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Social Innovation in Small-Scale Blue Food Systems: A Case Study of Oyster Harvesters in The Gambia, West Africa

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ABSTRACT

The emerging "Blue Economy" and "Blue Growth" paradigms, focusing on economic growth, innovations, and environmental sustainability, have increasingly dominated discussions on marine and coastal development. However, in this discourse, the future of small-scale blue food systems often remains underemphasized and increasingly uncertain. This paper explores the potential of social innovation approaches as tools to support a collective and inclusive transformation within blue food systems in the blue economy. We draw on a case study of a female-led social enterprise in The Gambia—the TRY Oyster Women's Association (TRY)—to highlight the social innovation pathways for small-scale blue food systems transformation. The study shows that social innovation through institutional changes, participatory governance, emerging institutional entrepreneurs, and financial resource mobilization and support facilitates effective natural resources management, environmental stewardship, and social and economic inclusion within small-scale blue food systems. Importantly, the granting of TRY's exclusive user rights through a national Fishery Act has facilitated community engagement in sustainable management of the oyster shellfish and mangroves in The Gambia. Also, TRY promotes community empowerment and social cohesion through social learning and capacity-building initiatives with financial and technical support from external partners enabling the association to thrive as a social enterprise. The paper underscores the significance of social innovation in steering successful transformation within small-scale blue food systems, fostering environmental and inclusive resource management in the blue economy with applicability in similar geographical contexts.

1 | Introduction

Over the past decade, the concept of "Blue Economy" has occupied many international fora on ocean developments and marine (blue) food systems (Bennett et al. 2021; Voyer et al. 2018). The emerging blue economy places a distinct emphasis on economic growth, social wellbeing, and environmental stewardship, with some level of commitment to social inclusion and justice (Silver et al. 2015; Barbesgaard 2018; Winder and Le Heron 2017; Keen et al. 2018; Fabinyi et al. 2021; Bennett et al. 2015; Allison et al. 2020). However, due to the blue acceleration—an intensifying competition among economic sectors and stakeholders (Jouffray et al. 2020)—the blue economy discourse has occasionally failed to acknowledge the significant contribution of small-scale fisheries (SSF) to the global blue food system (Bavinck et al. 2018; Silver et al. 2015; Olson 2011; Barbesgaard 2018; Childs and Hicks 2019). SSF, for many decades, constitutes a distinctive and significant component of the ocean and maritime economy, playing a pivotal role in the global food system, sustaining livelihoods,

economic opportunities, and food security (Allison 2011; Béné et al. 2009, 2016; Cohen et al. 2019; Fabinyi et al. 2017). In addition, SSF provides opportunities for social and institutional transformations within coastal communities, as their contribution extends beyond economic to encompass the social, cultural, relational, and everyday lifestyle of local coastal inhabitants in most developing countries (Ayilu et al. 2023; Fabinyi et al. 2019). Thus, there is a need to highlight the prominent role of SSF and SSF institutions in the blue economy discourse, which are critical for achieving a sustainable ocean economy.

In recent decades, the SSF value chains have been confronted with challenges that encompass adverse impacts of climate change, vulnerability of market systems, inequitable distribution of benefits (Bjorndal et al. 2014; Jacinto and Pomeroy 2011), and the recent growing transition towards blue growth (Bennett et al. 2021). The blue economy discourse and neoliberal paradigms have transitioned local marine and ocean resources into global economic and political dimensions, significantly impacting SSF's access to, use, and control over these resources (Bennett 2019; Martínez et al. 2019). Additionally, politics, power dynamics, and material discourse in the blue economy have shaped the organization and functioning of small-scale fishing and actors, raising issues of social, economic, and human rights justice (Bennett et al. 2021; Cohen et al. 2019; Cisneros-Montemayor et al. 2021). In most cases, SSFs are impacted by economic, social, and ecological exclusion, class discrimination, political disempowerment, environmental change, loss of identity, and disconnection from resources and other fishers (Bennett et al. 2021; Nayak et al. 2014).

As the blue economy unfolds, it has become imperative to comprehend pathways through which SSF can effectively respond to and engage in local natural resource exploitation and management. The academic discourse around approaches through which SSF navigates transformations and transitions has not inadequately engaged with the literature on social and institutional innovation (Akinsete et al. 2022; Mazigo 2017). In this paper, we draw on a social innovation framework to analyze a female-led oyster harvesting social enterprise in The Gambia to examine how a small blue food system effectively responds to and engages in community-based natural resource management (CBNRM) (Mulgan et al. 2007; Tapsell and Woods 2010; Westley and Antadze 2010). Moreover, gendered aspects of social innovation are less highlighted in the scholarly literature (AlMalki and Durugbo 2023; Lindberg et al. 2016). Prior research on the gendered dimensions of entrepreneurial innovation has identified a trend of male predominance (Teasdale et al. 2011); however, this gender disparity diminishes in the context of social enterprises (Nicolás and Rubio 2016). Others have argued hegemonic masculinity in terms of innovation, acknowledging that technological innovation and product development are symbolic of masculinity (Connell 2015), while symbolic of femininity are less acknowledged forms of innovation such as service or social innovations (Lindberg 2012; Lindberg et al. 2016; Lindberg and Schiffbänker 2020). This gendered dichotomy reflects deeper patterns in entrepreneurial motivation—female entrepreneurs often prioritize social impact over purely economic gains, making them particularly effective leaders in social entrepreneurship (Hechavarria et al. 2012; Fernández-Serrano and Liñán 2014). As Nicolás and Rubio (2016) argue, this orientation positions females as key architects in social enterprise success, challenging traditional narratives about entrepreneurial leadership.

The emerging literature on natural resource management within the framework of the blue economy calls for structural transformation and changes in institutions and institutional arrangements, particularly for people who depend on aquatic resources through various innovations (Soma et al. 2018). However, traditional innovation limited to technological and scientific innovations tends to dominate the literature. Less discussed are other forms of societal innovation, such as social innovation, which have, in recent years, gained momentum in policy and research as a response to the historical dominance of technological dimensions of innovation (Lindberg 2012; Lindberg et al. 2016). Although social innovation has been explored broadly (e.g., Mulgan 2006; Westley and Antadze 2010; Biggs et al. 2010; Bock 2012), its application in blue food systems research remains nascent (e.g., Soma et al. 2018; Akinsete et al. 2022).

The paper contributes to the blue economy literature (e.g., Cisneros-Montemayor et al. 2021; Bennett 2019; Allison et al. 2020); Bennett et al. 2021), arguing for a broadening of the limited technological viewpoint on innovation in the blue economy within aquatic resource management to encompass social and institutional innovation perspectives. The social innovation lens enabled the study to identify critical success factors that ensure an effective female-led social enterprise within The Gambia's oyster shellfishery system and mangrove management, including the role of agency, institutions, social development, and social entrepreneurship.

The remainder of the paper is divided into three sections and a conclusion. The following section provides background on the role of institutions in CBNRM and then discusses the social innovation and implications for institutional change. Next, we discuss the case study and our methodological approach, followed by the research findings and a discussion and conclusion.

2 | Role of Institutions in CBNRM

As opposed to the early anthropological view of community as a bounded object or social system, local communities are dynamic and heterogeneous with different social actors, environmental priorities, claims, and power relations (Leach et al. 1999). Therefore, the social, economic, and ecological dynamics within a community-based natural resource management (CBNRM), such as oyster resource management in The Gambia, are often considerably shaped by these social systems and institutional arrangements (Leach et al. 1999). Moreover, the literature has often emphasized the diverse and conflictual values and priorities of resource communities, shaped by different social identities, actors, and institutions, including traditional authority, social norms, rules, conventions, property rights, social change, and new aspirations, as well as the formulation of new state and international-level policies (Benjamin 2008; Mearn et al. 1998).

CBNRM is primarily focused on the collective management of community resources through decentralized management, with authority given to the local community actors (Fabricius and Collins 2007). In such approaches, the community is envisaged as capable of acting collectively toward common management of the resource. However, CBNRM has come under strong criticism in the literature, in some cases, for its failures to deliver sustainable resource management to communities, human well-being, and socioeconomic livelihood (Kamoto et al. 2013). In most cases, communities are constrained by the lack of social capital to work together for a common resource interest, particularly when there is no effective and efficient approach to balancing the diverse interests of community actors, community livelihoods, and the natural resources management regime. Similarly, a breakdown in institutional factors may also impact or weaken the social consensus, cohesion, and solidarity for effective collective agency needed for CBNRM (Musavengane and Kloppers 2020). As institutional economist Elinor Ostrom (1990) argued, environmental problems are not simply about population pressure, but more also about institutional change processes and diverse formal and informal institutions that mediate the relationships in the resource system. These formal and informal institutions and institutional arrangements play a significant role in influencing and mediating who has access to, control over, and benefits from resources, as well as how resource disputes and claims are adjudicated or settled (Nunan 2006; Leach et al. 1999). Besides, local institutions and institutional arrangements also influence social capital, knowledge, and capability, as well as mediate external interventions and between local social and political processes (Kamoto et al. 2013).

In recent decades, institutional structures around SSF governance and management have received significant scholarly attention, especially due to the global resource depletion of aquatic resources, climate change, the COVID-19 pandemic, and the emerging blue growth disruptions (Hanich et al. 2018; Arthur 2020; Ayilu et al. 2022; Nyiawung et al. 2024). The governance and management of SSF are characterized by institutions and institutional arrangements that are either locally established, provincially or state level regulated, or at the international level, or a hybrid. For example, the FAO Voluntary Guidelines for Securing Sustainable Small-Scale Fisheries (SSF guidelines), even though voluntary, remain a relevant global framework for SSF management (FAO, 2015). However, effective community-based management of resources necessitates critical success factors, including strong community leadership and institutional systems, incentives, and collective social capital among local communities at the resource level (Kosamu 2015; Gutiérrez et al. 2011; Evans and Andrew 2011; Gruber 2010). Also, local politics and power relations are significant mechanisms through which local actors mobilize various forms of political, economic, or social power to manage and access local natural resources, as well as control the distribution of benefits and the burdens of environmental degradation (Nolan 2019). Yet, less discussed in the academic scholarship on CBNRM is the role of social and institutional innovation processes in local resource management regimes that recognize and address power and access challenges, despite being a fundamental promise of CBNRM approaches (Brosius et al. 1998).

3 | Social Innovation and Institutional Change

Social and institutional entrepreneurs play a significant role in innovation processes through strategically transforming social agency and institutional settings to influence and advance solutions to societal problems (AlMalki and Durugbo 2023; van Wijk et al. 2019). According to Agrawal and Gibson (1999), institutions, defined as both formal and informal, constitute social orders that shape social interactions, but can often be renegotiated by the same social and institutional systems. While formal institutions such as rules and laws are legally codified and enforced, informal institutions emerge from everyday actions, interactions, and power relations among societal actors (Leach et al. 1999). Power, therefore, plays a significant role when (re)negotiating informal institutions in a social innovation and institutional change context (May, 2013; Agrawal & Gibson, 1999; van Wijk et al. 2019). Therefore, social innovation and institutional change such as the case of oyster shellfish harvesting and management in the Gambia go beyond just the actors' willingness to pursue change, but also strongly depend on the enabling power (leadership) conditions that frame the (re)negotiation of existing social interactions, positions, and actions of the actors involved (Mumford 2002; Mulgan et al. 2007; May, 2013).

Research on social innovation and institutional change literature has been categorized into three domains where place-based practices and innovations are socially oriented (Olmedo et al. 2023; Steiner et al. 2021; Georgios and Barraí 2023; de Fátima Ferreiro et al. 2023; de Souza et al. 2023). Firstly, social innovation and institutional change are described as innovations driven by institutional entrepreneurs or individuals (i.e., emerging leaders with leadership potential) who see and maximize existing windows of opportunity to foster development within different social or institutional contexts (Mumford 2002; Westley et al. 2013; Westley and Antadze 2010; McGowan et al. 2017). Secondly, the literature on context and targets of social innovation and institutional change encompasses the economic, political, social, and cultural factors that hinder existing or emerging social and institutional transformation targeted at specific groups or communities (Neumeier 2017; Richter and Christmann 2023). This is broadly referred to as the governance system that exists within a particular system and context, shaping the different processes of social innovation. Finally, the drivers and processes of social and institutional innovation discuss the individuals or collective actors who play significant roles in driving innovative initiatives that can transform the social or institutional context (Richter and Christmann 2023; Baxter 2023; Spitzer and Twikirize 2023; Kovanen 2021; Ferreiro et al. 2018), including the emergence, adjustment, and scaling of new institutions (Mulgan 2006). But, this can only be achieved based on the ability and enabling environment for actors to mobilize adequate resources (funding) to support place-based activities and collective actions.

In this study, social innovation and institutional change are considered an agentic, relational, situated, and multi-level process to develop, promote, and implement new solutions, products, processes, or programs that change the basic routines, resources, and authority flow, or beliefs in a way that profoundly changes the institutional contexts (van

Wijk et al. 2019; AlMalki and Durugbo 2023; Westley and Antadze 2010). Also, the social innovation means and ends are social, economic, cultural, and territorial motivated (Mulgan et al. 2007; Westley and Antadze 2010; Bock 2012), with the purpose of empowering those disadvantaged. As a result, developing and implementing such novel solutions to social problems often involve (re)negotiations of settled institutions and institutional arrangements among diverse actors with conflicting interests and priorities (Helms et al. 2012). This often involves building new institutions to "change the basic routines, resource and authority flows, or beliefs of the social system in which the innovation occurs" (Westley and Antadze 2010, 2). This could also come in the form of incremental institutional innovation and/or a response to existing social and economic structures, or a complete disruptive change in the existing institutional setting, with new ones emerging in the process (Nicholls et al. 2016).

As noted by Nijnik et al. (2022), "social innovation includes new institutional environments (e.g., of formal and informal rules) and arrangements (spatial and procedural), related actors' interactions (e.g., new attitudes, values, behaviors, skills, practices and processes) and new fields of activity (e.g., social entrepreneurship, social enterprises)", 453. Contextually, the process of social innovation typically starts when one or few people "agents" with their capacities, willingness, and ideas are able to act together as agents of change to a collective problem (Akinsete et al. 2022; Nijnik et al. 2022). They act in a certain ecological, economic, social, cultural, and institutional context, which might support or hinder the ideas. They start by exploring the idea leading to the emergence of new networks and, in the process of scaling up, reconfigure existing social practices as well as governance and institutional arrangements. When the new situation is concretized, the institutional entrepreneurs, together with their network and project partners, are successful in implementing a social innovation, leading to results and outcomes that change the uncomfortable or undesirable situation that they perceive to change. This shows that social innovation and institutional change are agentic, relational, situated, and multilevel processes (van Wijk et al. 2019; AlMalki and Durugbo 2023; Westley and Antadze 2010). Moreover, the role of actor agency, power relations (leadership), and social capital are critical enablers of social innovation and institutional change, including the social, political, economic, and cultural factors that frame and influence actors' change capacity to transform. This also includes the processes and pathways through which innovations emerge, scale, and are institutionalized or contested, reflecting the dynamic and iterative nature of institutional change. At the core is the emphasis on the outcomes of social innovation, which is to enhance outcomes on societal well-being (Akinsete et al. 2022), including empowerment, resilience, and transformative change, aligning with the normative goal of institutional changes.

4 | Case Study and Methodology

4.1 | Context—The TRY Oyster Women's Association as a Social Enterprise

The Gambia is among the smallest nations in Africa, with a population of around 2.6 million people (World Bank 2025). The country has a coastline spanning approximately 80 km, of which 25 km is the estuary of the River Gambia. The river takes its water from the Highlands of Futa Djallon in Guinea and flows through the east of Senegal down the entire length of The Gambia to the Atlantic Ocean. The mixture of the sea and freshwater creates brackish waters in the River Gambia estuary, ideal for mangrove and oyster growth. It spans from the mouth of the River in the coastline to about 160 km inland, fluctuating with tidal and seasonal water intakes (Njie and Drammeh 2011).

Oyster shellfish harvesting has a long history in the region, dating as far back as the 19th century, representing a vital socioeconomic activity in The Gambia (Lau and Scales 2016). While men dominate fishing in general, the harvesting, processing, and marketing of oysters is dominated by women from local communities along the River Gambia (Njie and Drammeh 2011). These enterprises are predominantly small scale, requiring minimal financial capital and technology. However, in a country with 40% of its population living in multidimensional poverty (UNDP 2023), they play a crucial socioeconomic role in terms of local livelihoods and women's empowerment. Despite women's historically limited power in the broader economic landscape in The Gambia, the oyster value chain has created significant social and economic spaces for local women within these communities. The women's role within the local markets has been recognized as essential in supplying relatively affordable food for locals and visitors.

Over the last decades, the oyster value chain has been impacted by various environmental stressors, rapid destruction of mangrove forests, and reduced oyster harvest (Satyanarayana et al. 2012). Moreover, migration, coupled with a growing population in Banjul and consumer demand for oysters, has increased the pressure on both mangroves and oysters (Lau and Scales 2016). In response to these growing threats, the Gambian government and several NGOs have been attempting to halt the deterioration of the mangroves and oysters. In 2007, the oyster harvesters, through a development-oriented woman, decided to "try" out better ways to harvest and market oysters in a way that is sustainable and protects the mangrove ecosystem. This led to the creation of the TRY Oyster Women's Association (hereafter TRY) initiative, with the objective to improve the livelihood of small-scale women oyster harvesters and improve the management of the mangroves and oyster fisheries in The Gambia. The TRY is a women-led social enterprise of oyster harvesters in The Gambia. TRY was established between 2006 and 2007, with headquarters in Banjul, the capital city of The Gambia (Lau and Scales 2016), with the mission to improve the sustainable harvest and management of oyster and mangrove forests, including innovations across the oysters' value chain. In addition, the group serves as an engagement and socioeconomic empowerment platform for the local women (UNDP 2013). Initial activities of the group started in the Tanbi-Kamalloh local community with over 40 members. As of 2021, TRY has scaled up to 16 communities with more than 800 registered members (Survey estimate, 2021), working collectively in oyster harvesting, mangrove restoration, and other women empowerment activities (See Figure 1).

Through the support from development partners like the USAID through the BaNaFaa project (USAID/BaNafaa, 2014), members of the association have been engaged in capacity-building

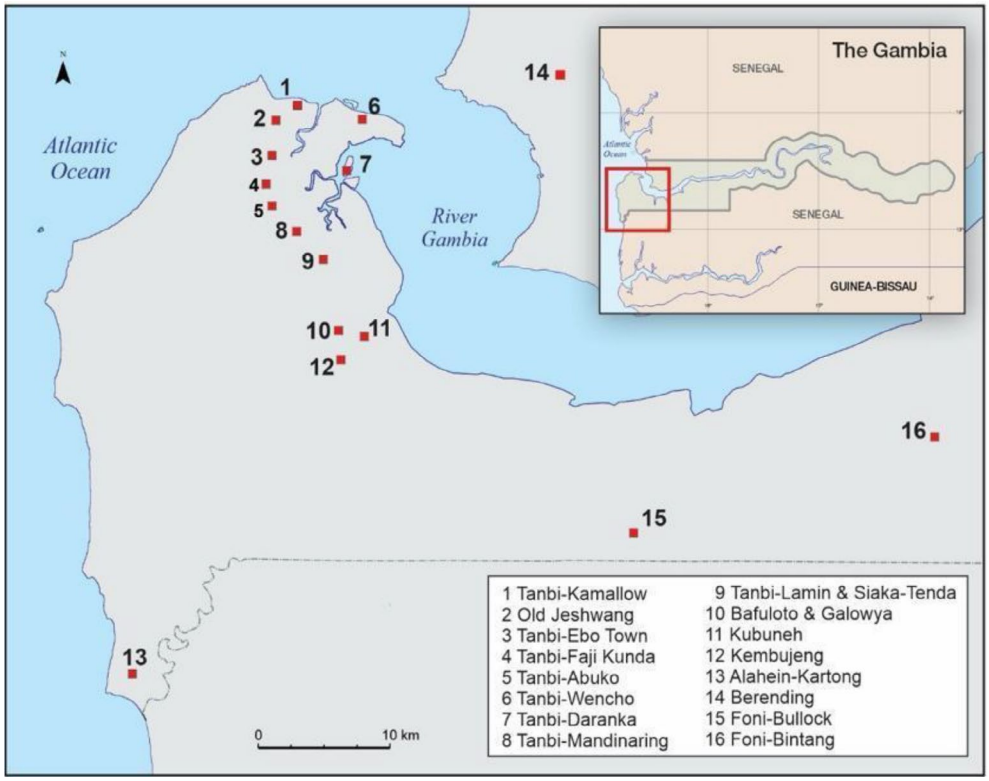

FIGURE 1 | A map showing TRY members' distribution across The Gambia in 16 communities.

opportunities on sustainable oyster harvesting techniques and knowledge and skills development to improve their social and economic wellbeing. Over time, the association moved beyond the interest in mangrove management and the oyster value chain to other local empowerment activities such as reproductive health, water and sanitation, and the establishment of a small credit and loan microfinance scheme (UNDP 2013). In 2012, TRY won the UNDP Equator Initiative prize, recognizing the association as an impactful social enterprise transforming the oyster shellfish system in The Gambia (UNDP 2013: https://www.equatorinitiative.org/). The association through its different activities has been considered an exemplary case study in the African blue economy by the United Nations Environment Program (2015) and researchers (see Okafor-Yarwood et al. 2020). This recognition is consistent with the blue economy strategy of the African Union, which extends beyond ocean-related activities but also other aquatic resources, including wetland, river, and lake environments (AU-IBAR 2019). Unlike other small-scale blue food systems in Africa, the unique characterization of TRY in The Gambia is the provisioning of exclusive access rights by the government and comanagement of the oyster resources. This promoted trust and collaboration among actors partnering to ensure the effective management of the oyster fishery in The Gambia. The exclusive user rights were achieved through recommendations from earlier development projects within the Department of Fisheries and related external development agencies/projects and experts in The Gambia (Nyiawung and Foley 2024). These recommendations steered the government in 2007 to gazette a new Fisheries Policy Act that provided authority for the formation of fishing associations within coastal communities for the purposes of comanagement of coastal resources in the country, including oyster resources.

4.2 | Data Collection and Analysis

To explore the concept of social and institutional change and innovation within the oyster shellfish system in The Gambia, this paper builds on extensive collaborative research with members of TRY, TRY's leadership, and external partners. This collaborative approach has allowed the researcher to understand the role and influence of all relevant actors within and beyond institutional spaces and a deeper understanding of participants' aspirations and social practices (Gibbs 2001). This also included extensive discussions with the founding leader of TRY to understand her motivation and pathway for change for sustainable oyster harvesting and improved health and wellbeing of women in The Gambia. The research approach serves as a methodological instrument to identify and analyze how an institution like TRY operates and influences the everyday practices of its members and those engaged in oyster harvesting in The Gambia.

The data collection approach combined long-term engagement with key informants and focused data collection to develop a deep understanding of TRY's institutional dynamics. The lead author has maintained ongoing interaction with TRY's founding leader and external funders since 2018, enabling deep institutional understanding. With the help of a research assistant, the intensive data collection in the field with TRY members was conducted over 3 months, building contextual knowledge and relationship-building in these communities. The participant selection process employed purposive sampling based on three key criteria: (1) direct involvement in TRY's operations, (2) a minimum of 2 years experience with the group, and (3) role diversity to capture multiple operational perspectives. Participants were selected from 16

communities, representing diverse geographical locations (coastal, inland), varying levels of organizational maturity (established vs. newer groups), and different scales of operation (small to large-scale production). We conducted in-depth interviews with TRY members ($n=23$) across the different communities, prioritizing those in leadership positions ($n=8$), long-term members ($n=10$), and newer members ($n=5$) to capture evolving perspectives. We also interviewed external donors (promoters) ($n=3$) who have been instrumental in TRY's development and conducted multiple in-depth discussions, including informal chats with the founding leader ($n=1$). The interviews and discussions with the different participants lasted between 45 min and 1 h in duration. The interviews and discussions with TRY members and the founding leader focused on understanding five key themes: organizational motivation and actors' interest, their activities and benefits, as well as the challenges and prospects. The individual discussion with external funders concentrated on their support mechanisms to TRY, capacity-building initiatives, and collaborative oyster management activities in the communities.

Finally, all information gathered was analyzed following standard qualitative research protocols and validity (e.g., Barclay et al. 2017). With consent from our participants, all interviews were digitally recorded. All the recorded interviews were transcribed and coded for thematic analysis to understand key attributes of the successes of TRY. In NVIVO, coding for specific themes is grouped into three key themes—governance mechanism, leadership, and resource mobilization (Li and Zhang 2022). These themes were informed by the social and institutional innovation literature, which is central to our theoretical concept.

5 | Synthesis of Research Finding

The section presents TRY—designated as an exemplary female-led case of a small-scale blue food system, drawing from three key enablers of social innovation and institutional change, that is, governance/management regimes, the leadership role of institutional entrepreneurs, and the ability to mobilize and access financial resources.

6 | Enabling Attributes of Social and Institutional Innovation Within The Gambia's Blue Food System

6.1 | Governance—Institutional Change

Governance in this context describes the various fisheries management regimes instituted within SSF (Cohen et al. 2015; Chuenpagdee and Jentoft 2018). In 2012, the Government of The Gambia, through the Cockle and Oyster Fishery Co-management policy for the Tanbi Wetlands, granted TRY exclusive use rights and management of the oyster fishery (UNDP 2013, 32; USAID 2013a). This became the first exclusive use rights for SSF in Sub-Saharan Africa. Such institutional innovation became highly advantageous for TRY oyster harvesting communities, cognizant of local needs to maintain and promote spatial tenure and access rights in SSF management (Bennett et al. 2021; Westley et al. 2011). The comanagement and collaborative governance approaches with TRY have been instrumental in supporting good governance and institutional innovation in the oyster fishery (Okafor-Yarwood et al. 2020). The comanagement approach catalyzes TRY's pursuit of sustainable blue food and inclusive fisheries management. Literature establishes a correlation between collaborative governance, institutional settings, and effective management of marine resources (Chuenpagdee and Jentoft 2018; Song et al. 2018). Scholars also observed that such institutional design, including social organization and local peoples rights, enables sustainability management and ensures social equality and empowerment within SSF (Soma et al. 2018; Mulgan et al. 2007). The comanagement governance approach has enabled TRY oyster harvesters in The Gambia to collectively possess exclusive access rights and engender knowledge-sharing platforms for oyster and mangrove management. For example, a participant made the following assertion, emphasizing the power of self-organization:

> "It [referring to the co-management policy] helps me personally because I was able to benefit from various training on better oyster and mangrove management. I now know the importance of close season; I know more about the oyster production cycle and when to best harvest, and I learned the importance of mangroves to the survival of oysters and the environment." (48-year-old TRY member, Tanbi-Mandinaring)

Inadequate management of blue food systems can have serious adverse effects on the environment, including habitat destruction, harm to biodiversity, and fish food environment (Wilson et al. 1994). In line with sustainable oyster management in The Gambia, TRY leadership and members, in collaboration with the government, enforce a suitable management regime through the periodic closure of fishing activities and other harvest rules. Another TRY member mentioned:

> "... since we collectively agreed on better management, oysters are harvested for only four months a year, from March to June. The women go in groups with their canoes and paddle along the mangroves for hours, harvesting only matured oysters during the harvest season; the women go harvesting six days a week. Whenever we see anyone cutting the mangroves, the individual is reported and fined accordingly." (39-year-old TRY member, Tanbi-Kamallow)

In addition, to promote equitable livelihoods for women, TRY has assigned designated oyster harvest areas to individual communities across the Tanbi area. Such economic justice dimension among the fishery communities and stakeholders has addressed local conflicts and guaranteed access for marginalized women and local tribes (Biggs et al. 2010; Lau and Scales 2016). As a result, this innovative pathway promotes the active engagement of all local communities and women in the initiatives to restore ecosystems and replant more mangroves. A TRY member said:

> "... in our different oyster harvesting sides, we allow oysters to grow big; that's why sometimes we don't harvest yearly. We allow the oysters for two years if

> we realize they are not big enough to be harvested. And also, no one is allowed to harvest mangroves because a serious penalty is attached." (52-year-old TRY member, Berending)

These institutional innovations also show some gender interconnectedness. In general, the collective management of oyster harvesting activities has promoted women's inclusion in resource governance and socioeconomic development in The Gambia. For example, the comanagement and user rights have transformed the traditional power structures in fisheries management by establishing a unique management model that is centered around women's knowledge systems about oyster resource conservation (Carney 2017).

6.2 | Leadership—Emerging Institutional Entrepreneurs

Leadership in this study elucidates the role of emerging leaders (institutional entrepreneurs) who decide to lead and champion social innovations that drive social change and community transformation (Mumford 2002). The social innovation process, that is, generation of ideas, piloting, and scaling up, all depends on the presence of leaders or an institutional entrepreneur capable of driving the innovation process using their experience, skills, or education (Mumford 2002). Institutional entrepreneurs recognize societal issues, formulate solutions, drive innovation, and motivate others to follow within a particular window of opportunity (Mumford and Moertl 2003). The power of leaders to drive social innovation depends on the ability to analyze information in the problem domain and identify restrictions and strategies to overcome institutional lock-in and social refinement for economic and social development (Mulgan et al. 2007; McGowan et al. 2017).

The leadership within TRY exemplifies the role of institutional entrepreneurs within a specific context to identify existing social inequities, identify new opportunities, and forge new networks for growth and success (McGowan et al. 2017). Unlike traditional hierarchical structures, TRY's leadership approach emphasizes collaborative decision-making, relationship-building, and transformative change. Our interviews with the TRY network of women revealed how the leadership of the founding leader facilitated institutional changes and their effective engagement in management decisions over oyster resources in The Gambia. Such changes were achieved through a thorough process, value-centered, and noncoercive approach. For instance, experienced women harvesters within communities supported the vision and idea of the founding leader to strengthen relational connections among diverse stakeholders, including government officials, NGOs, and their community members. These individuals demonstrate informal leadership through knowledge-sharing and mediation, contributing significantly to TRY's collective success within their different communities. These women champions recognized the dual challenges of resource depletion and economic marginalization, developing innovative solutions through sustainable harvesting practices while motivating broader community participation. The founding leader, in particular, exemplifies the role of an institutional entrepreneur, having utilized her deep understanding of local knowledge and community dynamics to drive the social innovation process from idea generation to scaling up across 16 communities. As she narrated:

> "In 2007, while on the streets of Banjul to purchase oysters, I saw the need to organize the women into a common collective cooperative. There were no coordinated social learning opportunities, interaction, or exchange of experiences and knowledge-sharing platforms among women oyster harvesters in The Gambia (Founding Leader of TRY)."

TRY's success in fostering inclusion and empowerment stems largely from the founding leader's ability to embrace collaborative governance that values diverse perspectives and shared decision-making. Her ability to organize and pilot strategies to address existing challenges of women oyster harvesters through effective communication and vision has played a crucial role in the number of women willing to join and support the activities of TRY (Mumford 2002). The leadership approach has proven particularly effective in ensuring marginalized voices are heard and in building consensus around sustainable resource management practices. For example, the leaders prioritized sustainable management in oyster resources and the process did not exclude or disadvantage other communities or actors, revealing the potential for win-win and less differential power in relation to new institutional arrangements. Mumford and Moertl (2003) posit that communication is the skill for any leader to ensure a successful social innovation process through the exchange of information and the mobilization of support from partners across scales (Mumford 2002). One participant mentioned:

> "... at the beginning, we didn't know TRY would work; when Fatou [TRY's leader] calls for a meeting, only a few of us will attend. But over time, we began learning and seeing the need to work as a group to manage our oysters and mangroves better. Now, we are excited to attend meetings and participate in different workshops, all thanks to the efforts of Fatou." (49-year-old TRY member, Tanbi-Kamallow)

For better social transformation, the power of leadership to drive social innovation and the emergence of institutional and social entrepreneurs are essential, although such leaders must be inspirational, visionaries, and able to utilize social, cultural and political opportunities, and resources in their existing environment (Westley et al. 2013; Westley et al. 2011; Westley and Antadze 2010, 3). Moreover, institutional entrepreneurs must be able to steer the social innovation process in ways that promote social learning opportunities and the power of interactions and exchange of knowledge and experiences between diverse social groups that previously could not interact due to different cultural identities and subjectivity (Bock 2012; Lau and Scales 2016). These processes and changes in the TRY network have promoted strong social cohesion within the communities. One participant made the following assertion:).

> "Working with a team makes me feel that my work is valued and included in the management of oysters in The Gambia. It helps me to work towards a goal.

> In Kartong, we contribute monthly to have savings, which we later use to buy the materials we need for oyster harvesting, such as paddles and boats." (42-year-old TRY member, Alahein-Kartong)

6.3 | Resource Mobilization—Funding

A significant challenge for small-scale actors within the blue food system, especially those in low-income countries in the Global South, is financial, physical, and human capital. The same challenges exist within the oyster fishery system in The Gambia, where limited financial resources often impede the social innovation process and activities. However, the engagement of external partners has been an instrument for resource mobilization. Our findings revealed two key dimensions of resource mobilization that enabled TRY's social innovation. This includes funds from external partners and internal financial schemes. First, TRY demonstrated significant capability in leveraging external funding sources, particularly through international development initiatives. A primary example was their engagement with the USAID/BaNafaa project, which provided both financial resources and technical assistance. The association, together with the partners, successfully channeled these resources into comprehensive capacity-building programs for its members, addressing both technical aspects of oyster management and broader capabilities. Through the BaNafaa project support, TRY members received training in sustainable harvesting practices, resource management, and organizational leadership. Secondly, through TRY leadership and external partners, the women have been able to set up a small microfinance program that provides its members access to credit and savings services, including training on better managing their small businesses and alternative livelihoods during close seasons (UNDP 2013). The creation of microfinance programs specifically designed for women members demonstrates how their social and institutional innovations recognized and responded to gender-specific economic barriers in SSF.

With access to financial resources, TRY promoted campaigns such as environmental awareness, capacity building on entrepreneurship, and facilitated dialogue between key stakeholders in the value chain. The ability to mobilize the necessary resources (financial and logistic) has been an essential enabler of TRY's success as a social enterprise. For example, the BaNafaa project provided institutional support for the capacity building of TRY members (USAID 2013b). Through the collective organization, the women have received training in reproductive health and water and sanitation, thus contributing to their health and well-being. Therefore, besides good governance and institutional settings, good leadership and the unique role of eminent leaders, achieving success in SSF in the blue economy and beyond requires adequate institutional support and financial resources (Bennett et al. 2021).

7 | Discussion

In this section, we elaborate on the different social innovation processes and pathways that enabled TRY, as a social enterprise, to self-organize and effectively respond to and participate in The Gambia's oyster shellfishery and mangrove forest management, while securing their livelihoods and social well-being. As noted by Lindberg et al. (2016), social enterprises are essential in tackling intricate societal problems that conventional political institutions frequently fail to resolve efficiently, including poverty, inequality, unemployment, demographic shifts, and climate change. Our analysis of TRY demonstrates how a female-led social enterprise can drive institutional changes and people-centered innovations to address local community natural resource management challenges as well as the social and economic well-being of members. Also, Leach et al. (1999) emphasize that communities are dynamic and heterogeneous with different social actors, environmental priorities, and power relations. TRY exemplifies this complexity, showing how through a social enterprise, woman oyster harvesters in The Gambia have successfully navigated diverse interests and power dynamics to establish effective institutional arrangements in local communities. Their success aligns with Ostrom's (1990) argument that environmental problems are fundamentally about institutional change processes. The women's collective action is embedded with the creation of both formal institutions (comanagement policy, exclusive use rights) and informal institutions (knowledge-sharing networks, community-specific harvest practices) that effectively mediate relationships within the resource system.

The various initiatives by TRY transcended the conventional resource management approaches by integrating social, economic, and political agencies for community action. This approach can be understood through three theoretical lenses of the social institutional innovation literature (Olmedo et al. 2023; Steiner et al. 2021). First, emerging leadership—TRYs founding leader and the community members acted as institutional entrepreneurs who maximized local opportunities within the specific institutional context to transform both oyster harvesting practices and broader social structures. Second, *innovation drivers and processes (participatory governance)*—the women's collective action demonstrated political agency and how actors can transform social and institutional contexts through bottom-up processes. This is consistent with Westley and Antadze's (2010) argument of social innovation as changing basic routines, resource flows, and belief systems. Finally, *innovation contexts and targets*—TRY addressed multiple institutional barriers, including economic (value chain transformation), political (comanagement arrangements), and social (gender empowerment), showing how social innovation can target multiple institutional constraints. TRYs ability to self-organize, share power, and socially learn helped these small blue food actors to navigate challenges around the value chain and mangrove management, reinforce effective governance and leadership, and mobilize social capital and financial resources. These attributes provided a holistic platform that stimulated new processes, changes, and the emergence of new institutional arrangements, with identifiable outcomes in the oyster value chain among oyster harvesters and the blue food system (see Figure 2).

7.1 | Improved Local Livelihood and Social Wellbeing

TRY acted as a strong platform for social entrepreneurship, transforming the oyster value chain for the women within the local communities in the Gambia. Local livelihood and social well-being were enhanced through multiple integrated approaches,

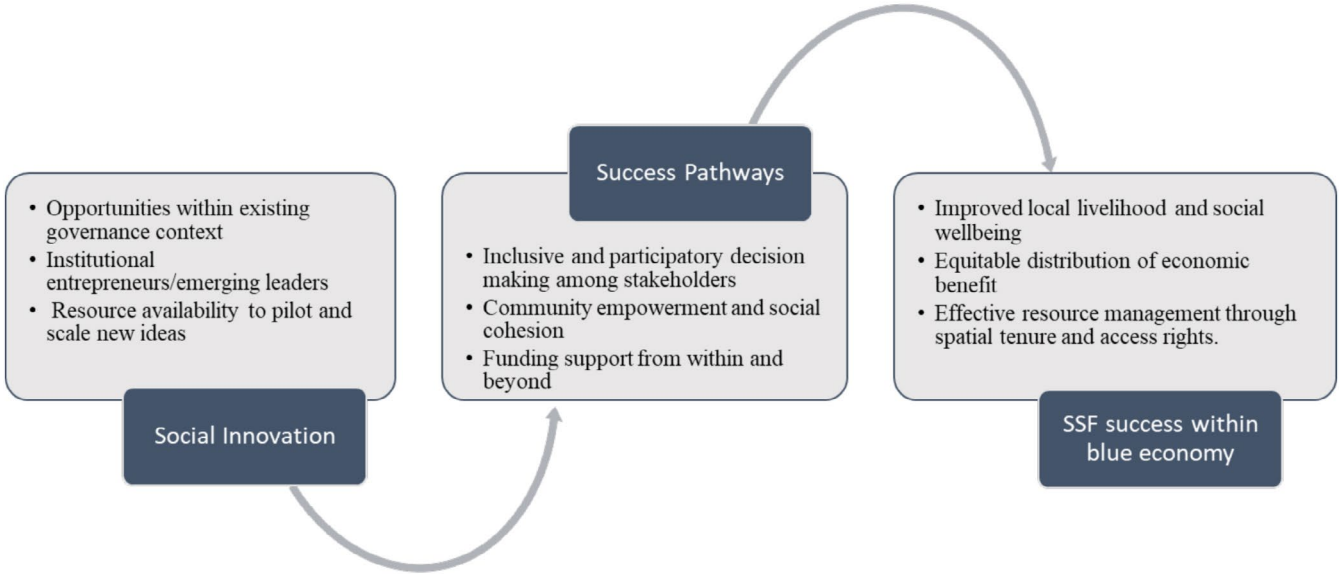

FIGURE 2 | Schematic representation of the processes of social innovation and pathways for institutional changes with social, economic, and environmental outcomes.

including microfinance programs providing members access to credit and savings services, training in business management, alternative livelihoods, and reproductive health, and water and sanitation training that improved the women's wellbeing. Moreover, TRY group meetings became a new community space that brought together women from different villages who had not previously interacted (Lau and Scales 2016). TRY was built around strong social innovation indicators such as the ability to identify gaps, develop strategies, and acquire funds to support the innovation (Mumford 2002; Mumford and Moertl 2003).

7.2 | Equitable Distribution of Economic Benefits

TRY institutional arrangements replicate efforts that enable more effective management of the oyster resources and renegotiate various existing procedural, market, and social justice dimensions in the value chain (Bennett et al. 2021; Gustavsson et al. 2021; Jentoft et al. 2022). The association also ensured economic justice through the equitable distribution of benefits from the oyster resources by collective marketing at certain prices and value chain improvement activities. TRY institutional arrangements helped create equitable access mechanisms for marginalized women and local tribes. For instance, the association established demarcated *bolongs* (mangrove tributaries), giving exclusive harvesting rights to designated communities, ensuring fair access to resources, and addressing local resource conflicts in the communities. While this approach promotes a more equitable model of resource governance, Lau and Scales (2016) argue that such divisions have also reinforced social fragmentation between groups within the communities.

7.3 | Effective Resource Management and Governance Processes

The 2012 Cockle and Oyster Fishery Co-management policy, which granted TRY exclusive use rights, represented a groundbreaking achievement in participatory governance. Such institutional arrangement empowered the members to institutionalize a bottom-up co-management of the oyster resources with the Gambia Government. For instance, the women harvesters collectively make decisions about resource management, including the establishment of harvest seasons and conservation measures. TRY represented transformation in the resource management and governance processes of the oyster resource system, from recognizing problems, and organizing resource users, to effectively communicating for social change. As Gutiérrez et al. (2011) posit, there is a positive correlation between leadership, social capital, and sustainability performance in fisheries resources. The social capital of the association comprised various shared norms, processes, and behaviors, as well as social networks, which ensured their effective collective agency in the governance of the oyster resource and the value chain (Borrini-Feyerabend et al. 2013; Komives 2009).

7.4 | Spatial Tenure and Access Rights

The spatial tenure and access rights represent perhaps TRY's most significant institutional innovation. The spatial rights through the government enacted "exclusive use rights" for coastal and fishery resources management systems not only secured women's access to resources but also enabled them to implement effective conservation measures. As the first exclusive use rights granted for SSF in Sub-Saharan Africa, this achievement demonstrated how female-led organizations could transform traditional resource governance structures. This also enables and creates a favorable environment for the inclusion of small-scale blue food system actors in the blue economy. The exclusive use rights were a result of institutional changes at the national level granting the authorization for fishing associations like TRY to comanage fishery resources through the Fishery Policy Act of 2007. The bottom-up approach to TRY's social enterprises provides participatory mechanisms to reconfigure institutional and community practices, mobilizing

actors or creating new institutions in the different transformation processes (Bock 2012; Ravazzoli and Valero 2020; Rodima-Taylor 2012; Neumeier 2017). Through the activities of the association, key features of oyster food production were renegotiated to ensure effective communication, institutional rules, stakeholders' participation, devolution, and empowerment, trust and legitimacy, participatory decision-making, and conflict resolution (Neumeier 2017; Evans and Andrew 2011; Gruber 2010).

8 | Conclusion

The TRY social enterprise in The Gambia highlights the transformative potential of social innovation in creating social and institutional changes within society and blue food systems beyond the conventional approaches and prescriptions of innovation, which are often technological and economical. TRY illustrates that innovation in small-scale blue food systems is not limited to technological or market-driven innovation but also includes innovations that are socially oriented. Using the social innovation lens, the study has identified three key factors, that is, governance/management regimes, the leadership role of institutional entrepreneurs, and the ability to mobilize and access financial resources that could enable small-scale blue food actors to lead and codesign inclusive and equitable transformation within the blue economy. TRY's ability to navigate institutional barriers, integrate economic and social empowerment, and secure spatial tenure rights underscores the broader potential of local social enterprises in addressing complex environmental and governance challenges in natural resources, especially blue food systems.

This study provides a theoretical and empirical contribution to the growing body of literature on social innovation within the blue economy. Using the case of the TRY in The Gambia, we have demonstrated how a social enterprise can catalyze institutional innovations that foster inclusive, sustainable, and place-based blue food system transformations. Theoretically, the paper demonstrates how transformative agency can emerge within traditionally disempowered groups to drive social change, highlighting the role of emerging visionary leadership (institutional entrepreneurs) who maximize potentials within a specific window of opportunity to mobilize local knowledge, legitimacy, build networks, and leverage on institutional changes to steer social innovation. Empirically, the case adds to the understanding of social innovation pathways in CBNRM. It illustrates how TRY's social innovation has led to five critical outcomes in response to societal well-being dimensions and ecological challenges: (1) enhance local livelihoods and well-being of small-scale blue food actors, (2) promote participatory governance, (3) equitable distribution of benefits, (4) adaptive environmental stewardship, and (5) spatial tenure and access rights. These findings support and extend Ostrom's (1990) principles for common governance by emphasizing the enabling role of relational capital, collective learning, and external institutional support. Finally, the research advances discourse on blue justice by empirically showcasing how social innovations can counteract exclusionary tendencies of blue growth agendas, particularly for women and small-scale actors often sidelined in marine governance.

In conclusion, this case underscores the need to expand theoretical frameworks of social innovation in environmental governance to fully incorporate gendered leadership, institutional hybridity, and locally situated agency. This case provides important insights for policymakers and practitioners seeking to promote inclusive and sustainable approaches to natural resource management within the blue economy framework, particularly in Global South contexts where conventional political institutions often struggle to address complex societal resource challenges effectively. The paper also highlights the important role of international development partners and policy actors in driving changes across scales such as the push and implementation of exclusive user rights for coastal resource management in The Gambia.

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Conflicts of Interest

The authors declare no conflicts of interest.

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