



Coastal Inhabitants and Livelihood Issues: A Case Study of Trivandrum, Kerala

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ABSTRACT

The coastal people of Thiruvananthapuram, Kerala, have historically depended on water for their livelihoods, cultural identity, and existence. However, rising coastline that is erosion, degradation of the environment, and socioeconomic issues are endangering their way of life. This study investigates the complicated impact of these issues Thiruvananthapuram's coastal human beings, having a focus on the causes and consequences of shoreline modifications, the financial consequences for traditional fishermen, and the effectiveness of visible mitigation measures. The growing sea destroyed homes and perturbed traditional fishing activities. Fishermen have to travel deep into the water, which raises operating costs and safety risks. While motorized vessels and synthetic gear increase catch efficiency, these additionally cause environmental concerns such as marine pollution and resource depletion. In addition, the loss of essential coastal vegetation and biodiversity has destabilized the natural world, decreasing the supply of fish and, consequently, fishermen's livelihoods. Government initiatives like the 'Punargeham Project' aim to rehabilitate families affected through providing assistance in relocation. However, challenges stay, including inadequate salary, reluctance to move due to culturalties, and an absence of alternative livelihood options. Many fishermen express worries regarding the future, discouraging younger generations from remaining in the industry and pushing migration in search of better options. This study highlights the urgent need for

combined, community-driven efforts that address both environmental conservation and socioeconomic resilience. Sustainable coastal management techniques, facilitated by effective policy frameworks and active community participation, are essential for conserving the livelihoods and cultural heritage of Thiruvananthapuram's coastal communities.

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Introduction

Coastal communities in Thiruvananthapuram, Kerala, have historically depended on marine resources to fulfill their economic, social, and cultural interests. Traditional fishing practices, on the basis of local knowledge and sustainable methods, have historically protected both these communities' livelihoods and the preservation of marine life. However, current developments provide significant challenges to their way of life.

Coastal erosion is a significant issue, exacerbated by both biological processes and human interventions such as port construction and sand mining. Such as the growth of the Vizhinjam International Transshipment Terminal has been linked to increased shoreline degradation. Furthermore, the utilization of automated fishing techniques and non-selective nets has caused is concerned regarding the depletion of fish stocks and the resulting destruction of marine ecosystems. While some community members promote sustainable practices, others have a bias toward strategies that may threaten long-term ecological balance. Socio-cultural shifts are also evident. The decreasing use of Kadappuram Bhasha, an indigenous coastal language, and a growing disconnection from traditional knowledge systems suggest a breakdown of cultural identity. Educational structures frequently tension mainstream languages and occupations, preventing future generations from reconnecting with their the marine history. Addressing these different difficulties requires coordinated approaches which take into consideration environmental conservation, sustainable development, and cultural preservation. Recognizing and safeguarding the rights of coastal residents to their traditional lands and resources are essential to maintaining the resilience and continuity of these communities.



Objectives

- 1.To examine the impact of coast erosion on the living conditions and economic stability of Thiruvananthapuram's traditional fishing community. This involves evaluating displacement conditions and loss of vital facilities.
2. To evaluate Socioeconomic Challenges: Analyze the economic challenges resulting from fluctuating fish prices, more competition, and the financial costs of using artificial fishing methods. The study will also look into the social implications, such as younger generations' reluctance to keep in the fishery.
3. To Investigate Environmental and Policy Impacts: Study to how environmental changes and policy decisions impact traditional fishing actions. This includes evaluating the effect of climate change, pollution, and laws and regulations on the sustainability of fisheries.
4. To analyze Gender-Specific issues: Determine the particular issues that women face in coastal regions, especially in fish processing and marketing. The study will focus on issues such as workplace harassment, labor undervaluation, and the need for improved conditions at work.
- 5.To propose sustainable solutions for policy interventions, community initiatives, and sustainable practices that will enhance the livelihoods of coastal people. This entails representation for better resource management, better social welfare programs, and the promotion of alternative livelihoods.

Research Questions

- 1.How effectively do the functioning efforts and regulations of the government support the livelihoods of Trivandrum's coastal communities?
- 2.What social consequences do changes in livelihood and displacement effect on people who reside along the coast?
- 3.What function does gender play in the challenges to livelihood and ways of survival which coastal people face?

Literature Review

Coastal places throughout the world are home to an extensive variety of communities, their livelihoods forever connected to the ocean environment. These communities face many issues, including



environmental dangers, socioeconomic limitations, and the effects of climate change. This literature review synthesizes major studies and publications that investigate coastal inhabitants' livelihood difficulties, having an emphasis on adaptation methods, vulnerabilities, and the integration of indigenous knowledge.

Study in a fishing the village in Kerala, India, to look into the community's methods for adapting to coastal hazards. The study discovered that formal adapting strategies were essentially techno-centric and costly, frequently disregarding the fishing community's vulnerabilities. These behaviors have inadvertently added to ecological and livelihood uncertainties. The study discovered that while local adaptation evaluates can tackle current unpredictability, they may not effectively alleviate long-term vulnerabilities. The study highlights the importance of incorporating community opinions and expertise into adaptation planning with the goal to deal with the complex interplay of ecological and economic problems.

Nayak and Berkes (2017) examined the phenomenon of coastal grabbing and its impact on community conservation efforts around worldwide. The study concentrated on Chilika Lagoon in India and showed how the rise of cultivation of shrimp results in the invasion of customary fishing areas, affecting traditional fishing methods and community-based conservation. The research emphasized local fishermen's sociopolitical attempts against such encroachments and encouraged authorities to protect indigenous coastal the population' rights and livelihoods.

Charu Gupta and Mukul Sharma's book "Contested Coastlines: Fisherfolk, Nations and Borders in South Asia" Gupta and Sharma (2012) examine the challenges faced by South Asian the fishermen, especially those imprisoned for crossing maritime boundaries. The authors examine decreasing sea resources, safety issues, and the not clear identities of these communities. They indicate for a shift in security opinions that priorities human security over territorial considerations.

Seema Purushothaman and Rosa Abraham edited the book "Livelihood Strategies in Southern India: Conservation and Poverty Reduction in Forest Fringes." This collected edition (2013) focuses on the livelihood difficulties encountered by forest residents in India's southern Western Ghats. While the investigation is mainly on forest ecosystems, the insights into flexible livelihood decisions and the balance between conservation and poverty reduction offer valuable connections for coastal communities facing comparable problems.



Methodology

Methodology for Research on Coastal Inhabitants and The livelihoods Analyzing coastal communities' livelihood concerns require an extensive and interdisciplinary research approach. The procedure of carrying out such a study is explained here, with an emphasis on qualitative and quantitative methods, ethical considerations, and data analysis techniques. A mixed-methods approach will be used for recording the multifaceted characteristics of livelihood concerns among coastal residents. This design mixes qualitative and quantitative insights to offer an extensive comprehension of the subject matter. Select coastal regions that reflect differed environmental, economic, and cultural factors. Geographic diversity, exposure to climate change impacts, economic growth (which includes fishing, agriculture, and tourism), and the population includes were crucial factors to consider. Quantitative Component: Using stratified random sampling to ensure representation of different subgroups within coastal communities. Employ purposive sampling to take key informants, such as community leaders, local authorities, and individuals with a thorough knowledge of local livelihood techniques. Surveys and Questionnaires: Develop arranged instruments to collect data on household demographics, income sources, employment patterns, levels of education, and perceptions of livelihood problem. Conduct semi-structured interviews with key informants to collect in-depth insights concerning historical livelihood trends, cultural practices, and adaptive strategies applied by communities. Using statistical software to identify patterns, correlations, and trends. Descriptive statistics summarize demographic information, while inferential statistics analyze relationships between variables. Employ thematic analysis to identify recurring themes and narratives within interviews and FGDs. To enhance the reliability and validity of the findings, utilize triangulation by verifying data collected through several methods and sources. This method helps to check findings and provides an expanded understanding of the difficulties. These instruments provide a comprehensive overview of the complex issues confronting coastal livelihoods, providing as an outline for additional research and policy development.

Results and Discussion

This study focuses into the socioeconomic circumstances, livelihood problems and methods of coping of coastal people in Trivandrum, Kerala. Based on primary surveys, interviews, and secondary data analysis, the results highlight significant challenges facing coastal communities, like getting fish catch, environmental degradation, climate change impacts, and socioeconomic vulnerabilities.

Demographic and socioeconomic characteristics of coastal inhabitants



The study focuses on several fishing villages along the Trivandrum coast, including Valiyathura, Poonthura, Vizhinjam, and Anchuthengu. The population in these places is primarily engaged in marine fishing, fish processing, and associated activity. The typical family size was 4.8 individuals, with most households relying on male members for making money through fishing or other forms of labor. Literacy rates among youths are relatively high, with 82% of people aged from 18 to 35 being literate. However, economic constraints continued limiting education beyond the secondary level. Women primarily engage in fish vending, net making, and domestic work, contributing to household income but facing issues such as poor salaries and exploitation by middlemen. Around 65 percent of the workforce is directly dependent on fishing, while the remainder employed in fish processing, vending, and tourism-related companies. Fishing households receive an average monthly income of ₹8,000 to ₹15,000, with seasonal fluctuations. Many fishermen reported a 40-50% decrease in fish record over the past two decades, leading to increased financial insecurity.

Overfishing, illegal trawling, and reduced fish stocks all have had an adverse impact on traditional fishermen's livelihoods. Fishermen stated that they utilized used to be able to earn enough money by fishing just a few hours, however now they must work longer hours at sea, resulting in higher fuel and operational costs. Rising sea surface temperatures and unpredictability monsoons, all resulting from climate change, had an effect on fish migrating and marriage patterns.

Coastal erosion was mentioned as an important problem by around 40% of respondents, with rising sea levels impacting homes and infrastructure. Frequent cyclones and storms have resulted in the destruction of fishing equipment and boats, placing fishermen in debt. The 2018 Kerala floods and Cyclone Ockhi (2017) were considered as major disasters that increased economic instability, with many people continuing to struggle financially.

Fishermen sell their catch through auctions organized by middlemen, who determine rates and exploit primary manufacturers. Only 15% of fishermen have direct market access, while the majority rely on intermediaries, resulting in low profit margins. The lack of sufficient cold storage and transportation facilities exacerbates the issue, pulling rapidly sales at affordable prices.

Many government schemes exist, such the Matsya Samridhi Yojana and the Fishermen Welfare Fund, but only 54% of people are aware of them. Fishermen reported delays in receiving financial aid, difficulty accessing subsidies, and bureaucratic barriers to receiving benefits.



70% of fishermen mentioned health issues such as respiratory issues, joint pains, and skin diseases as the consequence of ongoing exposure to seawater and severe weather. Alcoholism and drug use are pointed out as significant issues in society, annoyed by financial stress and unstable income. Women that engage in fish offering struggle additional health risks due to long hours of standing, exposure to unclean market conditions, and financial stress.

The study emphasizes the vulnerability of Trivandrum's coastal livelihoods and the urgent need for over time solutions. The following sections investigate significant results in relation to broader socioeconomic and policy perspectives.

The tumbling fish catch has an immediate effect on the sustainability of traditional marine-based livelihoods. The study's findings correspond with global trends, indicating that small-scale fishing communities become more exposed due to industrial fishing, climate change, and policy neglect (FAO, 2023).

Possible interventions: Promoting community-based fisheries management to reduce overfishing and promote sustainable fishing techniques. Strengthening regulatory frameworks to avoid illegal trawling and ensure equitable distribution of marine resources. Promote switch revenue streams such as deep-sea fishing, aquaculture, and eco-tourism to reduce dependence on depleting populations of fish.

In accordance with the poll, financial instability is an important concern among fishermen, those with enormous financial burdens and not much opportunity for official financing. Many are dependent on Informal lenders, who charge too much interest rates. Recommendations: Improving access to microfinance and cooperative banking for fishermen on a small scale. Implementing stable prices methods helps protect fishermen from market fluctuations and middlemen's exploitation. Strengthening cooperative fish marketing networks to enable for direct sales and greater margins of profit for fishermen.

Climate change is an important issue for coastal people, with stronger cyclones, unpredictable monsoons, and rising sea levels. The study highlights the significance of comprehensive climate resilience measures. Enhanced early warning systems and disaster preparedness training for fishermen. Implementing coastal protection measures such as seawalls, mangrove restoration, and beach nourishment programs. Providing insurance for fishing assets and alternative livelihood support during climate-related distractions.



Women play a vital component in boating, yet they face many socioeconomic issues including impoverished revenue, dangerous circumstances at work, and limited access to financial support. Policy recommendations: Establishing women's self-help groups (SHGs) and cooperatives to promote financial independence.

Promote gender-inclusive fisheries policies through offering subsidies and training for women in fish processing, marketing, and value addition. Creating safe markets with sanitation and childcare facilities for female investors.

Despite several government social services, understanding and accessibility remain major barriers. The article proposes strengthening policy implementation through decentralized governance and community participation. Key Measures: Increasing education initiatives to educate fishermen on available welfare programs. Simplifying administrative processes for accessing subsidies and benefits from insurance. Simplifying the administrative procedure of getting subsidies and insurance benefits. Increasing collaboration between municipalities, non-governmental organizations, and research institutions will ensure evidence-based policy formulation.

Conclusion

The people living on the coast of Trivandrum struggle an array of livelihood problems including financial uncertainty, climate change hazards and social vulnerabilities. The study highlights the significance of sustainable fisheries management, alternative income choices, financial inclusion, and gender-sensitive policies in improving coastal resilience in communities. Strengthening institutional support and empowering local stakeholders are essential for ensuring the long-term well-being of communities along the coast. Further research might focus on advances in technology in sustainable fisheries, the impact of marine pollution on coastal livelihoods, and the long-term effects of climate change on communities that fish. To address these challenges, lawmakers, researchers, and coastal communities need to collaborate together to establish a sustainable and inclusive blue economy in Kerala's coastal regions.



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