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# Power relations in Sub-Saharan African small scale fisheries and conservation: A multi-dimensional review

Khadidiatou Senghor 

Leibniz Center for Tropical Marine Research (ZMT), Germany



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## ABSTRACT

The complexity of power dynamics in marine conservation and fisheries management within Sub-Saharan Africa remains under-studied, despite its critical importance for sustainable resource governance. This review investigates the multifaceted nature of power by applying the Power Cube framework and the four dimensions of power, focusing on their implications for governance and resource management. The analysis reveals that centralized decision-making, traditional authority, neoliberal policies, and external actors significantly shape power relations, often marginalizing local communities and small-scale fishers. The review further explores how these dynamics contribute to sustainability challenges while highlighting the importance of addressing structural inequalities to promote equitable governance. By examining case studies and existing literature, this paper underscores the need for inclusive approaches that empower marginalized stakeholders and foster collaborative governance. The findings suggest that recognizing and addressing power asymmetries is crucial for achieving sustainable and just outcomes in marine conservation and fisheries management. Ultimately, this review contributes to a deeper understanding of power relations in natural resource governance and offers practical insights for enhancing policy frameworks in Sub-Saharan Africa.

## 1. Introduction

Marine ecosystems in sub-Saharan Africa face many environmental challenges, including overfishing, habitat degradation and climate change impacts [1–3]. These challenges require collaborative stewardship of natural resources, involving both communities and state actors, to ensure the sustainability of marine and coastal resources while also securing local benefits. Central to this endeavor are the power dynamics that shape marine and coastal resource governance, where unequal relationships among stakeholders within the fisheries sector often perpetuate poverty and economic vulnerability within coastal and artisanal fishing communities [4–6]. This unequal distribution of power further complicates the landscape of marine resource management in these countries with high resources dependence and hinders meaningful participation from these communities [7–9]. In this context, shedding light on the complex web of power in fisheries and conservation in sub-Saharan Africa, who holds it, how it is exercised, and how it affects different stakeholders is crucial to developing effective solutions that balance conservation imperatives with social and economic well-being.

Power is a dynamic force shaping interactions, decisions, and outcomes across various domains. It has been the focus of numerous debates

and has raised a number of controversies across disciplines [10–12]. While from a sociological perspective, power is examined as a relational concept that contributes to social stratification and inequality, [13] such analyses often fall short of addressing how these dynamics intersect with environmental and governance challenges in resource-dependent societies like those in Sub-Saharan Africa. Similarly, political scientists focus on power in the context of governance, authority, and decision-making processes [11,14] but they risk prioritizing formal institutional structures while overlooking informal or localized power dynamics, such as those exercised by traditional leaders or social networks. The psychological perspective on power examines how individuals perceive, acquire, and wield power in social settings [15], yet can be criticized for failing to account for broader structural and systemic influences. Ecologists have long studied power in ecosystems through the lens of energy control and flow, focusing on how dominant species and systems maximize energy or influence ecosystem structures [16]. However, these approaches tend to abstract power from its social and political dimensions, thus underestimating the role of human agency and governance in environmental management. In contrast, political ecology attempts to bridge this gap by exploring how broader political, social, and economic forces impact environmental governance,

E-mail address: [khadidiatou.senghor@leibniz-zmt.de](mailto:khadidiatou.senghor@leibniz-zmt.de).

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emphasizing how at local level power dynamics shape resource access and management [5,17,18]. Economic theories of power often explore issues related to income inequality, wealth concentration, and the distribution of economic opportunities within a society providing valuable frameworks for understanding power imbalances in governance systems [19,20]. It constitutes an essential dimension of power that intersects with other perspectives, particularly the political and sociological aspects, in understanding how power operates in complex modern societies [21]. However, these approaches tend to reduce power to economic transactions, neglecting the cultural, political, and ecological dimensions that shape resource management. While each perspective offers unique insights, the fragmented nature of these disciplinary approaches highlights the need for an integrated framework that transcends disciplinary barriers to adequately address the interplay of power in fisheries and conservation governance, especially in sub-Saharan Africa.

There is some recognition of power's importance in the literature, but little theoretical or empirical attention has been dedicated to exploring power dynamics specifically within the marine realm. Indeed, previous studies have primarily focused on structural aspects of marine resource management, often omitting in-depth analysis of the power dynamics that underlie decision-making processes [22–24]. While existing literature on decentralized governance, empowerment, and collective action implicitly addresses power dynamics, there remains a notable gap in explicitly analyzing these dynamics within marine resource management. This review makes power the central analytical focus, offering a structured and comprehensive assessment using explicit power frameworks. This approach helps uncover hidden and underexplored power relations, providing deeper insights into how power asymmetries shape governance outcomes in fisheries and conservation. Focusing on Sub-Saharan Africa is vital due to the economic importance of fisheries for local livelihoods and food security. The region's complex governance structures, characterized by traditional and national systems, pose unique challenges to conservation and resource management. Socioeconomic inequalities and the influence of external actors further complicate governance and conservation efforts. Additionally, environmental threats such as overfishing and climate change, combined with the region's diverse cultural practices, highlight the need for sustainable and equitable resource management. The emphasis on power provides critical insights into the interplay of environmental, economic, and social factors in the region.

The aim of this review is therefore to explore the intricate dynamics of “Power-within” the expansive marine realm, with a particular focus

**Table 2**

Dimensions of Power: characteristics and examples from the literature.

Dimension of Power	Categories	Description	Examples from Literature
Power-Over	Authority and Control	Refers to dominance and control exercised through formal governance structures, policies, and traditional leadership. It includes hierarchical decision-making, coercion, and rule enforcement.	Centralized fisheries policies limiting local decision-making [25]; Traditional leaders controlling access to fishing resources [26].
	Manipulation and Exclusion	The use of influence to shape decisions and exclude marginalized groups from resource governance. Often exercised by powerful stakeholders.	Politically connected groups securing fishing subsidies while others are excluded [5].
Power-To	Empowerment and Capacity to Act	The ability of individuals or communities to take initiative, influence policies, and implement resource management strategies. It highlights agency in decision-making and governance.	Community-led conservation projects and co-management initiatives empowering local fishers [27].
	Institutional Capacity and Constraints	The extent to which government agencies and institutions have the resources and authority to implement policies effectively. Capacity constraints may limit their ability to act.	Fisheries agencies facing financial and logistical constraints in enforcing regulations [28].
Power-With	Collaborative Action and Partnerships	Emphasizes cooperation among different actors, including local communities, NGOs, and government agencies, to achieve common conservation or fisheries governance goals.	Women-led cooperatives and partnerships for fisheries resource management [29].
	Collective Mobilization and Resistance	Collective efforts of marginalized groups to challenge inequitable governance structures and advocate for inclusive decision-making.	Fishers resisting restrictive policies through informal negotiation and advocacy [30].
Power-Within	Self-Empowerment and Identity	The internal capacity of individuals to recognize their own agency and engage in governance processes with confidence.	Fishers developing self-organized networks to enhance bargaining power in fisheries trade [31].

**Table 1**

Categories and description of the four dimensions of power.

Dimension of Power	Categories	Description
Power-Over	Authority and Control	Relates to explicit decision-making authority, coercion, and the ability to make and enforce rules or policies.
Power-To	Empowerment and Capacity to Act	Emphasizes empowerment and the capacity of individuals or communities to take action and make decisions. It focuses on enabling individuals or communities to have control over their circumstances and make choices affecting their well-being.
Power-With	Collaborative Action and Solidarity	Involves collaborative and solidarity-based joint action, emphasizing shared power, respect, mutual support, influence, empowerment, and collaborative decision-making.
Power-Within	Individual Empowerment and Self-Agency	Relates to an individual's self-worth, self-knowledge, and ability to recognize differences while respecting others.

**Table 3**  
Summary of key finding with the power cube framework.

Power Aspect	Key Findings
Visible Power	Institutions enforce top-down regulations, limiting community input.
Invisible Power	Co-management arrangements often reinforce state dominance.
Hidden Power	Social norms and economic dependencies shape resource access.
Global & National Level of Power	International agreements influence national fisheries policies.
Local Level of Power	Traditional leaders and decentralized bodies compete for authority.
Closed Spaces of Power	Decision-making processes exclude marginalized groups.
Invited Spaces of Power	Participation is structured but constrained by existing power hierarchies.
Claimed Spaces of Power	Fishers and local organizations resist exclusionary governance practices.

on small scale fisheries and conservation in sub-Saharan Africa. First, we will examine the theoretical foundations of power, outlining the core theories that shape our understanding of power and its dynamics. Building on this theoretical framework, we will delve into the empirical landscape, conducting an analysis of existing literature on power issues within fisheries and conservation in sub-Saharan Africa. To synthesize this broad literature and identify key manifestations of power, we will use the four dimensions of power (Power-over, Power-to, Power-with, Power-within) [32,33]. This synthesis will be further analyzed through the lens of the Power Cube framework, providing a nuanced understanding of how power operates across various levels, forms, and spaces [34]. Lastly, we will summarize our findings and discuss their implications for decision-making and practice in fisheries and conservation governance. Through this structured exploration, we aim to offer a comprehensive perspective on how power influences interactions and outcomes within sub-Saharan African fisheries and conservation.

## 2. Framework and theoretical foundation of power in this study

The diversity of debates surrounding the meanings of power reflects the varied approaches to analyzing and understanding this complex concept. One comprehensive framework we will use in this review that encapsulates these diverse perspectives is the four dimensions of power [32,33], which provides a synthesized understanding of power across various disciplines. This framework is particularly useful in this review as it helps identify key manifestations of power within fisheries and conservation in sub-Saharan Africa. Additionally, we will present the Power Cube framework, which has gained significant attention in recent policy and institutional analyses, particularly in the context of natural resource management [35–37]. This framework will be employed to deepen our understanding of power dynamics, especially in marine and coastal studies. Through this structured approach, we aim to illuminate the evolving landscape of power dynamics in these contexts and explain the rationale for choosing both the Four Dimensions of Power and the Power Cube as analytical tools for this review. While the Power Cube framework and the Four Dimensions of Power offer valuable insights into power relations, they are used independently in this paper to capture different facets of power dynamics. The four dimensions of power serve as a succinct summary of an extensive body of literature dedicated to the theorization of power (Barnett and Duvall 2005; Raik, Wilson, and Decker 2008; Jonathan Gaventa 2003; Cornwall 2003). This framework condenses diverse theoretical perspectives, offering a comprehensive approach to understanding the intricacies of power dynamics. Each dimension (Power-Over, Power-To, Power-With, and Power-Within) acts as a conceptual tool that captures various facets of power relationships, from hierarchical structures to collaborative efforts, individual and collective agency, and personal empowerment. (i)

Power-over relates to dominance and control in a relationship, it is exercised through authority, physical or non-physical constraint, and hierarchical decision-making structures in a social relationship [32]. It is the most visible form of power and is often associated with formal political structures and institutions. Indeed, this dimension refers to the traditional and overt exercise of power, where one group or individual can directly control or dominate others. It involves explicit decision-making authority, coercion, and the ability to make and enforce rules or policies. Power-over is famously encapsulated by Robert Dahl's equation: "A has Power-over B to the extent that he can get B to do something that B would not otherwise do" [38]. However, Bachrach and Baratz deconstruct this view by emphasizing the significance of "power of non-decision." They argue that power is exercised not only when A participates in decision-making affecting B but also when A reinforces values and practices limiting public consideration of issues detrimental to B's preferences. [39]. (ii) Empowerment and capacity to act described the second dimension of Power, Power-to. It emphasizes empowerment and the capacity of individuals and communities to take action and make decisions [40]. This dimension focuses on the ability of individuals or groups to influence and shape their own lives and environments. It emphasizes empowerment, agency, and the capacity to achieve desired goals. Power-to is about enabling individuals or communities to have control over their circumstances and the ability to make choices that affect their well-being. (iii) Power-with involves collaborative and solidarity-based joint action, emphasizing shared power, respect, mutual support, influence, empowerment, and collaborative decision-making, all serving the common good [41]. It refers to collective forms of power. It manifests through collaborative efforts, partnerships, and participatory decision-making processes and appears to be important in fostering cooperation and collective action [42]. In addition, Power-with emphasizes the strength that comes from people working together towards common objectives recognizing that collective efforts can be a powerful force for change and that social movements and community organizing are examples of this form of power. (iv) The fourth dimension, Power-within, relates to an individual's self-worth, self-knowledge, and ability to recognize differences while respecting others. Power-within recognizes that individuals have the capacity to transform themselves and, by extension, their communities. The concept of Power-within, emphasizes individual empowerment and self-agency management and decision-making processes influencing the engagement and participation of stakeholders [33]. This dimension highlights the internalized power that individuals possess. It is about self-awareness, self-confidence, and the ability to overcome personal limitations or obstacles. Analyzing different dimensions allows for a general exploration of power across social, political, and institutional landscapes. This not only facilitates a more holistic understanding of the concept but also encourages deeper inquiries into how power operates, influences, and shapes our social world. In essence, the four dimensions of power stand as a valuable condensation of diverse scholarly perspectives on the theoretical foundations of power. Additionally, Steven Lukes introduces the concept of ideological power, which allows an agent to influence society's beliefs. Ideological power can make individuals desire things contrary to their self-interest. Lukes' view of power is mainly falling under the category of Power-to, but it is also pluralistic, encompassing Power-over, Power-to and Power-with [10, 43].

In contrast, the Power Cube Framework, developed by John Gaventa, stands as a multidimensional model that combines three dimensions to provide a more comprehensive understanding of power dynamics [35, 37,44]. The three dimensions of the Power Cube are: Spaces, Levels and Forms. (i) Spaces refer to the arenas or locations where power is exercised; the potential arenas for participation and action. Spaces can be physical or virtual, and they represent the context in which power operates. Gaventa distinguishes between closed, invited and claimed spaces. According to Gaventa these three key spaces play pivotal roles in understanding power dynamics. Closed spaces represent

decision-making arenas where power is concentrated and exclusive, often limiting access to a selected group. Invited spaces are areas where some level of participation is extended, although within predefined parameters set by those in power. Claimed spaces are areas where marginalized groups or individuals actively assert their right to participate, challenging established power structures. These spaces collectively offer a comprehensive view of how power operates in different contexts, from controlled and exclusive to negotiated and contested arenas Gaventa.

(ii) Levels refer to the different layers of decision-making and authority held on a vertical scale, from local to the national and international, or global level. Local scale refers to Power-within a specific community or region, where interactions are often more direct and immediate. National scale involves the broader context of Power-within a country, encompassing political structures, policies, and societal norms. The international scale extends the analysis to the transnational arena, acknowledging the influence of global forces, institutions, and dynamics on local and national power structures. Examining power across these scales provides a more nuanced understanding of how it operates and intersects across various levels of governance and influence.

(iii) Forms of power encompass the ways in which power manifests itself, including its visible, hidden and invisible forms. Visible power, the most overt, operates in public spaces and formal decision-making bodies, encompassing laws, regulations, and government decisions. Invisible power, less apparent, shapes perceptions and ideologies, influencing agenda-setting and public discourse, often exercised through media framing. Hidden power, the most secret, operates by excluding certain issues or perspectives from decision-making, deliberately keeping them off the agenda. Together, these forms provide a nuanced understanding of power, acknowledging its multifaceted nature, from visible actions to the subtle shaping of discourse and strategic exclusions in decision-making processes. In essence, Gaventa's Power Cube Framework provides a nuanced understanding of power, recognizing that power operates not only through visible actions but also through influencing perceptions, shaping discourse, and strategically keeping certain issues off the agenda.

By using the Power Cube framework, this study can conduct more nuanced and context-specific analyses of power dynamics in different settings. It allows for a deeper exploration of how power operates in specific spaces, at different levels, and in various forms, leading to a richer understanding of social and political processes. The Power Cube framework, with its recognition of multi-dimensional power and critical analysis, offers a valuable perspective but can be complex and subjective. Similarly, the Four Dimensions of Power provide a comprehensive understanding of power but one can overlook the dynamics at different levels, contexts, or arena. Using the two frameworks allow for a better analysis of power dynamics and flexibility in adapting to specific contexts. Additionally, it streamlines the complexity and subjectivity while offering clearer guidance for power analysis, resulting in a more robust understanding of power dynamics. Overall, these tools provide a comprehensive lens for studying power and its implications in the context of fisheries and conservation.

### 3. Method

The methodology employed in this paper involved a comprehensive literature review to investigate studies relating to power dynamics in fisheries and conservation in Sub-Saharan Africa. The selection of relevant documents followed a two-stage process. Initially, a broad search strategy was implemented using Google Scholar and Web of Science to identify studies on power. A purposive (rather than systematic) approach was adopted to allow flexibility in capturing conceptually rich and diverse sources. Keywords including “power,” “power dynamics,” “fisheries governance,” “marine conservation,” and “Sub-Saharan Africa” were used both individually and in combination with Boolean

operators (e.g., AND, OR). Filters prioritized peer-reviewed journal articles from the last two decades, especially from disciplines such as environmental science, political ecology, and natural resource governance. From the initial 754 articles identified, 142 were selected for full-text review based on relevance to the themes of power, fisheries governance, and marine conservation in Sub-Saharan Africa. Following this, 58 papers were retained for in-depth analysis using MAXQDA software. These papers were chosen because they most concretely and explicitly engaged with power relations in the context of small-scale fisheries and conservation, particularly in West Africa. Literature was analyzed using a coding structure based on two complementary power frameworks. First, the four dimensions of power: (1) Power-over (coercion, authority, control, dominance, manipulation); (2) Power-to (agency, autonomy, empowerment, capacity, freedom); (3) Power-with (collaboration, coalition, cooperation, solidarity, shared decision-making); and (4) Power-within (self-confidence, self-determination, self-empowerment, self-realization, self-worth). Second, the Power Cube framework was applied, enabling the identification of forms of power (Visible, Hidden, Invisible), levels (Local, National, Global), and spaces (Closed, Invited, Claimed). Coding was facilitated using MAXQDA software. This dual-coding strategy provided a structured yet nuanced lens to examine how power operates in fisheries governance and marine conservation in Sub-Saharan Africa. It also ensured that both overt and subtle dynamics of power were captured in the analysis.

### 4. Results

#### 4.1. From authority to autonomy - exploring power dimensions in fisheries and conservation

The review of empirical papers has unveiled the intricate and multifaceted power dynamics within fisheries and conservation, illustrating a complex interplay of Power-over, Power-to, Power-with and Power-within dimensions. Below, we present the findings for each dimension while addressing the tensions, overlaps, and unique manifestations within the analyzed literature.

##### 4.1.1. Power-over

Power-over highlights the hierarchical and coercive nature of power, where dominant actors enforce control and authority over others. Key recurring themes include Dominance, Control, Authority, and Manipulation. Dominance is evident in various instances, including in many African contexts where traditional authorities such as village chiefs and head fishermen maintain significant influence over resource access and governance, often challenging decentralized management efforts. For instance, in Zambia, traditional leaders dominate decentralized bodies, limiting their ability to assert new authority structures [45]. Similarly, in Malawi, traditional leaders hold substantial influence over access and use of natural resources, affecting the authority and autonomy of decentralized governance framework [26]. Control is particularly highlighted in the context of decision-making and resource access. Centralized administrations often retain control over resource allocation and decision-making processes, sidelining local voices. Examples include tax collection mechanisms in Cameroon, where centralized control of financial resources limits redistribution to end-users [30]. [46]. While central authorities seek to diminish the influence of traditional leaders, these leaders continue to play a central role in fisheries management. Notably, traditional authorities often dictate the rules around fisheries resource use and conservation in contexts where formal governance is weak or inconsistent. Lastly, Power-over also manifests in subtle, often less visible forms, where local factions manipulate access to resources for political or personal gain. For instance, in Ghana, fish traders with political connections exert control over access to subsidized fuel and other resources [5].



#### 4.1.2. Power-to

The Power-to dimension refers to the capacity of individuals or institutions to take action and influence governance outcomes. The recurring themes in this dimension are Agency, Empowerment and Capacity. Local management bodies and government agencies often demonstrate agency in fisheries governance. Examples include beach management units (BMUs) in Kenya, which have the capacity to resolve minor disputes and propose bylaws [25,29]. Women in fishing communities also demonstrate agency by forming cooperatives to address shared challenges and advocate for their interests. In addition, Decentralization reforms are designed to empower local communities by transferring management responsibilities to local institutions. However, this transfer is often symbolic rather than substantive. For example, while co-management initiatives in Malawi aim to empower local actors, they frequently lack the political and financial support necessary for effective implementation. [26,27]. Power-to as Capacity is exercised through various institutional and governance structures, including formal government agencies, informal institutions, and community organizations [28,29]. While government agencies are formally tasked with managing fisheries resources, their capacity to do so is often constrained by limited financial, human, and technical resources. For instance, insufficient patrol boats, lack of judicial infrastructure, and weak enforcement mechanisms undermine the ability of agencies to ensure compliance with regulations [23].

#### 4.1.3. Power-with

In the coded segment related to the "Power-with" dimension, Collaboration/Partnership, Collective Action, and Community Empowerment manifest regularly across the literature, indicating their significance in the analysis. Partnerships between government agencies, NGOs, and local communities are critical for addressing challenges in fisheries and conservation. For instance, joint efforts to manage mangroves in Senegal demonstrate the value of leveraging diverse expertise and resources. [5,23,29]. However, the effectiveness of these partnerships often depends on equitable power-sharing arrangements. Collective Action reveals the coordinated efforts of groups or communities to address common challenges shared concerns and pursue common objectives. Examples include the formation of beach village committees and women-led cooperatives to advocate for fair access to resources and decision-making processes [27,29]. Empowerment initiatives, such as capacity-building programs and recognition of local knowledge, enable communities to play an active role in governance. For instance, community-based management programs in Uganda emphasize the inclusion of local voices in decision-making processes [25,31].

#### 4.1.4. Power-within

In the analysis of Power-within dimension, Self-Realization is a prominent theme highlighting the notion of power emanating from individual consciousness social structure and collective advocacy. Individuals derive power from self-awareness and agency, enabling them to navigate governance challenges and advocate for their interests. For example, women in fishing communities often find empowerment through self-organized cooperatives, enabling them to challenge traditional gender roles. Power-within is also shaped by broader social and economic structures, which influence access to resources and decision-making processes. Unequal class relations and entrenched hierarchies often limit the ability of marginalized groups to exercise agency [5]. Empowered individuals often use collective framing to advocate for justice and equity. For instance, fishing communities in Senegal have mobilized around the concept of environmental justice to challenge resource extraction practices that threaten their livelihoods [31].

### 4.2. Unveiling multifaceted power dynamics in marine fisheries and conservation using the power cube framework

The reviewed literature demonstrates how these dimensions of

power shape decision-making, resource access, and governance effectiveness in Sub-Saharan Africa fisheries and conservation.

#### 4.2.1. Forms of power: visible, invisible, and hidden forces

In analyzing power dynamics, it is essential to recognize that power manifests not only in overt mechanisms. The Forms of Power allow us to explore how power operates both in open arenas and behind the scenes. It is essential to distinguish between visible power (formal rules and regulations), invisible power (subtle forms of influence and exclusion), and hidden power (agenda-setting and norm-shaping). Visible power in fisheries and conservation governance is exercised through formal institutions, policies, and legal frameworks. Government agencies, regulatory bodies, and international conservation organizations use this power to set regulations, allocate resources, and enforce compliance [25]. For example, fisheries management authorities in Kenya, Tanzania, and Uganda implement licensing systems, quotas, and closed seasons to regulate fishing activities [47]. However, this often leads to top-down decision-making, where local fishers and resource users have limited participation in shaping policies that directly affect their livelihoods.

Invisible power shapes governance structures through ideological and cognitive influence. While co-management is widely promoted as a participatory approach, studies reveal that power imbalances persist, limiting the influence of local actors. [48]. Decentralized fisheries management initiatives in countries like Cameroon, Niger, Nigeria, and Malawi have shown a lack of political and local support, and inadequate alignment with fisheries policy [26,25,27]. In Malawi, co-management arrangements led to the marginalization of fishers, as government authorities retained de facto control over decision-making [26]. In Senegal, participatory conservation programs often fail to include migrant fishers and women traders in decision-making bodies, reinforcing exclusionary governance practices [28]. These findings highlight how invisible power operates within co-management systems to maintain existing hierarchies despite claims of inclusivity. The role of the state in co-management arrangements is also a critical aspect to consider. Scholars have challenged the view that the state is equal to other actors in fisheries co-management, highlighting the predominance of state capacities in shaping these arrangements [45].

Hidden power becomes evident in fisheries and conservation in Sub-Saharan Africa as social norms and power relations are shaped by individual subjectivities, knowledge, truth claims, and narratives [28, 49–51]. Powerful actors, such as international organizations and NGOs, establish conservation narratives that frame small-scale fishers as contributors to overfishing, justifying restrictions on their access to marine resources [51]. Authors emphasize the hidden power shaping the use of fisheries resources [28,41]. This is illustrated in the literature where in fishing communities, fish traders exert power through access to money and fishing materials, pressuring fishermen and women involved in fisheries activities [51]. In Ghana, for example, traders exert economic power over fishers through debt bondage, influencing fishing practices and resource distribution [5]. These dynamics illustrate how hidden power operates beyond formal institutions to shape governance outcomes.

#### 4.2.2. Level of power: global, national, and local dynamics

Power relations in fisheries and conservation governance operate across multiple levels, with global policies influencing national regulations and local implementation. Understanding these interconnections is crucial for addressing governance challenges. At the global level, international agreements and donor-funded programs significantly impact fisheries management in Africa [28]. This review has revealed the power of international actors that play a significant role in promoting sustainability and providing guidelines for fisheries policies [25,27,28,52]. These actors with the support to capacity-building efforts and resources provided to improve fisheries management orientate policies direction in African countries. It is in this context that Shackleton et al. (2022)

discuss the global influence on conservation policies in developing countries like in Africa [28]. As revealed by several authors these institutions dictate access to resources and influence decision-making processes [25,27]. Nunan et al., 2015 highlight how the introduction of co-management in Kenya, Tanzania, and Uganda by the departments of fisheries was supported by a number of internationally funded projects [25]. Béné et al. - 2009 emphasize how the increasing number of development programs and policy reforms in developing countries are being implemented with the financial support of developed countries and the explicit objective to promote decentralization reforms [27]. This involvement shapes the structural approach to co-management, showcasing supranational power dynamics and a top-down influence from global actors. Under this wide rubric of “decentralization,” governments are transferring management responsibilities and powers from central agencies to a variety of local institutions [53,54]. However, this transfer of power is not always effective, as power remains in the hands of the state [55,56]. The national level of power is evident in government involvement and oversight of the co-management structure. The formation and operation of co-management structures are situated within regional and national policy and legislation within the fisheries sector, setting out the process of forming Units, Networks and Co-Management Committees. Additionally, the study on small-scale fisheries in the sub-Saharan Africa highlights the intentional establishment of co-management institutions through fishery policy intervention, indicating a top-down influence on governance. This is evident in the case of MPA implementation in West Africa, where the co-management approach has been implemented for conservation for fisheries and others marine and coastal resources such as mangroves [57].

In the context of sub-Saharan Africa, the dynamics of Power-within local fisheries and conservation initiatives are marked by pronounced inequalities among various stakeholders [7,46,25]. Poorly conceived decentralization programs have sometimes resulted in a mere reorganization of power and responsibilities, failing to bring about substantive improvements in governance [54]. Local governments, often perceived as weak and lacking initiative, contribute to the challenge. Moreover, weakening their meaningful integration [58]. In these localized settings, key actors wielding significant power include traditional leaders, Fisheries Departments, and local management entities established through co-management reforms. Entities such as beach village committees and committees overseeing Marine Protected Areas (MPAs) play pivotal roles. Unfortunately, the marginalization of small-scale fishers persists, emphasizing the need for a reevaluation of power structures in local fisheries and conservation initiatives [59].

#### 4.2.3. *Space of power: closed, invited, and claimed arenas*

The effectiveness of governance structures is shaped by the arenas in which power is exercised. Power Cube analysis highlights how decision-making spaces can either exclude or empower resource users. Closed Spaces of Power showcase tensions between different actors, further emphasizing the nuanced nature of power dynamics. Exclusionary practices are highlighted in the literature, where fishers, feeling excluded from their own operational domains resist to local organization authority [28,41]. Authors bring attention to exclusionary practices where producers, such as small-scale fishers, are not meaningfully integrated into formal processes, indicating a lack of inclusion and participation [58]. Indeed, fishers in Africa are powerless in their own operational domains due to various factors. In Ghana, the introduction of a seasonal closure has led to restricted access to coastal waters, decreased financial capital, and declining small-scale fisheries opportunities, causing negative perceptions among fisher folk [5,18]. In South Africa, the regulatory regime for small-scale fishers has shortcomings that limit their access to fishing rights and alternative livelihoods, contributing to their marginalization and vulnerability [30,60,61]. In Malawi, similarly to Senegal, co-management arrangements have resulted in unequal power distribution, marginalizing fishers and leaving their role and importance unclear [7,26]. Along the Durban coast in

South Africa, the privatization of public space has led to the loss of fishing sites for local subsistence fishers, causing a loss of identity and exclusion from marine legislation [62].

Invited spaces include co-management platforms where local actors are formally included in governance processes but often with limited decision-making power [24,63,64]. In Kenya and Tanzania, beach management units (BMUs) were created to involve local fishers in regulatory decisions, but studies show that government agencies still hold significant control over these bodies [25]. Understanding “Claimed Space of Power” in fisheries and conservation relationship is essential for analyzing how authority is distributed, contested, and negotiated within a particular context.

Claimed spaces emerge when marginalized groups create their own platforms for influencing governance. In Malawi and Senegal, fishers’ associations have organized protests against restrictive conservation policies, demanding greater recognition of their rights [30]. In Zanzibar, women’s groups have developed alternative resource management strategies, challenging dominant conservation narratives and asserting their agency [65].

## 5. Discussion

This review critically examines power dynamics in fisheries and marine conservation in Sub-Saharan Africa through the lens of the Four Dimensions of Power [10,33,66] and the Power Cube framework [37]. By structuring the analysis around these frameworks, the study provides a nuanced understanding of how power manifests across different levels, spaces, and forms. While previous studies on fisheries governance and conservation in the region have addressed decentralized governance, collective action, and co-management [25,54], they often engage with power dynamics only implicitly. In contrast, this review explicitly centers power as an analytical focus, revealing underexplored mechanisms that shape governance outcomes.

Compared to broader literature on power in environmental governance, this review highlights important contextual distinctions. Global studies have emphasized the role of neoliberal conservation and market-based governance in shaping power asymmetries [67,68], but much of this literature has focused on Latin America and Southeast Asia. In the African context, power is often exercised through a mix of centralized state authority, traditional leadership structures, and external actors, leading to governance tensions that are less prominent in other regions [28,30]. Additionally, while power-over mechanisms in fisheries governance have been widely acknowledged in political ecology [17, 18], this review extends the discussion by systematically analyzing the interaction of power-within, power-to, and power-with across different governance arrangements.

### 5.1. *Interlinkages between power dimensions and the power cube framework*

One of the key contributions of this review is the integration of the Four Dimensions of Power [10,33,66] and the Power Cube framework [37] to analyze governance dynamics in fisheries and conservation. While these frameworks offer distinct conceptualizations of power, our findings reveal significant overlaps and interconnections between them, which are essential for understanding the complexity of power relations in natural resource management.

For instance, Power-over, which refers to control and dominance, is strongly linked to visible power in the Power Cube framework. This is evident in centralized governance structures, where decision-making authority is concentrated within government institutions and traditional leadership, limiting the participation of small-scale fishers [25, 54]. However, Power-over also extends into hidden power, where elites and institutions control the agenda-setting process, determining whose voices are included or excluded from governance decisions [28]. This highlights how formal authority (visible power) often works in tandem

with manipulative strategies (hidden power) to maintain control over marine resources.

Similarly, Power-to, which emphasizes agency and capacity, is closely related to both visible and invisible power. On one hand, state agencies and decentralized governance bodies possess the formal authority to implement policies and conservation initiatives [5]. On the other hand, their ability to act is often constrained by invisible power, where deeply embedded social structures such as political patronage networks or gendered norms limit their effectiveness [24]. The interplay between these forms of power explains why, despite formal decentralization policies, many small-scale fishers remain disempowered in decision-making processes [27].

Power-with, which relates to collaboration and collective action, manifests primarily within invited spaces in the Power Cube framework, where stakeholders are brought into governance dialogues through co-management and participatory approaches [69]. However, this dimension also intersects with claimed spaces, where marginalized groups actively resist exclusion and assert their rights [41]. For example, small-scale fishers in West Africa have formed local cooperatives and advocacy networks to challenge state-imposed regulations and negotiate more favorable management arrangements [30]. These examples illustrate how collaborative power (Power-with) is often exercised in contested arenas where different levels and forms of power interact.

Finally, Power-within, which refers to individual empowerment and self-awareness, is deeply tied to hidden power, as it shapes how individuals and communities perceive their own roles and capacities within governance systems [37]. The influence of external conservation narratives and global sustainability discourses can either reinforce feelings of marginalization or inspire grassroots movements for change [28]. Understanding this dynamic is crucial for designing interventions that genuinely empower local actors rather than perpetuating passive compliance with externally imposed governance models.

### 5.2. Theoretical and practical implications

The findings of this review have significant theoretical and practical implications. Theoretically, they underscore the importance of integrating multiple power frameworks to capture the complexity of governance arrangements in resource-dependent communities. While the Four Dimensions of Power effectively categorize different expressions of power, the Power Cube framework adds depth by situating these expressions within spatial, structural, and relational contexts [37]. This multilevel approach helps clarify the overlapping and contested nature of power, particularly in decentralized governance systems where local institutions are expected to manage resources but often remain constrained by national and international influences [25].

From a practical standpoint, these findings highlight the need for governance reforms that go beyond institutional restructuring to address entrenched power imbalances. The persistent dominance of state-led conservation and fisheries policies, often shaped by external donors and large-scale industrial actors [28,30], suggests that participatory governance initiatives may remain ineffective unless power inequalities are actively challenged. Policies should prioritize mechanisms for meaningful inclusion of marginalized groups, including small-scale fishers and women, whose agency is frequently undermined despite their critical role in local economies [5]. Furthermore, interventions must consider the persistence of traditional authority structures, which can either facilitate or hinder equitable governance depending on how they interact with formal regulatory systems [27].

### 5.3. Limitations and future research directions

Despite its contributions, this review has limitations. The reliance on published literature means that certain informal or undocumented governance practices may not be fully captured, particularly those related to customary norms and small-scale negotiations over resource

access. Additionally, while the review examines power across different levels and spaces, future research could further explore how power is contested and renegotiated over time, particularly in response to shifting environmental and economic conditions. Finally, the review primarily focuses on small-scale fisheries and conservation governance, leaving the role of industrial fleets and large-scale extractive industries underexplored. Given their significant influence on marine governance in Sub-Saharan Africa [28], future studies should investigate how these actors interact with local governance systems and shape broader power dynamics.

## 6. Conclusion

Power relations in Sub-Saharan African fisheries and conservation are deeply embedded in governance structures, socio-economic systems, and community dynamics. Formal regulations, informal institutions, and external influences, all of which determine how resources are accessed, controlled, and distributed, shape these relations. While power enables governance structures to function, imbalances in power relationships often undermine effective and inclusive management. This review, applying the Four Dimensions of Power and the Power Cube framework, has provided a comprehensive lens to examine how power manifests across different levels, forms, and spaces. It highlights how centralized control, traditional authority structures, and external interventions shape governance outcomes, sometimes reinforcing structural inequalities and limiting the participation of marginalized stakeholders.

A key insight from this analysis is that power imbalances are not inherently problematic but depend on how they are exercised and toward what end. Some level of centralized authority is necessary for enforcing regulations, coordinating resource management, and ensuring long-term conservation goals. For instance, the ability of states to enforce policies or implement conservation measures can serve sustainability objectives, provided these actions are transparent, participatory, and responsive to local needs. However, power asymmetries become unjust when they reinforce exclusion, limit access to decision-making, or serve the interests of a select few at the expense of broader societal and environmental well-being. Governance structures must therefore not only recognize existing power imbalances but also ensure mechanisms of accountability, checks, and counterbalances that promote equity and justice in marine resource management.

The persistent underrepresentation of local communities and small-scale fishers in governance decisions remains a critical challenge. While participatory approaches, co-management frameworks, and collaborative governance initiatives have been widely promoted, they often fail to redistribute power effectively or challenge entrenched hierarchies. This review underscores the need to move beyond superficial participatory mechanisms and toward governance models that actively empower marginalized stakeholders. Strengthening community-based governance, ensuring transparency in decision-making, and fostering interdisciplinary collaboration can contribute to more inclusive resource management practices.

Additionally, the limited focus on power dynamics in fisheries and conservation research within Sub-Saharan Africa reflects broader systemic issues. The dominance of Western-centric research frameworks, funding constraints within African institutions and the complexity of studying power relations have all contributed to the lack of localized, in-depth analyses. Future research should prioritize context-specific investigations into power relations, integrating insights from political ecology, institutional economics, and participatory governance to develop more nuanced understandings of power in marine governance.

Moving forward, achieving sustainable and equitable fisheries governance requires not only addressing existing power imbalances but also recognizing the legitimate role of power in structuring governance. The challenge is not to eliminate power asymmetries but to ensure they are applied responsibly, with mechanisms for accountability and



inclusion. By fostering equitable decision-making processes, strengthening countervailing forces within governance structures, and amplifying the voices of historically marginalized groups, the governance of fisheries and conservation in Sub-Saharan Africa can become more just, resilient, and sustainable.

### CRedit authorship contribution statement

**Khadidiatou Senghor:** Writing – original draft, Software, Methodology, Formal analysis, Data curation, Conceptualization.

### Authorship & Contributions

I am the sole author of this manuscript. The research design, data collection, analysis, and manuscript writing were all conducted independently by me.

### Ethical Considerations

The research presented adheres to ethical guidelines for social science and environmental research. No human or animal subjects were involved that would require additional ethical approval.

### Originality & Unpublished Work

This manuscript is my original work and has not been published or submitted for publication elsewhere, either in part or in full.

### Compliance with Journal Guidelines

The manuscript follows *Marine Policy*'s submission guidelines, including formatting and citation requirements.

Please do not hesitate to contact me should you require any further information. I appreciate your consideration of this manuscript for publication and look forward to your feedback.

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I declare that there are no financial, professional, or personal conflicts of interest that could influence the findings of this study.

### Data availability

Data will be made available on request.

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