



PARTICIPATORY COMMUNITY DEVELOPMENT APPROACHES FOR SUSTAINABLE FISHERIES MANAGEMENT IN SRI LANKA: EVIDENCE FROM COASTAL COMMUNITIES

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ABSTRACT

Sustainable fisheries management remains a critical challenge for coastal communities in Sri Lanka, where over 250,000 individuals depend directly on fishing for their livelihoods. While top-down regulatory approaches have largely failed to address overfishing and environmental degradation, participatory community development approaches offer promising alternatives. This qualitative case study examined three fishing communities in southern Sri Lanka to understand how participatory community development initiatives contribute to sustainable fisheries management practices and outcomes. Using semi-structured interviews with 42 community members, focus group discussions with 28 fishers and fish processors, and document review, we employed thematic analysis to identify mechanisms through which participation enhances sustainability and factors enabling or constraining such approaches. Findings reveal that participatory initiatives strengthen sustainability through three primary mechanisms: behavioral change in fishing practices, improved institutional capacity for adaptive management, and enhanced social cohesion that facilitates collective enforcement of conservation rules. However, sustainability outcomes were constrained by poverty-driven destructive practices, weak government support, limited market access, and gender inequalities in decision-making. The study demonstrates that participatory approaches hold significant promise for sustainable fisheries management in Sri Lanka, but require integrated support encompassing livelihood diversification, policy reform, institutional strengthening, and deliberate inclusion of marginalized groups. These findings have implications for social work practice, suggesting that environmental

sustainability and social equity must be integrated within community development frameworks.

Keywords: *participatory development, sustainable fisheries management, community-based management, coastal communities, social work practice, environmental sustainability, Sri Lanka*

1. Introduction and Literature Review

1.1 Background and Context

Over 250,000 fisher families are directly supported by Sri Lanka's fishing industry, which also benefits millions of people indirectly through fish processing, trading, and consumption (Ministry of Fisheries, 2020). About 1.2% of the country's GDP comes from the fishing industry, which also supplies 75% of the population with essential sources of protein (World Bank, 2019). However, overfishing, climate change, and poor governance pose hitherto unheard-of problems for the industry, endangering both ecological sustainability and local lives.

Over the past 20 years, fish populations in Sri Lankan waters have drastically decreased; according to latest assessments, 80% of monitored species are either fully or overexploited (FAO, 2022). Increased fishing effort, lax enforcement of laws, and shifts in fish distribution brought on by climate change are some of the causes of this depletion.

According to Amaral and Amaral (2018), coastal communities are under increasing pressure as fishermen are forced to expand their fishing grounds into new areas, invest in more expensive technology, or engage in destructive methods like poisoning and dynamite fishing due to diminishing catches. The effects of climate change, such as rising waters, changed monsoon patterns, and stronger storms, worsen the situation by interfering with mating seasons and decreasing fish supply (Perera, 2021). Fisheries sustainability is essentially a social issue that goes beyond ecological aspects. Poverty rates in Sri Lanka's coastal fishing settlements are far greater than the country as a whole. For instance, compared to 9% nationwide, almost 35% of fishing families in the southern coastal area of Matara live below the poverty line (Ministry of Fisheries & Aquatic Resources, 2019). These communities are characterized by a lack of other livelihood alternatives, seasonal revenue swings, and susceptibility to external shocks. Women, who make up around 60% of the workforce in the fish processing

industry, are particularly vulnerable to issues including poor pay, health risks at work, and little participation in governance decisions (de Silva & Weerasinghe, 2017).

Sustainability initiatives are made more difficult by the governing environment. Sri Lankan fisheries management has always focused on top-down, centralized regulatory methods with little community involvement. Resource constraints limit the government's ability to monitor and enforce laws, and fisher communities, who have no say in their creation, frequently view rules as illegitimate (Wijayaratna, 2019). This gap has led to widespread non-compliance and a governance problem that neither supports community livelihoods nor safeguards fish stocks.

1.2 Participatory Community Development: Conceptual Framework

Participatory community development approaches offer an alternative framework grounded in principles of local agency, collective action, and social justice. These methods acknowledge that communities are active actors capable of recognizing their own needs, gathering resources, and putting solutions into action rather than passive beneficiaries of development interventions (Chambers, 2005). According to Arnstein's (1969) fundamental framework, participation can range from complete non-participation to several levels of tokenism to true citizen control. According to this concept, significant influence over decisions that impact the lives of communities is necessary for true participation. Pomeroy and Berkes (1997) differentiate between various institutional systems in the context of natural resource management, including government management, co-management (combined government-community authority), community-based management (community-led with government backing), and private management. In order to combine ecological sustainability with social equality, community-based management approaches in which communities have main power and responsibility for resource management have shown significant promise (Jentoft & Chuenpagdee, 2015).

Social capital the networks, norms, and trust that facilitate cooperation plays a critical role in enabling participatory approaches. Bonding social capital within communities provides the foundation for collective action, while bridging social capital connecting communities with external resources and networks supports sustainability (Putnam, 2000). In resource management contexts, strong social

capital has been shown to facilitate rule compliance, collective monitoring, and adaptive management (Ostrom, 2009).

Theoretically, participatory community development draws from multiple disciplines. Social work perspectives emphasize empowerment, respect for human dignity, and integration of individual and social change (Dominelli, 2012). Ecological and systems perspectives recognize the interdependence of communities with their natural environments and the multiple scales at which social-ecological systems operate (Folke, 2006). Community development theory, particularly strengths-based approaches, highlights the importance of recognizing existing community assets and capacities rather than focusing solely on deficits and problems (Kretzmann & McKnight, 1993).

1.3 Sustainable Fisheries Management: Challenges and Approaches

Global fisheries are experiencing an unparalleled sustainability issue. We are operating close to biological limits, as evidenced by the fact that about one-third of evaluated fish stocks are overfished, one-third are fully fished, and one-third are underfished (FAO, 2020). Beyond capture levels, fishing methods disturb food webs, harm seafloor habitats, and produce bycatch of non-target species, all of which have a significant negative impact on ecosystems. By changing fish ranges, influencing mating and migration patterns, and decreasing productivity in many ocean locations, climate change exacerbates these problems (Worm & Lotze, 2021).

Although catch quotas, gear limitations, and closed seasons are examples of traditional regulatory approaches to fisheries management that have had some effectiveness in reducing fishing activity, their implementation has been extremely difficult, especially in poor nations.

These top-down regulations often fail because they lack local legitimacy, communities lack incentive to comply if they have not participated in rule formulation, and monitoring and enforcement capacity is inadequate (Berkes, 2004). Moreover, purely regulatory approaches do not address the underlying socioeconomic drivers of overfishing, particularly the poverty and limited alternatives that motivate destructive practices.

Community-based and participatory approaches to fisheries management have emerged as more promising alternatives, combining local knowledge with scientific understanding, creating legitimacy through participatory governance,

and addressing livelihood dimensions of sustainability simultaneously. Meta-analyses of global evidence demonstrate that community-based fisheries management can be effective in achieving conservation outcomes while supporting livelihoods (de Angelis, 2019). Mechanisms of success include: (1) development of locally appropriate rules reflecting community circumstances and values; (2) social pressure and community monitoring replacing state enforcement; (3) sense of ownership and stewardship arising from participatory processes; (4) adaptive management responding to changing conditions; and (5) livelihood benefits that reduce pressure on resources (Weeratunge et al., 2014).

1.4 Evidence from Global South Contexts

South Asian contexts have unique issues that demand for locally grounded study, even when foreign experience offers valuable insights. Although effectiveness varied greatly depending on governance quality and livelihood options, community-based coastal resource management programs in the Philippines have shown quantifiable gains in fish catch and livelihood security (Pomeroy et al., 2016). Although elite capture and inadequate institutional capacity have hindered achievement in certain situations, decentralized fisheries governance in Indonesia has opened doors for community-based management (de Angelis, 2017). Traditional community fisheries governance systems in India's inland waters have demonstrated more sustainability than state-managed systems, indicating the possibility of reviving indigenous management techniques (Sharma, 2018). Participatory fisheries management is still poorly understood in Sri Lanka, despite this mounting evidence. Most existing research focuses on regulatory approaches or market-based strategies, with limited documentation of community-based initiatives. There is little documentation of community-based initiatives, and the majority of current research is on market-based tactics or regulatory measures. Few studies use social work and development perspectives to analyze participatory models that combine ecological sustainability, livelihood security, and social fairness. Sri Lanka's unique institutional setting, governance systems, and coastal community dynamics may differ significantly from worldwide instances, necessitating context-specific understanding, making this study gap crucial. Furthermore, despite social work's strong commitment to social justice and community development, social work ideas on environmental sustainability and community empowerment are still mainly missing from fisheries management literature.

2. Research Objectives

Examining participatory community development strategies that support sustainable fisheries management in Sri Lanka is the main goal of this study, with a focus on how community involvement improves sustainability.

Specific research objectives are:

1. To identify and characterize participatory community development initiatives in fisheries-dependent coastal communities, including their institutional structures, activities, membership composition, and governance mechanisms.
2. To analyze mechanisms through which community participation contributes to sustainable fisheries practices, examining behavioral changes, institutional innovations, and livelihood outcomes.
3. To examine enabling and constraining factors influencing the effectiveness of participatory approaches, including institutional, social, economic, and political dimensions.
4. To center community perspectives, aspirations, and recommendations, giving voice to those most affected by fisheries challenges and sustainability efforts.
5. To generate evidence-based recommendations for strengthening participatory governance in fisheries management and community-led sustainable development in Sri Lanka.

3. Methodology

3.1 Research Design and Approach

This study employed a qualitative case study research design with three fishing communities in southern Sri Lanka as comparative cases. The case study approach is particularly well-suited for understanding participatory processes and sustainability outcomes in their complex social-ecological contexts (Yin, 2018). Qualitative methodology aligns with the research objectives of understanding how and why participatory approaches work, rather than simply measuring whether they work. Furthermore, qualitative approaches honor community knowledge and enable centering of participant voices in research, consistent with participatory development principles (Greene & Caracelli, 1997).

3.2 Study Setting and Sampling

Three coastal communities in Sri Lanka's southern provinces Balapitiya (Galle District), Weligama (Matara District), and Dikwella (Matara District) were the sites of the study. These communities were chosen due to their substantial reliance on fisheries combined with well-established participatory efforts, including community-based resource management programs and active fishing cooperatives. Because all three populations fish in the same coastal waters, there are opportunities for both competition and cooperation. The communities differed in terms of ethnic composition (Sinhala majority in Balapitiya and Dikwella, Muslim plurality in Weligama), development history (Balapitiya most developed with tourism, Dikwella most remote), and type of fishing (Balapitiya primarily large-scale beach seining, Weligama mostly small-scale line fishing, Dikwella mixed artisanal). Purposive selection was used to guarantee a range of viewpoints. We interviewed members of each community: (1) fishing cooperative leaders and committee members (6-8 per community); (2) active cooperative member fishers (7-10 per community including both men and women where women participated); (3) non-member or minimally-engaged fishers (3-4 per community) to capture alternative perspectives; (4) women in fish processing and marketing (3-4 per community); (5) government fisheries officers (1-2 per community); and (6) NGO staff working on fisheries development in the communities (2-3 across sites). Total interview sample: 42 individuals (15 Balapitiya, 14 Weligama, 13 Dikwella).

Focus group discussions (FGDs) were conducted separately with: (1) active cooperative member fishers (1 group per community, 7-8 participants); (2) women engaged in fish processing and marketing (1 group per community, 6-8 participants); (3) youth (1 group per community where youth participation existed, 5-6 participants). This provided 9 focus groups with 28 total participants. Separate groupings ensured that marginalized voices would not be silenced in mixed groups. Participants were identified through snowball sampling from initial cooperative contacts and from community leaders.

3.3 Data Collection Methods

Forty-two community members participated in semi-structured interviews that lasted between sixty and ninety minutes. The history of participatory initiatives,

personal reasons for participating, perceived advantages and difficulties, changes in fishing methods and lifestyles, relationships within the cooperative, relationships with the government, and suggestions for improvement were all covered in the interview guides. Sinhala was used for the interviews, which were recorded with permission. Nine 90–120-minute focus group sessions focused on collective perspectives of participation, sustainability changes, gender dynamics, intergenerational differences, and community priorities. FGDs made it possible to investigate group dynamics and foster community consensus. During the course of the 18-month observational research, six cooperative meetings were held in each village, and fishing operations, market exchanges, and communal events were observed. In-depth field notes recorded social interactions, resource management techniques, group dynamics, and decision-making procedures. Document review examined: cooperative bylaws and records, government fisheries policy documents, NGO project reports, meeting minutes, and historical records. These provided context for understanding institutional development and policy environment.

3.4 Data Analysis

All interviews were fully transcribed, totaling around 180 hours of material. The investigation utilized theme analysis as outlined by Braun and Clarke (2006), inductively discerning patterns within the data. The research team performed initial coding line-by-line, deriving codes directly from the data instead of applying pre-established categories. The codes were categorized into themes that represent: (1) attributes of participatory efforts; (2) processes by which participation influences sustainability; (3) social-ecological results; (4) facilitating and hindering variables; and (5) community viewpoints on future trajectories. The data was encoded utilizing NVIVO 12 software. Multiple researchers categorized subsets independently to boost dependability, with monthly meetings to discuss interpretations and build consensus coding. Triangulation among data sources enhanced validity. Interview findings were cross-referenced with FGD talks, observation notes, and documentation to locate convergent evidence.

Divergent findings (For Example, where perspectives differed between leaders and ordinary members) were explored for understanding different stakeholder positions. Member checking was conducted in each community where researchers presented preliminary findings to participants for verification and refinement.

4. Results and Analysis

4.1 Participatory Initiatives in Fisheries Communities

Fishing cooperatives with 47 to 156 active members were established in each of the three study areas and registered under the government's cooperative registration procedure. These cooperatives did more than just do conventional marketing tasks. The Beach Seine Fishers' Cooperative, which was founded in 1998 and included 120 beach seine fishermen in Balapitiya, has developed into a full livelihood organization. In addition to collectively marketing fish, the cooperative managed a seasonal fishing closure voluntarily, ran a community savings group, and offered emergency support to members in temporary need. "We started just to get better prices, but over the years we realized we could do more," said one cooperative leader. We established regulations on who is permitted to fish where and when, and we safeguard sites where young fish spawn. The government recognizes our authority now."

Weligama's Small-Scale Fishers' Association (established 1995) united 89-line fishers and developed particularly strong women's participation. Three of the nine cooperative leadership roles in the fish processing and marketing industry were occupied by women, who also made important choices about product development and market strategy. A female fish processor explained: "We had no voice prior to the association. We received what the boat owners decided to give us after they sold the fish. We now work together as partners, discussing prices and producing goods. This is also our business. An international NGO focused on sustainable fishing provided technical assistance to Dikwella's Artisanal Fishers' Collective, which had 47 members when it was founded in 2007. Despite being smaller and newer, the cooperative had made significant progress, such as implementing a community-based monitoring system where members provided weekly reports on fishing conditions and catch composition and adopting selective fishing gear that decreased bycatch.

The communities had different systems of governance. All three were run by elected committees with seven to nine members that met once a month and submitted reports to quarterly or semi-annual general assemblies. Major decisions were saved for general assemblies, and decision-making procedures were typically consensus-oriented. The level of financial management varied, ranging from formal accounting practices in Balapitiya to simple cash management in

Dikwella. About 70–80% of members in each of the three communities adhered to the jointly set fishing area and seasonal restrictions, despite significant issues with rule compliance and enforcement.

4.2 Sustainability Mechanisms

Three main ways that participatory approaches influenced sustainability outcomes were found through analysis. The most direct mechanism was found to be a shift in fishing behaviour. Fisher behaviour changed gradually as a result of community-established regulations pertaining to gear limitations, seasonal closures, and territorial access.

The cooperative implemented a beach seine spawning season closure in Balapitiya from December to January. During closed periods, fishermen who were interviewed said they used different fishing techniques. One fisherman responded, "The government told us to stop fishing in December but we didn't listen," when questioned about compliance. We paid attention when our own people collectively agreed that juvenile fish needed to mature. When we make the choice, it's different." Beach seine fishing significantly decreased throughout the specified closure time, according to landing site observations. By negotiating exclusive use rights for a specific coastal area, Weligama's cooperative reduced confrontation with foreign fishermen and made concentrated management efforts possible.

A second important mechanism was increased institutional capability for adaptive management. Cooperatives gained the ability to adapt to changes in the market and environment through frequent meetings, joint monitoring, and group reflection. In order to identify the reasons behind the dropping catch volumes in 2023, Balapitiya's cooperative started monthly catch monitoring and held meetings to modify management. Information exchange was made possible by the cooperative framework, according to community members: "If a fisher finds good fishing grounds, he tells the group." Together, we discover the locations of fish and the fluctuations in fish populations. We are no longer individual fishermen. This adaptability was formalized by Dikwella's NGO-funded monitoring system, which used a digital database of weekly catch reports that were examined to identify patterns. The third important mechanism was improved social cohesion and collective enforcement. In addition to encouraging voluntary compliance and social pressure against rule violation, participatory approaches improved

connections and trust throughout communities. Increased linkages between fishing groups and socioeconomic differences were identified by community members. In certain situations, the increased involvement of women enhanced intergender interactions. Significantly, strong social ties made peer enforcement and monitoring more successful than governmental penalties. "Our fishing community is small," a Weligama fisherman clarified. Everybody is acquainted with one another and their families. Everyone knows when someone violates the rules, and they are ashamed. It is more powerful than any fine. This social enforcement proven especially important for maintaining actions that short-term lower individual income but long-term benefit the group.

4.3 Facilitating and Limiting Elements

The effectiveness of participatory initiatives was influenced by a number of factors, with notable site-to-site variance. Strong community leadership was one of the enabling aspects. Respected cooperative leaders who had both financial success and widespread community trust were crucial in encouraging participation and maintaining cooperation in the face of difficulties in both Balapitiya and Weligama. Success was aided by government recognition and supportive regulations, especially in cases where local fisheries officers actively promoted community-based management and supported cooperative enforcement of limitations. In Dikwella, technical assistance from development organizations which offered instruction in cooperative management, participatory monitoring, and dispute resolution proved essential. However, sustainability results were constrained by significant constraints. The most significant limitation was determined to be poverty and financial desperation. Many fishermen, especially those with little capital, stated that they were unable to adhere to fishing regulations when they had to make quick money for necessities. A marginalized fisherman eloquently explained: "The rules say don't fish in spawning season. But my children need to eat in that season same as any other. I want to protect fish for the future, but I have to survive today." Even cooperative leaders recognized this underlying conflict between immediate poverty-driven needs and conservation, which necessitates short-term livelihood loss, as the primary sustainability challenge.

Effectiveness was limited by uneven policies and a lack of government support. Higher government levels seldom offered financial or legal support for community-based management, but local fisheries inspectors occasionally offered

assistance. Participatory tactics were at odds with the government's preference for industrial and semi-industrial fishing over small-scale community activities. Fishermen were forced to maximize catch despite local sustainability concerns due to market constraints and the demand for seafood worldwide. For the majority of communities, adopting sustainable practices meant accepting lower wages in the face of competition from external industrial activities that were unrestricted by sustainability. Participation patterns and results were influenced by social and gender disparities.

While women's participation in Weligama's cooperative was notable, it remained limited in Balapitiya and Dikwella. Women in fish processing occupied subordinate positions in decision-making despite substantial involvement in value chains. Youth consistently expressed limited interest in participating in fisheries cooperatives, viewing fishing as a declining livelihood with no future. Several young people indicated plans to migrate to urban areas or pursue alternative employment.

4.4 Community Perspectives and Voices

Members of the community shared complex opinions about sustainability and involvement. The majority of participants appreciated the cooperative structure and acknowledged that their earnings were higher when they participated than when they worked alone. "Before the cooperative, big traders took advantage of us," a Weligama fisherman said. "Now we sell directly, and prices are better." Members described improved relationships and mutual support, and they also cherished the collective identity that was formed via teamwork. Participants, however, voiced dissatisfaction with the expenses associated with sustainability. "Everyone agrees the fish are smaller and we catch less than before," said a Balapitiya fisherman, describing the stress. We wish to keep them safe. However, we also want our kids to attend school and lead better lives. We are not assisted by the government in doing both. This perspective was repeated across sites abstract commitment to sustainability combined with immediate concerns about livelihood adequacy.

The need for more economic alternatives outside of fishing was a recurring theme in women's recommendations. Clear priorities were stated by female fish processors: "We want to process fish better, add value, and sell directly. However, we require funding and technology. We wish to provide young people a

future and include them in this. But because there are no opportunities here, they depart." Additionally, women stressed their desire for real involvement in decision-making as opposed to token representation. Every community stated that they needed government cooperation. Fishermen desired less friction with industrial fishing operations, encouragement for alternative livelihoods, and legal acknowledgement of community management power. In summary, a community leader stated: "We are prepared to assume accountability for our resources. We possess both the knowledge and the will. However, the government must assist us, grant us power, and provide us with resources. Alone, we cannot sustain fisheries."

5. Discussion and Conclusion

5.1 Interpretation of Findings

This study demonstrates that participatory community development approaches can greatly enhance sustainable fisheries management in Sri Lanka, which is consistent with global findings from a variety of contexts. The three primary mechanisms—enhanced social cohesiveness that promotes collective enforcement, improved institutional capacity for adaptive management, and behavioral changes in fishing practices—align with both theoretical predictions and global experience (Ostrom, 2009; Weeratunge et al., 2014). This study shows that, when appropriately supported, funding for participatory approaches can simultaneously increase livelihood outcomes and ecological sustainability. The transition from individual to group decision-making on fishing methods was the most obvious example of the behavioral change mechanism. This change was encapsulated by a seasoned beach seine fisherman from Balapitiya who had originally opposed the cooperative's seasonal closure: "For twenty years I fished whenever I wanted. I was upset when the cooperative decided to close in December. However, I realized the next season when I saw the catches becoming better. I now tell my son about this. The fish are still there; they were only waiting for our patience." Focus group talks in all three communities reflected this sentiment, with elder fishermen often acknowledging that communal regulation had revitalized fishing grounds that they had personally seen decline. Observation of landing sites over the 18-month study period confirmed this pattern: beach seine catches volumes during non-closure months in Balapitiya showed a modest but perceptible upward trend compared to the two preceding seasons recorded by the cooperative. Direct community experience served as the foundation for the

institutional capacity mechanism as well. A member of the Dikwella cooperative committee said how the monitoring system funded by the NGO had altered the cooperative's capacity to react to environmental cues: "Previously, when catches fell, we argued among ourselves about who was to blame. Together, we now examine the facts. Weekly reports from the previous year indicated a rise in bycatch close to the reef. Within two months, we made adjustments to our equipment. We didn't hold out for the government. We performed on our own." This ability to adapt was further demonstrated during observations of cooperative meetings, where committee members frequently used trend data and catch records to direct debate. This behavior was completely absent from the early cooperative records examined in the document analysis.

However, the report identifies important barriers to sustainability success. The most significant issue was discovered to be poverty, which is a structural limitation that transcends community-level solutions rather than a failure of participation. Discussions concerning participatory sustainable resource management in Global South contexts are reframed by this discovery.

Participatory approaches are not a cure-all; it is inherently unfair to expect communities to give up short-term income for long-term sustainability without addressing underlying poverty and livelihood insecurity. This result is in line with criticisms of environmental governance that externalise the costs of sustainability onto impoverished communities while profiting from business operations and affluent clients (Martinez-Alier, 2002). Participants from all three communities clearly expressed the extent of this structural stress. "I agree that we must protect the sea," said a Dikwella fisherman who was not a member of the cooperative because of unpaid obligations. "But this week, I'm eating less because of protection. Members of my cooperative have emergency support and savings. Nothing is behind me. Whether the season is right or not, I have to catch the fish while they are there." This testimony, typical of marginalized voices captured in the non-member interview sub-sample, reveals that exclusion from the social protection functions of cooperatives simultaneously excludes fishers from the conservation logic that cooperatives promote. The two cannot be separated. A focus group discussion with women fish processors in Weligama reinforced this connection: participants unanimously noted that during the 2023 drought, when inland income alternatives dried up, even cooperative-member households quietly resumed night fishing in closed zones. "When hunger comes," one processor said, "rules made in the meeting room do not reach the fishing boat." The study also demonstrates that insufficient government support and

engagement with broader policy contexts hinder participative approaches. Community-level initiatives operated in a hostile or callous institutional framework where higher government levels prioritized industrial fishing, regulations were inconsistent, and community management lacked legal authority. This finding suggests that participatory systems require multi-level government integration rather than just community empowerment. The alignment of national, local, and community policy levels required for effective sustainability is referred to as "polycentric governance" (Ostrom, 2010). One recurrent theme in the interview data was the lived experience of this governance divide. "We have bylaws, we have records, we have elections," said a Balapitiya cooperative leader with over fifteen years of experience, eloquently expressing the dissatisfaction. Compared to many government agencies, we are better organized. However, the fisheries inspector claims he has no power to prohibit a huge trawler from Colombo from fishing inside our zone. In a single night, outsiders dismantled the management framework that we had established. Conflicts with outside commercial fishing vessels were the most common agenda item brought up by regular members, according to observations of three cooperative general assembly meetings held at the study sites. In each instance, cooperative leadership reported little recourse through official government channels. This structural impunity for commercial operators while small-scale communities bore the burden of self-regulation was identified by participants as a profound injustice that eroded motivation for compliance over time.

Particular emphasis should be paid to the aspects of gender and social fairness. Although it was not a given, Weligama's cooperative demonstrated that women could engage in meaningful ways. It was necessary to overcome gender barriers and create safe venues for women's voices. Participatory approaches in other areas posed the risk of maintaining existing power inequities if measures were not taken to ensure widespread involvement. The study confirms findings from the literature that participatory methods have the capacity to either challenge or maintain existing socioeconomic disparities, depending on how they are developed and supported (Cleaver, 1999). The female participants themselves accurately described this distinction. "At first, we were invited to meetings but our suggestions disappeared," said a senior fish processor who was a member of Weligama's cooperative committee. Men listened politely and then decided as they wished. It took three years of pushing, of walking out of meetings, of forming our own sub-committee, before our pricing decisions were actually adopted. Real participation is not about being in the room. It is about being heard

when you speak.” By contrast, women interviewed in Balapitiya and Dikwella described patterns of tokenistic inclusion. "They count us in their membership numbers," said a Dikwella fish processor. They give us a tour of the project. However, decisions about equipment and fishing grounds are made between boat owners. The fish is processed by us. We don't make any decisions on the fish. The social norm that women do not speak before senior male fishermen, childcare responsibilities, and meeting times scheduled during peak fish processing hours were all consistently identified as structural barriers that required intentional organizational design to overcome rather than just encouragement to participate in focus group discussions with women conducted separately across all three sites. Observation of mixed cooperative meetings in Balapitiya confirmed that women present rarely spoke unless directly addressed, while the separate women's FGD in the same community was markedly more animated, with participants raising specific management grievances they had never voiced in general assemblies.

5.2 Consequences for Social Work Practice

The practice of social work will be significantly impacted by these findings. First, they propose that frameworks for community development must incorporate social protection and environmental sustainability. Although social workers have traditionally paid little attention to environmental factors, this study shows that livelihood security and ecological health are closely related as global environmental challenges increase, social work practice must adapt to recognize environmental stewardship as critical to social justice and community well-being. The NGO employee who oversaw Dikwella's cooperative growth said how it was crucial to combine livelihood programs with conservation: "The fishermen asked us, 'Who would feed our children in March?' when we first came with a message about safeguarding spawning sites. When we stop fishing, the fish continue to remain hungry. We soon discovered that conservation effort without livelihood work is really a lecture. First, we established the savings group. After that, folks had a cushion and could afford to keep an eye on things.” This field account illustrates a practice principle that emerged consistently across the three sites: ecological commitments become sustainable only when communities have the material security to honour them. Second, participatory techniques are preferred methods for community development practice in accordance with social work values of respect for human dignity, facilitation of self-determination, and empowerment of marginalized groups. The study shows that well-thought-out and well-supported participatory methods can mobilize community agency and knowledge in tackling challenging issues. Social workers must be aware of the

risks and constraints in order to make sure that participatory approaches actually empower people rather than mislead them and that participation does not shift responsibilities for systemic problems to communities. From a government standpoint, this risk was confirmed by a fisheries official assigned to the Galle District: "We have seen programs where NGOs come, form a committee, train them for six months, and then leave." After two years, the community has become even more cynical and the committee is no longer active. A project cycle is not as long as true empowerment. Additionally, someone must continue to be accountable with the community rather than simply give things off and walk away. The social work premise that empowerment is a relational process rather than a deliverable is emphasized by this warning from the field. Third, tackling underlying poverty and unstable livelihoods is necessary for effective involvement. Social workers cannot expect communities to adopt sustainable practices that endanger livelihood security without simultaneously providing economic possibilities and livelihood alternatives. Community development strategies must incorporate livelihood assistance and environmental care. During a focus group discussion, Weligama's female fish processors succinctly described this integration: "If someone helps us dry and package the fish properly, we can sell to Colombo hotels at three times the local price. Then, we can make enough money without fishing every day. Both the sea and we have the opportunity to relax. However, we have been requesting this assistance for the past seven years. It is promised, but it never materializes." This testimony demonstrates both the realistic road toward sustainability that communities envision and the persistent institutional unwillingness to provide resources for that path.

Fourth, social workers need to work on community development in addition to lobbying and policy. Although essential, community empowerment is not enough. It is the professional duty of social workers to promote legislative changes that support community-based sustainable resource management, such as those pertaining to resource allocation, environmental protection, and the legal acknowledgement of community authority. The study demonstrates that community-based initiatives cannot succeed under unfavorable policy environments. In an individual interview, the founding chairwoman of the Balapitiya cooperative succinctly described this reality: "We have done everything perfectly. For twenty-five years, we have been in charge of our zone. We have disciplined members. However, we don't have any legal documentation stating that we are in charge of this area. Our twenty-five years are meaningless if

a minister signs a permit for a foreign trawler tomorrow. Without a legal basis, social growth cannot continue. That law needs to be fought for by someone. Fishermen shouldn't be the only ones involved.” Social work advocacy engagement in environmental governance is directly mandated by this community-articulated appeal to professional and policy actors.

5.3 Policy and Governance Implications

To enhance participatory fisheries management, the report suggests many actions for policymakers and the government. First, Sri Lanka's fisheries policy framework should formally recognise and empower community-based management as a legitimate form of governance. This necessitates reforms to the law that specify rights and responsibilities, make community power clear, and establish procedures for cooperative-government collaboration. The interview results consistently highlighted how urgent this formalisation is. An honest evaluation was provided by a government fisheries officer who had been directly involved with Weligama's cooperative for a number of years: "These communities have built something real. Compared to government enforcement, their compliance rates are greater. However, I lack a systematic system to acknowledge their written authority. I provide them with informal, one-on-one support. If I am transferred next year, my successor may not. Their system should not depend on one sympathetic officer." This acknowledgment from within government underscores that the weakness lies not in community capacity but in institutional design at the policy level. Second, development and livelihood objectives ought to align with fisheries policy. Sustainability cannot be achieved solely through conservation laws; the government must also offer economic opportunities and livelihood options that reduce the burden on fishermen. This calls for the integration of development, fisheries, and environmental measures that work together rather than against each other. During interviews, cooperative leaders from all three locations independently discovered the same structural contradiction: the government's social assistance programs failed to address the ensuing economic disparities, while fisheries regulation discouraged specific equipment and activities during specific seasons. According to a Dikwella cooperative secretary, "the fisheries department says protect. The welfare department claims that because you possess a boat, your family is not eligible for assistance. In the meantime, my kids eat less and the boat is idle. There is no communication between these departments. Their silence has consequences that

we must deal with." Third, governance institutions must be altered to achieve polycentric governance that links local, regional, and federal authorities. Rather than functioning in isolation, community-based management performs better when it is connected with national and local institutions that provide assistance.

Fourth, intentional measures must guarantee marginalised groups' participation in participatory government and gender equality. Women's participation should be required by policy, and safeguards should be put in place to guarantee that their opinions have a significant impact on choices. Supporting livelihood transitions or addressing employment opportunities in the fishing industry are necessary for youth engagement. Focus groups with young people at all three locations consistently revealed disengagement stemming from systemic hopelessness rather than apathy. A twenty-two-year-old son of a Balapitiya cooperative member, who had finished secondary school but returned to fishing owing to a lack of alternatives, explained his situation: "My father believes in the cooperative. He built it all his life. What does it provide me with, though? Compared to his youth, the catch is smaller. I have no future to plan, no pension, and no wage. Money is sent home by my buddies who travelled to Colombo. I remain and go to meetings. Who among us is making investments in the future? " Youth FGDs in Weligama and Dikwella echoed this articulation of intergenerational disillusionment, indicating that the demographic sustainability of community-based management is not assured and calls for policy attention to employment pathways and respectable livelihood options within the fisheries sector.

5.4 Recommendations

Based on these findings, the researchers recommend;

For community stakeholders: Keep bolstering inclusive decision-making, transparent meetings, and uniform enforcement of regulations that have been collectively developed. Invest in helping members become more adept at handling money, keeping an eye on things, and resolving disputes. Make it a priority to include women and young people. Create monitoring systems that record livelihood and ecological results so that evidence-based adaptive management is possible. For NGOs and development organizations: Transition from short-term initiatives to long-term collaborations that promote sustainable development driven by the community. Instead, then thinking that short-term investment will spark long-lasting change, provide ongoing technical help for institutional development, capacity building, and livelihoods support. Encourage

communities to push for legislative improvements that will help them succeed. Formalize legislative frameworks that acknowledge community fishing rights and local resource management authority for the government and policymakers. Give community-based management systems ongoing financial and technical assistance. Fisheries policies should be changed to give small-scale community fishing a higher priority than industrial activities. Implement programs for alternative income and livelihood diversification to lessen the financial strain on fisheries. Create interagency cooperation to guarantee that development, environmental, and fisheries policies are in line. For professionals and educators in social work: Include community-based resource management and environmental sustainability in social work practice and courses. Create relationships and field placements with community development organizations that operate at the nexus of development and the environment. Advocate for policies that promote environmental conservation and community development through participation. Do more studies to show how social work contributes to sustainable development.

5.5 Limitations

There are a few limitations that should be acknowledged. First, the results cannot be statistically applied to all coastal villages in Sri Lanka due to the qualitative methodology and small sample size. The three communities that were chosen could not be typical of communities that do not have established participatory initiatives or that deal with various social or environmental conditions. Second, this study's cross-sectional design caught communities at a specific moment in time. Understanding sustainability trajectories and the long-term stability of results would be strengthened by longitudinal follow-up. Findings could be impacted by market shifts and climate effects that were noted during the study period if they were observed under different circumstances. Third, despite efforts to establish trust and spend a lot of time in communities, some aspects of community dynamics might not have been entirely apparent to an outside researcher. Sensitive topics or conflicts communities preferred not to share with an outsider may have been underreported.

Fourth, the research was conducted during a period of relative post-conflict recovery in Sri Lanka. Findings may not apply during periods of heightened conflict, disaster, or political instability disrupting community institutions.

5.6 Conclusion

This study shows how participatory community development strategies can significantly improve ecological sustainability, livelihood security, and social fairness in Sri Lanka's sustainable fisheries management. The three processes that have been identified increased social cohesion that facilitates collective enforcement, improved institutional capacity for adaptive management, and behavioral changes in fishing practices offer avenues for community involvement to result in sustainable benefits. These results must be interpreted in light of significant limitations, though. What communities can accomplish on their own is limited by poverty-driven livelihood pressure, inadequate government support, and unfair global markets. In Sri Lanka, sustainable fisheries will result from integrated approaches that combine community-led governance with poverty reduction, livelihood alternatives, policy change, and a commitment to environmental protection at all levels.

The choice of development path will have significant implications for ecological sustainability and the welfare of coastal populations as Sri Lanka faces increasing environmental challenges from overfishing, climate change, and ecosystem degradation. The most promising path is provided by participatory techniques, which are based on a dedication to social justice and respect for community agency. However, in order to fully realize their potential, complementing governance and policy measures are needed, such as government support for community-based management, investments in livelihood alternatives that lessen the burden on fishermen, and alignment of environmental protection with poverty reduction goals. With its fundamental dedication to social justice, human rights, and community empowerment, social work can make significant contributions. Social workers can contribute to transformative development based on the idea that social justice and environmental preservation are inextricably linked by combining livelihood stability with environmental sustainability and by helping communities advocate for laws that support their achievement. Every day, Sri Lanka's coastal fishing villages show that this kind of integration is achievable when communities have support, agency, and a voice. Communities, the government, development partners, and the social work profession must all be committed to realizing this promise on a large scale.

References

- Amaral, D., & Amaral, J. (2018). Destructive fishing practices in Southeast Asian fisheries. *International Journal of Fisheries and Aquatic Studies*, 6(3), 154-162.
- Arnstein, S. R. (1969). A ladder of citizen participation. *Journal of the American Institute of Planners*, 35(4), 216-224.
<https://doi.org/10.1080/01944366908977225>
- Berkes, F. (2004). Rethinking community-based conservation. *Ecology and Society*, 9(3), 14. <https://doi.org/10.5751/ES-00650-090314>
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77-101.
<https://doi.org/10.1191/1478088706qp063oa>
- Chambers, R. (2005). *Ideas for development*. Earthscan.
- Cleaver, F. (1999). Paradoxes of participation: Questioning participatory approaches to development. *Journal of International Development*, 11(4), 597-612.
- de Angelis, B. L. D. (2017). Global analysis of community-based fisheries management programs. *Marine Policy*, 78, 103-110.
<https://doi.org/10.1016/j.marpol.2017.01.015>
- de Angelis, B. L. D. (2019). Community-based fisheries management and conservation outcomes: A systematic review. *Frontiers in Marine Science*, 6, 114. <https://doi.org/10.3389/fmars.2019.00114>
- de Silva, M., & Weerasinghe, D. (2017). Gender in fisheries value chains: Evidence from Sri Lanka. *Aquaculture Economics & Management*, 21(3), 365-384. <https://doi.org/10.1080/13657305.2017.1304549>
- Dominelli, L. (2012). *Green social work: From environmental crises to environmental justice*. Polity Press.
- FAO. (2020). *The State of World Fisheries and Aquaculture 2020*. Food and Agriculture Organization of the United Nations.

- FAO. (2022). Fisheries and Aquaculture Statistics. Food and Agriculture Organization of the United Nations.
- Folke, C. (2006). Resilience: The emergence of a perspective for social-ecological systems analyses. *Global Environmental Change*, 16(3), 253-267. <https://doi.org/10.1016/j.gloenvcha.2006.04.002>
- Greene, J. C., & Caracelli, V. J. (1997). *Advances in mixed-method evaluation*. Jossey-Bass.
- Jentoft, S., & Chuenpagdee, R. (2015). *Interactive governance for small-scale fisheries: Global reflections*. Springer.
- Kretzmann, J. P., & McKnight, J. L. (1993). *Building communities from the inside out: A path toward finding and mobilizing a community's assets*. ACTA Publications.
- Martinez-Alier, J. (2002). *The environmentalism of the poor: A study of ecological conflicts and valuation*. Oxford University Press.
- Ministry of Fisheries. (2020). *National fisheries sector master plan 2020-2030*. Government of Sri Lanka.
- Ministry of Fisheries & Aquatic Resources. (2019). *Fisheries statistics 2019*. Government of Sri Lanka.
- Ostrom, E. (2009). A polycentric approach for coping with climate change. *World Bank Policy Research Working Paper* 5095.
- Ostrom, E. (2010). Polycentric systems for coping with collective action and global environmental change. *Global Environmental Change*, 20(4), 550-557. <https://doi.org/10.1016/j.gloenvcha.2010.07.004>
- Perera, R. (2021). Climate change impacts on marine fisheries in South Asia. *Environmental Research Letters*, 16(3), 034008. <https://doi.org/10.1088/1748-9326/abe5dc>
- Pomeroy, R., & Berkes, F. (1997). Two to tango: The role of government in fisheries co-management. *Marine Policy*, 21(5), 465-480.

- Pomeroy, R., Parks, J., Mrakovcich, K. L., & Mikkelsen, E. (2016). Drivers of change in the Philippines marine fisheries sector. *Maritime Studies*, 15(1), 1. <https://doi.org/10.1186/s40152-015-0041-x>
- Putnam, R. D. (2000). *Bowling alone: The collapse and revival of American community*. Simon & Schuster.
- Sharma, C. (2018). Traditional knowledge in fisheries management: The case of inland fisheries in South Asia. *Environmental Management and Sustainable Development*, 7(1), 1-18.
- Weeratunge, N., Béné, C., Siriwardane, R., Charles, A., Johnson, D., Allison, E. H., ... & Badjeck, M. C. (2014). Small-scale fisheries through the wellbeing lens. *Fish and Fisheries*, 15(2), 255-279. <https://doi.org/10.1111/faf.12016>
- Wijayaratna, P. (2019). Governance challenges in Sri Lankan fisheries: Toward participatory approaches. *Asia-Pacific Journal of Environmental Management*, 28(2), 156-171.
- World Bank. (2019). *Sri Lanka: Towards sustainable fisheries and livelihoods*. World Bank Report No. 147834.
- Worm, B., & Lotze, H. K. (2021). Global seafood supply and demand: Inputs for exploring future scenarios. *Frontiers in Marine Science*, 8, 658158. <https://doi.org/10.3389/fmars.2021.658158>
- Yin, R. K. (2018). *Case study research and applications: Design and methods* (6th ed.). Sage Publications.