, A. M., Moreno-Báez, M. & Reygondeau, G. et al. (2021) Enabling conditions for an equitable and sustainable blue economy. *Nature* **591** (7850), 396–401.
- Clement, F. (2010) Analysing decentralised natural resource governance: proposition for a “politicised” institutional analysis and development framework. *Policy Sciences* **43** (2), 129–156.

- Clement, F. & Amezaga, J. M. (2013) Conceptualising context in institutional reforms of land and natural resource management: the case of Vietnam. *International Journal of the Commons* **7** (1), 140.
- Cohen, P. J., Allison, E. H. & Andrew, N. L. et al. (2019) Securing a Just Space for Small-Scale Fisheries in the Blue Economy. *Frontiers in Marine Science* **6**.
- Cohen, P. J., Roscher, M. & Wathsala Fernando, A. et al. (2021) *Characteristics and performance of fisheries co-management in Asia - Synthesis of knowledge and case studies: Bangladesh, Cambodia, Philippines and Sri Lanka*. FAO, Bangkok.
- Cox, M., Arnold, G. & Villamayor-Tomas, S. (2010) A Review of Design Principles for Community-based Natural Resource Management. *Ecology and Society* **15** (4).
- Creswell, J. W. (2007) *Qualitative inquiry & research design: Choosing among five approaches*, 2nd ed. Sage publications, Thousand Oaks.
- Creswell, J. W. & Creswell, J. D. (2018) *Research design: Qualitative quantitative and mixed methods approaches*, Fifth edition. SAGE, Los Angeles, London, New Delhi, Singapore, Washington DC, Melbourne.
- Cumming, G. S., Epstein, G. & Anderies, J. M. et al. (2020) Advancing understanding of natural resource governance: a post-Ostrom research agenda. *Current Opinion in Environmental Sustainability* **44**, 26–34.
- d'Armengol, L., Prieto Castillo, M., Ruiz-Mallén, I. & Corbera, E. (2018) A systematic review of co-managed small-scale fisheries: Social diversity and adaptive management improve outcomes. *Global Environmental Change* **52**, 212–225.
- De la Torre-Castro, M. & Lindström, L. (2010) Fishing institutions: Addressing regulative, normative and cultural-cognitive elements to enhance fisheries management. *Marine Policy* **34** (1), 77–84.
- Defeo, O., Castrejón, M. & Pérez-Castañeda, R. et al. (2016) Co-management in Latin American small-scale shellfisheries: assessment from long-term case studies. *Fish and Fisheries* **17** (1), 176–192.
- Denzau, A. T. & North, D. C. (1994) Shared mental models: ideologies and institutions. *Kyklos* **47** (1), 3–31.
- Dietz, T., Ostrom, E. & Stern, P. C. (2003) The struggle to govern the commons. *Science (New York, N.Y.)* **302** (5652), 1907–1912.
- Eggertsson, T. (2015) Demand for Wealth-Reducing Institutional Change: The Role of Ideas and Interests. In: Schofield, N. & Caballero, G. (eds.) *The Political Economy of Governance*. Springer International Publishing, Cham, pp. 3–20.

- Epstein, G., Morrison, T. H. & Lien, A. et al. (2020) Advances in understanding the evolution of institutions in complex social-ecological systems. *Current Opinion in Environmental Sustainability* **44**, 58–66.
- Epstein, G., Pittman, J. & Alexander, S. M. et al. (2015) Institutional fit and the sustainability of social–ecological systems. *Current Opinion in Environmental Sustainability* **14**, 34–40.
- Etiegni, C. A., Irvine, K. & Kooy, M. (2017) Playing by whose rules? Community norms and fisheries rules in selected beaches within Lake Victoria (Kenya) co-management. *Environment, Development and Sustainability* **19** (4), 1557–1575.
- Evans, L., Cherrett, N. & Pemsil, D. (2011) Assessing the impact of fisheries co-management interventions in developing countries: a meta-analysis. *Journal of environmental management* **92** (8), 1938–1949.
- Evans, L. S., Buchan, P. M., Fortnam, M., Honig, M. & Heaps, L. (2023) Putting coastal communities at the center of a sustainable blue economy: A review of risks, opportunities, and strategies. *Frontiers in Political Science* **4**.
- Fabinyi, M. & Barclay, K. (2022) Fisheries Governance. In: Fabinyi, M. & Barclay, K. (eds.) *Asia-Pacific Fishing Livelihoods*. Springer International Publishing, Cham, pp. 65–90.
- Finegold, C., Gordon, A., Mills, D., Curtis, L. & Pulis, A. (2010) *Western Region Fisheries Sector Review*.
- Galappaththi, E. K. & Berkes, F. (2015) Can co-management emerge spontaneously? Collaborative management in Sri Lankan shrimp aquaculture. *Marine Policy* **60**, 1–8.
- Ganseforth, S. (2023) Blue revitalization or dispossession? Reform of common resource management in Japanese small-scale fisheries. *The Geographical Journal* **189** (2), 204–216.
- Gelcich, S., Hughes, T. P. & Olsson, P. et al. (2010) Navigating transformations in governance of Chilean marine coastal resources. *PNAS* **107** (39), 16794–16799.
- Gill, P., Stewart, K., Treasure, E. & Chadwick, B. (2008) Methods of data collection in qualitative research: interviews and focus groups. *British dental journal* **204** (6), 291–295.
- Gordon, S. H. (1954) The Economic Theory of a Common-Property Resource: The Fishery. *The Journal of Political Economy* **62** (2), 124–142.
- Gutiérrez, N. L., Hilborn, R. & Defeo, O. (2011) Leadership, social capital and incentives promote successful fisheries. *Nature* **470** (7334), 386–389.
- Hanna, S. (2003) The Economics of Co-management. In: Wilson, D. C., Nielsen, J. R. & Degnbol, P. (eds.) *The Fisheries Co-management Experience*. Springer Netherlands, Dordrecht.

- Hanna, S. S. (1995) Efficiencies of User Participation in Natural Resource Management. In: Hanna, S. & Munasinghe, M. (eds.) *Property Rights and the Environment: Social and Ecological Issues*. World Bank, Washington, D.C., p. 59.
- Hara, M., Donda, S. & Njaya, F. J. (2015) Lessons from Existing Modes of Governance in Malawi's Small-Scale Fisheries. In: Jentoft, S. & Chuenpagdee, R. (eds.) *Interactive Governance for Small-Scale Fisheries*. Springer International Publishing, Cham, pp. 135–156.
- Hara, M. & Nielsen, J. R. (2003) Experiences with fisheries co-management in Africa. In: Wilson, D. C., Nielsen, J. R. & Degnbol, P. (eds.) *The Fisheries Co-management Experience*. Springer Netherlands, Dordrecht, pp. 81–98.
- Hardin, G. (1968) The Tragedy of the Commons. *Science* **162**, :1243-1248.
- Herrfahrdt-Pähle, E., Schlüter, M., Olsson, P., Folke, C., Gelcich, S. & Pahl-Wostl, C. (2020) Sustainability transformations: socio-political shocks as opportunities for governance transitions. *Global Environmental Change* **63**, 102097.
- Hickey, S., Abdulai, A.-G., Izama, A. & Mohan, G. (2020) Responding to the commodity boom with varieties of resource nationalism: a political economy explanation for the different routes taken by Africa's new oil producers. *The Extractive Industries and Society* **7** (4), 1246–1256.
- Higgs, R. (2008) The Complex Course of Ideological Change. *American Journal of Economics and Sociology* **67** (4), 547–565.
- Ho, N. (2023) A Review of Coastal Resources Co-management in Southeast Asia. In: Baldwin, C. & van Bommel, S. (eds.) *Rural Development for Sustainable Social-Ecological Systems: Putting Communities First*, 1st ed. Springer International Publishing AG, Cham, pp. 263–287.
- Ho, N. T. T., Ross, H. & Coutts, J. (2016) Can't three tango? The role of donor-funded projects in developing fisheries co-management in the Tam Giang Lagoon system, Vietnam. *Ocean & Coastal Management* **121**, 97–106.
- Hodgson, G. M. (2006) What Are Institutions? *Journal of Economic Issues* **40** (1), 1–25.
- Hubbard, P. (2019) Legal pluralism at the beach: Public access, land use, and the struggle for the "coastal commons". *Area* **52** (2), 420–428.
- Ishihara, H., Tokunaga, K. & Uchida, H. (2021) Achieving multiple socio-ecological institutional fits: The case of spiny lobster co-management in Wagu, Japan. *Ecological Economics* **181**, 106911.

- Islam, M. M., Nahiduzzaman, M. & Wahab, M. A. (2020) Fisheries co-management in hilsa shad sanctuaries of Bangladesh: Early experiences and implementation challenges. *Marine Policy* **117**, 103955.
- Jentoft, S. (1989) Fisheries co-management. *Marine Policy* **13** (2), 137–154.
- Jentoft, S. (2000) Legitimacy and disappointment in fisheries management. *Marine Policy* **24** (2), 141–148.
- Jentoft, S. (2011) Legal Pluralism and the Governability of Fisheries and Coastal Systems. *The Journal of Legal Pluralism and Unofficial Law* **43** (64), 149–172.
- Jentoft, S. & Bavinck, M. (2014) Interactive governance for sustainable fisheries: dealing with legal pluralism. *Current Opinion in Environmental Sustainability* **11**, 71–77.
- Jentoft, S., Bavinck, M., Johnson, D. & Thomson, K. (2009) Fisheries Co-Management and Legal Pluralism: How an Analytical Problem Becomes an Institutional One. *Human Organization* **68** (1), 27–38.
- Johannes, R. E. (2002) The Renaissance of Community-Based Marine Resource Management in Oceania. *Annual Review of Ecology and Systematics* **33** (1), 317–340.
- Kaluma, K. & Umar, B. B. (2021) Outcomes of participatory fisheries management: An example from co-management in Zambia's Mweru-Luapula fishery. *Heliyon* **7** (2), e06083.
- Kaplan, K. A., Ahmadi, G. N., Fox, H., Glew, L., Pomeranz, E. F. & Sullivan, P. (2015) Linking ecological condition to enforcement of marine protected area regulations in the greater Caribbean region. *Marine Policy* **62**, 186–195.
- Kearney, R. (2002) Co-management: the resolution of conflict between commercial and recreational fishers in Victoria, Australia. *Ocean & Coastal Management* **45** (4-5), 201–214.
- Kelsall, T., Ferguson, W. D., Hickey, S., Levy, B., Schulz, N. & vom Hau, M. (2022) *Political Settlements and Development Theory, Evidence, Implications*. Oxford University Press USA - OSO, Oxford.
- Khan, M. (2010) *Political settlements and the governance of growth-enhancing institutions*, London.
- Khan, M. (2019) Institutions and Development. In: Edited by: DEEPAK NAYYAR (ed.) *Asian transformations: An inquiry into the development of nations*, First edition. Oxford University Press, Oxford, pp. 321–344.
- Khan, M. H. (2015) *The Political Economy of Community-Based Fisheries in Bangladesh*, London.

- Khan, M. H. (2017) Political settlements and the analysis of institutions. *African Affairs* **117** (469), 636–655.
- Khan, M. H. (2018) Power, pacts and political settlements: A reply to Tim Kelsall. *African Affairs*, 656–669.
- Kingston, C. & Caballero, G. (2009) Comparing theories of institutional change. *Journal of Institutional Economics* **5** (2), 151–180.
- Kjær, A. M. (2015) Political Settlements and Productive Sector Policies: Understanding Sector Differences in Uganda. *World Development* **68**, 230–241.
- Knight, J. (1992) *Institutions and Social Conflict*. Cambridge University Press.
- Knight, J. & North, D. (1997) Explaining Economic Change: The Interplay Between Cognition and Institutions. *Legal Theory* **3** (3), 211–226.
- Kosamu, I. B. (2015) Conditions for sustainability of small-scale fisheries in developing countries. *Fisheries Research* **161**, 365–373.
- Kraan, M. L. (2009) 'Creating space for fishermen's livelihoods: Anlo-Ewe beach seine fishermen's negotiations for livelihood space within multiple governance structures in Ghana. PhD Thesis. University of Amsterdam, Amsterdam.
- Kuperan, K., Abdullah, N. M. R., Pomeroy, R. S., Genio, E. L. & Salamanca, A. M. (2008) Measuring Transaction Costs of Fisheries Co-Management. *Coastal Management* **36** (3), 225–240.
- Kwadjosse, T. (2009) *The Law of the Sea: Impacts on the Conservation and Management of Fisheries Resources of Developing Coastal States – the Ghana Case Study*, New York.
- Leopold, M., Thebaud, O. & Charles, A. (2019) The dynamics of institutional innovation: Crafting co-management in small-scale fisheries through action research. *J Environ Manage* **237**, 187–199.
- Levine, A. (2016) The development and unraveling of marine resource co-management in the Pemba Channel, Zanzibar: institutions, governance, and the politics of scale. *Regional Environmental Change* **16** (5), 1279–1291.
- Levine, A. S. & Richmond, L. S. (2014) Examining Enabling Conditions for Community-Based Fisheries Comanagement: Comparing Efforts in Hawai'i and American Samoa. *Ecology and Society* **19** (1).
- Libecap, G. D. (1989) Distributional Issues in Contracting for Property Rights. *Journal of Institutional and Theoretical Economics (JITE)* **145** (1).
- Lindley, J. & Techera, E. J. (2017) Overcoming complexity in illegal, unregulated and unreported fishing to achieve effective regulatory pluralism. *Marine Policy* **81**, 71–79.

- March, A., Bennett, M., Germishuizen, M., Evans, T. & Failler, P. (2024) The status of Blue Economy development in Africa. *Marine Policy* **165**, 106205.
- McCay, B. J. (2002) Emergence of Institutions for the Commons: Contexts, Situations, and Events. In: Ostrom, E., Dietz, T., Dolšák, N., Stern, P. C., Stonich, S. & Weber, E. U. (eds.) *The Drama of the Commons*. National Academies Press, Washington, D.C.
- McCay, B. J. & Acheson, J. M. (eds.) (1987) *The Question of the Commons: The Culture and Ecology of Communal Resources*, 3rd print. Univ. of Arizona Press, Tucson, Baltimore, Md.
- McCay, B. J. & Jentoft, S. (1996) From the bottom up: Participatory issues in fisheries management. *Society & Natural Resources* **9** (3), 237–250.
- McClanahan, T., Muthiga, N. A. & Abunge, C. A. (2016) Establishment of Community Managed Fisheries' Closures in Kenya: Early Evolution of the Tengefu Movement. *Coastal Management* **44** (1), 1–20.
- McLain, R., Lawry, S. & Ojanen, M. (2018) Fisheries' Property Regimes and Environmental Outcomes: A Realist Synthesis Review. *World Development* **102**, 213–227.
- Meinzen-Dick, R. S. & Pradhan, R. (2001) Implications of Legal Pluralism for Natural Resource Management **32** (4), 10–17.
- Ministry of Fisheries and Aquaculture Development (2020) *Co-management Policy for the Fisheries Sector*, Accra, Ghana.
- Minja, R. A., Ponte, S., Mwamfupe, A., Noe, C. & Brockington, D. (2023) The Legitimacy of Sustainability Initiatives in Tanzania. *The European Journal of Development Research* **35** (3), 453–482.
- Mohan, G., Asante, K. P. & Abdulai, A.-G. (2017) Party Politics and the Political Economy of Ghana's Oil. *New Political Economy* **23** (3), 1–16.
- Murunga, M., Partelow, S. & Breckwoldt, A. (2021) Drivers of collective action and role of conflict in Kenyan fisheries co-management. *World Development* **141**, 105413.
- Nielsen, J. R. (2003) An analytical framework for studying: compliance and legitimacy in fisheries management. *Marine Policy* **27** (5), 425–432.
- Nielsen, J. R., Degnbol, P., Viswanathan, K., Ahmed, M., Hara, M. & Abdullah, N. M. R. (2004) Fisheries co-management—an institutional innovation? Lessons from South East Asia and Southern Africa. *Marine Policy* **28** (2), 151–160.
- Njaya, F. (2007) Governance Challenges of the Implementation of Fisheries Co-Management - Experiences from Malawi. *International Journal of the Commons* **1** (1), 137–153.
- Njaya, F., Donda, S. & Béné, C. (2012) Analysis of Power in Fisheries Co-Management: Experiences from Malawi. *Society & Natural Resources* **25** (7), 652–666.

- Njaya, F., Donda, S. & Hara, M. (2018) A review of potential sources of revenue for sustaining fisheries co-management activities in the southern Lake Malawi, Mangochi district. *Aquatic Ecosystem Health & Management* **21** (2), 168–175.
- Noble, B. F. (2000) Institutional criteria for co-management. *Marine Policy* **24**, 69–77.
- North, D. C. (1990) *Institutions, Institutional Change and Economic Performance*. Cambridge University Press, Cambridge.
- North, D. C. (2005) *Understanding the process of economic change*. Princeton University Press, Princeton N.J.
- North, D. C., Wallis, J. J., Webb, S. B. & Weingast, B. R. (2007) *Limited Access Orders in the Developing World: A New Approach to the Problems of Development*.
- Nunan, F. (2020) The political economy of fisheries co-management: Challenging the potential for success on Lake Victoria. *Global Environmental Change* **63**, 102101.
- Nunan, F., Cepić, D. & Yongo, E. et al. (2018) Compliance, corruption and co-management: how corruption fuels illegalities and undermines the legitimacy of fisheries co-management. *International Journal of the Commons* **12** (2), xx.
- Nunan, F., Hara, M. & Onyango, P. (2015) Institutions and Co-Management in East African Inland and Malawi Fisheries: A Critical Perspective. *World Development* **70**, 203–214.
- Okyere, I., Chuku, E. O., Dzantor, S. A., Ahenkorah, V. & Adade, R. (2023) Capacity deficit and marginalisation of artisanal fishers hamper effective fisheries governance in Ghana: Insights and propositions for promoting sustainable small-scale fisheries. *Marine Policy* **153**, 105640.
- Orach, K. & Schlüter, M. (2021) Understanding the dynamics of fish politics: The role of diverse actor interactions in transformations towards co-management. *Environmental Science & Policy* **124**, 195–205.
- Ostrom, E. (1990) *Governing the Commons: Evolution of Institutions for Collective Action*. Cambridge University Press.
- Ostrom, E. (2005) *Understanding Institutional Diversity*. Princeton University Press.
- Ostrom, E. (2007) A diagnostic approach for going beyond panaceas. *PNAS* **104** (39), 15181–15187.
- Ostrom, E. (2009) A general framework for analyzing sustainability of social-ecological systems. *Science* **325** (5939), 419–422.
- Paavola, J. (2007) Institutions and environmental governance: A reconceptualization. *Ecological Economics* **63** (1), 93–103.
- Paavola, J. & Adger, W. N. (2005) Institutional ecological economics. *Ecological Economics* **53** (3), 353–368.

- Parlee, C. E. & Wiber, M. G. (2014) Institutional innovation in fisheries governance: adaptive co-management in situations of legal pluralism. *Current Opinion in Environmental Sustainability* **11**, 48–54.
- Pinkerton, E. (ed.) (1989) *Co-operative management of local fisheries: new directions for improved management and community development*. University of British Columbia Press, Vancouver.
- Pinkerton, E. (2018) Legitimacy and Effectiveness through Fisheries Co-Management. In: Werle, D. & Borgese, E. M. (eds.) *The future of ocean governance and capacity development: Essays in honor of Elisabeth Mann Borgese (1918-2002)*. Brill Nijhoff, Leiden The Netherlands, Boston, pp. 333–337.
- Plummer, R. & Fitzgibbon, J. (2004) Co-management of natural resources: a proposed framework. *Environmental management* **33** (6), 876–885.
- Pomeroy, R. S. (1995) Community-based and co-management institutions for sustainable coastal fisheries management in Southeast Asia. *Ocean & Coastal Management* **27** (3), 143–162.
- Pomeroy, R. S. & Berkes, F. (1997) Two to tango: the role of government in fisheries co-management. *Marine Policy* **21** (5), 465–480.
- Pomeroy, R. S., Katon, B. M. & Harkes, I. (2001) Conditions affecting the success of fisheries co-management: lessons from Asia. *Marine Policy* **25** (3), 197–208.
- Pomeroy, R. S. & Williams, M. J. (1994) *Fisheries Co-management and Small-scale Fisheries: A Policy Brief*, Makati City, Phillipines.
- Poteete, A. R. (2009) Is Development Path Dependent or Political? A Reinterpretation of Mineral-Dependent Development in Botswana. *The Journal of Development Studies* **45** (4), 544–571.
- Poteete, A. R. (2019) Electoral competition, clientelism, and responsiveness to fishing communities in Senegal. *African Affairs* **118** (470), 24–48.
- Puley, M. & Charles, A. (2022) Dissecting co-management: Fisher participation across management components and implications for governance. *Fish and Fisheries* **23** (3), 719–732.
- Rivera, A., Gelcich, S., García-Flórez, L. & Acuña, J. L. (2019) Social attributes can drive or deter the sustainability of bottom-up management systems. *The Science of the total environment* **690**, 760–767.
- Rivera, A., San Martin-Chicas, J. & Myton, J. (2021) Transitioning to co-management in Caribbean reef fisheries: Tela Bay case study. *Sustainability Science*.

- Robinson, J. A. (2010) The Political economy of institutions and resources. In: Leal, D. R. (ed.) *The political economy of natural resource use: lessons for fisheries reform*. The World Bank, Washington, D.C., pp. 47–56.
- Rohe, J. R., Govan, H., Schlüter, A. & Ferse, S. C. A. (2019) A legal pluralism perspective on coastal fisheries governance in two Pacific Island countries. *Marine Policy* **100**, 90–97.
- Russell, A. J. M. & Dobson, T. (2011) Chiefs as Critical Partners for Decentralized Governance of Fisheries: An Analysis of Co-Management Case Studies in Malawi. *Society & Natural Resources* **24** (7), 734–750.
- Sandström, A., Crona, B. & Bodin, Ö. (2013) Legitimacy in Co-Management: The Impact of Preexisting Structures, Social Networks and Governance Strategies. *Environmental Policy and Governance* **24** (1), 60–76.
- Sarr, M., Kimani, M. E. & Jobo, S. (2022) The political economy of development aid and marine fisheries reform. In: Wamboye, E. F. & Fayissa, B. (eds.) *The Palgrave Handbook of Africa's Economic Sectors*. Springer International Publishing, Cham, Switzerland, p. 65.
- Sauerland, D. (2015) Ideologies, Institutions, and the New Institutionalism. In: *International Encyclopedia of the Social & Behavioral Sciences*. Elsevier, pp. 561–572.
- Saunders, M., Lewis, P. & Thornhill, A. (eds.) (2023) *Research methods for business students*, Ninth edition. Pearson, Harlow.
- Schlüter, A. (2007) Institutional change in the forestry sector—The explanatory potential of New Institutional Economics. *Forest Policy and Economics* **9** (8), 1090–1099.
- Schlüter, A. (2010) Institutional Change and Qualitative Research: Methodological considerations for institutional economic empirical research. *Journal of Interdisciplinary Economics* **22** (4), 391–406.
- Schlüter, A., Bavinck, M., Hadjimichael, M., Partelow, S., Said, A. & Ertör, I. (2020) Broadening the perspective on ocean privatizations: an interdisciplinary social science enquiry. *Ecology and Society* **25** (3).
- Schlüter, A., Wise, S., Schwerdtner Máñez, K., Weber de Morais, G. & Glaser, M. (2013) Institutional Change, Sustainability and the Sea. *Sustainability* **5** (12), 5373–5390.
- Schmid, A. A. (2004) *Conflict and Cooperation: Institutional and Behavioral Economics*. Blackwell Publishing Ltd.
- Schmidt, V. A. (2010) Taking ideas and discourse seriously: explaining change through discursive institutionalism as the fourth 'new institutionalism'. *European Political Science Review* **2** (01).

- Scholtens, J. & Bavinck, M. (2014) Lessons for legal pluralism: investigating the challenges of transboundary fisheries governance. *Current Opinion in Environmental Sustainability* **11**, 10–18.
- Schwaiger, J., Tas Kronenburg, Z. M., Auch, A., Bosker, T. & Ehrhardt, D. (2024) Customary Authorities and Environmental Governance in Africa: A Systematic Review. *Society & Natural Resources*, 1–19.
- Selig, E. R., Kleisner, K. M. & Ahoobim, O. et al. (2017) A typology of fisheries management tools: using experience to catalyse greater success. *Fish and Fisheries* **18** (3), 543–570.
- Sen, S. & Nielsen, J. R. (1996) Fisheries co-management: Fisheries: a comparative analysis. *Marine Policy* **20** (5), 405–418.
- Siddique, M., Hossain, M., Rashid, A. Z. M., Khan, N., Shuvo, S. & Hassan, M. (2024) Evaluating co-management in the Sundarbans mangrove forest of Bangladesh: success and limitations from local forest users' perspectives. *Ecology and Society* **29** (2).
- Silver, J. J., Gray, N. J., Campbell, L. M., Fairbanks, L. W. & Gruby, R. L. (2015) Blue Economy and Competing Discourses in International Oceans Governance. *The Journal of Environment & Development* **24** (2), 135–160.
- Skarbek, D. (2020) Qualitative research methods for institutional analysis. *Journal of Institutional Economics* **16** (4), 409–422.
- Smallhorn-West, P., Cohen, P. J., Phillips, M., Jupiter, S. D., Govan, H. & Pressey, R. L. (2022) Linking small-scale fisheries co-management to U.N. Sustainable Development Goals. *Conservation biology the journal of the Society for Conservation Biology* **36** (6), e13977.
- Sundström, A. (2013) Corruption in the commons: Why bribery hampers enforcement of environmental regulations in South African fisheries. *International Journal of the Commons* **7** (2), 454–472.
- Swenson, G. (2018) Legal Pluralism in Theory and Practice. *International Studies Review* **20** (3), 438–462.
- Torres-Guevara, L. E., Schlüter, A. & Lopez, M. C. (2016) Collective action in a tropical estuarine lagoon: adapting Ostrom's SES framework to Ciénaga Grande de Santa Marta, Colombia. *International Journal of the Commons* **10** (1), 334–362.
- Vaismoradi, M., Turunen, H. & Bondas, T. (2013) Content analysis and thematic analysis: Implications for conducting a qualitative descriptive study. *Nursing & health sciences* **15** (3), 398–405.
- Vatn, A. (2005) *Institutions and the Environment*. Edward Elgar Publishing, Cheltenham.

- Vatn, A. & Vedeld, P. (2012) Fit, Interplay, and Scale: A Diagnosis. *Ecology and Society* **17** (4).
- Voyer, M., Benzaken, D. & Rambourg, C. (2022) Institutionalizing the Blue Economy: an examination of variations and consistencies among Commonwealth countries. *Philosophical transactions of the Royal Society of London. Series B, Biological sciences* **377**, 1–8.
- Voyer, M., Quirk, G., McIlgorm, A. & Azmi, K. (2018a) Shades of blue: what do competing interpretations of the Blue Economy mean for oceans governance? *Journal of Environmental Policy & Planning* **20** (5), 595–616.
- Voyer, M., Quirk, G., McIlgorm, A. & Azmi, K. (2018b) Shades of blue: what do competing interpretations of the Blue Economy mean for oceans governance? *Journal of Environmental Policy & Planning* **20** (5), 595–616.
- Wade, R. (1987) The management of common property resources: collective action as an alternative to privatisation or state regulation. *Cambridge Journal of Economics* **11** (2), 95–106.
- Walker, B. L. (1998) *Sisterhood and Seine-Nets: Engendering the Development, Science, and Conservation of Ghana's Marine Fishery*. Doctoral dissertation. University of California, Berkeley, Bekeley, California.
- Wamukota, A. W., Cinner, J. E. & McClanahan, T. R. (2012) Co-management of coral reef fisheries: A critical evaluation of the literature. *Marine Policy* **36** (2), 481–488.
- World Bank (1995) *Staff Appraisal Report: Republic of Ghana Fisheries Sub-sector Capacity Building Project*, Washington, D.C.
- World Bank (2003) *Implementation Completion Report: Ghana Fisheries Sub-sector Capacity Building Project*, Washington, D.C.
- Yandle, T. (2006) Sharing natural resource management responsibility: Examining the New Zealand rock lobster co-management experience. *Policy Sciences* **39** (3), 249–278.
- Yin, R. K. (2003) *Case study research: Design and methods*, 3rd ed., 9th. Sage publications, Thousand Oaks, Calif.
- Yin, R. K. (2018) *Case study research and applications: Design and methods*, Sixth edition. SAGE, Los Angeles.
- Young, O. R., Webster, D. G. & Cox, M. E. et al. (2018) Moving beyond panaceas in fisheries governance. *PNAS* **115** (37), 9065–9073.

RESEARCH PAPER 1

Understanding transformations in the marine coastal realm: the explanatory potential theories of institutional change

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Abstract

Marine and coastal areas currently face an unprecedented level of multiple and interdependent anthropogenic and natural drivers of change. Increasing demand for use of marine and coastal space largely driven by the blue economy paradigm presents a myriad of sustainability challenges that require governance transformations and institutional innovation. Various institutional forms have already emerged in this realm, but recent processes will increase the spate of institutional change taking place. This calls for a comprehensive understanding of institutional change in the marine coastal realm; thus, an overview of the tools available for understanding such changes. In this paper, we assess the analytical potential of seven theories of institutional change in relation to the contextual features of marine and coastal systems. By applying the propositions of the various theories to empirical studies of institutional change in this arena, we aim to provide a repertoire of theories of institutional change to help marine social scientists understand and guide change in the marine coastal arena. The analysis reveals that all the theories have some relevance for understanding institutional change in the marine coastal realm, but the analytical strength of each theory depends on the specific institutional features, resource system, context, and scale of governance. Due to the material and institutional characteristics of the marine coastal area, no single theory is sufficient for understanding institutional change in this realm. The combination of multiple theories or the use of analytical frameworks provides a better lens to illuminate institutional change in marine and coastal systems.

Keywords: Environmental governance, institutional change, sustainability transformations, marine coastal systems, institutional theory, natural resource management

1. Introduction

Marine and coastal areas currently face multiple and interdependent anthropogenic and natural drivers of change. While navigation and fisheries have been the traditional activities in the coastal marine realm, it is now an arena of multiple economic activities in the form of aquaculture, coastal tourism, mining, renewable energy development, and ecological conservation systems [1]. This is partly driven by the increasing recognition of the potential of the marine coastal systems for economic development and ecological conservation under the triple banners of the blue economy, blue growth and the new ocean economy [2]. The institutionalization of the blue economy paradigm is occurring in many countries albeit in varying degrees with multiple and competing interpretations [3]. This increasing interest in the economic development potential of marine coastal systems and the socioeconomic and ecological transformations that come with it have raised sustainability concerns which researchers have called upon the social sciences to investigate and facilitate sustainable transformations in this realm [4–8]. While this interest in sustainability transformations in the marine coastal realm is growing [1, 9], what processes can generate sustainable transformations is still a subject of intense debate in both academic and policy circles [10, 11].

Nevertheless, institutions and institutional change have been identified as crucial leverage points for steering transformations towards sustainable trajectories [10, 12–14]. This institutional focus has also risen to prominence in the discourse on sustainability transitions and transformation in the marine coastal realm [1, 8, 15]. This focus is not surprising, as the debate around sustainable development and environmental governance in general has underscored the need for attention to institutions and institutional change [16–21]. Institutions here refer to “the rules of the game of a society or more formally are the humanly devised constraints that structure human interaction. They are composed of formal rules (statute law, common law, regulations), informal constraints (conventions, norms of behaviour, and self-imposed rules of behaviour); and the enforcement characteristics of both” [22]. Understanding institutional change is important for many reasons: from an explanatory perspective, it helps us understand both history and contemporary events of society; from a critical perspective, it allows us to analyse if and to what extent existing institutions further the goals for which they were created; and from a normative perspective, it influences our ability to reform institutions [23]. To leverage institutional change for sustainability in the marine coastal systems thus requires us to understand the complexity of institutional change [15, 24–26]. However, “understanding the complexity of institutional change requires us to study the diversity of theories of institutional change” [27].

The social sciences are well-positioned to provide the knowledge and analytical tools for understanding institutions and institutional change in the marine coastal realm [4, 7, 15, 17]. Theories of institutional change have been solidly developed in a broad range of fields in the social sciences – economics, sociology, political science and anthropology (see [23, 28–36]). The theorization of institutions and institutional change has a long history in the early scientific development of social sciences [36–38]. Its development is considered a by-product of the famous academic debate on scientific method in the social sciences – the *Methodenstreit* – in the 19th century led by the German Historical School in the quest to understand the institutional structure and evolution of socio-economic systems [36]. More recent theoretical developments in institutionalism in the 20th & 21st century span the research fields of economic history & development [29, 35, 39–42], organizational studies [36, 43–46] comparative political-economy and globalization [32, 47–52] and environmental/resource governance [16, 53–59]. The institutional turn in the research field of environmental and resource governance could perhaps be attributed largely to the rise of the sustainable development discourse in late 1980s.

While these theoretical developments provide diverse analytical tools for the study of institutions and institutional change in general, their explanatory potential in the marine coastal context is yet unclear, as these theories were initially developed for understanding institutional change in broader socio-economic systems [37]. Efforts have been made to synthesize or compare the theoretical approaches to institutional change more generally (see [16, 33, 60, 61]), but a contextual overview of the explanatory potential of the diverse theories of institutional change is still lacking in marine coastal environmental and resource governance literature. Considering materiality and social complexity of the marine coastal realm, we explore the explanatory potential of various theories of institutional change for understanding governance transformations in this context. An overview of the diversity of theories of institutional change will not only help us to understand and guide institutional development and sustainability transformations in the marine coastal realm, but it will also provide a theoretical repertoire for students and early career researchers in the marine social sciences. The intention here is not to demonstrate the superiority of one theory over the other or to conduct a systematic literature review of institutional change, but to illustrate the conditions under which a particular theory has analytical utility for understanding institutional change in the marine coastal context. To be clear, we are coming from the tradition and perspective of institutional economics. However, we also draw from institutional theory in sociology and political science, as “scholars from various intellectual and social science backgrounds share

common conceptual, theoretical and methodological problems” in the study of institutional change [32].

The rest of the paper is structured as follows: the next section illuminates the contextual features of institutional change in the coastal marine realm. Then we present an overview of the theorization of institutional change in social sciences, applying them to empirical cases of institutional change in the marine coastal systems. We do this by reviewing the variety of institutional theories in the social sciences and using empirical studies of institutional change in coastal and marine resource governance to illustrate their explanatory potential. We then discuss and conclude on the implications for studying empirical phenomena of institutional change in the marine coastal systems.

1.1. The marine coastal context and institutional change

The marine coastal realm – the land-sea interface encompassing the coast in its terrestrial form, the inshore and offshore seaward waters – contains a broad spectrum of diverse social-ecological systems that are contiguously interlinked and interact in an interdependent manner. These diverse marine coastal systems – fisheries, mangroves, estuaries, coastal wetlands, coral reefs, aquaculture, offshore oil and gas offshore energy, coastal tourism and residential development systems – bring together multiple actors of diverse interests and sectors [62]. Due to this diversity in coastal marine systems, the governance characteristics – the institutions, actors, and associated knowledge systems – are also very diverse. Uncertainty then is a natural condition in this realm.

Uncertainty is a major challenge in governance transformations and institutional change in the marine coastal systems [63]. Uncertainties may stem from variability of systems and system properties, spatial variability, mobility of resource systems and resource units, and insufficient knowledge systems. There is lack of sufficient knowledge about the influence of external processes (both natural and human-induced) on the functioning of marine coastal systems [64]. There is difficulty in predicting, for example, the rate of sea level change, land and sea use change, and socioeconomic change scenarios in the marine coastal realm. Uncertainty about impacts of institutional arrangements [64], and uncertainty about the availability of resources [63] all influence dynamics of institutional change. Legal pluralism is quite ubiquitous in coastal resource governance [65], and this exacerbates institutional uncertainty, making institutional change more complex [66]. Transformative knowledge accumulation for governance change at various levels and scales is still low [15], and thus knowledge uncertainty. Part of this uncertainty stems from the complexity inherent in marine coastal systems.

Complexity in this realm includes both material complexity and socioeconomic and institutional complexity. Marine coastal systems are very diverse, numerous and heterogeneous in components. They are coupled and they interact in multiple ways at multiple levels. Viewed from complexity theory, various marine coastal systems may be governed by micro-level rules but the interconnectedness and interactions between systems lead to emergent properties from the micro-level processes. For instance, micro-level processes within a mangrove system or an aquaculture system may produce enormous effects on capture fisheries and vice versa. These material complexities precipitate complexities in the socioeconomic and institutional context; thus, governance complexity. Governance systems in this realm are composed of multiple governing agents (organizations or individuals) with diverse interests, rationalities, cognitive abilities, ideologies, and *knowledge/power asymmetries*. Because of the diversity in socioeconomic systems, knowledge/power asymmetries among actors (rooted in agency and structure) are ubiquitous. These actors are embedded in various “political, economic, and cultural rule systems, which distribute rights, resources, and incentives in a complex way” [67]. Their micro-level interactions explain institutional change at various levels of governance (ibid). Complexity relates to another common feature – interdependencies.

Interdependencies – between actors and institutions, between actors, between institutions and between social systems and the physical environment – are key among dependencies that shape institutional paths in the marine coastal realm [68]. Other dependencies include goal dependencies (impact of visions of the future on current institutional arrangements), and path-dependencies (the legacy of the past on current institutional paths). Van Assche and colleagues [68] distinguish between cognitive path-dependencies (concepts, narrative, ideologies and other cognitive elements inherited from previous governance systems), organizational path-dependencies (legacies imbued by inherited institution and actors), and material path-dependencies (legacies stemming from interactions between the social and natural systems) that can be crucial for understanding institutional change in the marine coastal realm. Path-dependencies shape interdependencies and vice versa, and both can shape goal dependencies.

Dependencies relate to another feature of the marine coastal realm – governance scale (international/global, national, and local). *Governance scale* is important for understanding institutional change. The marine coastal realm is large in extent, and rules developed affect several jurisdictions. Multi-scalar interactions often occur at multiple administrative levels (local, national, regional, and global) in institutional development processes. In addition, there is politics of scale where scalar narratives or international policy processes can produce particular institutional forms that influence and sometimes undermine existing national and

local institutions [9]. The above dynamics makes the marine coastal context ideal for understanding the explanatory potential of the variety of theories of institutional change.

2. Theorization of institutional change: a synthesis of institutional theory

Institutional theory is very diverse, and theories of institutional change are plentiful. Theories of institutional change can be considered evolutionary or designed-based [60], exogenous and endogenous-based theories [69], or evolutionary and revolutionary theories [32]. However, a theory of institutional change should ideally answer the why (drivers) and how (mechanism) questions of institutional change. In this paper, we identified seven theories of institutional change based on their theoretical propositions on drivers and mechanisms of change (see Table 1). The categorization was based on the extent to which they are distinguishable in explaining causal mechanisms of change. Existing literature that synthesized theories of institutional change (particularly [16, 33, 60, 61]) served as a useful guide for identifying the theories. In Table 1, the theories are listed together with a summary of their main characteristics and relevant theoretical and empirical literature applying the theories in marine coastal context. In the following, we expand on the seven theories of institutional change and their empirical application.

2.1. Evolutionary theories

This theoretical approach has a much longer history and can be traced from the classical spontaneous order accounts of social institutions in the works of David Hume, Adam Smith and Herbert Spencer [23] to the writings of Friedrich Hayek and Armen Alchian. Evolutionary theories of institutional change draw analogies between processes in biological systems and socioeconomic systems to explain institutional change (see 70–76). In this approach, institutions, akin to the biological process of evolution, change through key processes of variation (mutation), selection and replication (reproduction) [33, 71]. Institutions may emerge spontaneously as unintentional consequences of human action (uncoordinated choices of individuals) in the pursuit of their individual purposes rather than human design [72, 76]. Also, by a principle of guided variation, actors may consciously and purposefully create and change institutions through a process of learning by doing (trial-and-error) and communication [77]. In this light, “an evolutionary approach to institutional change places human cognition, intentionality, and agency at the centre of the analysis. Humans have displayed an advanced capacity to generate new rules (variation); they strategically choose between different institutional schemas (selection); and they often imperfectly implement, copy, or repeat successful behaviours (replication)” [78]. Evolutionary theories consider exogenous parameters as impetus for change (variation) but focus more on the mode of selection and/or

replication of institutional elements [69]. Theories suggest both individual and group selection occur [79].

What determines which successful rules, norms and conventions are selected and replicated vary. This could be through an evolutionary process of competition which weeds out inefficient institutions [72, 76] or the institutional arrangement that produces preferable “positive profits” is selected ex-post – after experimentation with alternative institutions because of the ex-ante uncertainty about distributional outcomes [73]. The institutions may also be copied (through imitation) and replicated “while competing rules, beliefs and preferences have suffered extinction (or have been replicated only in marginal niches)” [75]. That is, as actors adjust their strategies and actions to changing circumstances, experimentation, learning and imitation, the most successful institutions will emerge [69]. Also, a particular institution may emerge as equilibrium due to prominence (it is beneficial to follow the convention or norm because majority follow it) or versatility (those following the norm or convention are more successful than others e.g. higher payoff) even if such institution is inefficient [80]. Recent theorization in evolutionary theory emphasizes coevolutionary change, where institutions co-evolve with the material environment, preferences, behaviour, technology, knowledge and actors [77, 81, 82]. Here socio-economic systems are considered complex with multiple dependent sub-systems – markets, technologies, organizations, institutions, knowledge systems etc. – consisting of heterogeneous actors and changing populations [68, 81–83]. Thus, institutions may change as a coevolutionary response to co-dynamics of sub-systems through reciprocal selective pressures of evolving populations [83]. The coevolutionary change is however marked by various dependencies: path-, inter-, and goal- dependencies [81].

Evolutionary theories have been applied to study institutional change in many marine coastal systems including coastal tourism, territorialization in fisheries and emergence of co-management in aquaculture. Partelow and Nelson’s [84] study of the evolution of tourism governance provides an example of the co-evolution of institutions and environment in the Gili Islands. Local institutions for tourism governance began to evolve as the Island’s economic activities grew. The influx of businesses and change in environmental conditions such as increased waste management challenges led to recognition that institutions need to adapt to the social and ecological changes. Hitherto informal institutions were formalized as a coevolutionary response to the socioeconomic and ecological changes occurring in the Island, demonstrating the important role of materiality [82] in the evolution of coastal governance institutions.

In the evolution of the Maine lobster fisheries management institution, Waring and Acheson [85] adopted a cultural evolution theory to show that cultural group selection was evident in the emergence of territoriality and conservation rules in the lobster fishery. The cultural evolutionary theory of multilevel group selection has also been applied to the evolution of customary marine tenure institutions in the Pacific. The traditional marine tenure institutions in Fiji emerged under conditions of strong community-level selection: “strong individual selection for unrestrained harvesting was initially held in check by selection for marine foraging restrictions within clans and villages, spurred by local resource competition and warfare. British colonization of Fiji and continued integration with the global market altered the dominant level of selection, strengthening the nation-state and weakening the power of traditional village chiefs” [86].

2.2. Functionalism/efficiency theories

Efficiency theories are a “naïve” variant of evolutionary theorization of institutional change that focuses on the collective-benefits (efficient or socially optimal outcomes) function of institutions [23]. This theoretical approach has roots in neoclassical economics theorization of human behaviour [87]. Functionalist/efficiency theories explain institutional stability and change in relation to the ability of institutions to provide functional outcomes – social optimality or efficiency in economization of transaction costs. Often rooted in the rational choice tradition, these theories assume “some given opportunity to increase total wealth, whether its source is a change in population, a new technology, discovery of a natural resource, or a change in consumer preferences” [33]. Thus, “institutions should in general be both efficient and adapted to the existing social and economic environment” [88]. Institutional change is seen as a functional response to changes in the technical and social environment that render existing institutions inefficient. Changes in parameters such as relative prices, population growth, technology, and factor (resource) endowments may provide opportunities for higher economic rents under less costly alternative institutional arrangements; thus demand for institutional change [89–91]. Changes in cultural endowments (e.g. religion, ideology) and advances in knowledge can provide opportunities for new income streams and/or reduce transaction costs of institutional change; thus the design of more efficient institutions [92].

Harold Demsetz postulates that, “[c]hanges in knowledge results in changes in production functions, market values, and new aspirations. [Thus]...the emergence of new property rights [institutions] takes place in response to the desires of the interacting persons for adjustment to new benefit-cost possibilities” [89]. As old property institutions become poorly attuned to the changes in knowledge (new techniques), technology and relative prices, new private or

state property institutions will develop to internalize externalities when the gains exceed the costs of internalization [89]. Institutional arrangements are characterized by varied transaction costs, and (boundedly) rational actors will choose institutional arrangements that maximize aggregate benefits and minimize transaction costs [44, 87]. By mechanisms of competitive selection, institutional arrangements that produce optimal outcomes and minimize transaction costs will emerge to govern interactions among agents in a society. Competitive pressure, learning processes, and transaction costs determine institutional choice. Governance structures for enforcing use and management rules of marine coastal systems, be it hierarchies, hybrids or decentralized markets are, according to theory influenced, by transaction and transformation costs [93].

Functionalist/efficiency arguments have been applied in marine coastal context to explain change in property rights institutions in fisheries, the development of contracts in artisanal-tuna fishing industry, and the emergence of right-based instruments for fisheries (ITQs and TURFs). The empirical case of ITQs regulatory instruments in Iceland illustrates how change in exogenous socio-political and institutional factors can reduce transaction and transformation costs, facilitating the emergence of new institutional arrangements to exploit new opportunities or efficiency gains that emerge. In this case, the extension of the exclusive economic zone (EEZ) in Iceland, following the third United Nations Convention on the Law of the Sea (UNCLOS), lowered the transaction cost of implementing ITQs. Arnason [94] argues that while the long-term decline in the economic performance of the Icelandic fisheries was a concern, an ITQ regime was virtually impracticable due to the inability to exclude of foreign fleets prior to the extension of the EEZ to 200 nautical miles in 1976. It would be too costly to implement restrictive institutional arrangements without the EEZ.

In the case of the transformation of property right institutions in marine systems Acheson [95], drew from the arguments of efficiency theories to elucidate the role of economic defendability in institutional change. He concluded that the forms of property right institutions that emerge in the marine realm depend on economic defendability (the cost of protecting a resource area relative to the value of the resources). His findings mirror and further the functionalist theory of Demsetz [89] that (private) property institutions that internalize externalities will emerge if the gains from internalization outweigh the cost of internalization. Gelcich and colleagues [96] study of the emergence of the Chilean system of territorial use rights of fisheries (TURFs) shows that the TURFs were adopted as management instruments for fisheries in Chile because they were considered to be the cost efficient institutional alternative after experimentation with other institutional alternatives.

2.3. Path-dependence/incremental change theories

This theoretical approach emerged in the quest to understand the persistence of inefficient institutions in contrast to efficiency based explanations of institutions [35]. Path-dependent/incremental change theories emphasize how contingent events and decisions, pre-existing institutions, increasing returns, network effect of an institutional matrix and power distribution constrain the range of future institutional options and shape the trajectory of institutional change [34, 35, 97–99]. An institutional change is path-dependent if the process of change accommodates or retains the logic, beliefs and/or features of past institutional arrangement [39]. Institutional path-dependence occurs because, increasing returns (positive feedbacks) – resulting from sunk and high setup costs, learning effects, coordination effects, adaptive expectations, and vested interests/power asymmetries – create a self-reinforcement mechanism that pushes institutional change into an established path [35, 97, 99]. Whilst increasing returns may result in institutional lock-in, institutional change still occurs. However, “[t]he economies of scope, complementarities, and network externalities of an institutional matrix make institutional change overwhelmingly incremental and path dependent.” [22]. Ideas can also serve as weapons in distributional struggles and as cognitive locks (intellectual path-dependence) pushing subsequent institutional change in the same path [100].

Acemoglu et al. [101] divides path-dependent change into “intrinsic path-dependent change” resulting from internal dynamics, and “extrinsic path-dependent change” caused by exogenous shocks. Path-dependent change may occur because “power begets power” – groups empowered by a certain institutional arrangement are reproduced and will use their power to reproduce their preferred institutional arrangements in subsequent institutional changes [101]. Actors with power may also fear to diverge from a particular institutional path because they are uncertain about the beneficial effects of institutional changes. Institutional change under such conditions occurs mostly in an incremental or gradual fashion [34, 35].

Path-dependent and gradual institutional change may be interspersed or punctuated by abrupt (revolutionary) change that disrupts the institutional equilibrium due to exogenous shocks to the socioeconomic environment and political (power) dynamics such as a crisis [34, 101]. Such institutional change can occur when groups empowered by the existing institutional arrangement prefer a different institutional arrangement, or when they fear the reaction of the disempowered whose de facto power and ability to organize and solve their collective action problems may change over time [101]. Exogenous shocks or critical junctures (major events or confluence of factors) may disrupt the balance of political or economic power [40].

Shifts in balance of power and coalitions may also result from changes in environmental conditions or change in complementary institutions that change resource distribution [34].

Path-dependence and gradual change have been illustrated in institutional change in a variety of marine coastal systems. Weber de Morais et al's [24, 102] analysis of institutional development for marine protected areas illustrate how the mechanisms of path-dependent institutional change: learning effects, coordination effects, high set-up costs, adaptive expectations and power asymmetries contributed to the institutional arrangements being modelled after terrestrial conservation institutional principles and practices. Bertheussen [103] shows how critical juncture (collapse of fishery) triggered a transition from an open access regime to closed entry institutions and subsequent introduction of ITQ regimes. Before this, "the century-old high quality fisheries management institution" had contributed to biological, economic and social sustainability along the Norwegian coastline and thus experienced a lock-in [103]. The role of increasing returns has been illustrated in the evolution of TURFs in Japan, where historical territorial institutions of the feudal era provided less costly paths for institutional development (see [104–106]). The high transaction costs (relating to enforcement and conflict resolution) of operating under a centralized institutional regime meant that a revolutionary institutional change was curtailed, and a reversion to historical institutional paths with marginal changes [106].

The role of path-dependent power distribution in the path-dependent/gradual institutional change has also been exemplified in the evolution of fisheries governance in the Faroe Islands [107]. Fisheries subsidy policies implemented in open access fisheries before and after the establishment of EEZ in 1977, and initial institutional path for restricting and allocating access (vessel licensing regime) created informal insider groups with vested interests. As a result "the vessel license holders have constituted the decisive insider group of the Faroese fishing industry with particular preferences with respect to Faroese fisheries management and immense political power to shape the structure of the management regime" [107]. Subsequent efforts to change institutional arrangements since 1994 – from vessel licensing system to ITQs and transferrable effort quotas – have only led to marginal amendments and persistence of the logic and features of the vessel-licensing regime due to the strong political bargaining power of the insider groups in the fishery [107, 108].

2.4. Distributional conflict/power struggle

Institutions have distributional consequences and they protect certain interests and values [16, 33]. Distributional conflict and power theories seek to illuminate the influence of distributional conflicts and power asymmetries in a society on institutional change (see [23, 41, 58, 109–

111]). This theoretical approach emerged as a critique to functionalist/efficiency theories for their focus on collective-benefits and the neglect of the role of conflict and power in institutional change [23]. Because there exist multiple institutional alternatives with varied distributional effects, actors engage in strategic bargaining and the institutional arrangement that emerges is a product of actors' strategic action in "the process seeking distributional advantage in conflict over substantive benefits; the development of institutional rules is merely a means to this substantive end" [112]. The position agents take in the process of lobbying, bargaining and political actions to change institutions is "determined by their expected net gains from the new arrangement" [58].

Influential agents can lobby politicians who have the power to change laws and administrative practices relating to property rights institutions or to block institutional change if they are not sufficiently compensated [58]. Changes in relative bargaining power resulting from change in resource-holding power exogenous to the specific institution can precipitate institutional change [23]. In another perspective, institutions structure bargaining power and coercive power resources unequally; those who have weaker power resources will acquiesce with or give consent to institutional arrangement if there are "gains from trade, the cost of withdrawal are too high or they are unable to perceive an alternative" [110]. In this perspective, an important source of institutional change is "the redistribution of the bargaining and coercive resources of power within the institution" [110].

The mechanism of institutional choice in this theoretical approach is bargaining competition among actors over distributional outcomes of various alternative institutional arrangements because of competing preferences [23, 112]. In this process, relative bargaining power determines the acceptance or rejection of various commitments people have to alternative institutional choices and the ability of the powerful group to enforce institutions considering relative costs [111]. Also, "asymmetries of resource ownership serve as an ex ante measure of bargaining power of actors in a social interaction" [112]. Coercive power is also a key determinant of institutional arrangements to resolve conflicts of interests [33, 41, 110]. That is, "the *political power* [italics in original] of the different groups will be the deciding factor" in the bargaining process [41].

The distributional conflicts and power approach has been used to assess the emergence of co-management regimes and various forms of regulation in fisheries, privatization of coastal land for tourism, and the institutionalization of TURFs. Beem [113] adopted the propositions of distributional conflict and power struggle theories to understand variations in the emergence of co-management institutions in two fisheries – the Chesapeake Bay blue crab fishery and Maine lobster fishery. She found that the development of institutions in both fisheries indicate

that distributional conflicts “provided the impetus for new rules to emerge as stakeholders, recognizing benefits of rule change, were willing to invest time and resources into the process to develop these new rules” [113]. Acheson [114] assessed the evolution of co-management institutions in the Maine Lobster fisheries illustrating that distributional issues were the impetus for emergence of the co-management regime and the mechanism of institutional choice was shaped by bargaining power.

Acheson and Knight [115] further demonstrate the role of distributional conflicts and bargaining power in the emergence of three institutional solutions for the management of the Maine Lobster fishery: size regulations and prohibitions against taking egg-bearing female lobsters; the double gauge law; and the trap limit regulation. They show that agents with resources could form a coalition with agents of the government to drive institutional change [115]. Ávila-García and Sánchez’s [116] study of the development of private property institutions for coastal ecotourism development in Costa Alegre, Mexico demonstrate how national and transnational business elites used their bargaining power (emanating from the resources and access they have to political elite) to influence government to change institutions. The government in turn leveraged the global conservation discourse to privatize coastal space for private ecotourism enterprise in the guise of environmentalism, using its coercive power. This shows how bargaining power, ideational power and coercive power can be so connected in institutional change.

2.5. Ideational theories

Ideational theories emerged to address the deficiencies of the rationality/efficiency-based assumptions in explaining institutional change in the context of uncertainty [31, 117]. These theories view institutional change as a result of people interpreting their world in various ways through certain ideational elements and how ideational power can influence actors’ normative and cognitive beliefs about institutions [31, 32, 39, 100, 117–121]. Such ideational elements may include beliefs, discourses, frames, narratives, ideologies, mental models, myths, dogmas and ideas in various forms [32, 100, 121]. Denzau and North [31] argue that actors do not always make institutional choices based on complete rationality in the context of uncertainty. Rather, “people act in part upon the basis of myths, dogmas, ideologies, and ‘half-baked’ theories. Ideas matter; and the way that ideas are communicated among people is crucial to theories that will enable us to deal with strong uncertainty problems at the individual level.” [31]. Ideologies are the underlying logical structures of institutions in a society; change in ideologies may thus trigger a co-evolutionary change in institutions [122]. If we are to understand decision making under conditions of uncertainty, “we must understand the

relationships of the mental models that individuals construct to make sense of the world around them, the ideologies that evolve from such constructions, and the institutions that develop in a society to order interpersonal relationships” [31].

Mental models change through learning and can be shaped by framing of new ideas or discourses that emerge through endogenous and exogenous processes and activities of actors especially in the context of uncertainty or crisis [32, 117]. Change in ideologies may result from logical incoherencies, which ideological entrepreneurs can leverage to develop new and less sophisticated but more logically coherent and consistent competing ideologies to cause a shift in ideologies; hence, trigger institutional change [122]. Campbell [32] identified four typologies of cognitive and normative ideas that influence institutional change: paradigms (assumptions or mental models that constrain the cognitive range of useful programs); programs (prescriptions that enable actors to chart a particular path of institutional change); frames (discourses, narratives and symbol actors use to legitimize programs or institutions); and public sentiments (public assumptions that constrain the normative range of legitimate programs available to actors).

Ideas often do not emerge and proliferate spontaneously – the role of institutional entrepreneurs in transmitting new ideas, mental models and values is crucial [32, 35]. The competition between ideas, mental models and ideology and their framing represents the mechanism of institutional change – they influence if a change occurs and the choice of institutional arrangements. During periods of uncertainty, powerful actors use framings to build their desired institutions – interests and preferences are no longer structurally determined but socially constructed, in the sense that, framing (politics of ideas) leads to agents reinterpreting their own interests and preferences to become homologous with the powerful actors [117, 123]. The explanatory potential of ideational theories is illustrated in several cases including: institutional change in mangroves governance, institutionalization of ecosystem-based management, institutional transformation for market-based conservation and privatization of fisheries.

Song et al [124] demonstrated the role of global discourses and framing in the evolution of mangrove governance institutions in the Philippines. The global framing of mangroves as “wasteland” in much of the 20th century spurred a pro-development narrative and institutional changes that facilitated the reclamation and conversion of mangroves into fishponds (“fishpond boom” and “shrimp fever”) throughout the 1950s-1980s. Due to the social and environmental impacts of conversion activities, an opposing global framing of mangroves as natural buffers and sites for community-based conservation emerged; resulting in institutional

changes – the passing of the Local Government Code (RA7160) – that facilitated “a broad transition from top-down to decentralized mode of coastal governance”[124]. The recent global framing of mangroves as carbon sinks undergirded by discourses and actions on blue carbon has again generated policy enthusiasm and processes of institutional development in the Philippines [124].

The transformation of governance to ecosystem-based management in the Great Barrier Reef in Australia as traced by Olsson and colleagues [125] presents where ideational framing facilitated institutional change. To ensure the successful passage and implementation of the rezoning legislation and plan, politicians, interest groups and the public had to be convinced through changing their mental models. The Great Barrier Reef Marine Park Authority (GBRMPA) “hired a highly skilled communication officer to produce a “reef under pressure” information campaign showing that the reef is no longer a pristine wilderness but rather is subject to anthropogenic degradation caused by coastal development, land use, shipping, tourism, and fishing” [125].

2.6. Isomorphic diffusion/bricolage theories

Another theoretical approach to studying institutional change is isomorphic diffusion and bricolage that emerged largely from organizational and cultural sociology [32, 46, 126–129]. Isomorphic diffusion/bricolage theories explain institutional change in terms of the spread (with little modifications) or rearrangement of existing institutional principles and practices in social systems through a population of actors [32]. These theories suggest that institutional elements may be translated or copied from one setting or organization to another leading to isomorphism [46], or institutional elements within the local setting may be rearranged through bricolage [32, 129]. Isomorphic diffusion can be motivated by substantive goals (to minimize transaction costs and optimize outcomes) or normative goals such as legitimacy [32]. Diffusion through bricolage can also be initiated as a response or adaptation to changing situations or everyday challenges actors are confronted with, such as crisis or resource depletion [130].

Competition, coercive, mimetic and normative mechanisms can lead to the institutionalization of similar institutional principles and practices of other social systems, leading to institutional isomorphic change [46, 61]. *Normative* processes refer to situations where, through learning, institutional principles and practices are adopted because they are considered normatively appropriate – they enhance legitimacy [61]. This process is considered mimetic if it involves imitation or copying, amid uncertainty and ambiguity, to enhance performance of the adopter. The mechanism of *competition* occurs when institutions are chosen to match that of competitors in the fear of losing out [32, 61]. *Coercion* refers to the coercive imposition of

institutions by powerful actors (e.g. states and international organizations) on other actors in exchange for loans and other valuable resources [61]. Coercive isomorphism can also be subtle in the sense that institution elements may be adopted to gain support of the originator [46].

To unpack the black box of how institutional principles and practices are institutionalized at the adopters' level, the mechanisms of *translation* and *bricolage* are useful [32]. Institutional bricolage is a process where actors craft new institutional solutions through an innovative process of assembling and recombining institutional principles and practices of existing institutional repertoire in their local setting [32]. This process results in the creation of new institutions which differ from but resemble the old institutions [32]. *Translation* refers to the blending of new institutional elements into already existing institutional arrangements – institutions may originate from somewhere else but are modified and blended with existing local institutional principles and practices [61]. These mechanisms of bricolage and translation could precipitate a revolutionary or evolutionary institutional change depending on the social, organisational and institutional context of institutional entrepreneurs and the constraints (both cognitive and material) they face [32].

Isomorphic diffusion/bricolage theories have been used to explain the institutionalization of fisheries co-management, integrated coastal zone management, marine spatial planning, and market-based sustainability certification schemes in fisheries and mangroves. Other areas of application include the emergence and reorganization of coordination structures in marine coastal governance organizations and the translation of international institutional principles and norms in coastal fisheries. The coercive mechanism of isomorphism is demonstrated in the institutionalization of ITQs in Faroe Island through the Commercial Fisheries Act of 1994 when the Faroese economy collapsed in 1992 [108]. The institutional change was “more or less forced upon the Faroese fisheries by the Danish authorities as a condition for desperately needed loans” [107]. “Under strict time pressure from Danish authorities, [...] the Structure Committee [in charge of crafting new institutional arrangement] decided to adopt the “Icelandic model,” and it recommended the introduction of ITQs” [131]. The coercive mechanism of isomorphic diffusion has also been demonstrated in institutional change in Thailand's fisheries governance. Through a market-based mode of governance, EU normative power was used to influence legal reforms and implementation, including the transition from open access to licensing system of fisheries management [132, 133].

The mimetic mechanism of isomorphic diffusion has been illustrated in the institutionalization of the Marine Stewardship Council (MSC) certification for marine coastal fisheries at the global level [134, 135]. Whilst the emergence of the MSC scheme was driven by sustainability

challenges and consumer concerns in the fisheries sector, the institutional approach was inspired by and modelled after the Forest Stewardship Council (FSC) certification. Through informal learning, the FSC model was considered applicable to fisheries and a similar model was imitated for fisheries [134]. Normative and competition mechanisms of isomorphic diffusion have also been demonstrated in the institutionalization of territorial eco-certification initiatives for fisheries in Japan, Iceland and Alaska in which international governance norms and practices (specifically, FAO eco-labelling guidelines) were drawn upon to institutionalize territorial eco-certification initiatives to enhance legitimacy and to compete with and offer alternative to the MSC [136].

2.7. Volitional pragmatism/sufficient reason

Volitional pragmatism/sufficient reason as a theory of institutional change has been developed by Daniel Bromley in his quest to offer an alternative theory of human action that escapes the “conceptual and empirical flaws” of the rational choice models with their stable preferences, utility maximization and tendency to explain institutional outcomes in terms of pareto efficiency (see [30, 137–139]). Rooted in the classical institutionalist tradition of Thorstein Veblen and John Commons, volitional pragmatism seeks to explain institutional change as a function of individual and collective actors intentional efforts to find “sufficient reason” to act within the limits of what is considered feasible or seen reasonable to do in the circumstances [30]. Based on the concepts of impressions, expressions and created imaginings, volitional pragmatism theory posits that, institutional change is motivated, *ab initio*, by “an inchoate yet emerging recognition that something must be done about existing institutional settings and their associated outcomes to *mitigate probable harms* that would otherwise emanate from a continuation of the status quo ante institutional setup” [137].

That is, when there is a shared understanding among individuals or groups of individuals that their created imaginings of the future under current institutional arrangements is undesirable, they will initiate institutional change [30]. Under this theory, institutional change entails three basic steps of formulating and implementing created imaginings: 1) recognition by actors that the status quo institutional setup induces particular individual behaviours and produces outcomes that are no longer regarded as acceptable or reasonable; 2) initiation of created imaginings (mappings of plausible outcomes from the enactment of new institutional arrangements) and a process of sifting winnowing through the created imaginings till one dominates the others; and 3) modification of the working rules for the explicit purpose of implementing the dominating created imaginings [137]. In the last step of the process, the

“dominant imagining comprises the *sufficient reason* [emphasis added] for the new institutions. It explains the institutional change.” [30].

The dominant imagining is selected for implementation of new institutional solutions through a collective action process in the legislature, executive branch, courts, village councils, supranational forums, among others [30, 137]. The collective action involves “a process of reconciling contending expressions and imaginings, and this is an essential activity leading to the formulation of what seems best, in the eyes of the individual (or of the group), to do” [137]. Under this theory, institutional change is a continuous process because ideas change, actors change as they learn (e.g. through experimentation), and their created imaginings in the future also change [30]. This theoretical approach has been exemplified in studying institutional change in marine coastal realm in a case of fisheries governance.

Ellefsen and Bromley [131] applied the logic and propositions of volitional pragmatism/sufficient reason to assess five attempts at institutional change in fisheries governance in the Faroe Islands over a 40-year period: 1) forced adjustments in response to the new Law of the Sea creation of Exclusive Economic Zones; 2) imposed reforms by Denmark in 1994; 3) industry-driven reforms in 1996; 4) market-based reforms beginning in 2018; and 5) abandonment of the 2018 reforms 2 years later. Here, the process of institutional change involved a “long and tortured transition in the Faroe Islands as it now enters its fifth attempt at crafting a coherent and acceptable fisheries governance regime” [131]. The whole process of institutional change represents a case of institutional development where contending visions are continuously balanced as “the ever-changing cast of participants—industry, scientists, interested citizens, and the politicians watching and influencing the process unfold—were constantly revising their views about what they wanted to achieve as they interacted with a dynamic cohort of participants. This revising necessarily follows from the fact that all participants were unsure of what they “wanted” until they were able to learn (to realize) what they might be able to have” [131].

Table 1 Overview of theories of institutional change and empirical applications

	Evolutionary theories	Functionalism/ efficiency	Path-dependence theories	Distributional Conflict & power struggle	Ideational theories	Isomorphic diffusion	Volitional Pragmatism
<i>Key concepts</i>	Decentralized emergence; Spontaneous evolution; Coevolution; Variation; Selection; Replication; Punctuated equilibrium	Competition; Efficiency; Transaction costs; Exogenous parameters; Rational choice	Path-dependence; Critical junctures; Incremental change; Power-distribution; Increasing returns; Sunk cost; Set-up costs; Punctuated equilibrium	Distributional conflicts; Bargaining power; Coercive power; Multiple equilibria; Bounded rationality	Ideology; Mental models; Ideas; Discourses; Framing	Bricolage; Translation; Competition; Mimetic; Coercive; Normative; Isomorphism	Sufficient reason; Created imaginings; impressions; expressions; Pragmatism; Collective action
<i>Drivers of Institutional change</i>	Imitation, learning & adaptation to changing environments (e.g., behavior, technology, institutions, biophysical context).	Functional deficiency; Change in exogenous parameters: relative prices, technology, resource endowments & advances in social science knowledge	Exogenous shocks/critical junctures; Change in endogenous parameters (e.g., rule interpretation); Change in power resources	Distributional conflicts; Changes in technology & prices may alter endowments & bargaining power; Change in the balance of power resources; Withdrawal of consent or acquiescence	New ideas & ideological change; Change in mental models or beliefs; Shifts in paradigms or public sentiments; Crisis & uncertainty	Emergence of challenges in everyday interactions; Exogenous shocks; perceived crisis; Change in endogenous parameters; competition goals	Existing undesirable behavior produced by existing institutional set-up; change in shared mental objectifications (desired imaginings)
<i>Mechanisms of institutional change & choice</i>	A process of experimentation (trial-and-error) where the most successful	Mechanism of competition among institutional alternatives;	A collective process of bargaining & balancing interests; Past	Mechanism of bargaining & power struggle; bargaining power/coercive	Competition between ideas and mental models; discursive	Mimetic, coercive & normative mechanisms, bricolage/translation generate	Collective action process in parliament, courts, community

	institutions emerge; Efficiency (near optimum outcomes ex post), Prominence & versatility of institution influence institutional choice	Transaction costs institutional choice	institutional legacies, Power asymmetries & sunk & set-up costs influence path of institutional change	power determine institutional choice	framing & ideational power determine institutional choice	institutional change; Collective interpretation & social legitimacy, structural & ideational power determine institutional choice	courts etc. where contending visions are evaluated; dominant created imaginings & pragmatism determine institutional choice
<i>Seminal & relevant theoretical literature</i>	[70, 72, 73, 75, 77, 80, 140]	[43, 87, 89–92]	[34, 35, 97, 98, 141]	[23, 41, 110, 142]	[31, 32, 39, 100, 117]	[32, 46, 126, 127]	[30, 137, 138]
<i>Empirical applications in marine coastal context</i>	[84, 85, 143–146]	[94, 95, 147, 148]	[102, 103, 149–151]	[113–116, 152]	[124, 153–155]	[135, 136, 156–158]	[131]
<i>Strengths & contexts when theory is most useful</i>	In contexts emergence & change of informal institutions such as social norms & conventions; strong for explaining change in context of uncertainty & complexity	Market-like contexts where uncertainty & power asymmetries are minimal but competition & economic interests are high; strong for examining coordination &	Context where dependencies are high & vested interests is prominent; Strong for examining persistence of inefficient or undesirable and incremental change	Contexts where power asymmetries exist & distributional issues/ conflicting interests are prominent; strong for explaining mechanisms of change	Contexts where uncertain & complexity shape actors' decisions, rationality & interactions; strong potential for explaining institutional choice in uncertainty &	In contexts where uncertainty is high & imitation, or experimentation is inevitable; In situations; strong potential for explaining institutional choice in uncertainty & the	In context where interdependencies are high & collective action is inevitable; Strong for explaining institutional change in contexts of uncertainty;

		governance structures or organizational forms			the influence of international ideology/discourse at national & local levels	influence of global institutional principle at national & local levels	
<i>Limitations</i>	Weak in explaining change in the context of centralized & intentional design & power asymmetries	Ignores the role of power asymmetries; weak in context of uncertainty & complexity where pure rationality is impossible	Tend to focus on institutional persistence; weak in explaining revolutionary change	Not very suitable for explaining situations where cooperation is favored than conflict;	Tend to overemphasize agency & ideational power but does not sufficiently account for structural power	Weak in explaining institutional innovations that are novel and where past or existing institutional templates are absent	Tend to downplay the role of instrumental rationality

3. Discussion

In this paper, we explored the explanatory potential of theories of institutional change in relation to contextual institutional features and materiality of the coastal marine realm. The empirical cases of institutional change cut across various institutional arrangements in marine coastal systems, including fisheries, mangroves, coastal tourism, marine spatial planning, and ecosystem-based management. We find that all the theories, to some degree, have been applied to study institutional change in marine coastal governance. However, the explanatory potential of each theory depends on the contextual features of the marine coastal system. Institutional arrangements in marine coastal governance have international/global, national, and local, dimensions. Uncertainty, complexity, and interdependencies are inherently high. Actor constellations and knowledge systems are diverse, and power asymmetries are ubiquitous. These social and material conditions influence institutional change and thus the explanatory purchase of various theories. Here, we discuss the findings in relation to the five key contextual features of the coastal marine realm – uncertainty, complexity, interdependencies, knowledge/power asymmetries, and governance scale (international, national, and local).

First, high *uncertainty* is one major challenge for governance transformations in the marine coastal realm [63]. Under conditions of high uncertainty, history, experimentation, ideas, mental models, and ideology play a huge role in driving institutional change and mechanisms of institutional choice. In this context, ideational theories, isomorphic diffusion, path-dependence/gradual change theories have stronger explanatory potential for understanding institutional change in resource systems where uncertainty is high (e.g. fisheries). Uncertainty creates a search for new ideas and in the process, our mental models and historical institutional and cognitive paths influence our choices [35, 39]. We may mimic institutional examples from a similar context [46]. It is in the context of uncertainty that ideas have a high degree of influence [117]. Ideas change through learning, and as we experiment with institutional solutions, we get better ideas of how they perform and what outcomes are desirable and undesirable, leading to further institutional change [138]. From this perspective, volitional pragmatism and evolutionary theories of institutional change also provide very useful analytical tools for examining change in the context of high uncertainty.

Secondly, marine coastal systems are characterized by high material and social *complexity*. This means that systems are likely to coevolve as they change each other through interactions. Where material complexity and institutional complexity are considerations in the study of any empirical cases of institutional change in the marine coastal realm, evolutionary theories, and

path-dependence/gradual change theories can better illuminate institutional change. This is the case because interactions within and between systems shape and produce emergent effects, leading to coevolution; history plays an important role in the process because interdependencies exist [68]. Volitional pragmatism/sufficient reason also has strong analytical purchase in this context. Complexity means that institutional change occurs through collective action of multiple and diverse actors with contending visions (created imaginings) interacting in complex ways. This generates an evolutionary process of working out a purpose of action, and thus institutional change [138].

Thirdly, if the role of *interdependencies* is a key focus of any empirical study of institutional change, path-dependence/gradual change, and distributional conflict theories have stronger explanatory potential. This is especially true if we are examining the development or change of formal institutions, precisely because institutional complexity is high, which increases the role of institutional path-dependencies. Informal institutions developed much earlier in many marine coastal systems before formal institutions. Where interdependencies are high, path-dependence/gradual change theories have stronger analytical utility for studying empirical cases of institutional change, because other dependencies – goal dependencies, cognitive, organizational and material path-dependencies become equally high [68]. This array of dependencies leads to entrenchment of institutional paths taken at critical junctures in relation to one interdependent marine coastal system, which then constrain or provide less costly institutional paths for the governance change in the other. Also, distributional conflict/power struggle theories can be analytically useful for understanding institutional change that involves high interdependencies and collaboration between and among actors with asymmetric power resources, or the restructuring of power and distributional incentives. This is very instructive from the study of the evolution of co-management in the Maine lobster fishery [114].

Interdependencies relate to a key phenomenon in marine coastal governance – *knowledge/power asymmetries* of actors. Asymmetries in knowledge/power are ubiquitous in the marine coastal realm, and these play a huge role in institutional change [159]. If we are to understand the role of knowledge/power asymmetries in institutional change in this context, volitional pragmatic/sufficient reason and ideational theories provide stronger analytical tools. These theoretical approaches emphasize the struggle of and over ideas and ideologies, and ideational power becomes critical. However, the degree to which either theory is more useful may depend on the scale of governance in focus. Volitional pragmatism and ideational theories both have stronger analytical power for explaining institutional change at the *international/global level*. Ideological hegemony (ideational and bargaining power) of the

actors determine which institutional arrangements emerge to govern environmental resources at global scale [160]. Institutional change at international levels often involves an interplay of contending discourses and ideologies [161], and discursive power and ideological hegemony play a huge role in marine governance change, even if the role of structural power cannot be discounted [159]. This also means that distributional conflict and power theories can be analytically useful to a certain degree in international marine governance context.

At the *national scale*, distributional conflict/power struggle, isomorphic diffusion, volitional pragmatism, path-dependence/incremental change, and ideational theories all provide strong analytical tools for studying institutional change in the marine coastal context. The dynamics of international processes directly influence institutional change at the national level. It is common that international institutional norms of marine governance are diffused to national level institutional processes of various countries through various mechanisms of governance [157]. In such contexts, isomorphic diffusion and ideational theories provide very useful analytical tools for understanding institutional change. Formal institutional change at the national level in marine governance tends to be incremental and path-dependent because of complexity and vested interest of actors with power [63]. This makes path-dependence/gradual change and distributional conflict/power struggle theories strong candidates for understanding institutional change at the national scale of marine coastal governance. Volitional pragmatism has a strong analytical potential for understanding institutional development at the national level. Because of the uncertainty and complexity inherent in marine coastal systems and the diversity of actors in this realm, institutional change often involves a dynamic process of learning and balancing contending visions (created imaginings) within the constraints of incomplete mental models and ever-changing interests and knowledge systems [30].

Lastly, for institutional change at the very *local scale*, decentralized emergence often occurs in many aspects including contracts development in marine resources [148, 162] and co-management regimes [144]. Thus, evolutionary theories and distributional conflict/power theories can be very useful in such contexts. In such decentralized contexts where market forces and competition have a huge role in social interactions in the use of marine coastal resources, functionalist/efficient theories can be analytically strong for understanding institutional change. This is the case for the development of contracts linking fishermen and processors [148], and to some extent, the development of ITQs in fisheries [94]. Because such institutional arrangements govern some mode of exchange and competition, minimizing transactions becomes very important in the choice of institutional arrangements. This does not

mean that other theories of institutional change are less important here. Kingston's [163] study of institutional change in marine insurance markets illustrates the point that in pure market-like settings, path-dependence theories are still very useful for understanding institutional change.

In general, many of the examples of institutional change used in this study illustrate an indispensable role of ideational, evolutionary, distributional conflict/power struggle and path-dependence/gradual change theories for understanding institutional change in the context of uncertainty, complexity, and interdependence. Because of the uncertainty inherent in the marine coastal realm, institutional arrangements are in constant flux but also constrained by historical legacies. Path-dependence/gradual change theories have the strongest explanatory potential in relation to the contextual features of the marine coastal realm. This is so because it accommodates both agency and structure – it has power, ideational, diffusion, transaction costs, and evolutionary dimensions – in its explanation of institutional dynamics.

In addition, the analysis also points to the importance of geographical context in the explanatory potential of the theories. For instance, in many cases of institutional change in the Global South, isomorphic diffusion/bricolage theories tend to explain institutional change. However, such institutional principles might have emerged in a context through processes that cannot be explained by isomorphic theories but other theoretical approaches that emphasize ideational elements and distributional conflicts. Many examples exist in the Global South in which institutional change in marine coastal governance simply entailed the translation of institutional blueprints into the local contexts through donor ideology and funding programs (see [164, 165]). From this perspective, it is useful to study institutional change in different contexts of marine and coastal resource governance to enable comparison and a broader understanding of institutional change more generally.

Table 2 Comparison of the explanatory potential of theories of institutional change vis-à-vis the contextual features of the marine coastal realm

<i>Contextual elements of the Marine coastal systems</i>	Functionalism /efficiency theories	Distributional conflict/ power struggle	Ideational theories	Isomorphic diffusion	Path-dependence/g radual change	Volitional pragmatism/ sufficient reason	Evolutionary theories
High uncertainty	☒	☒	☑	☑	☑	☑	☑
High complexity	☒	✓	☒	☒	☑	☑	☑
High interdependencies	☒	☑	✓	✓	☑	☑	☑
Knowledge/power asymmetries	☒	☑	☑	✓	☑	✓	☒
International scale	☒	☒	☑	✓	✓	☑	☒
National scale	☒	✓	☑	☑	☑	☑	✓
Local scale	☑	☑	☑	☑	☑	✓	☑

Qualitative Rating System for the theories	
☒	Low applicability (has weak explanatory potential)
✓	Medium Applicability (has strong explanatory potential)
☑	High applicability (has the strongest explanatory potential)

4. Conclusion

In this paper, we have presented a range of theories of institutional change that could be useful for understanding transformations in the marine coastal realm. We first presented an overview of the theories more generally and then applied the arguments of each theory to the features of institutional change in specific coastal and marine socioeconomic and ecological systems. We argue that each theoretical approach has explanatory purchase for understanding institutional change depending on the context, scale, the specific coastal marine system, and the institutional features under consideration. Because of the uncertainty, complexity, and interdependencies inherent in marine coastal systems, institutional change is usually much more complex than modelled in single theories. From an ontological perspective, institutions embody multiple constitutive elements – varied and competing beliefs, ideas, mental models/ideologies, and power asymmetries; they have functional properties and distribute incentives. There are always multiple interests, contending visions, logics and rationalities that shape any process of institutional change. This is especially true in the coastal marine realm with diverse actors located at various nodes of the institutional change process.

Therefore, a much more comprehensive understanding of institutional development and change in the coastal marine realm warrants combining complementary theoretical approaches. Drawing from one theoretical approach to analyse institutional change may leave many questions unanswered because of uncertainty, complexity, and interdependencies. One could also argue that it is possible to develop a single theory of institutional change that is amenable to encapsulating the array of institutional variables and materiality as well as complexity, uncertainty, and interdependencies in marine coastal systems. The evolutionary governance theory (EGT) [68, 81] is a step in this direction but looks at governance more broadly than typical institutional theories. Similar developments in institutional theory with specific orientation towards the institutional characteristics of coastal marine governance will be important for empirical research on institutional change and sustainability transformations in the marine coastal realm.

References

- [1] Neumann B, Ott K, Kenchington R. Strong sustainability in coastal areas: a conceptual interpretation of SDG 14. *Sustainability Science* 2017; 12(6): 1019–35.
- [2] Mallin F, Barbesgaard M. Awash with contradiction: Capital, ocean space and the logics of the Blue Economy Paradigm. *Geoforum* 2020; 113: 121–32.

- [3] Voyer M, Benzaken D, Rambourg C. Institutionalizing the Blue Economy: an examination of variations and consistencies among Commonwealth countries. *Philosophical transactions of the Royal Society of London. Series B, Biological sciences* 2022; 377(1854): 20210125.
- [4] Bavinck M, Verrips J. Manifesto for the marine social sciences. *Maritime Studies* 2020; 19(2): 121–3.
- [5] Bavinck M, Jentoft S, Scholtens J. Fisheries as social struggle: A reinvigorated social science research agenda. *Marine Policy* 2018; 94: 46–52.
- [6] Arbo P, Knol M, Linke S, St. Martin K. The transformation of the oceans and the future of marine social science. *Maritime Studies* 2018; 17(3): 295–304.
- [7] Schlüter A, Bavinck M, Hadjimichael M, Partelow S, Said A, Ertör I. Broadening the perspective on ocean privatizations: an interdisciplinary social science enquiry. *E&S* 2020; 25(3).
- [8] Bennett NJ, Cisneros-Montemayor AM, Blythe J, Silver JJ, Singh G, Andrews N et al. Towards a sustainable and equitable blue economy. *Nat Sustain* 2019; 2(11): 991–3.
- [9] Campbell LM, Gray NJ, Fairbanks L, Silver JJ, Gruby RL, Dubik BA et al. Global Oceans Governance: New and Emerging Issues. *Annu. Rev. Environ. Resour.* 2016; 41(1): 517–43.
- [10] Scoones I, Stirling A, Abrol D, Atela J, Charli-Joseph L, Eakin H et al. Transformations to sustainability: combining structural, systemic and enabling approaches. *Current Opinion in Environmental Sustainability* 2020; 42: 65–75.
- [11] Blythe J, Silver J, Evans L, Armitage D, Bennett NJ, Moore M-L et al. The Dark Side of Transformation: Latent Risks in Contemporary Sustainability Discourse. *Antipode* 2018; 50(5): 1206–23.
- [12] Abson DJ, Fischer J, Leventon J, Newig J, Schomerus T, Vilsmaier U et al. Leverage points for sustainability transformation. *Ambio* 2017; 46(1): 30–9.
- [13] Biermann F, Abbott K, Andresen S, Bäckstrand K, Bernstein S, Betsill MM et al. Transforming governance and institutions for global sustainability: key insights from the Earth System Governance Project. *Current Opinion in Environmental Sustainability* 2012; 4(1): 51–60.
- [14] Herrfahrtdt-Pähle E, Schlüter M, Olsson P, Folke C, Gelcich S, Pahl-Wostl C. Sustainability transformations: socio-political shocks as opportunities for governance transitions. *Global Environmental Change* 2020; 63: 102097.
- [15] Partelow S, Schlüter A, Wehrden H von, Jänig M, Senff P. A Sustainability Agenda for Tropical Marine Science. *Conservation Letters* 2018; 11(1): e12351.

- [16] Vatn A. *Institutions and the Environment*. Cheltenham: Edward Elgar Publishing; 2005.
- [17] Vatn A. *Governing the environment: The institutional economics approach*. In: Marletto G, editor. *Creating a Sustainable Economy: An institutional and evolutionary approach to environmental policy*. London, New York: Routledge Taylor & Francis Group; 2012, p. 67–91.
- [18] Vatn A. *Institutions for sustainability—Towards an expanded research program for ecological economics*. *Ecological Economics* 2020; 168: 106507.
- [19] Paavola J. *Institutions and environmental governance: A reconceptualization*. *Ecological Economics* 2007; 63(1): 93–103.
- [20] Paavola J, Adger WN. *Institutional ecological economics*. *Ecological Economics* 2005; 53(3): 353–68.
- [21] Epstein G, Morrison TH, Lien A, Gurney GG, Cole DH, Delaroché M et al. *Advances in understanding the evolution of institutions in complex social-ecological systems*. *Current Opinion in Environmental Sustainability* 2020; 44: 58–66.
- [22] North DC. *Institutions and Economic Theory*. *The American Economist* 1992; 36(1): 3–6.
- [23] Knight J. *Institutions and Social Conflict*: Cambridge University Press; 1992.
- [24] Weber de Morais G, Schlüter A, Verweij M. *Can institutional change theories contribute to the understanding of marine protected areas?* *Global Environmental Change* 2015; 31: 154–62.
- [25] Schlüter A, Wise S, Schwerdtner Mánez K, Weber de Morais G, Glaser M. *Institutional Change, Sustainability and the Sea*. *Sustainability* 2013; 5(12): 5373–90.
- [26] Partelow S, Abson DJ, Schlüter A, Fernández-Giménez M, Wehrden H von, Collier N. *Privatizing the commons: New approaches need broader evaluative criteria for sustainability*. *International Journal of the Commons* 2019; 13(1).
- [27] Caballero G, Soto-Oñate D. *The Diversity and Rapprochement of Theories of Institutional Change: Original Institutionalism and New Institutional Economics*. *Journal of Economic Issues* 2015; 49(4): 947–77.
- [28] Aoki M. *Endogenizing institutions and institutional changes*. *Journal of Institutional Economics* 2007; 3(1): 1–31.
- [29] Greif A (ed.). *Institutions and the Path to the Modern Economy*. Cambridge: Cambridge University Press; 2006.
- [30] Bromley DW. *Sufficient reason: Volitional pragmatism and the meaning of economic institutions*. Princeton: Princeton University Press; 2006.

- [31] Denzau AT, North DC. Shared mental models: ideologies and institutions. *Kyklos* 1994; 47(1): 3–31.
- [32] Campbell JL. *Institutional Change and Globalization*: Princeton University Press; 2004.
- [33] Schmid AA. *Conflict and Cooperation: Institutional and Behavioral Economics*: Blackwell Publishing Ltd; 2004.
- [34] Mahoney J, Thelen KA. A Theory of Gradual Institutional Change. In: Mahoney J, Thelen KA, editors. *Explaining Institutional Change: Ambiguity, Agency, and Power*. Cambridge: Cambridge University Press; 2010, p. 1–37.
- [35] North DC. *Institutions, Institutional Change and Economic Performance*. Cambridge: Cambridge University Press; 1990.
- [36] Scott WR. *Institutions and organizations: Ideas, interests, and identities*. Los Angeles: SAGE; 2014.
- [37] Hodgson GM. *The Evolution of Institutional Economics: Agency, Structure and Darwinism in American Institutionalism*: Routledge; 2004.
- [38] Hodgson GM. Institutional/evolutionary economics and environmental policy. In: Marletto G, editor. *Creating a Sustainable Economy: An institutional and evolutionary approach to environmental policy*. London, New York: Routledge Taylor & Francis Group; 2012, p. 92–114.
- [39] North DC. *Understanding the process of economic change*. Princeton N.J.: Princeton University Press; 2005.
- [40] Acemoglu D, Robinson JA. *Why nations fail: The origins of power, prosperity and poverty* / Daron Acemoglu and James A. Robinson. London: Profile Books; 2012.
- [41] Acemoglu D, Robinson J. The Role of Institutions in Growth and Development. *Review of Economics and Institutions* 2010; 1(2).
- [42] Greif A. *Institutions and the Path to the Modern Economy: Lessons from Medieval Trade*. Cambridge: Cambridge University Press; 2006.
- [43] Williamson OE. *The Economic Institutions of Capitalism*. New York: The Free Press-Macmillan; 1985.
- [44] Williamson OE. *The Mechanisms of Governance*. Oxford: Oxford University Press; 1996.
- [45] Coase RH. The nature of the firm. *Economica* 1937; IV: 386–405.
- [46] DiMaggio PJ, Powell WW. The Iron Cage Revisited: Institutional Isomorphism and Collective Rationality in Organizational Fields. *American Sociological Review* 1983; 48(2): 147–60.

- [47] Mahoney J, Thelen KA (eds.). *Explaining Institutional Change: Ambiguity, Agency, and Power*. Cambridge: Cambridge University Press; 2010.
- [48] Hall PA, Thelen K. Institutional change in varieties of capitalism. *Socio-Economic Review* 2008; 7(1): 7–34.
- [49] Streeck W, Thelen KA (eds.). *Beyond continuity: Institutional change in advanced political economies*. Oxford: Oxford University Press; 2005.
- [50] Thelen K. Historical institutionalism in comparative politics. *Annual Review of Political Science* 1999; 2: 369–404.
- [51] Thelen KA (ed.). *How institutions evolve: The political economy of skills in Germany, Britain, the United States and Japan*. Cambridge: Cambridge University Press; 2004.
- [52] Steinmo S, Thelen KE, Longstreth F (eds.). *Structuring politics: Historical institutionalism in comparative analysis*; 1992.
- [53] Ostrom E. *Governing the Commons: Evolution of Institutions for Collective Action*: Cambridge University Press; 1990.
- [54] Schlager E, Ostrom E. Property-rights regimes and natural resources: a conceptual analysis. *Land economics* 1992: 249–62.
- [55] Bromley DW. The commons, common property, and environmental policy. *Environ Resource Econ* 1992; 2(1): 1–17.
- [56] Ensminger J, Rutten A. The Political Economy of Changing Property Rights: Dismantling a Pastoral Commons. *American Anthropologist* 1991; 18(4): 683–99.
- [57] Baland J-M, Platteau J-P. *Halting degradation of natural resources: Is there a role for rural communities?* Oxford: Oxford Univ. Press; 1996.
- [58] Libecap GD. *Contracting for Property Rights*: Cambridge University Press; 1989.
- [59] Agrawal A. Common Property Institutions and Sustainable Governance of Resources. *World Development* 2001; 29(10): 1649–72.
- [60] Kingston C, Caballero G. Comparing theories of institutional change. *Journal of Institutional Economics* 2009; 5(2): 151–80.
- [61] Campbell JL. Institutional Reproduction and Change. In: Morgan G, Campbell JL, Crouch C, Pedersen OK, Whitley R, editors. *The Oxford Handbook of Comparative Institutional Analysis*. Oxford: Oxford University Press; 2010, 87-115.
- [62] Schlüter A, Partelow S, Torres-Guevara LE, Jennerjahn TC. Coastal commons as social-ecological systems. In: Hudson B, Rosenbloom J, Cole D, editors. *Routledge Handbook of the Study of the Commons*. Abingdon, Oxon, New York, NY Routledge, 2019.: Routledge; 2019.

- [63] Kelly C, Ellis G, Flannery W. Unravelling Persistent Problems to Transformative Marine Governance. *Front. Mar. Sci.* 2019; 6.
- [64] Otter HS, Capobianco M. Uncertainty in Integrated Coastal Zone Management. *Journal of Coastal Conservation* 2000; 6(1): 23–32.
- [65] Jentoft S, Bavinck M, Johnson D, Thomson K. Fisheries Co-Management and Legal Pluralism: How an Analytical Problem Becomes an Institutional One. *Human Organization* 2009; 68(1): 27–38.
- [66] Meinen-Dick RS, Pradhan R. *Legal Pluralism and Dynamic Property Rights*. Washington, D.C; 2002.
- [67] Schneider V. Governance and Complexity. In: Levi-Faur D, editor. *The Oxford Handbook of Governance*: Oxford University Press; 2012, p. 129–142.
- [68] Van Assche K, Hornidge A-K, Schlüter A, Vaidianu N. Governance and the coastal condition: Towards new modes of observation, adaptation and integration. *Marine Policy* 2020; 112.
- [69] Brousseau E, Garrouste P, Raynaud E. Institutional changes: Alternative theories and consequences for institutional design. *Journal of Economic Behavior & Organization* 2011; 79(1-2): 3–19.
- [70] Nelson RR, Winter SG. *An evolutionary theory of economic change*. Cambridge, Mass.: Belknap Press of Harvard Univ. Press; 1982.
- [71] Hodgson GM. Evolution and Institutional Change: On the Nature of Selection in Biology and Economics. In: Mäki U, Gustafsson B, Knudsen C, editors. *Rationality, institutions, and economic methodology*. London, New York: Routledge; 1993, p. 222–241.
- [72] Hayek FA von. *Law, Legislation and Liberty*: University of Chicago Press; 1973.
- [73] Alchian AA. Uncertainty, Evolution, and Economic Theory. *Journal of Political Economy* 1950; 58(3): 211–21.
- [74] Bowles S, Choi J-K, Hopfensitz A. The co-evolution of individual behaviors and social institutions. *Journal of Theoretical Biology* 2003; 223(2): 135–47.
- [75] Bowles S. *Microeconomics: Behavior, institutions, and evolution*. New York, Princeton N.J.: Russell Sage; Princeton University Press; 2004.
- [76] Hayek FA von. *The Constitution of Liberty*: The University of Chicago; 1960.
- [77] Van den Bergh JCJM, Stagl S. Coevolution of economic behaviour and institutions: towards a theory of institutional change. *Journal of Evolutionary Economics* 2003; 13(3): 289–317.

- [78] Lewis OA, Steinmo S. How Institutions Evolve: Evolutionary Theory and Institutional Change. *Polity* 2012; 44(3): 314–39.
- [79] Bergstrom TC. Evolution of Social Behavior: Individual and Group Selection. *Journal of Economic Perspectives* 2002; 16(2): 67–88.
- [80] Sugden R. Spontaneous Order. *Journal of Economic Perspectives* 1989; 3(4): 85–97.
- [81] Van Assche K, Beunen R, Duineveld M. *Evolutionary Governance Theory: An Introduction*: Springer; 2014.
- [82] Van Assche K, Duineveld M, Beunen R, Valentinov V, Gruezmacher M. Material dependencies: hidden underpinnings of sustainability transitions. *Journal of Environmental Policy & Planning* 2022; 24(3): 281–96.
- [83] Safarzyńska K, Van den Bergh JCJM. Evolutionary models in economics: a survey of methods and building blocks. *J Evol Econ* 2010; 20(3): 329–73.
- [84] Partelow S, Nelson K. Social networks, collective action and the evolution of governance for sustainable tourism on the Gili Islands, Indonesia. *Marine Policy* 2020; 112.
- [85] Waring T, Acheson J. Evidence of cultural group selection in territorial lobstering in Maine. *Sustainability Science* 2018; 13(1): 21–34.
- [86] Waring TM, Kline MA, Brooks JS, Goff SH, Gowdy J, Janssen MA et al. A multilevel evolutionary framework for sustainability analysis. *E&S* 2015; 20(2).
- [87] Eggertsson T. *Economic Behavior and Institutions: Principles of Neoinstitutional Economics*. Cambridge: Cambridge University Press; 1990.
- [88] Roland G. Understanding Institutional Change: Fast-Moving and Slow-Moving Institutions*. *Studies in Comparative International Development* 2004; 38(4): 109–31.
- [89] Demsetz H. Toward a Theory of Property Rights. *The American Economic Review* 1967; 57(2): 347–59.
- [90] North DC, Thomas RP. *An Economic Theory of the Growth of Western World*. *The Economic History Review* 1970; XXIII(1): 1.
- [91] Ruttan VW, Hayami Y. Toward a theory of induced institutional innovation. *The Journal of Development Studies* 1984; 20(4): 203–23.
- [92] Ruttan VW. Social science knowledge and induced institutional innovation: an institutional design perspective. *Journal of Institutional Economics* 2006; 2(3): 249–72.
- [93] Ménard C. A new institutional economics perspective on environmental issues. *Environmental Innovation and Societal Transitions* 2011; 1(1): 115–20.
- [94] Arnason R. The Icelandic Individual Transferable Quota System: A Descriptive Account. *Marine Resource Economics*, 1993; 8(3): 201–18.

- [95] Acheson JM. Private Land and Common Oceans. *Current Anthropology* 2015; 56(1): 28–55.
- [96] Gelcich S, Hughes TP, Olsson P, Folke C, Defeo O, Fernández M et al. Navigating transformations in governance of Chilean marine coastal resources. *Proceedings of the National Academy of Sciences of the United States of America* 2010; 107(39): 16794–9.
- [97] Pierson P. Increasing Returns, Path Dependence, and the Study of Politics. *Am Polit Sci Rev* 2000; 94(2): 251–67.
- [98] David PA. Why are institutions the 'carriers of history'? Path dependence and the evolution of conventions, organizations and institutions. *Structural Change and Economic Dynamics* 1994; 5(2): 205–20.
- [99] Pierson P. *Politics in time: History, institutions, and social analysis*. Princeton: Princeton University Press; 2004.
- [100] Blyth M. The Transformation of the Swedish Model: Economic Ideas, Distributional Conflict, and Institutional Change. *World Pol.* 2001; 54(1): 1–26.
- [101] Acemoglu D, Egorov G, Sonin K. Institutional change and institutional persistence. In: Bisin A, Federico G, editors. *The handbook of historical economics*. Amsterdam: Academic Press; 2021, p. 365–389.
- [102] Weber de Morais G. *Governance of Marine Protected Areas in Costa Rica: stability and change of institutions*. PhD Thesis. Bremen; 2016.
- [103] Bertheussen BA. The role of path-dependent institutions during the collapse and rebuilding of a fishery. *Marine Policy* 2022; 136: 104944.
- [104] Cancino J, Uchida H, Wilen JE. TURFs and ITQs: Collective vs. Individual Decision Making. *Marine Resource Economics* 2007; 22: 391–406.
- [105] Akimichi T, Ruddle K. The Historical Development of Territorial Rights and Fishery Regulations in Okinawan Inshore Waters. *Senri Ethnological Studies* 1984; 17: 37–88.
- [106] Makino M, Matsuda H. Co-management in Japanese coastal fisheries: institutional features and transaction costs. *Marine Policy* 2005; 29(5): 441–50.
- [107] Jacobsen J. Path dependence in Faroese fisheries (mis)management. *Marine Policy* 2019; 108: 103615.
- [108] Danielsen R, Agnarsson S. Analysing the fisheries policy reform in the Faroe Islands: On the path to sustainability? *Environmental Science & Policy* 2018; 90: 91–101.
- [109] Knight J. Models, interpretations, and theories: constructing explanations of institutional emergence and change. In: Knight J, Sened I, editors. *Explaining social institutions*. Ann Arbor: University of Michigan Press; 1995, p. 95–120.

- [110] Levi M. A Logic of Institutional Change. In: Cook KS, Levi M, editors. *The Limits of rationality*. Chicago, London: University of Chicago Press; 1990, p. 402–418.
- [111] Knight J, Ensminger J. Conflict over Changing Social Norms: Bargaining, Ideology, and Enforcement. In: Brinton MC, Nee V, editors. *The New Institutionalism in Sociology*: Russel Sage Foundation; 1998, p. 105–126.
- [112] Knight J. Explaining the Rise of Neoliberalism: The Mechanisms of Institutional Change. In: Campbell JL, Pedersen OK, editors. *The Rise of Neoliberalism and Institutional Analysis*. Princeton: Princeton University Press; 2001, p. 27–50.
- [113] Beem B. Co-management from the top? The roles of policy entrepreneurs and distributive conflict in developing co-management arrangements. *Marine Policy* 2007; 31(4): 540–9.
- [114] Acheson JM. Co-management in the Maine Lobster Industry: A Study in Factional Politics. *Conservat Soc* 2013; 11(1): 60.
- [115] Acheson JM, Knight J. Distribution Fights, Coordination Games, and Lobster Management. *Comparative Studies in Society and History* 2000; 42(1): 209–38.
- [116] Ávila-García P, Sánchez EL. The Environmentalism of the Rich and the Privatization of Nature. *Latin American Perspectives* 2012; 39(6): 51–67.
- [117] Blyth M. *Great transformations: Economic ideas and institutional change in the twentieth century*. New York: Cambridge University Press; 2002.
- [118] Knight J, North D. Explaining Economic Change: The Interplay Between Cognition and Institutions. *Legal Theory* 1997; 3(3): 211–26.
- [119] Schmidt VA. Taking ideas and discourse seriously: explaining change through discursive institutionalism as the fourth 'new institutionalism'. *European Political Science Review* 2010; 2(01).
- [120] Schmidt VA. Discursive Institutionalism: The Explanatory Power of Ideas and Discourse. *Annu. Rev. Polit. Sci.* 2008; 11(1): 303–26.
- [121] Carstensen MB, Schmidt VA. Power through, over and in ideas: conceptualizing ideational power in discursive institutionalism. *Journal of European Public Policy* 2016; 23(3): 318–37.
- [122] Sauerland D. Ideologies, Institutions, and the New Institutionalism. In: *International Encyclopedia of the Social & Behavioral Sciences*: Elsevier; 2015, p. 561–572.
- [123] Blyth M. Powering, Puzzling, or Persuading? The Mechanisms of Building Institutional Orders. *International Studies Quarterly* 2007; 51(4): 761–77.

- [124] Song AM, Dressler WH, Satizábal P, Fabinyi M. From conversion to conservation to carbon: The changing policy discourse on mangrove governance and use in the Philippines. *Journal of Rural Studies* 2021; 82: 184–95.
- [125] Olsson P, Folke C, Hughes TP. Navigating the transition to ecosystem-based management of the Great Barrier Reef, Australia. *Proceedings of the National Academy of Sciences of the United States of America* 2008; 105(28): 9489–94.
- [126] Strang D, Meyer JW. Institutional conditions for diffusion. *Theor Soc* 1993; 22(4): 487–511.
- [127] Nee V, Strang D. The Emergence and Diffusion of Institutional Forms. *Journal of Institutional and Theoretical Economics (JITE) / Zeitschrift für die gesamte Staatswissenschaft* 1998; 154(4): 706–15.
- [128] Redmond WH. Innovation, Diffusion, and Institutional Change. *Journal of Economic Issues* 2003; 37(3): 665–79.
- [129] Cleaver F. Reinventing Institutions: Bricolage and the Social Embeddedness of Natural Resource Management. *The European Journal of Development Research* 2002; 14(2): 11–30.
- [130] Cleaver FD, De Koning J. Furthering critical institutionalism. *Int J Commons* 2015; 9(1): 1.
- [131] Ellefsen H, Bromley DW. The quest for fisheries governance. *Elementa: Science of the Anthropocene* 2021; 9(1).
- [132] Kadfak A, Antonova A. Sustainable Networks: Modes of governance in the EU’s external fisheries policy relations under the IUU Regulation in Thailand and the SFPAs with Senegal. *Marine Policy* 2021; 132: 104656.
- [133] Tavornmas A, Cheeppensook K. Shaping ocean governance: a study of EU normative power on Thailand’s sustainable fisheries. *Int Econ Econ Policy* 2020; 17(3): 671–85.
- [134] Gulbrandsen LH. The emergence and effectiveness of the Marine Stewardship Council. *Marine Policy* 2009; 33(4): 654–60.
- [135] Gulbrandsen LH. *Transnational environmental governance: The emergence and effects of the certification of forests and fisheries*. Cheltenham, UK: Elgar; 2010.
- [136] Foley P, Havice E. The rise of territorial eco-certifications: New politics of transnational sustainability governance in the fishery sector. *Geoforum* 2016; 69: 24–33.
- [137] Bromley DW. Institutional economics as volitional pragmatism. In: Batie SS, Mercurio N, editors. *Alternative Institutional Structures: Evolution and Impact*. Abingdon, Oxon: Routledge; 2008, p. 91–112.

- [138] Bromley. Volitional Pragmatism: The Collective Construction of Rules to Live By. *The Pluralist* 2015; 10(1): 6.
- [139] Bromley DW. Reconsidering Environmental Policy: Prescriptive Consequentialism and Volitional Pragmatism. *Environmental and Resource Economics* 2004; 28: 73–99.
- [140] Schotter A. *The economic theory of social institutions*. Cambridge Eng., New York: Cambridge University Press; 1981.
- [141] Blyth M, Helgadottir O, Kring W. Ideas and Historical Institutionalism. In: Fioretos KO, Falleti TG, Sheingate AD, editors. *The Oxford handbook of historical institutionalism*. Oxford United Kingdom: Oxford University Press; 2016.
- [142] Ensminger J, Knight J. Changing Social Norms: Common Property, Bridewealth, and Clan Exogamy. *Current Anthropology* 1997; 38(1).
- [143] Ma M, Hassink R. An evolutionary perspective on tourism area development. *Annals of Tourism Research* 2013; 41: 89–109.
- [144] Galappaththi EK, Berkes F. Can co-management emerge spontaneously? Collaborative management in Sri Lankan shrimp aquaculture. *Marine Policy* 2015; 60: 1–8.
- [145] Acheson JM. *Capturing the commons: Devising institutions to manage the Maine lobster industry* / James M. Acheson. Hanover, N.H., London: University Press of New England; 2003.
- [146] Schlüter A, Kluger LC, Garteizgogeoasca M, Damonte GH. Resource Grabbing and the Blue Commons: The Evolution of Institutions in Scallop Production in Sechura Bay, Peru. In: Neef A, Ngin C, Moreda T, Mollett S, editors. *Routledge Handbook of Global Land and Resource Grabbing*. London: Routledge; 2023, p. 300–317.
- [147] Flaaten O. Fisheries rent creation and distribution—the imaginary case of Codland. *Marine Policy* 2010; 34(6): 1268–72.
- [148] Satria D, Li E. Contract Engagement in the Small-Scale Tuna-Fishing Economies of East Java. *Bulletin of Indonesian Economic Studies* 2017; 53(1): 27–54.
- [149] Chen G, Bao J. Path dependence in the evolution of resort governance models in China. *Tourism Geographies* 2014; 16(5): 812–25.
- [150] Aarset B, Jakobsen S-E. Political regulation and radical institutional change: The case of aquaculture in Norway. *Marine Policy* 2009; 33(2): 280–7.
- [151] Talib NL, Utomo A, Barnett J, Adhuri DS. Three centuries of marine governance in Indonesia: Path dependence impedes sustainability. *Marine Policy* 2022; 143: 105171.
- [152] Wilen JE, Cancino J, Uchida H. The Economics of Territorial Use Rights Fisheries, or TURFs. *Review of Environmental Economics and Policy* 2012; 6(2): 237–57.

- [153] Orsini-Rosenberg L. Analyzing Institutional Change. The Establishment of a sustainable Fishery at Apo Island. Master Thesis. Vienna; 2014.
- [154] Ahmed A, Gasparatos A. Reconfiguration of land politics in community resource management areas in Ghana: Insights from the Avu Lagoon CREMA. *Land Use Policy* 2020; 97: 104786.
- [155] Carothers C. "Rationalized Out": Discourses and Realities of Fisheries Privatization in Kodiak, Alaska. *American Fisheries Society Symposium* 2008; 68(55-74).
- [156] Barragán Muñoz JM. Progress of coastal management in Latin America and the Caribbean. *Ocean & Coastal Management* 2020; 184: 105009.
- [157] Song AM, Cohen PJ, Hanich Q, Morrison TH, Andrew N. Multi-scale policy diffusion and translation in Pacific Island coastal fisheries. *Ocean & Coastal Management* 2019; 168: 139–49.
- [158] Wenzel B. Organizing coordination in fisheries and marine environmental management: Patterns of organizational change in Europe. *Ocean & Coastal Management* 2016; 134: 194–206.
- [159] Blythe JL, Armitage D, Bennett NJ, Silver JJ, Song AM. The Politics of Ocean Governance Transformations. *Front. Mar. Sci.* 2021; 8.
- [160] Young O. Vertical interplay among scale-dependent environmental and resource regimes. *Ecology and Society* 2006; 11(1).
- [161] Silver JJ, Gray NJ, Campbell LM, Fairbanks LW, Gruby RL. Blue Economy and Competing Discourses in International Oceans Governance. *The Journal of Environment & Development* 2015; 24(2): 135–60.
- [162] Schlüter A, Vance C, Ferse S. Coral reefs and the slow emergence of institutional structures for a glocal land- and sea-based collective dilemma. *Marine Policy* 2020; 112: 1–7.
- [163] Kingston C. Governance and institutional change in marine insurance, 1350-1850. *European Review of Economic History* 2014; 18(1): 1–18.
- [164] Orach K, Schlüter M. Understanding the dynamics of fish politics: The role of diverse actor interactions in transformations towards co-management. *Environmental Science & Policy* 2021; 124: 195–205.
- [165] Cinner JE, Daw TM, McClanahan TR, Muthiga N, Abunge C, Hamed S et al. Transitions toward co-management: The process of marine resource management devolution in three east African countries. *Global Environmental Change* 2012; 22(3): 651–8.

RESEARCH PAPER 2

Legal pluralism, ideology, and institutional change: The evolution of institutions for coastal resource governance in Ghana

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Abstract

Co-management regimes are institutional innovations that hold the promise of achieving sustainable common-pool resource governance. However, the transition to such institutional regimes in coastal resource systems has faced challenges in many countries. This article examines the processes and outcomes of such institutional changes in coastal fisheries in Ghana, where the transition to co-management was unsuccessful. Combining theoretical perspectives from legal pluralism in legal anthropology and ideational theories of institutional change within institutional economics, the paper uses process tracing to examine the role of ideology and historical institutional dynamics of the resource context in the institutionalization and failure of co-management arrangements for governing coastal fisheries. The study finds that ideological conflicts and historical legacies of legal pluralism hindered the practice and outcomes of coastal fisheries co-management in Ghana. The article argues for particular attention to the historical institutional dimensions and underlying worldviews of the resource context in institutional interventions for sustainability in coastal resource systems.

Keywords: Ideational change, Co-management, Process tracing, Common-pool resources, Environmental governance

1. Introduction

The institutional basis for sustainable common-pool resource governance has long been a subject of intense scholarly discourse. While there are no institutional panaceas for achieving sustainable resource governance (Ostrom 2007), institutional perspectives on sustainable common-pool resource governance have evolved from a focus on state-led (centralization) and market-based (privatization) governance mechanisms (Gordon 1954; Hardin 1968) to common-property regimes and hybrid institutional arrangements such as co-management regimes (Ostrom 1990; Nielsen et al. 2004). Since the early 1990s, many institutional economists have espoused the sustainability potential of participatory and community-based resource management regimes (e.g. Wade 1987; Ostrom 1990; Baland & Platteau 1996). Co-management regimes – hybrid institutional arrangements in which power, decision-making rights, and responsibilities over resource management are shared, usually between state-level actors and resource users (Nielsen et al. 2004) – have since become mainstream and the preferred institutional regimes for coastal marine resource governance (Cohen et al, 2021).

Co-management is often argued to have the potential to achieve sustainable resource governance for both normative and efficiency reasons: user participation in governance enhances legitimacy and compliance, reduces ex-post transaction costs, and improves resource management outcomes (Nielsen et al. 2004). However, in the wave of institutional changes towards co-management regimes in marine and coastal resource systems in many countries, sustainable resource governance outcomes have not been monolithic. The corpus of existing co-management literature examined the social, economic, and ecological outcomes of such institutional regimes in coastal fisheries, revealing varying degrees of success (see Gelcich et al. 2010; Cinner & McClanahan 2015; d'Armengol et al. 2018). However, the implementation process, effectiveness, and sustainability of co-management regimes have faced challenges in many countries (Hara & Nielsen 2003; Levine 2016; Nunan 2020). Extant literature attributes challenges to factors such as lack of participation, unclear definition of roles among stakeholders, weak social capital, power struggles, institutional incapacity, and unsustainable funding mechanisms (Njaya et al. 2012; Nunan et al. 2015; Levine 2016).

Yet, there is still a gap in our understanding of why co-management regimes succeed in some countries but fail in other contexts. Promising avenues for probing contextual conditions relate to the political-economic, socio-cultural, and ideational dynamics of resource governance context (Clement & Amezaga 2013), which have until now been under-researched (however, see Russell & Dobson 2011; Nunan et al. 2015; Etegni et al. 2017; Nunan 2020). Drawing from critical institutionalism (Cleaver 2012; Cleaver & De Koning 2015), extant studies suggest

that the nature of interactions between formal and informal institutions and how co-management is designed to fit socially embedded institutions can hinder the effectiveness and resilience of co-management regimes (Nunan et al. 2015). However, it is unclear if and to what extent the processes and mechanisms that produce the development and implementation of co-management arrangements may influence institutional interactions that facilitate or hinder the effectiveness and sustainability of co-management regimes. While some studies have examined the process of transitions to co-management regimes in marine and coastal resource governance (Gelcich et al. 2010; Cinner et al. 2012; Ho et al. 2016), most co-management literature has focused on explaining the socioeconomic and ecological outcomes of co-management without probing the causal mechanisms that link the drivers of institutional change to the effectiveness and sustainability of the resultant institutional arrangements. This study contributes to this perspective by examining the role of ideology and contextual institutional histories in the challenges of developing and sustaining co-management arrangements for coastal fisheries in Ghana.

Ghana is an ideal context to examine because of its long history of traditional fisheries governance and unsuccessful experiences in establishing a formal coastal fisheries co-management regime. In the late 1990s, a process of institutional change was initiated in coastal fisheries, leading to the development of co-management structures across the coast. However, this institutional arrangement was ineffective and could not be sustained, and most of the governance structures collapsed a few years after the project ended (Finegold et al. 2010). The main goal of this study is to understand if and to what extent the failure of the coastal resource co-management regime is linked to the contextual dynamics of the institutional change process. The study thus examines the following questions: why and how was co-management institutionalized in coastal fisheries? What role did ideology and contextual institutional histories play in the practice and outcomes of the co-management regime? This paper explores these questions through a process-tracing approach, drawing from the perspectives of legal pluralism and ideational theories of institutional change. By adopting process tracing – an in-depth qualitative case study methodology that seeks to explain historical outcomes by unpacking causal mechanisms linking the drivers of institutional and policy changes and the outcomes of those changes (Beach 2018) – this study brings analytical attention to the study of processes that connect the underlying drivers of institutional development to the outcomes of co-management arrangements.

The rest of this paper is structured as follows. The next section outlines the theoretical perspectives and potential causal mechanisms of the transition to co-management regimes. This provides a framework for empirically tracing the emergence of co-management in Ghana.

Section 3 elaborates on the research methods. Section 4 presents the analysis, starting with the contextual scope conditions and then tracing the causal process of the transition to the co-management regime. A reflection on the role of ideology and legal pluralism in the failure of the co-management regime is also offered, leading to conclusions in section 5.

2. Theorizing causal mechanisms of institutional transformation to co-management regimes

The literature on resource governance evolutions to co-management regimes emphasizes the role of socioeconomic, ecological, and political drivers of change. Some common causal mechanisms of transition to co-management regimes in marine coastal systems include resource use conflicts, resource depletion/crisis, major socio-political changes, changes in market dynamics, and ideational change/ideological diffusion (Gelcich et al. 2010; Cinner et al. 2012; Orach & Schlüter 2021). In many coastal resource systems, especially in developing countries, the transition to co-management regimes has often been triggered by international donor pressure and ideological diffusion mechanisms through international development organizations such as the World Bank, international non-governmental organizations, and foreign government agencies (Hara & Nielsen 2003; Cinner et al. 2012; Ho et al. 2016; Orach & Schlüter 2021). This paper unpacks the ideational change/diffusion causal mechanism (see Figure 1) because the institutional transformation to co-management was externally induced. To achieve this, the article draws on the ideational theory of institutional change to develop the relevant parts of the causal mechanism. The ideational theory of institutional change is complemented with the analytical perspectives of legal pluralism to examine the role of contextual scope conditions that influence the instantiation of the causal mechanism for the governance transformation. This is important for examining the role of the broader institutional environment in hindering the transition to co-management regimes in Ghanaian coastal fisheries. Despite the usefulness of legal pluralism for institutional analysis in resource governance, its link with theories of institutional change has not yet been explicitly illuminated in empirical studies of institutional change in coastal resource governance. This study leverages the complementary value of these theoretical perspectives to understand the process and outcomes of common-pool resource governance transformation.

2.1. Ideational theories of institutional change

Numerous theories of institutional change exist in institutional economics, as comprehensively reviewed in the literature (see Kingston & Caballero 2009; Banikoi et al. 2023). Conventional economics explanation of institutional change often emphasises the efficiency function of

institutions whereby, through competition, institutional alternatives that minimize transaction costs and optimize outcomes will emerge to govern economic exchange. However, Denzau & North (1994) argue that in contexts of high uncertainty and complexity, it is impossible to rationally calculate the *ex-ante* costs and benefits of institutional alternatives; thus, actors rely on mental models and ideologies for institutional choice. Ideologies here refer to “the shared framework of mental models that groups of individuals possess that provide both an interpretation of the environment and a prescription as to how that environment should be structured” (Denzau & North 1994: 4). Ideologies have cognitive (help in interpreting environment), normative (define what is right), programmatic (condition one to act in a certain way) and solidary (instigate one to act in solidarity with others) dimensions (Higgs 2008). Ideologies are the underlying logical structure of institutions in a society; a change in ideologies may thus trigger a co-evolutionary change in institutions (Sauerland 2015).

Ideational theories thus view institutional change as resulting from people interpreting their world in various ways through ideational elements, and how ideational change and ideational resources can influence actors’ normative and cognitive beliefs about institutions (Denzau & North 1994; Campbell 2004; North 2005). Campbell (2004) identified four typologies of cognitive and normative ideas that influence institutional change: paradigms (background assumptions or mental models that constrain the cognitive range of useful programs), programs (prescriptions that enable actors to chart a particular path of institutional change); frames (discourses, narratives, and symbol actors use to legitimize programs or institutions); and public sentiments (public assumptions that constrain the normative range of legitimate programs available to actors). Ideational elements can change through actors learning from their internal environment and culture (North 2005), but they can also be shaped by exogenous discourses and ideas (Higgs 2008). Ideological change can be theory-driven, where influential academic scholarship changes worldviews and paradigms, or event-driven, whereby events such as crises can provide opportunities for ideological change through the supply of ideas (Higgs 2008). Change in ideologies may also result from logical incoherencies, which ideational entrepreneurs can leverage to develop new and less sophisticated but more logically coherent and consistent competing ideologies to cause a shift in ideologies and, hence, trigger institutional change (Sauerland 2015: 570).

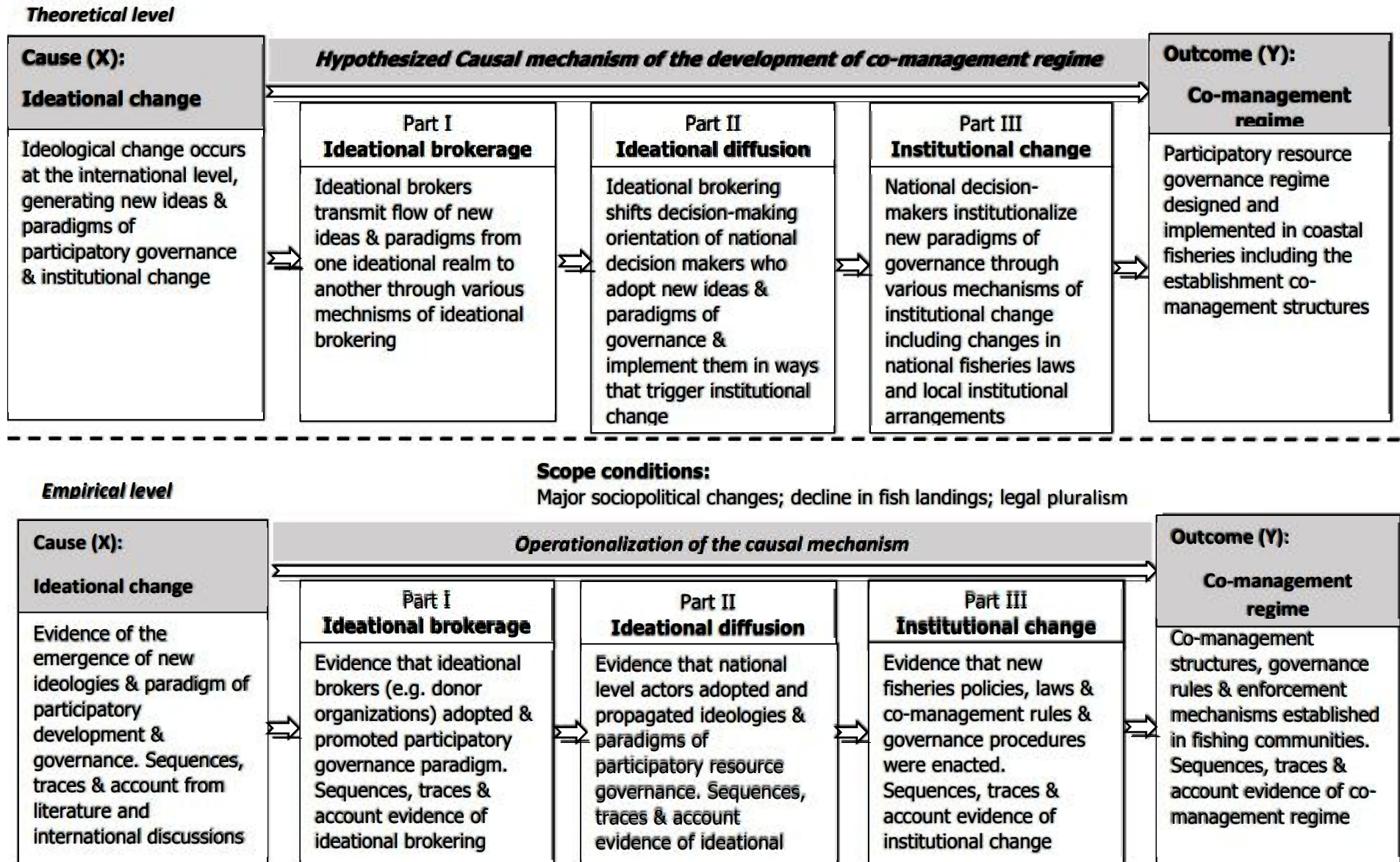


Figure 1. Conceptualized ideational change mechanism in the transformation to a coastal resource co-management regime

Ideas do not often emerge and proliferate spontaneously; the role of ideational brokers is crucial for ideational change in one ideational realm to influence institutional change in another realm (Campbell 2004). In a transnational diffusion of new ideas, ideational brokers could be individual actors, epistemic communities, or international organizations who broker the flow of these ideas to actively influence ideational and institutional change at the national level through various diffusion mechanisms. Such mechanisms include *competition* (adopting ideas to match competitors), *mimicry* (imitation to enhance performance), learning (normative adoption to enhance legitimacy), and *coercion* (imposition of ideas by powerful actors in exchange for loans and valuable resources) (DiMaggio & Powell 1983; Campbell 2010). The coercion mechanism can also be subtle in the sense that ideational elements may be adopted to gain the support of the originator (DiMaggio & Powell 1983). The diffused ideas can be institutionalized through the mechanism of *translation* (blending of institutional principles with existing institutional arrangements) or *bricolage* (the innovative process of assembling and recombining existing institutional repertoire to create new institutional arrangements) (Campbell 2004). This brings to the fore the challenge of potential ideological conflicts in the institutionalization of ideational change in the context of legal pluralism, such as coastal fisheries, as ideologies are the underlying logical structure of social institutions (Sauerland 2015). Although this ideational perspective has not been used extensively in studying coastal resource governance outcomes, it provides a useful complementary theoretical lens for studying the process of institutional change and governance outcomes in the context of legal pluralism.

2.2. Legal pluralism and institutional change

Coastal resource governance is a realm in which legal pluralism is ubiquitous, and its analytical perspectives have been adopted to study governance outcomes (Jentoft et al. 2009; Bavinck & Gupta 2014). Legal pluralism denotes the situation where “within the same social order, or social or geographical space, more than one body of law, pertaining to more or less the same set of activities, may coexist. Rules and principles generated and used by the state organization appear as one variation besides law generated and maintained by other organizations and authorities with different sources of legitimations such as religion or tradition” (Benda-Beckmann & Benda-Beckmann 2006: 14). In resource governance, legal pluralism as an analytical concept denotes a situation where multiple legal systems – rules, norms, practices, regulations, and their associated enforcement and decision-making authorities – with different sources of legitimation structure human-environment interactions. The mode of institutional interaction or relationship between legal systems in resource governance is termed a

“governance pattern”. Such governance patterns are conceptualized to include four ideal types: indifference, competition, accommodation, and mutual support (Bavinck & Gupta 2014). *Indifference* refers to a situation where the two legal systems operate in parallel without operational overlap (e.g., if rules emanating from the national legal system are not implemented in coastal fisheries while the customary legal system continues to operate).

Competition occurs where there is a strong and contrary relationship between the legal systems, and they compete for power to govern the same jurisdiction or situation (e.g., national regulations and customary rules compete to govern coastal fisheries). In *accommodation*, the legal systems interact non-conflictual, and there is a recognition of each other’s legitimacy and a measure of reciprocal adaptation but little formal institutional or jurisdictional integration. In the *mutual support* type, there is a formal recognition of the legitimacy of both legal systems, and arrangements are made to enhance the mutual interaction and joint governance of resources under a hybrid institutional arrangement such as a co-management regime (Bavinck & Gupta 2014). These four ideal types of governance patterns are determined by the quality and intensity of relationship between the legal systems (see Table 1). The quality of relationship refers to whether the decision-making and enforcement authorities in the respective legal systems perceive the other system as valid and useful, whereas intensity indicates the degree to which the systems are interconnected (Bavinck & Gupta 2014). The constellations of legal pluralism or governance patterns are not static and can evolve in multiple ways at various periods of governance, leading to the emergence of new institutional arrangements (Benda-Beckmann & Benda-Beckmann 2006). The transition to well-functioning co-management regimes in resource governance indicates the evolution of constellations of legal pluralism or governance patterns (e.g., institutional competition or accommodation) to institutional mutual support. This theoretical perspective is complemented with the ideational theory of institutional change in this study to examine the contextual scope conditions relating to the institutional environment for coastal fisheries in Ghana that could hinder the instantiation of the hypothesized causal mechanism.

Table 1. Typology of relationships between legal systems in a governance pattern

<i>Quality</i>	<i>Intensity</i>	
	Weak relations	Strong relations
Negative (contrary)	Type 1: Indifference	Type 2: Competition
Positive (affirmative)	Type 3: Accommodation	Type 4: Mutual support

Source: Adapted from Bavinck & Gupta (2014)

3. Materials and methods

3.1. Process tracing

To better understand institutions and institutional change, some institutional economists argue that economists need to go beyond quantitative evidence and statistical estimations to engage more with qualitative evidence using qualitative methods because many vital aspects of institutions and institutional change can be better explained with qualitative evidence (Schlüter 2010; Skarbek 2020). In this study, the process tracing (PT) approach, which has gained traction in qualitative social science, is adopted to examine the institutional development process for coastal fisheries co-management. PT is “an ideal method for understanding questions that have to do with institutional change and for understanding what factors sustain institutional outcomes” (Skarbek 2020: 416). This is because explaining institutional change often requires a thick description evidence (Schlüter 2010; Skarbek 2020). PT is a within-case method that focuses on unpacking causal mechanisms between variables, an independent variable X (trigger) and a dependent variable Y (outcome), to generate a causal inference (Beach 2018). In this approach, “the analytical focus is on understanding processes whereby causes contribute, to produce outcomes, opening up what is going on in the causal arrow in-between” (Beach 2018: 1).

PT can be divided into three variants: theory-testing, theory-building and case-centric (explaining-outcome) PT (Beach 2018). While the theory-testing and theory-building variants seek to test established theories and generate generalizable theoretical explanations based on empirical evidence, respectively, explaining-outcome PT traces causal mechanisms to produce a comprehensive explanation of a historical outcome through an abductive process of juxtaposing theories and empirical material (Beach 2018: 17). This study adopted the explaining-outcome PT, a pragmatic approach to process tracing guided by theory. Three steps were involved in this PT: (1) conceptualization and hypothesizing the operationalization of causal mechanism from the theoretical literature on drivers of transition to co-management regimes (see figure 1); (2) verification of the causal manifestation or existence of the conceptualized causal mechanism in the collection of evidence; (3) Operationalization through the analysis of the empirical evidence to trace the instantiation of the manifested mechanism to make causal inference. This involves searching for mechanistic evidence or traces of activities that actors leave behind in each part of the causal process. Mechanistic evidence can be in the form of patterns (predictions of statistical patterns), sequences (temporal and spatial chronology of events), traces (pieces of evidence whose mere presence provides proof), or accounts (content of empirical material such as interview narrations, minutes of meetings etc.)

(Beach 2018: 10). The mechanistic evidence used in this study included sequences, traces, and accounts from interviews, narrations, byelaws, scholarly literature, project reports, and other gray literature.

3.2. Study area context

The study was conducted on the coast of Ghana, a regional fishing nation with a significant reliance on coastal fisheries. The fisheries sector accounts for 3.5% of the national GDP, employs approximately 2 million people, and provides 60% of the animal protein needs of Ghanaians (Ministry of Fisheries and Aquaculture Development 2020). There are over 200 coastal artisanal fishing communities in Ghana, contributing the majority of annual marine fish landings (Finegold et al. 2010). This artisanal fisheries sector is governed by customary institutions enacted by the chief fisherman (*Apofohene*) and national fisheries laws and regulations. In the late 1990s, co-management structures were established in 133 coastal fishing communities to ensure sustainable management of coastal fisheries (World Bank 2003). The study was conducted in two of the four coastal regions of Ghana: the Central and Volta regions. These two regions were chosen because they had the strongest commitment to the co-management project (Bennett 2002). The regions also differ regarding coastal fishing history and methods, socio-cultural practices, and political characteristics. The specific communities were selected based on their history of co-management and importance in the coastal artisanal fisheries sector. In the central region, three fishing communities in three different districts were selected: Cape Coast, Elmina, and Mumford. In the Volta region, the communities studied include Dzelukope, Abutiakope, Woe, Tegbi, Anloga, and Adina.

3.3. Data collection and analysis

The study used qualitative research methods – semi-structured interviews and focus group discussions (FGDs) to collect data. In total, 63 participants were involved in the study through face-to-face interviews and FGDs during a three-month period of fieldwork (January-March 2022). The participant groups (see Table 2) included traditional leaders in fisheries governance: the chief fishermen known as *Apofohene* (n= 9) and chief fishmongers/women leaders known as *Konkohemaa* (n=6), experienced fishermen/canoe owners (n=6), co-management committee members (n=30), representatives of fishers associations (n=2), current and retired fisheries officers at zonal, regional, and national offices of the Fisheries Commission (n=8), and representatives from civil society organizations working in the coastal fisheries sector (n=2). The participants included both men (n=49) and women (n=14). The unequal representation of women in the research is due to the focus of the research and the

structure of coastal fisheries governance in Ghana. While the traditional leaders of women (*Konkohemaa*) represent the voice of women in traditional fisheries governance, men have majority representation in the co-management committees, with only one woman in each committee. Two of the women are senior fisheries officers at the Fisheries Commission. Thus, the unequal representation of women did not affect the results obtained because each participant group had a representation of women.

The participant groups were purposively selected because of the peculiarity of the information sought, which could only be provided by experienced fishermen and actors who knew what transpired in the co-management processes between 1997 and 2008. A snowballing approach was adopted to identify individual participants. Of the nine communities, six FGDs comprising 30 participants were held in-person with co-management committees in six fishing communities: Dzelukope, Woe, Adina, Elmina, Mumford, and Cape Coast. The FGDs could not be held with co-management committees in other communities due to difficulties in organizing committee members who were not readily available during the fieldwork period. However, in-depth interviews were conducted with chief fishermen and their governing councils in all nine fishing communities. In addition, in-depth interviews were conducted with traditional women leaders in six communities. In the other communities, new *Konkohemaa* were yet to be installed. All interviews were conducted in the local languages (*Fante* and *Ewe*) spoken in the regions with the help of interpreters, and using English only when the respondent could understand and speak English. The topics covered in the interviews and FGDs centred on why the governance change in coastal fisheries occurred, how the development of co-management arrangements occurred, and why co-management was unsuccessful. This included probing issues of legal pluralism, potential ideological conflicts, and the historical context of coastal fisheries governance.

Most of the interviews were recorded except when participants objected during the interviews. The interviews lasted between 45 and 90 minutes. The recorded interviews were not transcribed verbatim. Detailed and observational notes were taken during and after the interviews to grasp the salient points of the conversations. The interview notes were complemented with audio recordings of the interviews, which were replayed to ensure that nothing important was missed in the data analysis. The data coding process was abductive, guided by the analytical framework, and was performed using MAXQDA software. Due to limitations regarding how accurately participants could recall events that occurred over two decades, the interview data was complemented with secondary data (grey and scholarly literature) on the historical institutional and ideological features of coastal fisheries governance in Ghana. The analysis of the evolution of fisheries governance patterns relied heavily on

historical accounts in scholarly literature and grey literature. Secondary data were collected through broader searches on Google search engine, Google Scholar, and Scopus for literature on coastal fisheries governance in Ghana. The aim was not to conduct a systematic review but to generate sufficient information to triangulate and complement the empirical accounts.

Table 2. Interview participants

Participant group	Number of participants	Code	Description
Traditional Authorities (TAs)	15	TA1-15	Traditional leaders (chief fishermen & chief fishmongers) in coastal communities undertaking governance activities. Chief fishermen are traditional leaders of canoe fishermen. Chief fishmongers are traditional women leaders in coastal fisheries
Community-Based Fisheries Management Committees (CBFMCs)	30	CBFMC1-6	The community-based organisations established to carry out co-management responsibilities in coastal fisheries
Experienced Fishermen & Canoe owners (EFCOs)	6	EFCO1-6	Experienced fishermen and fishing gear owners who have been fishing long enough to speak to issues pertaining to the co-management
State Agencies (SAs)	8	SA1-8	Active & retired fisheries officers at the national, regional and zonal offices of the Fisheries Commission and the Ministry
Civil society organisations (NGOs)	2	NGO1-2	Civil society organisations involved coastal fisheries governance
Fishermen Associations (FAs)	2	FA1-2	These include representatives of Ghana National Canoe Fishermen Council & National Canoe & Gear Owners Association

Source: Author

4. Findings and Discussion

The examination of empirical data using process tracing reveals that new international/donor ideologies (ideational change) triggered the institutional development of the coastal fisheries co-management regime in Ghana. To trace the instantiation of this causal mechanism, it is essential to outline the scope conditions. Scope or contextual conditions in PT refer to the relevant socio-institutional, temporal, spatial, or analytical aspects of the setting within which the instantiation of the hypothesized causal mechanism occurs (van Meegdenburg 2023). Here, I examine the temporal socio-institutional context of coastal fisheries governance important for spurring, changing, or limiting the instantiation of the ideational change mechanism. I begin by tracing the historical evolution of institutions for the governance of coastal resources from the precolonial (see Figure 2).

4.1. Scope conditions: ideologies, legal pluralism, socio-political changes, and the evolution of coastal resource governance in Ghana

Pre-colonial coastal fisheries governance

Before colonialism, a thriving fishing economy existed in the Fante communities along the coast of Ghana (Walker 1998). The Fantes were the first to venture into marine fisheries, developed skills, technologies, and traditional rules for using these resources, and subsequently introduced marine fishing to other coastal communities (Walker 1998; Odotei 1999). The Fante fishermen went to sea fishing with canoes, while the women developed skills in the preservation, storage, and marketing of the fish to distribute the profits throughout the year due to the seasonal nature of fishing (Walker 1998: 86). During this period, coastal communities governed marine coastal resources through customary institutions such as customs, norms, and taboos (Odotei 1999). Traditional fisheries governance institutions comprise norms and conventions on how to access fishing grounds, fishing holidays, rules governing the type of fishing gear and fishing practices among fishermen at the beach and in the sea, norms and conventions governing the distribution of fish, and conflicts resolution mechanisms among fishermen and fishmongers (Vercrujisse 1984; Odotei 1999).

The traditional fisheries institutions derived their sources of legitimation from the customs and culture of coastal communities and, as such, were nested in the broader traditional governance structure of the community (Odotei 1999). The traditional fisheries governance in each community was led and shaped by the chief fisherman (*apofohene*) and his council of elders, who together represented the authority of the Chief (traditional ruler) of the community at the beach (Interviews, TA1-9). While the chief fishermen regulated fish production, the rules for fish distribution and trade were enacted by a female leader, the chief fishmonger (*konkohemaa*) (Interviews, TA10-15). Fishermen and fishmongers who broke customary rules and norms regarding fishing and fish distribution were punished through various institutional mechanisms, including providing customary items such as sheep and bottles of schnapps to appease the sea gods (Interviews, TA1-9). The ideologies of fishermen and their leaders during this period were shaped by spiritual and superstitious beliefs and subsistence objectives (Vercrujisse 1984; Walker 1998). Legal pluralism was absent during this period in coastal resource governance.

Colonialism and the emergence of legal pluralism in coastal fisheries governance

The involvement of the British colonial authorities in coastal fisheries in the 1890s led to the evolution of fisheries governance to legal pluralism, where coastal fisheries came under

multiple normative orderings for the first time. Although the colonial government did not establish a Fisheries Department until 1946, colonial officers became involved in the fishing industry in the 1890s through the introduction of new technologies in the form of more efficient fishing nets, which precipitated a host of conflicts over marine space and resources (Vercrujssse 1984; Walker 1998). There were tussles between traditional and colonial authorities regarding the regulation of fishing gear in coastal fisheries. Although the colonial administration promoted the use of more productive fishing nets, traditional authorities resisted it. Arguments put forward by traditional authorities against the use of the new nets reflected “apprehensions about overfishing, sustainability of fisheries resources, and the maintenance of fairness, equality, and peace between fishermen” (Walker 1998: 105). They argued that the use of the new nets not only led to the depletion of fishing waters, but that, such a practice was “a peculiarly greedy and selfish fishing method quite unusual in our fishing industry, and it is calculated to produce malicious feelings and mischievous intentions in the minds of other fishermen” (quoted in Vercrujssse 1984: 115). Their arguments were thus rooted in the perception that the introduction of more productive fishing gear would mark a “transition from an economy in symbiosis with the marine environment...to an economy exploitative of the same environment” (De Surgy, 1969:113 cited in Vercrujssse 1984: 113).

However, the view of the colonial authorities was always that “a net which had been so successful to European fishermen must be equally useful to their Ghanaian colleagues” (Vercrujssse 1984: 119). Thus, according to the Colonial Secretary of Agriculture, “the best fishing net is the net that catches the most fish” (quoted in Walker 1998: 120). In this era, “local governance over fisheries was undermined by legislation of the British administrators who were beginning to see Ghana’s fisheries as a potentially lucrative industry for the colony” (Walker 1998: 103). The colonial courts consistently ruled that the traditional authorities no longer had the right to determine appropriate fishing methods, restrict fishing, or ban fishing gear (Finegold et al. 2010: 29). From a legal pluralism perspective, this period was marked by the conflictual governance pattern or institutional interaction known as *competition*. This was due to the ideological differences underlying the resource use values and norms of actors in the two legal systems (Interviews, TA1-3). It was a period of ideological conflict “between those in pursuit of profits, and those concerned with preserving the fisheries resource base [and a struggle] between local leaders (Chiefs and chief fishermen) and colonial leaders over who had the authority to legislate fisheries policy” (Walker 1998: 116).

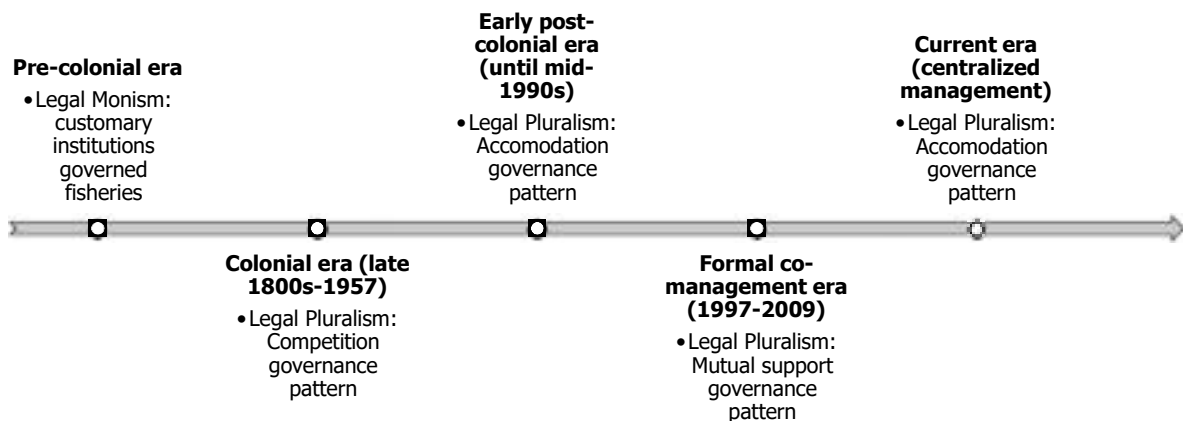


Figure 2. Legal pluralism and the evolution of institutional interaction in different eras of fisheries governance in Ghana

Source: Author

Evolution of institutional interaction in early post-colonial fisheries governance

Fisheries governance in the early independence era was a continuation of centralized management underlined by “the euphoric years of aggressive nationalism and intense struggle for economic opportunity in the wake of independence” (Kwadjosse 2009: 20). Institutional development during this period reflected the ideologies of coastal fisheries as a means of maximizing short-term profits and revenues for economic growth, leading to policies favoring the industrialization of the fisheries sector (Vercrujisse 1984; Walker 1998). Inspired by the modernization ideology, the technological modernization of coastal fisheries occurred radically through technical innovation, such as the introduction of new fishing nets and outboard motors in canoe fishing (Vercrujisse 1984; Overå 2011). This occurred without any resistance from the traditional authorities, as witnessed in the colonial era (Vercrujisse 1984). In line with the prevailing worldwide shared-mental models about marine fisheries in that period, national regulations and ideologies underlying fisheries development in the 1960s were based on the belief that marine fisheries were inexhaustible and that Ghana had enormous fishing potential (Kwadjosse 2009: 19).

From the 1970s to 1992, there were structural changes in governance as Ghana came under a long period of military rule. This coincided with Ghana’s ratification of the United Nations Convention on the Law of the Sea in 1983, which cemented the state’s *de jure property rights* to control access and manage coastal fisheries. While the *de jure* management right to the sea was vested in the state and thus regulated by the government, access rights to coastal fisheries were *de facto* defined by the traditional fisheries governance structures that existed historically. During this period, the government showed more interest in cooperating with traditional governance structures in coastal fisheries governance. This culminated in the

formation of the Ghana National Canoe Fishermen Council (a national body of chief fishermen) in February 1982 and its formal recognition by the government (Interviews, TA4-5). From a legal pluralism perspective, the governance pattern evolved from *competition* to *accommodation* due to convergence in ideologies regarding coastal fisheries during this period. The state and fishing communities both viewed fisheries from the lens of resource extraction and profit maximization (Interview, FA1). While sustainability considerations gradually gained ground in the early 1990s because of the influence of international processes, the extractivist ideologies about coastal fisheries and their economic development rationality did not change significantly; thus, national fisheries rules and regulations thus did not limit resource extraction (Kwadjosse 2009).

Democratization, decentralization, and institutional evolution to co-management

Before the transition to a co-management regime, coastal fisheries had a dual governance structure. There was a traditional governance structure for fisheries comprising the chief fisherman and his council of elders (experienced and well-respected fishermen and canoe/net owners) (Interviews, TA1-9). The traditional authorities *de facto* controlled access to fisheries at the community level, resolved conflicts among artisanal fishermen, and set rules and customs for fishing holidays and fishermen's interactions at the beach and in the sea. Rules regarding the distribution and pricing of fish at the beach were enacted by a chief fishmonger who also works with her council of elders to resolve related issues (Interviews, TA10-15). However, the formal enactment of rules and laws for the overall governance of the fisheries sector falls under the purview of the central government, which implements fisheries regulations through the Fisheries Commission (then the Department of Fisheries). Thus, issues concerning legal fishing methods and types of fishing gear allowed for fishing were formally regulated and enforced by the state. However, there were informal collaborations between traditional authorities and the state in coastal fisheries governance (Interviews, TA1-4).

The period between the early 1980s and 1990s was characterized by transformations in the economic and governance structure of Ghana. Due to persistent economic deterioration, Ghana undertook a structural adjustment program with financing from the IMF and the World Bank, including economic liberalization, democratization, and decentralization conditionality (Devarajan et al. 2001). This had enormous implications for marine fisheries governance (Bennett 2002). The influence of international development organizations, especially the World Bank and the IMF, on domestic institutional and economic changes was enormous. Thus, the early 1990s witnessed the decentralization of central government functions in various sectors to district assemblies, but fisheries management responsibilities were not devolved to local

government bodies in the coastal districts. At the same time, resource depletion was apparent, and the sustainability discourse trickled down to the national level of fisheries governance (Kwadjosse 2009). However, the main approach to fisheries governance was a continuation of the centralized management regime, i.e., controlling access through licensing, establishment of fishing zones, and restrictions on fishing gear to be used within and without these zones and in the industry as a whole (Kwadjosse 2009: 22).

4.2 The causal process for institutional evolution to the co-management regime

Between 1997 and 2002, many institutional changes occurred in coastal fisheries governance, including the formulation of a new national fisheries law (Fisheries Act 625, 2002) and the establishment of co-management structures known as community-based fisheries management committees (CBFMCs). This section traces the instantiation of the theorized ideational change/diffusion causal mechanism (see Figure 1) in the development of the coastal fisheries co-management regime.

Cause (X): Ideational change

The transition to the coastal fisheries co-management regime was caused by a change in the cognitive and normative ideas of development and resource governance at the international level. In the 1980s, there was an evolution in academic paradigms and programs of development and resource governance, which until the 1980s emphasized the centralization of resource management, following Garrett Hardin's 'tragedy of the commons theory' (Hardin 1968), which became the dominant framework within which social scientists portray sustainable resource use challenges (McCay & Acheson 1987: 1). The intellectual paradigm of resource governance led by new institutionalists from the 1980s espoused the value of local institutions and the sustainability potential of participatory or community-based resource management regimes (McCay & Acheson 1987; Wade 1987; Ostrom 1990; Baland & Platteau 1996). These theoretical developments were influential in changing international ideologies and discourses of development and resource governance (Cleaver 1999; Overå 2011), mirroring what Higgs (2008) conceptualized as theory-driven ideological change.

Thus, there was a paradigm shift in the international paradigms and programs on development assistance, emphasizing participatory approaches for achieving the sustainability imperatives of global development. While the responsibility for environmental and resource management was entrusted to the state and emphasized in principles 7, 17, and 21 of the Stockholm Declaration on the Human Environment (1972), the ideologies of resource governance changed significantly in the Rio Declaration on Environment and Development (1992).

Principles 10, 20, and 22 of the Rio Declaration strongly emphasize public and local community participation in environmental and resource management as a key pillar of sound and inclusive environmental governance for achieving sustainable development. Thus, co-management regimes emerged as a resource governance paradigm from this “ideological shift in development agendas that considered popular participation essential for the poor to gain access to and control over resources” (Cinner et al. 2012: 651).

Part I: Ideational brokerage

Ideas do not just emerge and become influential in decision-making and institutional building without being spread or carried by agents; they are transported from one ideational realm to another by ideational brokers (Campbell, 2004). These could be individual actors, epistemic communities, or international organizations that broker the flow of these ideas to actively influence ideational diffusion at the national level to drive institutional change (Campbell 2010). The ideational change in academia and at the international level also diffused into the paradigms and programs promoted by bilateral donor agencies and international development organizations (Cleaver 1999). The paradigm of participatory development led to changes in the World Bank’s “institutional culture and procedures [...] to adopt participation as a regular feature of its work with borrowing countries” (World Bank 1994: 1). The World Bank noted that the growing focus on promoting paradigms and programs of participatory governance was necessary because “[i]nternationally, emphasis is being placed on the challenge of sustainable development and participation is increasingly recognized as a necessary part of sustainable development strategies” (World Bank 1994: 3).

The growing interest of the World Bank in institutional development in the 1990s could also be seen in key presentations by new institutional economists at the World Bank annual conference on development economics in 1994 and 1995 (See Williamson 1995; Ostrom 1996). In the small-scale fisheries sector, particularly in developing countries, the focus of development assistance shifted from infrastructural development and technological modernization to institutional modernization and participatory resource governance in the 1990s (Cleaver 1999; Overå 2011; Hamilton et al. 2021). The World Bank thus performed the function of an ideational broker in transmitting new paradigms of participation in the development and governance of the coastal fisheries sector in Ghana (Interviews, NGO1 & SA8). The brokering of the new ideologies was achieved by capturing participatory development and governance in its 1994 country assistance strategy for Ghana (World Bank 1995: 5). This was aided by the framing of participation and institutional modernization as a

program to enhance the contribution of the fisheries sector to the country's economic development (Interview, NGO1).

Part II: Ideational diffusion

For ideas transported through ideational brokering to influence institutional change, they must be adopted by actors in the targeted ideational realm. Ideational diffusion can occur through several mechanisms: competition, coercion, learning, and emulation (Campbell 2004). The adoption of new ideas of participation in development and governance by the government of Ghana began with the development of a 5-year institutional development project for coastal fisheries in 1995, dubbed the fisheries sub-sector capacity-building project. This project aimed to 'modernize' institutions (Overå 2011) and strengthen fisheries governance to ensure the long-term sustainability of fisheries resources and enhance their contribution to the Ghanaian economy (World Bank 1995). The institutional development project was intended to be funded by the World Bank; thus, it could not diverge from the paradigms and programs promoted in the CAS. Accordingly, the project was evaluated to be "fully consistent with the Bank Group's Country Assistance Strategy (CAS), [as] specifically mentioned in the CAS that was discussed by the Board on April 14 1994" (World Bank 1995: 5).

In this process, the coercion mechanism of ideational diffusion was instantiated, in which the government of Ghana adopted the new paradigms of participatory governance promoted by the World Bank to access funding opportunities. This process of ideational diffusion has also been observed in many other places, where "international donor agencies pressured African countries to introduce co-management or at least establish more democratic processes in the formulation of fisheries management objectives and the decentralization of fisheries governance" (Hara & Nielsen 2003: 82). In the case of Ghana, the diffusion of international ideologies to the national level of fisheries governance was facilitated by the influence the World Bank had on domestic policy owing to its support for the country's economic and governance transformation at the time (Interview, SA8). While resource depletion and concerns for the sustainability of the fisheries sector were important, "the most profound changes in fisheries governance in this period were brought about by non-fisheries concerns such as a need to respond to donor imperatives for structural adjustment and 'good governance'" (Finegold et al. 2010: 3). It is well-recognized that the influence of international donors and policy advisers has had the most significant impact on how coastal fisheries are perceived and managed in Ghana (Bennett 2002: 242).

Part III: institutional change

The influence of diffused ideas on institutional change can only be visible in institutionalization processes at the domestic or local level (Campbell 2010). Institutionalization of the new paradigms of participatory resource governance occurred through the enactment of the new national fisheries law (the Fisheries Act, 2002) and the establishment of co-management structures to enhance private sector participation and sustainable governance of the fisheries sector (World Bank 2003). This occurred through a top-down process whereby the government, through the Ministry of Food and Agriculture (MOFA), invited traditional authorities of fishing communities and fisheries officers to workshops to sensitize and train them on the development of the fisheries co-management regime (Interviews, NGO1 & SA7-8). This culminated in MOFA hiring a consultant to prepare a social mobilization manual for establishing the co-management regime (Interview, NGO1). The consultant prepared the manual by drawing on examples of co-management regimes in other countries and a model community-based fisheries management system in one of the fishing communities in Ghana (Interviews, TA4, NGO1, & SA8). Consultants then worked with the regional fisheries directors and fisheries officers to facilitate the establishment of co-management committees in coastal fishing communities with bylaws comprising statutory regulations and customary rules of the traditional fisheries governance of coastal fishing communities (Interviews, NGO1, SA8 & FA1).

This shows that although international ideas can be influential through coercive diffusion mechanisms, their institutionalization can often vary due to contextual conditions. Unlike other countries, where the influence of donor ideologies resulted in revolutionary institutional changes in the fisheries sector (Cinner et al. 2012), the institutional change in Ghana mainly resulted in the rearrangement of the pre-existing institutional repertoire of fisheries governance to form a co-management regime. This is a common feature of the institutionalization of international ideologies (Campbell 2004, 2010). The institutional development had features of institutional *bricolage* (Clever 2012), even though *bricolage* in its true sense never occurred because of the lack of support from the traditional authorities in coastal fisheries.

Outcome (X): Coastal fisheries co-management regime

By the end of the institutional development project in 2002, 133 CBFMCs were established with their constitutions and by-laws in coastal fishing communities to “enforce rules and regulations designed to protect their fisheries resources” (World Bank 2003: 6). The co-management structures were created anew with a different composition of members, even though the chief fisherman or his representative should chair the committees to leverage the

respect they command to implement fisheries regulations (Interviews, NGO1 & SA8). Therefore, the co-management committees operated as parallel fisheries governance structures along with the pre-existing traditional fisheries governance structures. While the co-management structures were successfully established within a short period, their effectiveness and sustainability were short-lived, as most collapsed a few years later (Finegold et al. 2010). Drawing on the classification of property rights institutions in common-pool resources by Schlager & Ostrom (1992), I outline changes in the distribution of institutional power owing to the transition to a co-management regime. Before the establishment of co-management structures (CBFMCs), all *de jure* property rights were defined by the state, but traditional authorities (chief fishermen & their councils) exercised *de facto* control over access and conflict resolution in artisanal fisheries at the community level (Interviews, TA1-9). The development of the co-management regime thus led to formal readjustments of the prevailing institutional arrangements and enforcement mechanisms (see Table 3).

Table 3. Distribution of power in institutional domains of the co-management regime

Institutional domain	Description	Pre-co-management	Co-management period
Access & withdrawal	The authority to define the right to enter the resource system (fishery) and obtain the resource units (fish)	<i>De jure</i> regulation by the state <i>De facto</i> control by traditional leaders of fishing communities	<i>De jure</i> regulation by the state & CBFMCs <i>De facto</i> control by traditional leaders
Management	The authority to regulate internal use patterns, i.e. the power to determine how, when, and where harvesting from the resource may occur and how the structure of the resource may be changed. E.g. issuing & enforcing rules specifying types of fishing methods & gear, fishing area zoning, close seasons, conflict resolution, etc.	<i>De jure</i> regulation of internal use patterns by the state <i>De facto</i> issuance of fishing holidays & rules of conflict resolution by traditional leaders	<i>De jure</i> regulation of internal use patterns & conflict resolution by the state & CBFMCs <i>De facto</i> conflict resolution by traditional leaders
Exclusion	The authority to define the qualifications individuals must meet to access the resource e.g. belonging to a fishing community	<i>De jure</i> exclusion is defined by the state <i>De facto</i> exclusion defined by traditional leaders	<i>De jure</i> definition of exclusion by the state & CBFMCs
Alienation	Authority to transfer access, withdrawal, management, and exclusion rights to the resource	Only the state had alienation rights	Only the state had alienation rights

Source: Author, based on field interviews

4.3 Legal pluralism, ideology, and the implementation of co-management regimes

Developing co-management regimes is a complex process in coastal fisheries in many developing countries, where legal pluralism is ubiquitous, partly because ideational conflicts may hinder institutional building and the sustainability of co-management regimes (Jentoft et al. 2009; Bavinck & Gupta 2014). While the co-management process can provide avenues for bridging the statutory and customary legal orders (Jentoft et al. 2009), it requires creative processes of bricolage in which diverse ideologies are at play (Campbell 2004; Cleaver 2012). Ideologies are the filters through which the appropriateness and legitimacy of newly instituted institutional arrangements in such contexts are determined, and if and to what extent actors will want to participate in collaborative governance arrangements (Cleaver 2012). The process tracing of the development of the co-management regime above indicates that the transition to coastal fisheries co-management regime in Ghana was externally driven and underpinned by donor ideologies of good governance. This was triggered by an ideological and paradigmatic shift in resource governance at the international level, which was institutionalized at the national and local levels through a top-down process. Consistent with many studies on the transition to co-management in the Global South (Cinner et al. 2012; Ho et al. 2016; Orach & Schlüter 2021; Fabinyi & Barclay 2022), the promotion of institutional modernization ideology and participatory development programs by donors influenced the adoption of the co-management regime in Ghana (Overå 2011). While the diffusion of the new governance paradigm was facilitated by some scope conditions, such as the socio-political changes occurring in the broader national governance structure at the time, the implementation of the institutional change was hindered by other contextual scope conditions, particularly the complexities of strong legal pluralism in coastal fisheries in Ghana.

While the tussles with the colonial authorities led to changes in the power and regulatory remit of the customary legal system in some aspects of fisheries governance, such as regulating the fishing methods and gear, the customary institutions successfully regulated access and resolved conflicts among fishermen at the community level (Bennett 2002; Finegold et al. 2010). The traditional institutional structure of coastal fisheries governance is underpinned by ideologies that underlie the broader traditional governance system of coastal communities and their ways of organizing. The worldviews of the traditional authorities are rooted in their traditional beliefs about how the broader traditional society is organized based on chieftaincy, kinship, and historical customary institutional repertoire. Most of the traditional authorities in coastal fisheries inherited their positions or were selected based on historical customary

arrangements and experience in coastal fisheries (Interviews, TA1-9). They then form their own traditional councils to help perform traditional fisheries governance functions.

However, the co-management development process created new governance structures comprising a diversity of actors different from the governing councils of traditional authorities. Thus, some of the traditional authorities argue that organizing collaborative fisheries governance around a broad diversity of actors – some of whom had no affinity to or knowledge of coastal fisheries – in the name of participation through democratic representation runs counter to their norms of decision-making and how traditional governance has historically been organized (Interviews, TA1-3). Some chief fishermen of the study communities pointed out this conflict in worldviews:

We had our own ways of organizing things before the co-management committees were established. They have collapsed, and we are still here. [...] If existing structures are not supported and new ones are created just like that, this will not work (Interview, TA9).

This is a typical challenge that has been recognized in the donor-driven implementation of participatory resource governance regimes, which tend to pay little attention to ideologies and power constellations in the resource context (Russell & Dobson 2011; Cleaver 2012; Ho et al. 2016). Donor-driven participatory institutional development interventions are often project-focused and functionalist, mostly adopting an organizational approach to institutions with a strong emphasis on committees and representative participation through elections (Cleaver 1999). Thus, such organizational approaches tend to not fit with the local institutional repertoire, and existing power/societal structures may be attenuated by the introduction of new institutional structures, especially if there are strong and divergent ideological convictions (Cleaver 2012).

Also connected to the ideological convictions of the traditional authorities is the potential redistribution of incentives inherent in the customary fisheries governance structure by creating new institutional arrangements for co-management. The pre-existing customary institutional structure created certain incentives for traditional leaders who preferred the persistence of the traditional fisheries governance structure (FGDs, CBFMC1-3). The co-management arrangements were thus perceived as externally imposed government extensions to usurp the power and authority of the traditional authorities (chief fishermen) who exercise authority and control over coastal fisheries use and relations at the community level. This resulted in disinterest and lack of support for co-management structures, which was stressed

as a core reason for the failure of co-management by committee members during focus group discussions:

The *apofohene* here did not support the CBFMC; he was unhappy with it. He thought we were taking his power and the things he gets from the fishermen and all that. And you know he is the chief of the beach, he has power and respect of the fishermen. So, it was difficult for us to continue the committee's work, and some of us decided to stop because we did not want problems (FGD, CBFMC2).

The role of legal pluralism and conflicting ideologies in the failure of co-management was more prominent in one of the two study regions (the Central region). Issues of disagreements and conflicts between chief fishermen and co-management committee members were not mentioned during the interviews in the Volta region. This can be attributed to the level of social embeddedness of traditional fisheries governance structures, which is much stronger in the Central region. The Fantes have had a long history of traditional fisheries governance regimes modelled after the overall traditional governance structure of their society (Odotei 1999). The concept of the chief fisherman in customary fisheries governance is relatively recent in the Volta region – it was modelled after the Fante traditional fisheries governance structure (Interviews, TA4-5). Thus, disagreements over and the fear of co-management arrangements unsettling the power resources and incentive structure of the traditional fisheries governance structure were minimal in the Volta region. This study confirms the observations in the broader literature that the failure to realize the hope that generated co-management is attributed to donor-driven ideologies and economic logics that run counter to the ideologies and logics of local actors and livelihood dimensions of resource users in the resource governance context (Overå 2011).

Contrary to findings in other contexts, where the failure of co-management regimes was attributed to a lack of prior community organizing structures and little history of community self-organization around marine resource management (Levine 2016), such organizational structures existed in this context. However, ideological conflicts (worldviews on what participatory governance is and how it should be organized) hindered the success of co-management. While the development of co-management was said to be intended to strengthen traditional governance structures, it was instead designed to co-opt traditional leaders (Bennett 2002). The traditional governance structure, however, is not just the chief fisherman; it involves his traditional council and the ideologies and decision-making norms underpinning the customary normative order of coastal communities (Interview, FA1). Contrasting ideologies, vested interests, and disagreements between traditional authorities

and co-management committees have also been found to undermine the effectiveness and sustainability of co-management regimes in inland fisheries in other parts of Africa (Njaya et al. 2012; Nunan et al. 2015; Etiegni et al. 2017). While inland fisheries might be distinctively different from marine fisheries in how far the transaction costs of governance can vary, it shows that establishing co-management regimes for the governance of common-pool resources is not a straightforward endeavour in contexts where legal pluralism is strong. This is not only because of the differential ideologies that underpin customary and statutory legal orders but also because of the vested interests created by pre-existing institutions in customary resource governance systems.

Constraints of the broader institutional and governance context have also been recognized as a central theme of 'second-generation' challenges of co-management in many other places (Ratner et al. 2012). Local power dynamics can lead to important stakeholders, such as local politicians or traditional leaders withdrawing their support for co-management. Evidence has shown that a lack of support from such important and powerful local-level actors often presents a serious threat to the sustainability of co-management regimes (Russell & Dobson 2011; Ratner et al. 2012). The findings from this study are consistent with these observations and thus draw attention to the crucial role of local institutional and power structures in transitions to collaborative governance regimes in coastal social-ecological systems. All institutional regimes in resource governance – customary institutions/common property regimes, co-management regimes, resource nationalism (hierarchies), market-based governance, and neoliberalism (ITQs) – are representations of worldviews based on valuations of people and the environment (Fabinyi & Barclay 2022). Therefore, ideological convergence is necessary for co-management regimes to succeed in legal pluralistic contexts because the development of co-management in such contexts often involves navigating the institutional principles of statutory and customary legal systems, which tend to have different ideological foundations (Jentoft et al. 2009).

5 Conclusions

This article examined the process and outcomes of governance evolution in the coastal fisheries of Ghana. The process tracing shows that the development of the co-management arrangement was driven by donor ideologies that were diffused through funding mechanisms. The ideational change that instigated the governance change clashed with the ideological foundations of the traditional governance structure, which are not based on the modernist ideals of equal representation and participatory governance. While co-management was touted as a project to strengthen traditional fisheries governance, it instead created competitive

community-based fisheries organizations with attempts to co-opt the chief fishermen. The attempt to co-opt these traditional authorities did not succeed, especially in coastal communities where the social embeddedness of customary governance in coastal fisheries is stronger. The traditional authorities have a lot of power and command a great deal of respect among fishermen in coastal fisheries because they are extensions of the broader customary governance structure of Ghanaian society. Their worldviews on what co-management is, should be, and how it should be organized diverged with the modernization ideals that underpinned the co-management project.

The boundary between the exposition of worldviews and vested interests in the resistance of the traditional authorities to the design of the co-management regime is somewhat nebulous. What is clear, however, is that traditional authorities are inalienable in Ghana's coastal fisheries because of the broader institutional structure of the country. Legal pluralism is enshrined in the constitution, and a dual governance system – customary and statutory – co-exists, with chiefs as the custodians of traditional norms and rules. The chief fishermen in coastal fisheries are an extension of the remit of the traditional authorities to govern the beach, considered to be within the customary tenurial remit of traditional authorities in the coastal communities. The institutional design of the coastal fisheries co-management regime failed to align decision-making power and enforcement with the prevailing ideologies of powerful actors within the customary legal system, whose support was vital for the effectiveness and sustainability of the institutional arrangement. These findings are consistent with other studies on institutional change in small-scale fisheries, where the lack of support from powerful local stakeholders hindered the effectiveness and sustainability of co-management regimes (Russell & Dobson 2011; Ratner et al. 2012).

In conclusion, this study has shown that examining why and how institutional arrangements were created, and what ideologies shaped the emergence of such institutions, provides important avenues for understanding the practice and outcomes of collaborative common-pool resource governance regimes. The study shows how legal pluralism can complicate institutional development and practice of co-management in common-pool resource governance. Because institutional change redefines who people are and what they aspire to be (Bromley 2016) and redistributes incentives in resource use and governance (Vatn 2005), new institutional arrangements should fit within the prevailing cognitive and normative constraints of the institutional context to be effective and sustainable (Campbell 2004). This brings attention to the role of both agency and structure, as institutional change is a process of constrained innovation. For successful governance change, the development process of co-management regimes should consider the interactions between statutory and socially

embedded institutions in designing inter-legalities in a given resource governance context. Perspectives from legal pluralism and critical institutionalism provide promising analytical tools for understanding and resolving such contextual challenges of institutional development for coastal resource governance.

References

- Baland, J.-M. & Platteau, J.-P. (1996) *Halting degradation of natural resources: Is there a role for rural communities?* Oxford Univ. Press, Oxford.
- Banikoi, H., Schlüter, A. & Manlosa, A. O. (2023) Understanding transformations in the marine coastal realm: The explanatory potential of theories of institutional change. *Marine Policy* **155**, 1–12.
- Bavinck, M. & Gupta, J. (2014) Legal pluralism in aquatic regimes: a challenge for governance. *Current Opinion in Environmental Sustainability* **11**, 78–85.
- Beach, D. (2018) Process Tracing Methods. In: Wagemann, C., Goerres, A. & Siewert, M. (eds.) *Handbuch Methoden der Politikwissenschaft*. Springer Fachmedien Wiesbaden, Wiesbaden, pp. 1–21.
- Benda-Beckmann, F. von & Benda-Beckmann, K. von (2006) The Dynamics of Change and Continuity in Plural Legal Orders. *The Journal of Legal Pluralism and Unofficial Law* **38** (53-54), 1–44.
- Bennett, E. (2002) *The Challenges of managing small scale fisheries in West Africa*.
- Bromley, D. W. (2016) The 2016 Veblen-Commons Award Recipient: Daniel W. Bromley: Institutional Economics. *Journal of Economic Issues* **50** (2), 309–325.
- Campbell, J. L. (2004) *Institutional Change and Globalization*. Princeton University Press.
- Campbell, J. L. (2010) Institutional Reproduction and Change. In: Morgan, G., Campbell, J. L., Crouch, C., Pedersen, O. K. & Whitley, R. (eds.) *The Oxford Handbook of Comparative Institutional Analysis*. Oxford University Press, Oxford, 87-115.
- Cinner, J. E., Daw, T. M. & McClanahan, T. R. et al. (2012) Transitions toward co-management: The process of marine resource management devolution in three east African countries. *Global Environmental Change* **22** (3), 651–658.
- Cinner, J. E. & McClanahan, T. R. (2015) A sea change on the African coast? Preliminary social and ecological outcomes of a governance transformation in Kenyan fisheries. *Global Environmental Change* **30**, 133–139.
- Cleaver, F. (1999) Paradoxes of participation: questioning participatory approaches to development. *Journal of International Development* **11** (4), 597–612.
- Cleaver, F. (2012) *Development Through Bricolage: Rethinking Institutions for Natural Resource Management*, 1st ed. Routledge, London.

- Cleaver, F. D. & De Koning, J. (2015) Furthering critical institutionalism. *International Journal of the Commons* **9** (1), 1.
- Clement, F. & Amezaga, J. M. (2013) Conceptualising context in institutional reforms of land and natural resource management: the case of Vietnam. *International Journal of the Commons* **7** (1), 140.
- d'Armengol, L., Prieto Castillo, M., Ruiz-Mallén, I. & Corbera, E. (2018) A systematic review of co-managed small-scale fisheries: Social diversity and adaptive management improve outcomes. *Global Environmental Change* **52**, 212–225.
- Denzau, A. T. & North, D. C. (1994) Shared mental models: ideologies and institutions. *Kyklos* **47** (1), 3–31.
- Devarajan, S., Dollar, D. & Holmgren, T. (2001) *Aid and reform in Africa: Lessons from ten case studies*. World Bank, Washington, D.C.
- DiMaggio, P. J. & Powell, W. W. (1983) The Iron Cage Revisited: Institutional Isomorphism and Collective Rationality in Organizational Fields. *American Sociological Review* **48** (2), 147–160.
- Etiegni, C. A., Irvine, K. & Kooy, M. (2017) Playing by whose rules? Community norms and fisheries rules in selected beaches within Lake Victoria (Kenya) co-management. *Environment, Development and Sustainability* **19** (4), 1557–1575.
- Fabinyi, M. & Barclay, K. (2022) Fisheries Governance. In: Fabinyi, M. & Barclay, K. (eds.) *Asia-Pacific Fishing Livelihoods*. Springer International Publishing, Cham, pp. 65–90.
- Finegold, C., Gordon, A., Mills, D., Curtis, L. & Pulis, A. (2010) *Western Region Fisheries Sector Review*.
- Gelcich, S., Hughes, T. P. & Olsson, P. et al. (2010) Navigating transformations in governance of Chilean marine coastal resources. *PNAS* **107** (39), 16794–16799.
- Gordon, S. H. (1954) The Economic Theory of a Common-Property Resource: The Fishery. *The Journal of Political Economy* **62** (2), 124–142.
- Hamilton, J., Basurto, X., Smith, H. & Viridin, J. (2021) How does the World Bank shape global environmental governance agendas for coasts? 50 years of small-scale fisheries aid reveals paradigm shifts over time. *Global Environmental Change* **68**, 102246.
- Hara, M. & Nielsen, J. R. (2003) Experiences with fisheries co-management in Africa. In: Wilson, D. C., Nielsen, J. R. & Degnbol, P. (eds.) *The Fisheries Co-management Experience*. Springer Netherlands, Dordrecht, pp. 81–98.
- Hardin, G. (1968) The Tragedy of the Commons. *Science* **162**, :1243-1248.
- Higgs, R. (2008) The Complex Course of Ideological Change. *American Journal of Economics and Sociology* **67** (4), 547–565.

- Ho, N. T. T., Ross, H. & Coutts, J. (2016) Can't three tango? The role of donor-funded projects in developing fisheries co-management in the Tam Giang Lagoon system, Vietnam. *Ocean & Coastal Management* **121**, 97–106.
- Jentoft, S., Bavinck, M., Johnson, D. & Thomson, K. (2009) Fisheries Co-Management and Legal Pluralism: How an Analytical Problem Becomes an Institutional One. *Human Organization* **68** (1), 27–38.
- Kingston, C. & Caballero, G. (2009) Comparing theories of institutional change. *Journal of Institutional Economics* **5** (2), 151–180.
- Kwadjosse, T. (2009) *The Law of the Sea: Impacts on the Conservation and Management of Fisheries Resources of Developing Coastal States – the Ghana Case Study*, New York.
- Levine, A. (2016) The development and unraveling of marine resource co-management in the Pemba Channel, Zanzibar: institutions, governance, and the politics of scale. *Regional Environmental Change* **16** (5), 1279–1291.
- McCay, B. J. & Acheson, J. M. (eds.) (1987) *The Question of the Commons: The Culture and Ecology of Communal Resources*, 3rd print. Univ. of Arizona Press, Tucson, Baltimore, Md.
- Ministry of Fisheries and Aquaculture Development (2020) *Co-management Policy for the Fisheries Sector*, Accra, Ghana.
- Nielsen, J. R., Degnbol, P., Viswanathan, K., Ahmed, M., Hara, M. & Abdullah, N. M. R. (2004) Fisheries co-management—an institutional innovation? Lessons from South East Asia and Southern Africa. *Marine Policy* **28** (2), 151–160.
- Njaya, F., Donda, S. & Béné, C. (2012) Analysis of Power in Fisheries Co-Management: Experiences from Malawi. *Society & Natural Resources* **25** (7), 652–666.
- North, D. C. (2005) *Understanding the process of economic change*. Princeton University Press, Princeton N.J.
- Nunan, F. (2020) The political economy of fisheries co-management: Challenging the potential for success on Lake Victoria. *Global Environmental Change* **63**, 102101.
- Nunan, F., Hara, M. & Onyango, P. (2015) Institutions and Co-Management in East African Inland and Malawi Fisheries: A Critical Perspective. *World Development* **70**, 203–214.
- Odotei, I. (1999) Gender and Traditional Authority in the Artisanal Marine Fishing Industry in Ghana. *Research Review of the Institute of African Studies* **15** (1).
- Orach, K. & Schlüter, M. (2021) Understanding the dynamics of fish politics: The role of diverse actor interactions in transformations towards co-management. *Environmental Science & Policy* **124**, 195–205.

- Ostrom, E. (1990) *Governing the Commons: Evolution of Institutions for Collective Action*. Cambridge University Press.
- Ostrom, E. (1996) Incentives, Rules of the Game, and Development. In: World Bank Group (ed.) *Annual World Bank Conference on Development Economics 1995*, p. 207.
- Ostrom, E. (2007) A diagnostic approach for going beyond panaceas. *PNAS* **104** (39), 15181–15187.
- Overå, R. (2011) Modernisation Narratives and Small-Scale Fisheries in Ghana and Zambia. *Forum for Development Studies* **38** (3), 321–343.
- Ratner, B. D., Oh, E. J. V. & Pomeroy, R. S. (2012) Navigating change: second-generation challenges of small-scale fisheries co-management in the Philippines and Vietnam. *Journal of environmental management* **107**, 131–139.
- Russell, A. J. M. & Dobson, T. (2011) Chiefs as Critical Partners for Decentralized Governance of Fisheries: An Analysis of Co-Management Case Studies in Malawi. *Society & Natural Resources* **24** (7), 734–750.
- Sauerland, D. (2015) Ideologies, Institutions, and the New Institutionalism. In: *International Encyclopedia of the Social & Behavioral Sciences*. Elsevier, pp. 561–572.
- Schlager, E. & Ostrom, E. (1992) Property-rights regimes and natural resources: a conceptual analysis. *Land economics*, 249–262.
- Schlüter, A. (2010) Institutional Change and Qualitative Research: Methodological considerations for institutional economic empirical research. *Journal of Interdisciplinary Economics* **22** (4), 391–406.
- Skarbek, D. (2020) Qualitative research methods for institutional analysis. *Journal of Institutional Economics* **16** (4), 409–422.
- van Meegdenburg, H. (2023) Process Tracing. In: Mello, P. A. & Ostermann, F. (eds.) *Routledge Handbook of Foreign Policy Analysis Methods*. Routledge, London, pp. 405–420.
- Vatn, A. (2005) *Institutions and the Environment*. Edward Elgar Publishing, Cheltenham.
- Vercrujssse, E. V. W. (1984) *The penetration of capitalism: A West African case study*. Zed Books; The Institute of Social Studies, London, The Hague.
- Wade, R. (1987) The management of common property resources: collective action as an alternative to privatisation or state regulation. *Cambridge Journal of Economics* **11** (2), 95–106.
- Walker, B. L. (1998) *Sisterhood and Seine-Nets: Engendering the Development, Science, and Conservation of Ghana's Marine Fishery*. Doctoral dissertation. University of California, Berkeley, Bekeley, California.

Williamson, O. E. (1995) The Institutions and Governance of Economic Development and Reform. In: World Bank Group (ed.) *Development economics: 6th Annual conference Papers and discussions*, p. 171.

World Bank (1994) *The World Bank and Participation*, Washington, D.C.

World Bank (1995) *Memorandum and recommendation of the International Development Association to the Executive Directors of a proposed credit to the Republic of Ghana for a fisheries sub-sector capacity building project*, Washington, D.C.

World Bank (2003) *Implementation Completion Report: Ghana Fisheries Sub-sector Capacity Building Project*, Washington, D.C.

RESEARCH PAPER 3

The political economy of institutional change in the coastal blue economy: challenges and potential for co-management in Ghana

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Abstract

Since the early 1990s, development interventions have also supported the development of such institutional arrangements in coastal fisheries in developing countries. However, the transition to such governance arrangements have faced challenges in many countries including Ghana. It is still unclear why co-management has not lived up to the hype in many contexts, leading to questions on the potential for co-management regimes to achieve sustainable resource governance. In this study, we examine the challenges of institutional transformation towards co-management in coastal resource systems in Ghana. We explore the potential for developing and sustaining co-management arrangements in coastal fisheries considering socio-political and institutional complexities of coastal fisheries in Ghana. We analyse the challenges and opportunities for co-management in coastal fisheries, applying the enabling conditions for successful co-management to the contextual features of coastal fisheries governance in Ghana. The findings indicate that contextual political-economy dynamics hindered effectiveness and sustainability of co-management arrangements in coastal fisheries and that the potential for successful co-management of coastal fisheries depends on how institutional design accounts for these broader socio-political dynamics both at national and local levels. This paper contributes important insights on the challenges of successfully establishing and sustaining collaborative governance regimes for sustainability in coastal systems.

Keywords: Collaborative governance regimes, political settlements, institutional change, governance transitions, coastal fisheries

1. Introduction

The emergence of the blue economy paradigm has generated enthusiasm regarding the socioeconomic development potential of marine and coastal resources (Voyer et al. 2018). The institutionalization of the blue economy is occurring at a fast pace and coastal resources are increasingly becoming a major focus to address a broad range of potential blue growth industries (Bax et al. 2022; Voyer et al. 2022). However, concerns have been raised about the unintended and perhaps undesirable impacts of the blue economy implementation processes on coastal communities, including small-scale fisheries who not only face marginalization but also, threats to their livelihoods and socioeconomic organization (Bennett et al. 2015; Cohen et al. 2019; Ayilu et al. 2023). The challenges posed by blue growth-oriented institutional reforms underpinned by a presupposed economic and scientific rationality on coastal resource co-management has also been highlighted (Ganseforth 2023). This has reignited interest in institutional and governance transformations for the sustainable use and management of marine and coastal resources. Scholars have argued that achieving a sustainable and equitable blue economy requires institutional approaches that foster participatory and collaborative management of ocean spaces and resources with coastal communities (Bennett et al. 2019). As a result, co-management has been advocated as integral to building a sustainable coastal blue economy (Bax et al. 2022). This call for institutional change offers grounds for examining the challenges and opportunities for the successful implementation of institutional and governance approaches, such as co-management regimes, which have been promoted in development policy and pursued by governments for sustainable coastal resource governance.

Since the early 1990s, development interventions in common-pool resource governance have also supported the design and implementation of such institutional arrangements in coastal fisheries in developing countries to enhance the participation of resource users in resource management (Cinner et al. 2012; Ho et al. 2016; Orach & Schlüter 2021). Co-management has been touted by marine social scientists as a promising institutional approach for the sustainable, efficient and equitable resource governance (Pomeroy, 1995; Berkes et al., 1989; Nielsen et al., 2004; Pinkerton, 1989; Jentoft et al., 1998). However, the sustainable governance outcomes of co-management regimes have been mixed (Gutiérrez et al. 2011b; d'Armengol et al. 2018). Extant literature has shown that the failure of co-management regimes are related to lack of prior community organizing structures (Levine & Richmond 2014; Levine 2016), non-compliance and ineffective rule enforcement partly due to corruption (Obiero et al. 2015; Nunan et al. 2018), the degree of power devolved (Obiero et al. 2015), fishers opposing co-management regimes (Rivera et al. 2021), historical conflicts that hinder

collective action (Murunga et al. 2021), as well as, ideological and value conflicts in situations of legal pluralism (Parlee & Wiber 2014; Bennett-Jones et al. 2022; Banikoi 2024). Others have placed special emphasis on the significance of leadership and social capital to the success of co-management regimes in fisheries (Gutiérrez et al. 2011b; Kosamu 2015). Yet, the evidence has shown that institutional arrangements which succeed in one setting also fail in other settings even when these enabling conditions exist (Acheson 2006).

The transition to co-management regimes has faced challenges in many countries including Ghana. The challenge for the institutional analysis of co-management is to generate sufficient knowledge of what sustains or leads to the collapse of co-management regimes in resource governance. It is still unclear why co-management has not lived up to the hype in many contexts, leading to questions on the potential for co-management regimes to achieve sustainable resource governance. A key variable that has been identified as critical for understanding why institutional arrangements perform variably is the context within which institutional solutions are implemented. However, the role of the context in institutional outcomes has received less attention in the institutional analysis of resource governance regimes (Clement & Amezaga 2013; Cumming et al. 2020). Particularly, the role of contextual political-economic context in the outcomes of governance transformation towards co-management regimes has been less researched (Clement 2010; d'Armengol et al. 2018; Nunan 2020). Yet, to understand the emergence and relative effectiveness of institutional arrangements, it is critical to assess the socioeconomic and political context within which such institutional arrangements are located (Agrawal 2002; Dietz et al. 2003; Ostrom 2007; Khan 2017). Context plays an important role in shaping the challenges and opportunities for co-management in a particular setting. The socio-political context can affect the success of an institutional arrangement in threefold: i) institutional design, ii) the implementation of the institutional solution, and iii) the rule enforcement processes and outcomes of an institutional arrangement (Clement & Amezaga 2013; Khan 2015, 2017).

In this paper, we examine the challenges and potential for developing and sustaining coastal resource co-management arrangements in the context of the prevailing socio-political dynamics of resource governance. Using the case of Ghana, we explicate the role of the socio-political context in the failure of a coastal fisheries co-management regime and its implications for developing effective and sustainable co-management institutional arrangements for coastal fisheries. Ghana has unsuccessful experiences with transitioning from centralised management to a co-management regime. Through a World Bank supported institutional development project in 1997, co-management organisational structures were established in 133 coastal fishing communities to ensure the sustainable management of coastal fisheries. However, the

co-management regime could not be sustained, as the governance structures collapsed only a few years after the project ended (Finegold et al. 2010; Abane et al. 2013). This failure to transition to successful co-management occurred despite the pre-existence of local leadership and community organizing structures in coastal fishing communities, which are considered key enabling conditions for a successful co-management regime (Pomeroy et al. 2001; Gutiérrez et al. 2011a). The study examines this challenge, contributing to the institutional change literature by discussing the implications of political economy dynamics on governance transformations that aim to achieve sustainability in the coastal blue economy. There is currently a renewed interest in developing a co-management arrangement for coastal fisheries in Ghana – a new co-management policy has been enacted to this effect (Ministry of Fisheries and Aquaculture Development 2020). The findings also contribute empirical knowledge that is relevant for current and future institutional development processes for coastal resource governance in Ghana and similar contexts.

The rest of the paper is structured as follows. The next section outlines the theoretical approach. Section 3 presents an overview of the broader political-economy context of Ghana and its relation to the coastal resource governance. Section 4 outlines the research methods and section 5 presents and discusses the research findings. Section 6 then concludes the paper.

2. Theoretical framework

Co-management scholars have produced important insights that seek to explain enabling conditions for successful co-management regimes in fisheries. The research has synthesised a broad range of key conditions for successful fisheries co-management³ (Pomeroy & Williams 1994; Pomeroy et al. 2001). These include: 1) appropriate scale and clearly defined boundaries; 2) clearly defined membership; 3) group homogeneity; 4) partnerships and partners sense of ownership of co-management process; 5) monitoring and enforcement of resource management rules; 6) property rights over resource clarified; 7) leadership at community level exists; 8) legally recognised and legitimate community organisation; 9) individual incentive structure (benefits of participation exceed costs); 10) long-term support of the local government unit; 11) empowerment, capacity building & social preparation; 12) Adequate financial resources/budget; 13) conflict management mechanism exists; 14) enabling legislation and policies; and 15) clear objectives from a well-defined set of issues. While these enabling conditions are not exhaustive, they provide an important framework for

³ See Pomeroy and Williams (1994); Pomeroy et al. (2001) for detailed analysis of the key conditions for successful fisheries co-management regimes

examining the challenges and potential for successful implementation of co-management in a given setting. However, the extent to which these enabling conditions can facilitate effective and sustainable co-management regimes depends on the socio-political context within which such institutional arrangements are implemented (Clement & Amezaga 2013; Epstein et al. 2020; Nunan 2020). To examine the potential for successful co-management, it is important to understand how contextual factors may affect these key enabling conditions. The design of an institutional regime, its effectiveness and degree of enforcement may be constrained by contextual political-economic dynamics, defined by the existing and emerging political settlement (Khan 2015).

2.1. Conceptualising context in institutional analysis: the political settlements approach

The role of contextual factors in hindering or facilitating institutional change has been recognised in the common-pool resource governance literature. Context has been conceptualised in varied ways depending on the disciplinary orientation. The institutional economics approach to the study of common-pool resource governance earlier viewed contextual factors as internal to the social-ecological system, such as the social-cultural, institutional and biophysical conditions that constrain actor interactions in action situations (Ostrom 2005; McGinnis 2011; McGinnis & Ostrom 2014). These contextual variables are what Clement & Amezaga (2013) refer to as “fitting contextual factors” which determine whether new institutions fit the social-ecological system. The conceptualisation of context has been enlarged to include external factors such as the broader political-economic context (Clement 2010). Adding power dimensions to conceptualisation of context, the political-economic context and discourses are referred to as “mobilising contextual factors” which shape power dynamics and power distribution (Clement & Amezaga 2013: 147). While the role of the macro political-economic context has been recognised as crucial for understanding institutional change and institutional performance in resource governance, how this political-economic context should be understood remains abstract in the resource governance literature.

Recent theoretical development within the new institutional economics has produced a discrete theoretical approach for understanding the broader political-economic context in institutional analysis, known as the political settlements approach (Khan 2010; Khan 2017). The political settlements approach, a political economy variant of political settlements analysis, brings politics and distribution of power in society into institutional analysis (Kelsall et al. 2022). At the heart of the political settlements approach is how the distribution of power across organisations – groups of individuals who work together in structured ways and are subject to

rules of interaction – in a society shapes institutional and development outcomes (Khan 2017: 639). These organisations include elite and non-elite socio-political groups that hold power in a society (Behuria et al. 2017). The power of these different groups to contest, obstruct and oppose rules that are against their interests affects the effectiveness and enforceability of the institutions (Khan 2010: 18). Thus, the effectiveness and sustainability of any institutional regime depends on the responses of the organisations that are affected by that regime (i.e. whether they will punish or isolate rule breakers to ensure compliance) (Khan 2019) or what is politically feasible in the political equilibrium (Robinson 2010). That is, the distribution of power across organizations in the society is the most important determinant of the effectiveness and sustainability of institutional arrangements (Khan 2017).

The political settlements theory emphasizes the importance of analysing the relative holding-power⁴ and capabilities of relevant organisations, as organizations will support, resist or distort particular institutions and policies depending on their interests (Khan 2017). Two dimensions of the distribution of holding-power across political organizations are distinguished: horizontal power (the relative power of the higher factions compared to the lower factions of the same ruling coalition) and vertical power (the relative power of excluded factions compared to the ruling coalition) (Khan 2017). The relative holding power of political organisations to resist or enforce institutional changes depends on the type of political settlement⁵. Khan provides four ideal types of clientelist political settlements common to socio-political systems in developing economies: potential developmental coalition, (vulnerable) authoritarian coalition, (weak) dominant party, and competitive clientelism (Khan 2010). In a dominant party political settlement, ruling coalitions are able to repress or co-opt alternative sources of power, while ruling coalitions face a credible challenge from excluded rival power sources (elite factions) and considerable pressures from the lower-level actors of the ruling coalition to maintain their support and loyalty in competitive clientelism (Hickey et al. 2020). Dominant party political settlements allow ruling coalitions to adopt a long-term time horizon to policies and institutional development because the threat of alternative sources of power outside and inside the ruling coalition is minimal (Khan 2010). Due to the perennial threat of losing power to rival coalitions in competitive clientelism, ruling coalitions tend to focus on short-term time horizons unless the political and bureaucratic institutions of resource allocation are sufficiently robust (Khan

⁴ Holding power represents “how long a particular organization can hold out in actual or potential conflicts against other organizations or the state” Khan (2010: 20).

⁵ A political settlement is a description of the ‘social order’ of socio-political system, defined as ‘an interdependent combination of a structure of power and institutions at a level of a society that is mutually ‘compatible’ and also ‘sustainable’ in terms of economic and political viability” Khan (2010: 20).

2010; Hickey et al. 2020). In competitive clientelistic political settlements, intra-elite conflicts are also pivotal because the struggles between elite factions and lower-level followers will shape the kind of institutions that emerge and how such institutional arrangements will perform (Kelsall et al. 2022).

The political settlements approach provides a robust theoretical approach for understanding the macro political-economic context, looking at the structure of the socio-political system of a country. The theoretical approach has been widely used to examine institutional change and institutional outcomes in various sectors of development in the global south, including natural resource governance, especially in the extractive resource sector (Poteete 2009; Kjær 2015; Mohan et al. 2017; Hickey et al. 2020; Ayanoore & Hickey 2022; Benites & Ubillús 2022; Bothale 2022; Atta-Quayson 2023). However, the application of this theoretical approach to the institutional analysis of the outcomes of collaborative resource governance regimes in fisheries is still scant (however, see Khan 2015; Poteete 2019; Nunan 2020; Sarr et al. 2022). The political settlement approach has been criticized for lacking a clear definition and predictive power, as well as, for being inherently elite-bias with less comparative attention to non-elite (Kelsall et al. 2022). Nevertheless, it provides analytical tools for evaluating the sustainability of institutions and policies in a governance domain and thus has strong interpretive power (Khan 2018). The extant studies on resource governance have shown that the political settlements approach provides a useful analytical lens for illuminating the role of the socio-political context in the outcomes of institutional regimes. They show how political interference in rule enforcement, the choice of institutional regimes, and lack of political will to implement policies for effective resource governance are linked to the political incentives that are produced by the contextual political settlement. In this paper, we draw on Khan's political settlements framework to examine the role of the socio-political context in the challenges of sustaining coastal fisheries co-management arrangements in Ghana. This includes analysing the socio-political context in relation to the enabling conditions for successful co-management

2.2. The political settlement of Ghana and resource governance

Ghana's political settlement has been described as that of a competitive clientelism in which two major political parties – the New Patriotic Party (NPP) and the National Democratic Congress (NDC) – compete fiercely for power in general elections (Whitfield 2011; Oduro et al. 2014; Abdulai & Hickey 2016; Appiah & Abdulai 2017; Mohan et al. 2017). Since the return to multi-party politics in 1992, these two political parties have won four elections apiece out of the eight general elections conducted so far. While both parties have certain regions as their strongholds, there are four swing regions in the country and the margin of votes between the

winning faction and the losing faction is always slim (Appiah & Abdulai 2017). Since 1992, political power has swung between the two dominant political parties in three of the four coastal districts (see table 1). These three coastal regions – Central, Greater Accra, and Western regions – have been swing regions. Votes from those regions are critical to any of the two dominant parties to form the ruling coalition. The intense competition between the two dominant political parties means that a ruling coalition is always facing a powerful excluded rival coalition seeking opportunities to take over power. Similarly, the ruling coalitions also face threats from higher-level and lower-level factions within its ranks due to internal elite factionalism that characterizes the organization of both the political parties (Whitfield 2011; Hirvi & Whitfield 2015). Therefore, this competitive clientelism system in Ghana necessitates that the higher levels of the ruling coalition continuously engage and negotiate with lower level factions, who tend to hold significant bargaining power.

The lower-level factions in Ghana's competitive clientelism are the local party executives, who constitute delegates for choosing the party parliamentary and presidential candidates, and the constituency-level party members who are critical to delivering votes during elections (Whitfield 2011: 11). This means that the lower-level factions (the so-called party 'foot-soldiers') who mobilize the votes must be rewarded for their efforts when the elite faction forms the ruling coalition (Oduro et al. 2014; Kelsall et al. 2022). These rewards come in the form of government jobs, contracts and other institutional mechanisms of resource distribution to maintain their support and loyalty to the ruling coalition (Whitfield 2011; Kelsall et al. 2022). In this competitive clientelism, however, there are floating voters who are not party loyalists and tend to swing with each election. The elite factions have to respond to such voter groups too. Therefore, the ruling elites are dissuaded from pursuing policies that initially affect a significant portion of the population, given that doing so would result in a loss of votes in the next election (Whitfield 2011: 12). Due to this perennial threat of losing power to the excluded strong coalitions who cannot be contained through mechanisms of repression or co-optation of rival sources of power, the ruling coalitions, in most cases, make policy and institutional choices shaped by political survival strategies (Whitfield 2011; Oduro et al. 2014). Such strategies encompass providing privileges to both upper and lower sections of the ruling coalition, alongside distributing minimal quantities of visible goods and services to the general public with the intention of swaying voters in their favour during election periods. (Whitfield 2011: 6). In some cases, it involves replacing public and civil servants with politically aligned persons in state-controlled enterprises during election turnovers, as well as, the discontinuity of plans, policies, programs and institutional development (Hirvi & Whitfield 2015; Abdulai 2021).

Scholars have lamented how Ghana’s current political settlement appears to be undermining its capacity to overcome the next level of institutional and development challenges as structural transformation has not been achieved (Whitfield 2011; Hickey et al. 2020). Because of the competitive clientelism, institutional change processes are often discontinued when there is a change of government unless they have donor funding conditionality that makes it difficult for reforms to be aborted (Appiah & Abdulai 2017). This phenomenon undermines institutional changes that require a long-term horizon to materialise, thus leading to undesirable outcomes of institutional development. The role of the political settlement dynamics in natural resource governance outcomes in Ghana has been extensively researched in the extractives sector (Mohan et al. 2017; Ayanoore & Hickey 2022). The research has shown that institutional development and governance outcomes in the oil and gas sector have been strongly influenced by the political settlement dynamics. Similar observations have been recorded in the study of institutional outcomes in the salt mining in the coast of Ghana (Atta-Quayson 2023).

In this paper, we examine how this competitive clientelism shaped the institutional outcomes of fisheries co-management and what this means for institutional change and governance transformations in coastal resource systems in Ghana. The alternation of political power in the coastal regions suggests that the role of political settlement dynamics in the coastal blue economy governance is significant. This is more so, considering that a substantial number of voters’ livelihoods in the coastal regions are dependent on coastal fisheries and the fact that some fishers and fishing groups in the local communities are known supporters and activists of these political parties. For instance, over the years, individuals holding positions of authority within fisheries management bodies at various levels frequently become entangled in politically motivated changes to favour loyalists of the ruling coalition.

Table 1. Power alternations between dominant political organizations in the four coastal regions of Ghana in electoral cycles since 1992

<i>Winning coalition</i>	Western Region	Central Region	Greater Accra region	Volta Region
1992	NDC	NDC	NDC	NDC
1996	NDC	NDC	NDC	NDC
2000	NPP	NPP	NPP	NDC
2004	NPP	NPP	NPP	NDC
2008	NDC	NDC	NDC	NDC
2012	NDC	NDC	NDC	NDC
2016	NPP	NPP	NPP	NDC
2020	NPP	NPP	NDC	NDC

Source: Electoral commission of Ghana

3. Material and Methods

3.1. Study area

The study was conducted in the coast of Ghana, a regional fishing nation with a huge reliance on coastal fisheries. The fisheries sector accounts for 3.5% of the national GDP, employs approximately 2 million people, and provides 60% of the animal protein needs of Ghanaians (Ministry of Fisheries and Aquaculture Development 2020). The artisanal/small-scale fisheries sub-sector forms the engine of the fisheries sector. This coastal fisheries sector is dominated by artisanal fishermen in over 200 coastal fishing communities along the 550km coastline, contributing about 70% of annual marine fish landings in Ghana (Finegold et al. 2010; Okyere et al. 2023). Coastal fisheries are thus important for economic development, coastal livelihoods and development of coastal communities in Ghana. The *de jure* responsibility for the sustainable use and development of the fisheries sector rests with the government of Ghana. The government of Ghana carries out its responsibilities through the Ministry of Fisheries and Aquaculture Development (MoFAD) and the Fisheries Commission (FC). The governance approach adopted by governments since the colonial era has been a centralised management regime. The artisanal fisheries sector has a dual governance structure. Parallel to statutory governance structures, coastal fisheries are also governed by customary institutions enacted by the chief fisherman (*apofohene*) and chief fishmonger (*konkohemaa*) who are traditional leaders in coastal fisheries.

In the mid-1990s, the government of Ghana sought funding opportunities and collaborated with donor organisations to undertake institutional changes that would strengthen both industrial and artisanal fisheries governance. This led to the implementation of the Fisheries Sub-sector Capacity Building Project (FSCBP) in 1997 which was funded by the World Bank (World Bank 1995). This project resulted in the development of a new national fisheries law, the Fisheries Act 2002 (Act 625) and the strengthening of the fisheries department to undertake monitoring and surveillance to enhance compliance with fisheries regulations. As part of project, and in line with the global paradigmatic shift towards participation in development practice and resource governance in the 1990s, the government of Ghana identified co-management as the governance regime to achieve sustainability in coastal fisheries and to enhance the contribution of coastal fisheries to the economic development of Ghana (World Bank 2003). Thus, co-management structures – community-based fisheries management committees (CBFMCs) – were established in 133 coastal fishing communities across the four coastal regions of Ghana between 1997 and 2002 (World Bank 2003). These local CBFMCs were entrusted with fisheries management responsibilities, including the development of their own local rules and the enforcement of the rules and regulations of

fisheries management. Many of the CBFMCs had their byelaws approved and gazetted by the local district assemblies (DAs). However, the co-management regime was not successful, as most of the CBFMCs collapsed only a few years after the project ended (Finegold et al. 2010).

The study was conducted in coastal communities in two of the four coastal regions of Ghana – Central and Volta regions (see figure 1 for study locations). These are regions where artisanal fishing constitutes a major economic activity, and they also had the strongest commitment to and actively participated in the co-management project (Bennett 2002). The regions also differ regarding coastal fishing history and methods, socio-cultural practices, and political characteristics. Politically, the central has been a swing-region during general elections while the Volta region is a stronghold of the NDC. Socio-culturally, the Volta region is principally made up of the Ewe ethnic group with a patrilineal social system, while the Central region is majority Fante region with a matrilineal society. Thus, the role of women in traditional fisheries governance may differ. Considering the sociocultural and historical differences in fishing between the Volta and Central regions, this selection was also deemed important to explore contextual nuances in the outcomes and challenges of sustaining co-management. The specific communities in the regions were selected based on their history of co-management and importance in the coastal artisanal fisheries sector. In the central region, three fishing communities in three different districts were selected: Cape Coast, Elmina, and Mumford. In the Volta region, the communities studied include Dzelukope, Abutiakope, Woe, Tegbi, Anloga, and Adina.

3.2. Data collection and analysis

The study used qualitative research methods – semi-structured interviews and focus group discussions (FGDs) to collect data. In total, 63 participants were involved in the study through face-to-face interviews and the FGDs in a 3-month period of fieldwork (January-March, 2022). The participants included traditional leaders in fisheries governance – the chief fishermen known as *apofohene* (n= 9) and chief fishmongers known as *konkohemaa* (n=6), experienced fishermen/canoe owners (n=6), co-management committee members (n=30), representatives of fishers associations (n=2), current and retired fisheries officers at zonal, regional and national offices of the Fisheries Commission (n=8), and representatives from civil society organizations working in the coastal fisheries sector (n=2). The participant groups were purposively selected due the peculiarity of the information. A snowballing approach was adopted to identify specific individual participants from nine fishing communities (see table 2).

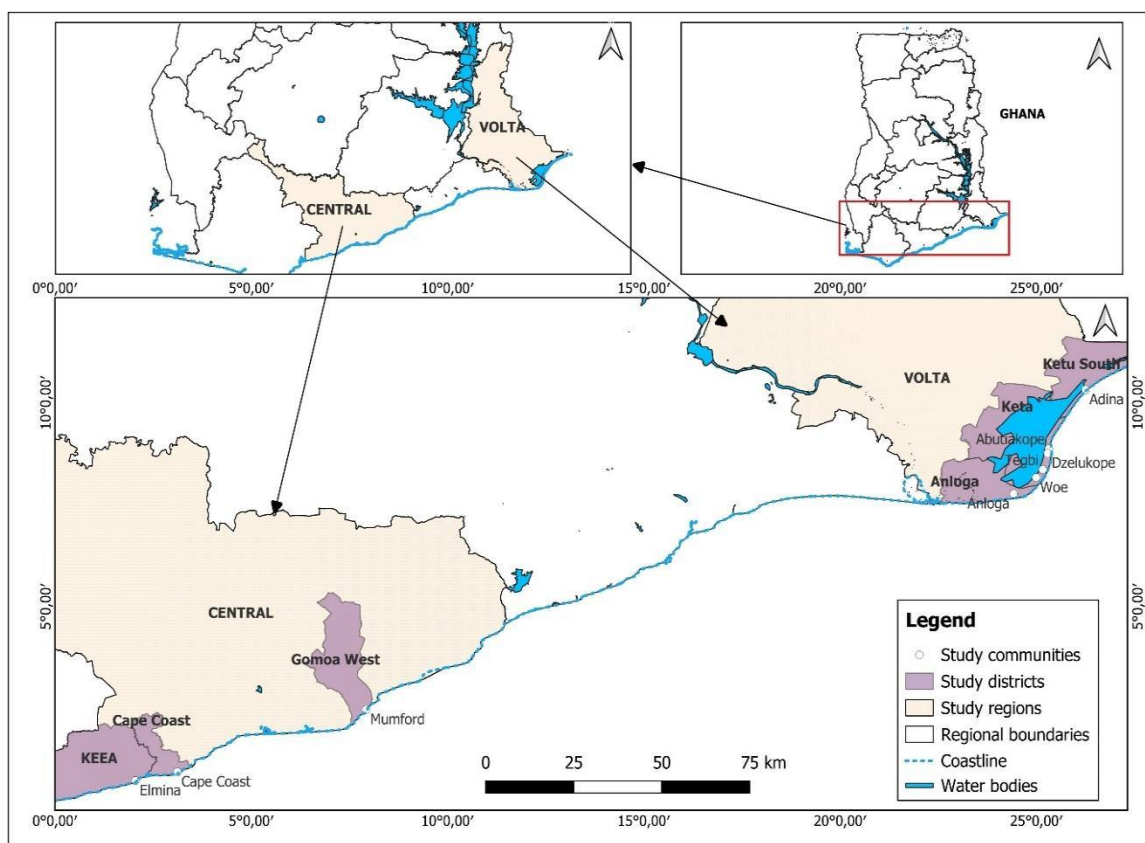


Figure 1. Study area map

Table 2. Study area characteristics

Study District	Total Fishermen Population	Selected Fishing community	Fishermen population in Selected Community	Fishing/ gear type	Number of Canoes
Cape Coast Metropolitan	2227	Cape Coast	1960	Purse seine, beach seine, ali & set nets	277
KEEA Municipal	7815	Elmina	2239	Purse seine, line, ali, drift & other set nets	255
Gomoa West District	4676	Mumford	592	Hook & line, beach sein & other set nets	128
Anloga District	2199	Anloga	213	Beach seine nets	28
		Woe	183	Beach seine & other set nets	28
		Tegbi	741	Beach seine & other set nets	73
Keta Municipal	3442	Abutiakope	689	Beach seine & set nets	141
		Dzelukope	572	Beach seine & set nets	67
Ketu South Municipal	6176	Adina	1745	Beach seine, purse seine & lobster nets	94

Source: (Dovlo, et al, 2016; MoFAD, 2022)

Of the nine communities, six FGDs comprising 30 participants were held in-person with co-management committees in six fishing communities: Dzelukope, Woe, Adina, Elmina, Mumford, and Cape Coast. The FGDs could not be held with co-management committees in three communities due to difficulties in organising committee members who were not readily available during the fieldwork period. However, in-depth interviews were conducted with chief fishermen and their governing councils in all nine fishing communities. In addition, in-depth interviews were conducted with traditional women leaders in six communities. The participants included both men (n=49) and women (n=14). The unequal representation of women in the research is due to the focus of the research and the structure of coastal fisheries governance in Ghana. While the traditional leaders of women (*Konkohemaa*) represent the voice of women in traditional fisheries governance, men have majority representation in the co-management committees, with only one woman in each committee.

All interviews were conducted in the local languages (*Fante* and *Ewe*) spoken in the regions with the help of interpreters, and using English only when the respondent could understand and speak English. The topics covered in the interviews and FGDs centred on the challenges of coastal fisheries governance, how co-management came about, why co-management was unsuccessful, issues of compliance and enforcement and the participants' thoughts on the potential for co-management in coastal fisheries. Most of the interviews were recorded except only when participants objected to recording during the interviews. The interviews lasted between 45 to 90 minutes long. The recorded interviews were not transcribed verbatim. The first author took detailed and observational notes during and after the interviews to grasp the salient points of the conversations. The interview notes were complemented with the audio recordings of the interviews which were replayed to ensure nothing important was missed in the data analysis. The thematic analysis method (Braun & Clark, 2006) was used to guide the coding and the qualitative data analysis. The interview notes were coded with the aid of MAXQDA Plus 2022. The themes generated were then summarized in write-ups and discussed.

4. Research findings

This section presents an analysis of the role of contextual political economy dynamics in the failure of coastal fisheries co-management regime and what implications it has for institutional change and governance transformations in coastal resource systems. We first provide a description of the co-management institutions and the enforcement mechanisms that resulted from the institutional development project, followed by the role of political incentives and distributional conflicts in the failure of the co-management institutional arrangement (see figure 2 for a visualised causal mechanism of the role of the socio-political context). We then

analyse the implications of the socio-political context for implementing effective and sustainable coastal fisheries co-management arrangements in Ghana.

4.1. Institutional design, enforcement mechanisms and challenges of sustaining co-management

As part of Ghana's structural adjustment reforms, the Government of Ghana and World Bank developed a Medium-Term Agricultural Development Strategy (MTADS) in 1990 to accelerate agricultural growth. The strategy required "institutional strengthening and policy reforms" for the development and sustainable governance of key natural resources, including marine and inland fisheries (World Bank 1995: 10). As a result, in 1995, the World Bank funded a fisheries sub-sector capacity-building project (FSCBP) with the aim of strengthening fisheries governance institutions that resulted in the implementation of a co-management regime for coastal fisheries. The project was part of the broader structural adjustment support the World Bank provided to the Government of Ghana to achieve economic growth. A fisheries sub-sector development strategy was thus prepared with inputs from donors and a team from the Food and Agricultural Organization of the United Nations (FAO), which served as a baseline document for the institutional development project. According to the World Bank report, the rationale for designing the project was to resolve a variety of problems in the fisheries sub-sector, including the "decline in the stock of fish, the proliferation of demersal trawling effort in the near-shore waters[...], absence of an active management regime, weak institutional and legal frameworks for the effectively managing the fisheries resources, and a growing financial crisis in the industry[...] due to the declining resource and rising cost" (World Bank 1995: 14). The involvement of the World Bank in promoting and funding co-management processes at the time was not peculiar to Ghana, as it provided funding for co-management institutional development projects in both coastal and inland fisheries in many African countries in the 1990s (Béné et al. 2009; Cinner et al. 2012; Nunan et al. 2015; Nunan 2020).

The institutional development process resulted in the enactment of a new national fisheries law – the Fisheries Act (act 625), 2002 – and the establishment of the co-management regime for coastal fisheries. The development of the co-management arrangement began in 1997 through a top-down approach where the central government through the Ministry of Agriculture and the then Fisheries Department initiated processes to form community-based fisheries management committees (CBFMCs) in all coastal fishing communities to enforce national fisheries regulations and local by-laws as appropriate. Each CBFMC was made up of five-member groups: the chief fisherman (*apofohene*) or his representative, the traditional leader of fishmongers (*konkohemaa*) or her representative, representatives of all ethnic groups

involved in fishing, representative of Ghana National Canoe Fishermen Council, and two representatives of the Unit Committees of the District Assembly (local government authority). The CBFMCs were created as a linking mechanism between the traditional fisheries governance system and modern state governing system to foster trust and cooperation with the traditional authorities to promote community-based rational management (World Bank 1995: 14). The government saw active cooperation with the fishing communities as a way to modernize the traditional system (Bennett 2002: 249).

Thus, the co-management institutions that were designed through a process where customary rules of coastal fisheries governance were recombined and blended with statutory rules and regulations of fisheries governance. Many of the CBFMCs were able to get their fisheries byelaws approved by the district assemblies, granting them the legal authority, while others were unable to do so. While the co-management institutions were made up statutory rules and customary rules, the enforcement mechanisms varied depending on the dimension of resource use and governance (see table 3 for sample co-management rules⁶ enforcement mechanisms). These rules covered three broad areas of fisheries governance: resource extraction and conservation, fisher interactions/conduct and safety at the sea, and rules of conduct and sanitation at the beach. Where rules concerned the management of social interaction among fishers or the pricing and transactions between fishermen and fish traders, customary rule enforcement mechanisms and sanctions were implemented. However, where breach of rules concerned issues of resource extraction and conservation, statutory sanctions and enforcement mechanisms were applied.

Considering that the co-management institutions were designed to be enforced through third-party enforcement mechanisms, strong and motivated enforcement structures were required to monitor and enforce the rules to ensure the effectiveness and sustainability of the co-management arrangement. However, third-party enforcement mechanisms are prone to political interference and corruption that tend to undermine effective rule enforcement and sustainable resource management outcomes of co-management regimes (Nunan et al. 2018; Nunan 2020). This section examines how the political settlement in Ghana's fisheries sector manifested in the form of political incentives and distributional conflicts that undermined the effectiveness and sustainability of the co-management regime.

⁶ These are samples of the rules from the Keta CBFMC but the rules were general for all the CBFMCs in the coast. A consultant was hired to design a manual for the co-management, which was used by all the CBFMCs to design the rules. Thus, all the CBFMCs have similar rules with only few nuances in specific days for fishing holidays and the type of customary items depending on customs of the people.

Table 3. Sample co-management rules and enforcement mechanisms

Rules	Enforcement Mechanisms
Resource extraction & conservation	
The Use of chemicals, poison, dynamite, gelignite or other explosive substance and obnoxious matter is prohibited	Offenders shall be liable to a fine or a term of imprisonment not exceeding 3 months or both
The use of beach seine and nets with mesh size less than 25mm or 1 inch is forbidden	Offenders will be prosecuted
Close seasons will be imposed from time to time	Offenders will be arrested and prosecuted
The hauling of fish juveniles apart from ABORBI is prohibited	Offenders will be arrested and prosecuted
Protection of sea turtle and endangered species shall be observed	Anyone caught in possession or harming sea turtle shall be prosecuted
Each CBFMC shall declare a day in the week to be a fishing holiday. There shall be no fishing on such days	Offenders shall be liable to a fine or a term of imprisonment not exceeding 3 months or both
All canoes and boats within the area of jurisdiction shall be registered	Offenders shall pay a fine or be prosecuted
Fishermen interactions/conduct & safety at sea	
Fighting of any sort either at sea or beach is prohibited	Offenders will be fined a sum of money
Conflict among vessels/canoes is prohibited	Violent conflicts two canoes will attract a fine before arbitration by the CBFMC
A fishing group shall not cast its net behind another group	The second group shall give one-third of the catch to the first group or will be fined
It is an offence for any group of fishermen to cast their net over a net already cast by another group of fishermen	Offenders shall be fined a sum of money
Cursing and invoking the wrath of the gods on another person is an offence	Offence punishable by a fine in addition to schnapps, <i>akpeteshie (local gin)</i> , sheep/goat
Fishermen shall not damage the fishing inputs or any article of another group	Offenders shall pay a fine and also replace such items destroyed
No fisherman, except those operating drift gill net or hook and line is permitted to carry cutlass, missiles, club or any dangerous articles to the sea or fishing grounds	Offenders shall pay a fine or be prosecuted
It is an offence for only one fisherman to go to sea. He must have a companion	Any such offender shall be pay a fine or be prosecuted
No fisherman shall get drunk when going to sea	Offenders will be fined a sum of money
It is an offence to ignore or refuse to help another fisherman who is facing a problem at sea due to mechanical faults or entangling of nets resulting in immobility	Offenders shall pay a fine or be prosecuted
Rules of conduct and sanitation at the beach	
Any migrant fisherman shall comply with the norms and accepted practices of the CBFMC	Offenders shall not be allowed to operate at the beach
Any person who by their action create insanitary conditions at the beach commits an offence	Offenders shall be fined and will be compelled to remove the unwanted material
Any fisherman who leaves his unserviceable canoe at the beach commits an offence	Offenders shall be fined and given time to remove the debris

Source: Based on Keta District CBFMC By-laws, 2006

Political incentives and interference

There are many facets to the influence of political incentives in the unsuccessful implementation of the co-management regime from institutional design to rule enforcement. These factors are interlinked but all lead back to the political settlement dynamics of the country. One key issue that was mentioned as the reason for the unsuccessful co-management arrangement is the difficulties faced in rule enforcement due to political interference (FGD-1 to FGD-6). Influential political elites at the national and local levels, including Members of Parliament, District Chief Executives, assembly members and powerful persons within the ruling coalition mostly interfered with the enforcement of the regulations by ensuring the release of fishers who broke stipulated resource management rules. They did so to ensure that they were in the good books of fishers to enable them win votes during elections. Such political interference in rule enforcement created a moral hazard problem in which the fishers continually violated co-management rules, knowing they could rely on politicians to shield them from punishment. In natural resource governance, political interference is a common feature, particularly in developing countries, where politically influential actors enjoy gatekeeping powers which allow them to influence selective enforcement of rules to serve vested interests (Kashwan 2017: 8). Within the African fisheries, political interference has contributed to the failure of many governance regimes (Hauck 2008; Gezelius & Hauck 2011; Sarr et al. 2022). Specifically, in fisheries co-management, political interference has also been found to undermine the rule enforcement and the success of such collaborative governance regimes (Nunan et al. 2018; Nunan 2020).

In the context of Ghana, this was accentuated by the competitive clientelistic political settlement of the country where two major political parties always fiercely compete for the votes of coastal communities. These findings are consistent with the broader research on the political dynamics of fisheries governance in Africa. For example, Poteete (2019) shows that when the competition between rival coalitions is high in times of elections, elite coalitions are more responsive to the demands of artisanal fishermen in Senegal. Similar instances are documented in the literature, where political meddling stifled the implementation of fisheries regulations and co-management rules (Khan 2015; Kjær 2015; Nunan et al. 2015; Nunan 2020). Political interference has been shown to reinforce non-compliance, increasing the operational level transaction costs of co-management, and thus resulting in unsuccessful implementation of fisheries management regimes.

In addition, internal disagreements between co-management committee members due to their political differences affected the effectiveness and sustainability of the co-management regime

in Ghana. Due to the competitive clientelism, many of the committee members who were affiliated to or were sympathizers of the ruling government at any point in time were against the strict enforcement of rules for the fear that it would agitate the local fishers against the government. These internal disagreements within committees on rules resulted in enforcement and collective decision-making difficult. During FGDs with CBFMCs, one of the participants noted:

Here, part of the reason why we could not continue the work is because of politics. You know this NDC or NPP thing. If NDC is in power and you are trying to enforce the law, those who are NDC will be reluctant to support it because they think you are making the government unpopular. It is the same thing if the NPP is in power. So most of the time we could not come to an agreement to carry out our duties and in the end it [the CBFMC] collapsed (FGD-2, January 2022).

Distributional conflicts

The politics of resource distribution emerged as a key issue in the failure to sustain co-management in Ghana. The issue of who controls the distribution of government-subsidized fishing inputs such as fishing gear, outboard motors and pre-mixed fuel used to power canoes was a prominent contributor to the collapse of the coastal fisheries co-management regime. The pre-mixed fuel is a major source of revenue for stakeholders in coastal fisheries; therefore, there is huge political interest in who controls its distribution to the local fishers. The pre-mixed fuel was introduced in the early 1990s as government-subsidized petroleum product for the canoe fishers to power their outboard motors, which are also subsidized. The aim was to increase fish production and to alleviate the operational cost of the canoe fishers. A national ministerial committee was set up to oversee the administration and distribution of the pre-mixed fuel (Abane et al. 2013). The chief fishermen through cooperatives formed by the fishers were given the authority to control the distribution of the subsidized pre-mixed fuel and fishing nets to the fisherfolk at the community level (KII-3, January, 2022). However, every change of government in Ghana often led to a change in the structure of the pre-mixed administration (Abane et al. 2013). For example, after a change of government in 2001, new pre-mixed administration structures were established in the form of national, regional and local pre-mixed fuel committees. This means the local pre-mixed fuel committee was responsible for the sale of the premixed fuel directly to the fishers in fishing communities.

While the chief fishermen and canoe owners were part of the local pre-mixed fuel committees, political appointees of the ruling coalition were also added to the membership. The profit from the sale of the pre-mixed was to be distributed by a sharing formula (i.e. 53% goes into

community development fund to be used for development projects in fishing communities, while the rest is shared among the members of the committee). Again, in 2009, there was a change in government in Ghana and the new ruling coalition also changed the pre-mixed structure, creating Landing Beach Committees (LBCs), to administer distribution of the premix fuel directly to fishers at the various landing beaches. Through these processes by successive governments political appointees took control of the distribution of the pre-mixed fuel and other subsidized fishing inputs in the local communities. As a result, the influence of the chief fisherman in these committees depends on the relationship he has with the ruling coalition. For example, a change in the ruling coalition can increase or decrease the power of the chief fisherman in the LBC depending on how he positions himself within the broader political landscape.

From a political settlement perspective, the distribution of benefits from the institutional structure was inconsistent with the distribution of local organizational power at the community level of fisheries governance. The chief fishermen who worked together with the co-management committees to sustain the operations of the co-management arrangement wield significant holding-power, and because the distribution of incentives for resource management was not aligned with these, it caused distributional concerns. This served as a disincentive for the chief fishermen and co-management committees, who registered their displeasure by abandoning co-management activities. In the political settlement literature, it has been established that institutions that threaten rents or fail to distribute substantial rents to powerful organisations will face intense opposition, reversal, modification, or distortion in various forms (Khan, 2017). This was succinctly put by a retired fisheries director during the field interviews:

Resource constraints and conflicts were the major reasons why the co-management did not work out in many places. Those who have to engage in fisheries management were not resourced. The pre-mix committee which generates the money has been made political and has been separated from the co-management committees. This also created conflicts between the co-management committees and the premix committees over the benefits from the premix (KII-31, March 2022).

This was also confirmed by the co-management committees and the chief fishermen during the one-on-one interviews and focus group discussions. One key informant narrated:

When Rawlings [former president of Ghana] brought this premix thing he gave us [chief fishermen] the power to control it. Because of this, we could even use the premix to punish any fisherman who broke the rules. But the party people [lower factions of

political parties] took over the premix. If you are doing the work and somebody else is rather benefiting, will you continue to do it? (KII-13, February 2022).

The issue of the politicization of premix and other fishing inputs has been extensively documented as a major challenge for the sustainable governance of coastal fisheries in Ghana (Abane et al. 2013; Akpalu et al. 2018; Stark et al. 2019; Abobi 2023; Okyere et al. 2023). Similarly, findings have also been highlighted in other jurisdictions where distributional concerns of traditional leaders undermined the success of fisheries co-management (Béné et al. 2009; Njaya et al. 2012; Nunan et al. 2015).

Financial challenges

The lack of funding is identified as a major difficulty faced by many fisheries co-management regimes across the developing world (Carbonetti et al. 2014; Njaya et al. 2018; Nunan 2020; Sarr et al. 2022; Livingstone & Anthony 2023). While funding mechanisms are often a part of the co-management design, many factors can lead to the inability of co-management structures to generate the needed revenue to run their activities. A major cause has been the lack of political will, which leads to non-allocation of funding for co-management, or political interference and corruption in rule enforcement mechanisms (Carbonetti et al. 2014; Nunan et al. 2018). In the case of Ghana, no financial resources from the central or local government were allocated for co-management beyond the World Bank's funding for the institutional development project. These financial challenges were accentuated when the donor funding for the project ended (KII-31, March 2022). The co-management committees were tasked to generate their own revenue through fines and levies that would be paid by the fishermen and fishmongers at the beach. However, these sources of funding could not be harnessed due to resistance and political interference in the process, limiting the co-management committees' ability to generate money from fines. For instance, fishers who resisted the imposition of the levies often called local and national politicians to interfere on their behalf to ensure they did not pay the levies (FGD-4, FGD-5 & FGD-6).

Additionally, under new national governments in 2001 and 2009, politicized local organisations were established in fishing communities to administer the distribution of fishing inputs. This development hindered the capacity of co-management committees to generate internal revenue from the distribution of the fishing inputs to support co-management activities, including rule enforcement and meetings (FGD-1 to FGD-6).

The revenue we used to generate from the sale of the premix was helpful for the operational activities of the co-management committee, because from there we will get

something to sort out the committee members to incentivize them to do the work. Now the party people have taken over the premix and this source of revenue does not exist anymore (FGD-4, March, 2022).

The creation of parallel politicized-organizations has also been found to undermine the local self-governing systems in other jurisdictions (Scholtens 2015). The creation of such organizational structures is often a result of patronage processes stemming from the broader socio-political context of resource governance. In Ghana, the pre-mixed committees (politicized fisheries organisations) were created to informally reward lower-level political factions with resources to maintain their loyalty to elite factions (KII-31, March 2022). This situation not only undermined the ability of the co-management committees to generate revenue from the premix fuel, but also made it difficult for them to enforce the fisheries regulations since the chief fishermen could no longer use the distribution of premix fuel to punish fishers who failed to comply with co-management rules (FGD-3, FGD-4 & FGD-6).

Lack of institutional support

The co-management regime in Ghana lacked institutional support because they were not integrated into the national fisheries law and the local government law (Tsamenyi 2013). A participant from the civil society highlighted this as a major reason:

One of the main reasons why the CBFMCs failed is that they did not get support from the district assemblies. Most of them [CBFMCs] could not get their byelaws gazetted because the district assemblies were not interested in approving them. How can you enforce a law that does not have legal backing? That was the issue (KII-28, March 2022).

This was corroborated by members of the CBFMCs in one of the communities who lamented how long it took for the local District Assembly to approve and gazette the byelaws (FGD-4, FGD-5 & FGD-6). A chief fisherman who was the chairman of one of the CBFMCs noted:

Politics is the problem. Even to get the by-laws approved and gazetted, we had to make several follow-ups at the assembly before it was done in 2008. We formulated the bylaws in 2000. It took almost 8 years to get the bylaws approved after some changes, and even after that, when you arrest a fisherman they will call them and then they are set free" (KII-13, February 2022).

Some studies in Ghana found that political concerns and lack of political will stalled the timely approval and gazetting of co-management byelaws (Kraan 2009). The lack of political will was also acknowledged by the World Bank as a major issue that hampered the sustainability of the

fisheries co-management regime (World Bank 2003). In its project completion report, the World Bank note that while the CBFMCs are empowered sufficiently to monitor the fisheries resources and generate revenue through fines to maintain their operations, the sustainability of the co-management regime was unlikely due to the lack of political support from the Ministry and the local government authorities (World Bank 2003). It noted that a “lack of political will to enforce regulations and remedial measures, the weak leadership provided by the [Department of Fisheries], and the problems of collaboration, unless resolved, will continue to hamper reforms and limit achievement of future operations” (World Bank 2003: 12).

The lack of political will has been recognized as a major reason for the failure of institutional and governance reforms in marine and coastal resource governance, including the implementation and sustainability of co-management regimes in several jurisdictions (Béné et al. 2009; Carbonetti et al. 2014; Okeke-Ogbuafor & Gray 2021; Livingstone & Anthony 2023). Institutional incentives and bargaining mechanisms of a socio-political context can influence the extent of political will (Post et al. 2010). In Ghana, the lack of political will is attributed to the prevailing political settlement, which makes institutional and governance reforms in the fisheries sector politically sensitive (Akpalu et al. 2018; Stark et al. 2019). In order not to incur the displeasure of fishers and risk losing votes during elections, the government prefers to be absent and, in some cases, political elites interfere with rule enforcement processes when fishers are arrested for breaching the rules. Since a co-management regime entails enforcement of rules and regulations, which are not in the interest of the fishers, politicians are often reluctant to lend their support for these processes. This is exacerbated by the fact that the majority of the coastal regions are swing-regions during national elections, which makes it difficult to undertake strict and sustained institutional and governance reforms in the fisheries sector.

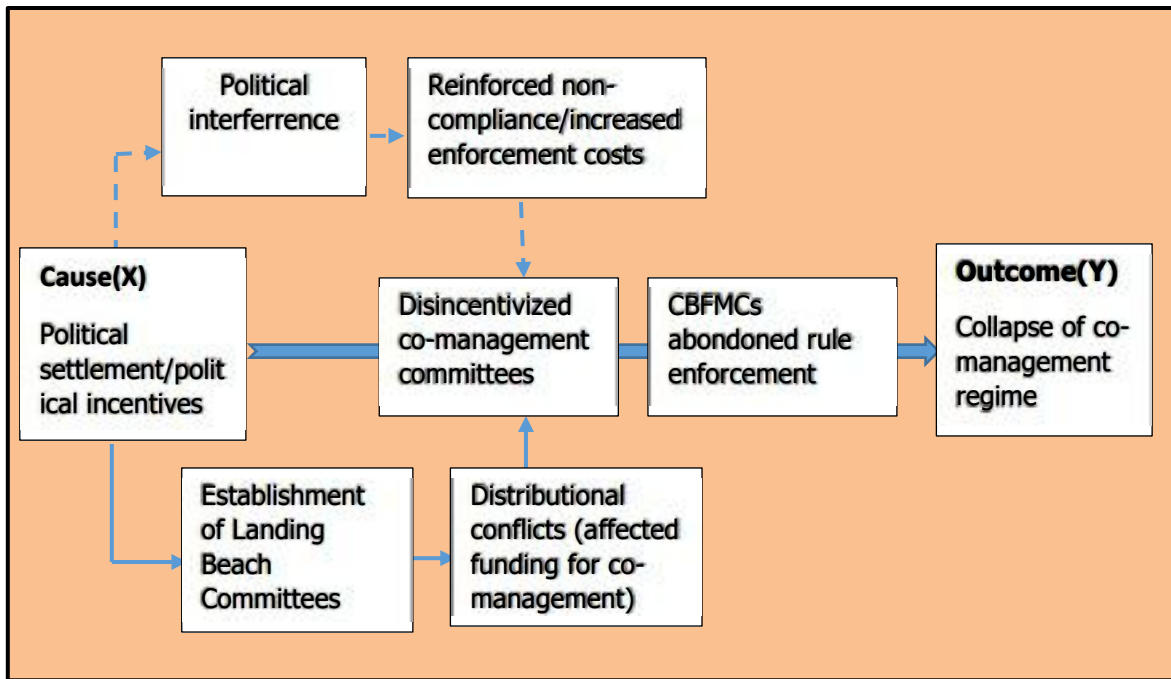


Figure 2. Causal mechanism of the impact of socio-political dynamics on the collapse of coastal fisheries co-management regime in Ghana

4.2. Socio-political context: challenges and opportunities for coastal fisheries co-management in Ghana

What is the potential for a successful co-management regime in coastal fisheries in the context of Ghana’s political economy? Table 4 provides an assessment of the challenges and potential for co-management in the prevailing socio-political dynamics in relation to the enabling conditions for successful co-management provided in literature (Pomeroy & Williams 1994; Pomeroy et al. 2001). The analysis is based on field interviews with fishers and fisheries stakeholders, supplemented by review of grey and published literature on coastal fisheries in Ghana. The analysis shows that while challenges exist, there are opportunities that can be leveraged to develop co-management. The successful implementation of co-management depends on addressing issues with several socio-political factors inherent to the broader political-economic context and resource governance context of coastal fisheries. There is evidence of the successful implementation of co-management arrangements in riverine and estuarine fisheries, indicating that communities are willing to take up responsibilities for the sustainable management of fisheries if they are sufficiently empowered (Okyerere et al. 2023). While coastal marine fisheries are quite different in terms of stakeholder constellation and the degree of economic interests, the long history of traditional fisheries governance shows that social capital and community-organizing structures are not lacking for the implementation of co-management.

Several factors however, need to be considered in the design and implementation of the institutional arrangement. The power dynamics inherent in the traditional governance structures need to be creatively accounted for if co-management is to have any potential for success in Ghana coastal fisheries. The chief fishermen are willing to participate in co-management but only under the right incentives. If this is not the case, co-management has little chance of getting the support of the traditional authorities who have significant holding power in coastal fisheries. A CBFMC member narrated during one of the FGDs:

Co-management can only work if they take the politics out. If the party people continue to be in charge of distributing fishing inputs and using the money for their own personal benefits, I am afraid it [co-management] will not work. We should have the power over fishing inputs" (FGD-4, February 2022).

Also, traditional fisheries governance has a long history in Ghana and has established its own incentive structure that is not necessarily based on the modernist ideals of participatory governance. The traditional authorities enjoy legitimacy; thus, wield a strong holding-power in coastal fisheries and thus cannot be sidelined through mechanisms of participatory resource governance that emphasize equal representation. At the same time, issues of rent distribution from fisheries governance need to be appropriately structured to provide the right incentives for community level actors to engage in co-management. Community-level actors are no longer willing to undertake fisheries management responsibilities on a voluntary basis without any form of financial incentives (FGD-3, FGD-5, KII-10, KII-13, KII-16). The issue of who controls the distribution of fishing inputs and the establishment of separate organizational structures for this purpose by political actors played a central role in the failure to sustain the earlier co-management regime. The chief fishermen lamented how their power to control fishers fishing behaviour through the distribution of government-subsidized fishing inputs has been eroded because the administration of these has now been taken over by lower-level political factions. The co-management committees should have some control over the distribution of fishing inputs or at least, a well-defined allocation of the revenue from the sale of premix fuel for the operational level activities of co-management. This is not only logical from the legitimacy and governance standpoint, but such an approach will provide an avenue for the co-management structures to generate the needed revenue to finance the operational level activities.

This brings into perspective the role of political will and political interference, which are complex issues to resolve in the current context of Ghana's political settlement. This concern was expressed by all the chief fishermen and the co-management committee members in all

the communities visited. It shows that resolving the issues of political incentives and interference is critical for any future governance arrangements in the fisheries sector. However, this is not a straightforward endeavour as the clientelist political settlement makes it unlikely that local-level political factions will willingly refrain from taking over the resource distribution mandate of the chief fishermen or any co-management structures that will be formed at the community level. On the other hand, the political elite are also unlikely to have the political will to implement resource governance arrangements devoid of political incentives and political interference because of the perennial threat of losing power to rival coalitions if their lower-level factions are unsettled or disgruntled. The issue of political will came out strongly from the civil society perspective:

Co-management can work for coastal fisheries but only if the politicians listen to the technical people. If the co-management is implemented in the same manner as the first one, then there is no hope. We need the political will and the necessary commitment from the government to collaborate with the communities (KII-28, March 2022).

In addition to this, if the co-management regime is not developed in a way that it inheres a high degree of legitimacy, there is little chance that it will be effective and sustained overtime. This point has already been made in the co-management literature (Nielsen 2003; Sandström et al. 2013; Pinkerton 2018), but legitimacy here is not limited to the rules and the participation of actors in the process, but also the degree to which the local level actors in charge of co-management activities will have the incentive to enforce the rule and regulations. This is much so because a precondition for sustainable and efficient institutional regimes for common-pool resource governance is that the rules are effective and can be enforced with relatively low transaction costs (Dietz et al. 2003; Nielsen 2003).

5. Discussion

This section discusses the potential for developing a successful co-management regime in Ghana's coastal fisheries in the context of the prevailing political economy dynamics. The political settlement of a country can facilitate or stifle the effectiveness and sustainability of institutional arrangements for coastal resource governance (Khan 2015). Two major issues are discussed - political will and the politics of resource distribution – which present different challenges for the successful implementation of co-management.

The extent of commitment by political elites and key decision makers to create and support the implementation of institutional or policy preferences to a particular governance problem is

very critical to the success of any resource governance regime (Post et al. 2010; Carbonetti et al. 2014). The preferences of political elites and the extent to which they are committed to those preferences with regard to institutional change determines if institutional and governance reforms will be implemented, effective and sustainable (Carbonetti et al. 2014). There are three critical components of a co-management regime that can be affected by political will: the institutional design, implementation, and rule enforcement (Khan 2015; Nunan 2020). When it comes to initiating institutional reforms and the designing of a co-management regime, the issue of political will is more prominent at the national level. However, the level of political will can often be influenced by the preferences of external constituencies such as donor agencies and civil society organisations, and is relatively easier to resolve, especially when this is backed by funding options. The design of the first co-management arrangement in Ghana was strongly influenced by the World Bank. Policy changes and the design of a new fisheries co-management regime has been completed and approved since 2020, awaiting implementation. This process was also led by NGOs through the support of donor agencies who influenced the policy preferences of political actors to approve the co-management policy (Okyere et al. 2023). These examples indicate that getting the commitment of political actors to take the initial steps in governance transformation is feasible with support from external constituencies such as donor agencies and civil society organisations.

However, a major hurdle, which is a critical component of a co-management regime, is achieving the implementation of the institutional regime. This is where political will is more difficult to achieve. At the heart of the concept of political will is the extent to which political elite or decision makers are committed to supporting the implementation of institutional or policy preferences. Central to the political economy approach to institutional analysis is often the assumption of rational behaviour or self-interest as a key driver of individual behaviour of actors in socio-political interactions in an institutional setting. Politicians are motivated by factors such as the desire to retain power, so will make policy decisions that will draw the support of resource users (Carbonetti et al. 2014). The resource users on the other hand are rational actors concerned about maximizing gains from the resource system (Hanna & Munasinghe 1995).

Table 4. Key conditions for successful co-management in relation to the socio-political context of Ghana

Key conditions for success	Opportunities & challenges for co-management in coastal fisheries
<p>Enabling legislation and policies: There are supportive policies and legislation from government defining and clarifying local responsibility and authority, jurisdiction, property rights, decision making arrangements, local enforcement mechanisms, and fisher groups legal right to organize</p>	<p>(+) There is a co-management policy which has been approved since November 2020, even though supportive legislation is yet to be enacted (-) A change of government may change policy priorities and stall the enactment of supportive legislation and the implementation of co-management in coastal fisheries. (-) Previous co-management regime suffered from these political dynamics; the impact of socio-political context on this key condition is very high.</p>
<p>Appropriate scale and defined boundaries: physical boundaries of the area to be managed clearly defined, and scale of co-management arrangements should be appropriate to the area's ecology, people and level of management</p>	<p>(+) Appropriate boundaries can be defined for coastal fishers engaged in beach seine fishing (-) While geographic units of coastal fishing communities and landing beaches are easily distinguishable, resource system boundaries are difficult to define. Resource units of fishing interests are very mobile and fishers tend to migrate along the coast depending on fishing methods</p>
<p>Membership clearly defined: individual fishers or households with rights to fish in the defined area and participate in the area management should be clearly defined</p>	<p>(+) Membership of coastal fishing communities are clearly distinguishable and can be defined (-) Fishing methods are diverse and resource units are very mobile. It is difficult to clearly define areas to be managed in most of the coastal communities due to their fishing methods</p>
<p>Group homogeneity: high degree of group cohesion, in terms of kingship ethnicity, religion, or fishing gear among fishers who reside permanently near the area to be managed. Socio-economic and cultural homogeneity of the community</p>	<p>(+) There is socioeconomic and cultural homogeneity in coastal fishing communities in the various coastal regions in terms of traditional practices and customary fisheries governance (-) Fishing gear and fishing methods among fishers are quite diverse in coastal fishing communities and grouping them based on where they reside can be difficult</p>
<p>Partnerships and partner sense of ownership of the co-management process: Active participation of partners in the planning and implementation process of co-management enhances sense of ownership and commitment</p>	<p>(+) Fishers and their traditional leaders are generally willing to participate in decision-making processes for co-management (+) There is active involvement of NGOs in coastal fisheries governance. This can help drive bottom-up approaches and resource users participation (-) Previous co-management arrangements lacked effective participation of resource users in the planning and implementation of co-management. The risk of instrumental and top-down approach is high considering the current context of fisheries governance</p>
<p>Leadership at community level: there is an individual or core group who takes leadership responsibility for the management process. E.g traditional leaders in a community or other local elite</p>	<p>(+) There is strong level of traditional fisheries governance in fishing communities; thus local leadership already exists in coastal fisheries in the form of chief fishermen and chief fishmongers (-) Local power-holding groups can present a problem for co-management due to the risk of elite capture (-) Previous co-management regime faced resistance from local power-holding groups (traditional leaders) due to ideological reasons and vested interest</p>

<p>Empowerment, capacity building & social preparation: Co-management often requires a conscious effort to develop and strengthen the capability of the partners for collective action, cooperation, power sharing, dialogue, leadership and sustainable resource management</p>	<p>(-) Previous co-management regime did not involve conscious effort to build the capacity and social preparedness of resource users and leaders on sustainable resource management. There is the need for political will to commit resources to</p> <p>(+) The presence and involvement of NGOs in coastal fisheries present opportunities for capacity building and sensitization of resource users on the role of co-management</p>
<p>Community organisations: the existence of legally recognized and legitimate community organisations representing resource users and influencing the direction of policies and decision-making.</p>	<p>(+) Due to group homogeneity of resource users and local leadership, it is not difficult to establish community organisations for co-management. Previous co-management established community-based organisations (CBFMCs)</p> <p>(-) The legitimacy of community organisations was low in the previous co-management regime.</p> <p>(-) Due to the prevailing political settlement of Ghana, partisan composition of community organisations in the previous co-management led to internal conflicts and ineffectiveness due to political differences. The risk of this socio-political dynamics is very high</p>
<p>Adequate financial resources/ budget: Funds need to be available to support various operations and facilities related to planning implementation, coordination, monitoring and enforcement. Co-management must should be designed from the start with internal budget source</p>	<p>(-) No specific funding sources were established for operational level activities of co-management in the previous co-management arrangement. Government resource management projects tend to rely heavily on donor funding which is time bound.</p> <p>(+) The sale of government-subsidized pre-mixed fuel is a major source of revenue for stakeholders in coastal fisheries in Ghana. An allocation of a percentage of this revenue for co-management can provide a sustainable source of funding.</p> <p>(-) There is risk of political interference by local politicians and the lack of political will to depoliticize the distribution of pre-mixed fuel</p>
<p>Management rules enforced: resource management rules are simple and monitoring and enforcement are able to be effected and shared by all resource users</p>	<p>(-) Rule enforcement requires strong and well-resourced enforcement structures to monitor and enforce rules. Previous co-management rule enforcement structures were not well-funded to carry out enforcement.</p> <p>(-) There is risk of political interference in rule enforcement due to political incentives of national and local politicians. The previous co-management regime suffered these socio-political dynamics</p>
<p>Property rights of over the resource: legally supported property rights should address legal ownership of resources and define mechanisms (economic, administrative, and collective) and the structures required for allocating user rights and procedures for enforcement</p>	<p>(+) Access to coastal fisheries by resource users is <i>de facto</i> guaranteed</p> <p>(-) Granting legal ownership over resource is difficult to achieve in coastal fisheries due to mobility and migration of fishers</p> <p>(-) The political will to share power and to grant legal property rights to coastal fisheries may be lacking</p>
<p>Long-term support of the local government unit: there is a formal policy or law delegating resource management responsibility and authority to local government. The cooperation and support of the local government and local political elite is important for co-management.</p>	<p>(+) The new co-management policy has structures to delegate resource management to local government units</p> <p>(-) due to the political settlement of the country, local governments may lack political will to support co-management due to fear of political repercussions from fishers. Previous co-</p>

	management committees faced challenges getting their resource management rules approved due to fear of losing votes from fishers
Conflict management mechanism exists: a mechanism for discussing and resolving conflicts and infractions must be available or established	(+) There already exist conflict resolution mechanisms in the traditional fisheries governance. Co-management design processes can leverage these traditional conflict resolution mechanisms through proper integration
Clear objectives from a well-defined set of issues: Resources users, stakeholders and partner organisations need to have a grasp of why they are co-managing the resource and what results is envisaged	(-) The previous co-management regime lacked processes to establish common understanding and objectives of co-management. The risk of instrumental approach to co-management is high (+) The presence and involvement of NGOs provide opportunities to enhance shared understanding of management objectives among stakeholders
Individual incentive structure: an incentive structure (economic, social and political) that induces various individuals to participate in the process. The benefits of participating in co-management exceed costs	(+) Economic activities and livelihoods of resource users in coastal communities highly depend on coastal fisheries and their sustainability. The involvement of NGOs can help develop shared understanding of costs and benefits of participating in co-management

Source: adapted from (Pomeroy & Williams 1994; Pomeroy et al. 2001). **(+)** in the table represent opportunities and **(-)** indicate challenges.

In the context of Ghana's political settlement, dealing with the effects of political incentives in resource governance is a complex challenge. If there are political gains to be made in terms of policy choices in governance of coastal fisheries, governments are willing to supply and implement such policy changes. However, if such policies or institutional changes have the potential to derail their electoral gains in the coastal regions, such policy or institutional changes are unlikely to be implemented even if they are enacted. In general, politicians are not willing to engage in the implementations of institutional changes that have the potential to derail their chances of getting support from the coastal fishers during elections (Carbonetti et al. 2014; Poteete 2019). Considering that the implementation of co-management is likely to bring restrictions to the fishing activities of coastal fishers, implementing such institutional arrangement is not an attractive endeavour for the political elite. The success of implementing a co-management regime in coastal fisheries in Ghana therefore depends on the extent to which bottom-up approaches are adopted in the process, which require a substantial role of NGOs and donor agencies in such governance transformations.

Extant literature has also shown that where governments initiated and materially and technically supported the establishment of co-management regimes, they performed poorly compared to co-management structures formed by resource users because it becomes difficult to wean them from government dependence (Hara et al, 2015). Further supporting this assertion, we argue that government initiated co-management regimes are more prone to political interference, lack of financial capacity and self-initiative, as these are often viewed as government responsibilities handed over to resource users. From this perspective, it requires a rethink of donor-supported institutional development for the co-management of coastal fisheries which tend to adopt top-down approaches, putting governments at the centre of governance transformation (Cleaver 1999). While the preferences of external constituencies (e.g. donors) can influence the degree of political will within a country (Post et al. 2010), the dynamics of the socio-political context can hinder the effective implementation of institutional and policy changes. As shown in the Ghanaian coastal fisheries, pressure from donor actors tends to generate enthusiasm and actions that signal some political will at national level. However, due to the competitive clientelistic political settlement, other incentives usually have stronger influence on the level of political will in the implementation of institutional and policy changes in the coastal resource governance. This relates to another important issue in the implementation of co-management – the preferences of non-political elite whose commitment is critical to the co-management process.

Mapping the distribution of preferences is integral to understanding political will (Post et al, 2010). This aspect of political will draws attention to the potential of preferences of key actors

outside the reforming elite factions to detract from political will. While the preferences of political elites are particularly important in implementing, sustaining institutional and governance reforms, in the context of co-management, it is important to take into account the extent to which preferences of local actors who are critical to the effectiveness and sustainability of the co-management regime affect the success of institutional changes. This is especially critical in the Ghanaian coastal fisheries where traditional authorities wield a lot of holding-power. This creates an agency problem in a co-management regime, as the local actors in charge of the day-to-day operations of co-management may have their idiosyncratic interests that may generate divergent preferences. This emerged as a critical issue in the failure of the co-management regime where the traditional leaders had different preferences on how the co-management arrangement should be structured (Banikoi 2024). Their commitment to the implementation of co-management is critical for the effectiveness and sustainability of the institutional arrangement in coastal fisheries governance (Okwere et al. 2023). It is therefore important to take into consideration the preferences of non-political elite (e.g. the traditional leaders) in co-management regimes. This is important because the extent to which co-management regimes can achieve sustainable resource management outcomes depends, among other things, on the effectiveness of rule enforcement (Agrawal 2001; Nielsen 2003; Gutiérrez et al. 2011b).

While weak and ineffective rule enforcement is often a driving factor behind the transition from centralised management regimes to co-management due to legitimacy issues (Wilson et al. 2003), this problem manifests in co-management regimes too (Nunan et al. 2018; Murunga et al. 2021). In co-management arrangements, the enforcement of rules is often carried by local structures among resource users in collaboration with government agencies. This means that the willingness and capacity of the local enforcement structures is necessary for the effectiveness and sustainability of the institutional arrangement (Khan 2015). Considering that all institutional arrangements have distributional consequences (Libecap 1989; Knight 1992), optimal enforcement of rules and regulations depends on the preferences, incentives, and capacity of the enforcement authority (Gezelius 2007; Bose et al. 2017). Actors will only enforce rules that they deem meet their preferences or provide sufficient incentives and legitimacy (Nielsen & Mathiesen 2003). That is, if dynamics of the institutional contexts, such as political-economic factors provide little incentives for actors in charge of rule enforcement, co-management regimes have little chance of surviving to achieve the desired resource management outcomes (Nunan et al. 2018; Nunan 2020). This manifested in the unsuccessful implementation of the co-management regime in Ghana where political interference stifled rule enforcement. Recent studies in Ghana have demonstrated how political interference and

lack of political will have stifled the enforcement of fisheries regulations in both the industrial and artisanal fisheries sectors (Akpalu et al. 2018; Stark et al. 2019). Without resolving this major challenge, co-management has little chance of achieving sustainable coastal resource governance outcomes in Ghana. Rule enforcement challenges relate to another important aspect of co-management – sustainable funding.

External enforcement mechanisms which are often institutionalized in co-management regimes entail monitoring, arrest and prosecution, which require effective, durable and well-resourced enforcement structures to ensure compliance (Dietz et al. 2003). Such deterrence enforcement mechanisms are costly to implement and thus require robust funding mechanisms (Gezelius 2007). The challenges of many coastal resource co-management arrangements is attributed to inadequate funding for the operational activities of co-management structures (Hara et al. 2015; Njaya et al. 2018; Nunan et al. 2018; Livingstone & Anthony 2023). As in many African fisheries (see Hara & Nielsen 2003), the failure to allocate funding to the co-management committees contributed to its unsuccessful implementation in Ghana (Abane et al. 2013; Okyere et al. 2023). The lack of funding from the government for co-management is often attributed to issues of prioritization, which pushes resource governance to the bottom of the scale of preference (Livingstone & Anthony 2023). Others have argued that it is not just an issue of prioritization but a case of lack of political will, shaped by the broader political-economy dynamics in developing countries (Carbonetti et al. 2014; Khan 2015; Nunan 2020). This is a major challenge for co-management in the context of the competitive clientelistic political settlements like in Ghana, which often leads to rewarding political factions in any governance arrangement that involves government funding. This means that alternative funding mechanisms that do not rely on government funding or levying fisherfolk have to be explored for sustaining co-management.

A particular critical component of fisheries co-management that makes it an ideal resource governance approach is the potential to lower transaction costs of operational level activities in fisheries management, such as rule enforcement (Abdullah et al. 1998; Hanna 2003). However, in the case of the co-management in Ghana, co-management did not manage to reduce the transaction costs of fisheries governance due to the political-economic factors. Due to the socio-political context of the country, diverse interests of elite and non-elite factions with strong holding-power increased the transaction costs of collective action. Also, effective co-management requires committees to meet regularly and to make operational-level decisions that improve the sustainable governance of resources (Pomeroy et al. 2001). However, the outcome of the co-management regimes has shown that the internal political disagreements between the co-management committee members affected the ability of some

of the co-management committees to meet regularly and agree on collective decisions on rule enforcement (FGD-1 & FGD-2). This issue was prominent in the central region, which is a swing region in the general election, and has a huge degree of heterogeneity in partisan political views and affiliations. Thus, the potential for implementing an effective and sustainable co-management regime in coastal fisheries in Ghana depends on how well it is designed and implemented to neutralize factors that increase the transaction costs. This calls for the development of local enforcement structures that are devoid of partisan political affiliations that can increase collective decision-making costs. Such new institutional approaches will come at a political cost considering the current political polarization, which makes it difficult to clearly delineate partisan political incentives from genuine resource governance concerns.

To conclude, in a competitive clientelism type of political settlement like in Ghana, there is a high chance of discontinuing institutional development projects when the ruling coalition changes. This is a common feature of Ghana political economy (Hirvi & Whitfield 2015; Abdulai 2021), which presents a major challenge to the development of a co-management regime that requires term time horizons to materialize. It is not uncommon for politicians to promise institutional changes or to reverse institutional changes in coastal fisheries if they believe these will benefit them in terms of electoral fortune. For example, the current president and the then opposition leader in 2016 promised to depoliticize the distribution of fishing inputs and to restore community-based fisheries management (Daily Graphic 2016). As at 2024, the ruling coalition the president led and won the general elections is in its second term of governance, but has not been able to depoliticize the distribution of fishing inputs, nor restored co-management as promised in 2016. According to some of the chief fishermen and the co-management committee members, the politicization of fishing inputs and political interference in fisheries governance has gotten worse as at the time of data collection. More recently in December 2023, the current opposition leader promised to abolish the closed-fishing season that has been introduced in the artisanal fisheries sector since 2016 (Nyarko 2023). These promises of institutional changes and the reversal of policies show that implementing co-management arrangements may continue to face issues of lack of political will. There is no straightforward solution to the issue of political will and political interference, as these are inherent in the broader political settlement dynamics.

6. Conclusion

This paper investigated the multifaceted challenges that contributed to the unsuccessful coastal resource co-management in Ghana and what implications this has for governance

transformation for a sustainable coastal blue economy. Drawing upon insights from the political economy analysis of institutions, we show that a concatenation of distributional issues and political incentives stifled the operational-level activities of co-management at the local level, leading to the eventual failure of the co-management regime. The influence of political incentives manifested in the misalignment of incentives for resource management and political interference in rule enforcement, which disincentivized local enforcement structures in performing co-management activities. The study shows how economic interest of actors in the coastal fisheries intertwined the political incentives of local and national politicians to hinder the rule enforcement, created distributional conflicts and stifled the availability of funding, impacting the effectiveness and sustainability of the co-management institutions. The political economy context of Ghana, coupled with the personal interest of local power-holding groups made the operational level transaction costs of co-management enormous. There is a strong emphasis in the academic literature on appropriate institutional design and institutional fit for sustainable common-pool resource governance (Ostrom 2010; Vatn & Vedeld 2012; Young et al. 2018). However, the political settlement approach adopted in this study has shown that even when institutional regimes are appropriate and enabling conditions exist for such governance regimes, the social order and local configuration of power can influence the degree of success and sustainability. Institutional transformations towards a sustainable coastal blue economy thus need to adopt a more holistic approach with sufficient attention to the social context at local level institutional development. This paper also underscores the need for a nuanced understanding of the power structures and political processes that underpin co-management arrangements, shedding light on how these dynamics can either facilitate or impede sustainable resource governance.

References

- Abane, H., Akonor, E., Ekumah, E. & Adjei, J. (2013) *Four Governance Case Studies and their Implications for Ghana Fisheries Sector*.
- Abdulai, A.-G. (2021) *Political settlement dynamics and the emergence and decline of bureaucratic pockets of effectiveness in Ghana*. Effective States and Inclusive Development Research Centre (ESID), The University of Manchester, Manchester.
- Abdulai, A.-G. & Hickey, S. (2016) The Politics of Development under Competitive Clientelism: Insights from Ghana's Education Sector. *African Affairs*.
- Abdullah, N. M. R., Kuperan, K. & Pomeroy, R. S. (1998) Transaction Costs and Fisheries Co-Management. *Marine Resource Economics* **13**, 101–114.
- Abobi, S. M. (2023) Ghana Case Study One: Challenges and opportunities in marine fisheries governance in Ghana. In: Wolff, M., Ferse, S. C. & Govan, H. (eds.) *Challenges in*

- Tropical Coastal Zone Management: Experiences and Lessons Learned*. Springer International Publishing, Cham, pp. 41–52.
- Acheson, J. M. (2006) Institutional Failure in Resource Management. *Annual Review of Anthropology* **35** (1), 117–134.
- Agrawal, A. (2001) Common Property Institutions and Sustainable Governance of Resources. *World Development* **29** (10), 1649–1672.
- Agrawal, A. (2002) Common Resources and Institutional Sustainability. In: Ostrom, E., Dietz, T., Dolšák, N., Stern, P. C., Stonich, S. & Weber, E. U. (eds.) *The Drama of the Commons*. National Academies Press, Washington, D.C., pp. 41–85.
- Akpalu, W., Eriksen, S. S. & Vondolia, G. K. (2018) *The fisheries sector in Ghana a political economy analysis*.
- Appiah, D. & Abdulai, A. G. (2017) Competitive Clientelism and the Politics of Core Public Sector Reform in Ghana. *SSRN Electronic Journal*.
- Atta-Quayson, A. (2023) The Impact of Institutions on the Salt Sector in Ghana. *Africa Today* **69** (3), 75–92.
- Ayanoore, I. & Hickey, S. (2022) Reframing the politics of natural resource governance in Africa: Insights from the local content legislation process in Ghana. *Politics & Policy* **50** (1), 119–136.
- Ayilu, R. K., Fabinyi, M., Barclay, K. & Bawa, M. A. (2023) Industrial and small-scale fisheries relations in Ghana: A political ecology perspective on blue economy exclusion. *Journal of Rural Studies* **102**, 103085.
- Banikoi, H. (2024) Legal Pluralism, ideology and institutional change: the evolution of institutions for coastal resource co-management in Ghana. *Journal of Institutional Economics*.
- Bax, N., Novaglio, C. & Maxwell, K. H. et al. (2022) Ocean resource use: building the coastal blue economy. *Reviews in Fish Biology and Fisheries* **32** (1), 189–207.
- Behuria, P., Buur, L. & Gray, H. (2017) Studying political settlements in Africa. *African Affairs* **116** (464), 508–525.
- Béné, C., Belal, E. & Baba, M. O. et al. (2009) Power Struggle, Dispute and Alliance Over Local Resources: Analyzing 'Democratic' Decentralization of Natural Resources through the Lenses of Africa Inland Fisheries. *World Development* **37** (12), 1935–1950.
- Benites, G. V. & Ubillús, A. V. (2022) The pendulum movement: Unstable political settlements for artisanal and small-scale mining in Peru. *Environmental Science & Policy* **136**, 78–90.
- Bennett, E. (2002) *The Challenges of managing small scale fisheries in West Africa*.

- Bennett, N. J., Cisneros-Montemayor, A. M. & Blythe, J. et al. (2019) Towards a sustainable and equitable blue economy. *Nature Sustainability* **2** (11), 991–993.
- Bennett, N. J., Govan, H. & Satterfield, T. (2015) Ocean grabbing. *Marine Policy* **57**, 61–68.
- Bennett-Jones, L., Gnanalingam, G., Flack, B., Scott, N., Chambers, P. & Hepburn, C. (2022) Constraints to effective comanagement of New Zealand's customary fisheries: experiences of the East Otago Taiāpure. *Ecology and Society* **27** (4).
- Bose, S., Al-Masroori, H. S. & Al-Habsi, A.-M. H. A. (2017) Traditional fisheries enforcement program: A case of three coastal villages in the eastern part of Oman. *Marine Policy* **78**, 61–67.
- Botlhale, E. (2022) Political Settlements Analysis of Natural Resource Governance in Botswana. *Politikon* **49** (3), 274–290.
- Carbonetti, B., Pomeroy, R. & Richards, D. L. (2014) Overcoming the lack of political will in small scale fisheries. *Marine Policy* **44**, 295–301.
- Cinner, J. E., Daw, T. M. & McClanahan, T. R. et al. (2012) Transitions toward co-management: The process of marine resource management devolution in three east African countries. *Global Environmental Change* **22** (3), 651–658.
- Cleaver, F. (1999) Paradoxes of participation: questioning participatory approaches to development. *Journal of International Development* **11** (4), 597–612.
- Clement, F. (2010) Analysing decentralised natural resource governance: proposition for a “politicised” institutional analysis and development framework. *Policy Sciences* **43** (2), 129–156.
- Clement, F. & Amezaga, J. M. (2013) Conceptualising context in institutional reforms of land and natural resource management: the case of Vietnam. *International Journal of the Commons* **7** (1), 140.
- Cohen, P. J., Allison, E. H. & Andrew, N. L. et al. (2019) Securing a Just Space for Small-Scale Fisheries in the Blue Economy. *Frontiers in Marine Science* **6**.
- Cumming, G. S., Epstein, G. & Anderies, J. M. et al. (2020) Advancing understanding of natural resource governance: a post-Ostrom research agenda. *Current Opinion in Environmental Sustainability* **44**, 26–34.
- d’Armengol, L., Prieto Castillo, M., Ruiz-Mallén, I. & Corbera, E. (2018) A systematic review of co-managed small-scale fisheries: Social diversity and adaptive management improve outcomes. *Global Environmental Change* **52**, 212–225.
- Daily Graphic (2016) Akufo-Addo pledges to ban pair-trawling. *Daily Graphic*, May 04.
- Dietz, T., Ostrom, E. & Stern, P. C. (2003) The struggle to govern the commons. *Science (New York, N.Y.)* **302** (5652), 1907–1912.

- Epstein, G., Morrison, T. H. & Lien, A. et al. (2020) Advances in understanding the evolution of institutions in complex social-ecological systems. *Current Opinion in Environmental Sustainability* **44**, 58–66.
- Finegold, C., Gordon, A., Mills, D., Curtis, L. & Pulis, A. (2010) *Western Region Fisheries Sector Review*.
- Ganseforth, S. (2023) Blue revitalization or dispossession? Reform of common resource management in Japanese small-scale fisheries. *The Geographical Journal* **189** (2), 204–216.
- Gezelius, S. (2007) Three Paths from Law Enforcement to Compliance: Cases from the Fisheries. *Human Organization* **66** (4), 414–425.
- Gezelius, S. S. & Hauck, M. (2011) Toward a Theory of Compliance in State-Regulated Livelihoods: A Comparative Study of Compliance Motivations in Developed and Developing World Fisheries. *Law & Society Review* **45** (2), 435–470.
- Gutiérrez, N. L., Hilborn, R. & Defeo, O. (2011a) Leadership, social capital and incentives promote successful fisheries. *Nature* **470** (7334), 386–389.
- Gutiérrez, N. L., Hilborn, R. & Defeo, O. (2011b) Leadership, social capital and incentives promote successful fisheries. *Nature* **470** (7334), 386–389.
- Hanna, S. (2003) The Economics of Co-management. In: Wilson, D. C., Nielsen, J. R. & Degnbol, P. (eds.) *The Fisheries Co-management Experience*. Springer Netherlands, Dordrecht.
- Hanna, S. & Munasinghe, M. (eds.) (1995) *Property Rights and the Environment: Social and Ecological Issues*. World Bank, Washington, D.C.
- Hara, M., Donda, S. & Njaya, F. J. (2015) Lessons from Existing Modes of Governance in Malawi's Small-Scale Fisheries. In: Jentoft, S. & Chuenpagdee, R. (eds.) *Interactive Governance for Small-Scale Fisheries*. Springer International Publishing, Cham, pp. 135–156.
- Hara, M. & Nielsen, J. R. (2003) Experiences with fisheries co-management in Africa. In: Wilson, D. C., Nielsen, J. R. & Degnbol, P. (eds.) *The Fisheries Co-management Experience*. Springer Netherlands, Dordrecht, pp. 81–98.
- Hauck, M. (2008) Rethinking small-scale fisheries compliance. *Marine Policy* **32** (4), 635–642.
- Hickey, S., Abdulai, A.-G., Izama, A. & Mohan, G. (2020) Responding to the commodity boom with varieties of resource nationalism: a political economy explanation for the different routes taken by Africa's new oil producers. *The Extractive Industries and Society* **7** (4), 1246–1256.

- Hirvi, M. & Whitfield, L. (2015) Public-service provision in clientelist political settlements: Lessons from Ghana's urban water sector. *Development Policy Review* **33** (2), 135–158.
- Ho, N. T. T., Ross, H. & Coutts, J. (2016) Can't three tango? The role of donor-funded projects in developing fisheries co-management in the Tam Giang Lagoon system, Vietnam. *Ocean & Coastal Management* **121**, 97–106.
- Kashwan, P. (2017) *Democracy in the woods: Environmental conservation and social justice in India, Tanzania, and Mexico*. Oxford University Press, New York, NY.
- Kelsall, T., Ferguson, W. D., Hickey, S., Levy, B., Schulz, N. & vom Hau, M. (2022) *Political Settlements and Development Theory, Evidence, Implications*. Oxford University Press USA - OSO, Oxford.
- Khan, M. (2010) *Political settlements and the governance of growth-enhancing institutions*, London.
- Khan, M. (2019) Institutions and Development. In: Edited by: DEEPAK NAYYAR (ed.) *Asian transformations: An inquiry into the development of nations*, First edition. Oxford University Press, Oxford, pp. 321–344.
- Khan, M. H. (2015) *The Political Economy of Community-Based Fisheries in Bangladesh*, London.
- Khan, M. H. (2017) Political settlements and the analysis of institutions. *African Affairs* **117** (469), 636–655.
- Khan, M. H. (2018) Power, pacts and political settlements: A reply to Tim Kelsall. *African Affairs*, 656–669.
- Kjær, A. M. (2015) Political Settlements and Productive Sector Policies: Understanding Sector Differences in Uganda. *World Development* **68**, 230–241.
- Knight, J. (1992) *Institutions and Social Conflict*. Cambridge University Press.
- Kosamu, I. B. (2015) Conditions for sustainability of small-scale fisheries in developing countries. *Fisheries Research* **161**, 365–373.
- Kraan, M. L. (2009) *'Creating space for fishermen's livelihoods: Anlo-Ewe beach seine fishermen's negotiations for livelihood space within multiple governance structures in Ghana*. PhD Thesis. University of Amsterdam, Amsterdam.
- Levine, A. (2016) The development and unraveling of marine resource co-management in the Pemba Channel, Zanzibar: institutions, governance, and the politics of scale. *Regional Environmental Change* **16** (5), 1279–1291.
- Levine, A. S. & Richmond, L. S. (2014) Examining Enabling Conditions for Community-Based Fisheries Comanagement: Comparing Efforts in Hawai'i and American Samoa. *Ecology and Society* **19** (1).

- Libecap, G. D. (1989) Distributional Issues in Contracting for Property Rights. *Journal of Institutional and Theoretical Economics (JITE)* **145** (1).
- Livingstone, O. & Anthony, B. P. (2023) Documenting fisheries co-management in action: Case of the Grand Cape Mount County Co-Management Association, Liberia. *Marine Policy* **157**, 105844.
- McGinnis, M. D. (2011) An introduction to IAD and the language of the Ostrom workshop: a simple guide to a complex framework. *Policy Studies Journal* **39** (1), 169–183.
- McGinnis, M. D. & Ostrom, E. (2014) Social-ecological system framework: initial changes and continuing challenges. *Ecology and Society* **19** (2).
- Ministry of Fisheries and Aquaculture Development (2020) *Co-management Policy for the Fisheries Sector*, Accra, Ghana.
- Mohan, G., Asante, K. P. & Abdulai, A.-G. (2017) Party Politics and the Political Economy of Ghana's Oil. *New Political Economy* **23** (3), 1–16.
- Murunga, M., Partelow, S. & Breckwoldt, A. (2021) Drivers of collective action and role of conflict in Kenyan fisheries co-management. *World Development* **141**, 105413.
- Nielsen, J. R. (2003) An analytical framework for studying: compliance and legitimacy in fisheries management. *Marine Policy* **27** (5), 425–432.
- Nielsen, J. R. & Mathiesen, C. (2003) Important factors influencing rule compliance in fisheries lessons from Denmark. *Marine Policy* **27** (5), 409–416.
- Njaya, F., Donda, S. & Béné, C. (2012) Analysis of Power in Fisheries Co-Management: Experiences from Malawi. *Society & Natural Resources* **25** (7), 652–666.
- Njaya, F., Donda, S. & Hara, M. (2018) A review of potential sources of revenue for sustaining fisheries co-management activities in the southern Lake Malawi, Mangochi district. *Aquatic Ecosystem Health & Management* **21** (2), 168–175.
- Nunan, F. (2020) The political economy of fisheries co-management: Challenging the potential for success on Lake Victoria. *Global Environmental Change* **63**, 102101.
- Nunan, F., Cepić, D. & Yongo, E. et al. (2018) Compliance, corruption and co-management: how corruption fuels illegalities and undermines the legitimacy of fisheries co-management. *International Journal of the Commons* **12** (2), xx.
- Nunan, F., Hara, M. & Onyango, P. (2015) Institutions and Co-Management in East African Inland and Malawi Fisheries: A Critical Perspective. *World Development* **70**, 203–214.
- Nyarko, K. R. (2023) No 'Closed Season' for artisanal fishers if NDC wins power in 2024 – Mahama. *Joy Online*, March 30.

- Obiero, K. O., Abila, R. O. & Njiru, M. J. et al. (2015) The challenges of management: Recent experiences in implementing fisheries co-management in Lake Victoria, Kenya. *Lakes & Reservoirs: Science, Policy and Management for Sustainable Use* **20** (3), 139–154.
- Oduro, F., Awal, M. & Ashon, M. A. (2014) *A dynamic mapping of the political settlement in Ghana*, Manchester, UK.
- Okeke-Ogbuafor, N. & Gray, T. (2021) Is community-based management of small-scale fisheries in Sierra Leone the answer to their problems? *World Development Perspectives* **21**, 100292.
- Okyere, I., Chuku, E. O., Dzantor, S. A., Ahenkorah, V. & Adade, R. (2023) Capacity deficit and marginalisation of artisanal fishers hamper effective fisheries governance in Ghana: Insights and propositions for promoting sustainable small-scale fisheries. *Marine Policy* **153**, 105640.
- Orach, K. & Schlüter, M. (2021) Understanding the dynamics of fish politics: The role of diverse actor interactions in transformations towards co-management. *Environmental Science & Policy* **124**, 195–205.
- Ostrom, E. (2005) *Understanding Institutional Diversity*. Princeton University Press.
- Ostrom, E. (2007) A diagnostic approach for going beyond panaceas. *PNAS* **104** (39), 15181–15187.
- Ostrom, E. (2010) Beyond Markets and States: Polycentric Governance of Complex Economic Systems. *American Economic Review* **100**, 641–672.
- Ostrom, E., Dietz, T., Dolšak, N., Stern, P. C., Stonich, S. & Weber, E. U. (eds.) (2002) *The Drama of the Commons*. National Academies Press, Washington, D.C.
- Parlee, C. E. & Wiber, M. G. (2014) Institutional innovation in fisheries governance: adaptive co-management in situations of legal pluralism. *Current Opinion in Environmental Sustainability* **11**, 48–54.
- Pinkerton, E. (2018) Legitimacy and Effectiveness through Fisheries Co-Management. In: Werle, D. & Borgese, E. M. (eds.) *The future of ocean governance and capacity development: Essays in honor of Elisabeth Mann Borgese (1918-2002)*. Brill Nijhoff, Leiden The Netherlands, Boston, pp. 333–337.
- Pomeroy, R. S., Katon, B. M. & Harkes, I. (2001) Conditions affecting the success of fisheries co-management: lessons from Asia. *Marine Policy* **25** (3), 197–208.
- Pomeroy, R. S. & Williams, M. J. (1994) *Fisheries Co-management and Small-scale Fisheries: A Policy Brief*, Makati City, Phillipines.
- Post, L. A., Raile, A. W. N. & Raile, E. D. (2010) Defining Political Will. *Politics & Policy* **38** (4), 653–676.

- Poteete, A. R. (2009) Is Development Path Dependent or Political? A Reinterpretation of Mineral-Dependent Development in Botswana. *The Journal of Development Studies* **45** (4), 544–571.
- Poteete, A. R. (2019) Electoral competition, clientelism, and responsiveness to fishing communities in Senegal. *African Affairs* **118** (470), 24–48.
- Rivera, A., San Martin-Chicas, J. & Myton, J. (2021) Transitioning to co-management in Caribbean reef fisheries: Tela Bay case study. *Sustainability Science*.
- Robinson, J. A. (2010) The Political economy of institutions and resources. In: Leal, D. R. (ed.) *The political economy of natural resource use: lessons for fisheries reform*. The World Bank, Washington, D.C., pp. 47–56.
- Sandström, A., Crona, B. & Bodin, Ö. (2013) Legitimacy in Co-Management: The Impact of Preexisting Structures, Social Networks and Governance Strategies. *Environmental Policy and Governance* **24** (1), 60–76.
- Sarr, M., Kimani, M. E. & Jobo, S. (2022) The political economy of development aid and marine fisheries reform. In: Wamboye, E. F. & Fayissa, B. (eds.) *The Palgrave Handbook of Africa's Economic Sectors*. Springer International Publishing, Cham, Switzerland, p. 65.
- Scholtens, J. (2015) Limits to the Governability of Transboundary Fisheries: Implications for Small-Scale Fishers in Northern Sri Lanka and Beyond. In: Jentoft, S. & Chuenpagdee, R. (eds.) *Interactive Governance for Small-Scale Fisheries*. Springer International Publishing, Cham, pp. 515–536.
- Stark, J., Schuttenberg, M. & Newton, S. et al. (2019) *Advancing Reforms to Promote Sustainable Management of Ghana's Small Pelagic Fisheries: An Applied Political Economy Analysis*, Washington, D.C.
- Tsamenyi, M. (2013) *Analysis of the Adequacy of Legislative Framework In Ghana To Support Fisheries Co-Management and Suggestions for a Way Forward*, Narragansett, Rhode Island.
- Vatn, A. & Vedeld, P. (2012) Fit, Interplay, and Scale: A Diagnosis. *Ecology and Society* **17** (4).
- Voyer, M., Benzaken, D. & Rambourg, C. (2022) Institutionalizing the Blue Economy: an examination of variations and consistencies among Commonwealth countries. *Philosophical transactions of the Royal Society of London. Series B, Biological sciences* **377**, 1–8.
- Voyer, M., Quirk, G., McIlgorm, A. & Azmi, K. (2018) Shades of blue: what do competing interpretations of the Blue Economy mean for oceans governance? *Journal of Environmental Policy & Planning* **20** (5), 595–616.

- Whitfield, L. (2011) *Competitive clientelism, easy financing and weak capitalists: The contemporary political settlement in Ghana*. CDR, Copenhagen.
- Wilson, D. C., Nielsen, J. R. & Degnbol, P. (eds.) (2003) *The Fisheries Co-management Experience*. Springer Netherlands, Dordrecht.
- World Bank (1995) *Staff Appraisal Report: Republic of Ghana Fisheries Sub-sector Capacity Building Project*, Washington, D.C.
- World Bank (2003) *Implementation Completion Report: Ghana Fisheries Sub-sector Capacity Building Project*, Washington, D.C.
- Young, O. R., Webster, D. G. & Cox, M. E. et al. (2018) Moving beyond panaceas in fisheries governance. *PNAS* **115** (37), 9065–9073.

General Declaration

I hereby declare that this dissertation is my own work and was completed without any unauthorized aid, and that I used only those sources and aids referenced in the text or otherwise acknowledged, and that all excerpts, citations, and ideas are indicated accordingly. I permit the dissertation to be checked with qualified software as part of investigation into allegations of plagiarism.

Bremen, 30.08.2024

Place, date

Hudu Banikoi