



Traditional Fishermen's Challenges and Coping Strategies in the Light of Commercial Fishing in Kerala

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ABSTRACT

The fisheries sector in India, particularly in Kerala, faces various challenges such as socioeconomic conflicts, low income, taking over advantage of marine resources, and vulnerability to climate change impacts. This study presents a complete review of the socioeconomic characteristics and powerless assessment of fishing communities in Kerala, focusing on the impacts of climate change. The research adopts a qualitative approach with a case study design, utilizing maximum variation sampling to ensure a whole representation of fishing communities.

Through in-depth interviews this study explores the complicated challenges faced by fishermen and their families during seasonal changes. The qualitative data collection allows for a complete understanding of the operational difficulties, financial instabilities, and social hazards experienced by fishing communities. The case study design further enables the examination of specific contexts and interactions within different fishing communities in Kerala, showing the richness and depth of the findings.

The review assesses the socioeconomic characteristics of fishermen, including their income levels, household hazards, and access to resources. Additionally, it examines the weakness of fishing communities to climate change impacts, such as changes in fish availability, extreme weather events, and sea level rise.

The findings of this qualitative study with a case study design and maximum variation sampling will contribute to the existing literature on the challenges faced by fishing communities in Kerala during seasonal changes and their difficulties to climate change impacts. The results will inform policymakers, researchers, and stakeholders about the specific needs and concerns of fishing communities, guiding the development of mark interventions to enhance their toughness, livelihood sustainability, and overall well-being.

Keywords: *Fishermen, socioeconomic, challenges, seasonal changes*

1.1 INTRODUCTION

The coastal state of Kerala, located in southwestern India, is home to an active fishing industry that sustains numerous fishing communities. The livelihoods of fishermen in Kerala are complicatedly tied to the seasonal changes that occur throughout the year. These changes bring forth a range of challenges that impact their fishing practices, economic stability, and social well-being. Understanding the background and context of these challenges is crucial for developing effective strategies and support mechanisms to reduce their impact on the fishing communities in Kerala.

Kollam, situated in the southern Indian state of Kerala, is a coastal district known for its landscapes, beaches, and fishing communities. Its long coastline, extending with the Arabian Sea, has been a hub for traditional fishing activities that have been passed down through generations. Andrews (2008), a fishermen from Kollam wrote a Malayalam book 'Kadalmuthu' narrating his experience in fishing and his relationship with sea and marine biodiversity. Therefore, its evident that how much fishing community relate to the population of Kollam district. Over generations, these traditional communities have build a harmony with their environment, preserving their cultural practices through fishing traditions. However, the arrival of commercial fishing activities have introduced new socio-economic and cultural challenges for these traditional fishermen (Aneeshkumar, 2018).

This research aims to show the socio-economic and cultural interactions between traditional and commercial fishermen in Kollam. Embracing a qualitative research approach and a case study design, the study seeks to dig into the challenges faced by traditional fisherfolk due to the coexistence with commercial fishing operations.

The primary objective is to gain in depth understanding into the lived experiences, perspectives, and cultural heritage of traditional fishermen, exploring how the presence of commercial fishing impacts their livelihoods and cultural identity. Through purposive sampling, participants from traditional fishing communities will be selected, facilitating an understanding of their distinct needs and vulnerabilities (Azril Mohamed Shaffril et al., 2013).

In recent years, governments and other change agents have become more aware of the widespread poverty that characterizes traditional fishing communities around the world, which has resulted in the start of development projects of all shapes and sizes. Even while these initiatives express a wide range of specific goals, improving the level of living in these communities is their primary objective, whether stated openly or not. This goal has recently been added to the others that are often associated with national fisheries development programs, which have primarily focused on raising production. This shift in focus is crucial because it opens up the possibility of looking beyond fishery-specific locations for answers to the issue of low living standards in fishing villages (Boyd et al., 2022).

As the underlying biological constraint of the "open-access" resources utilized by traditional fisherman has been recognized and documented, as has the economic and biological overfishing, the emphasis on technological solutions aimed at improving vessels and gear has decreased. Additionally, as proof grew that technology-driven development initiatives often made income disparities both within and between communities worse, the pertinent barriers to improving living standards were identified as predominantly socioeconomic and institutional in character. As a result, solutions are starting to be looked for within the framework of rural development initiatives, the goal of which is to generally improve rural areas. Input supply, production, and distribution sectors are all interconnected with other sectors in rural areas, and planners and managers must recognize the wide-ranging economic and social implications of any plans they may suggest pertaining to fishing. Programs and projects created for fishing villages must nevertheless maintain flexibility despite the broad approach suggested by rural development schemes. Projects that are location-specific, consider the needs that fishermen themselves identify, and recognize the connections that traditional fisheries and fishing communities have both vertically and horizontally with other sectors and institutions are imperative due to the variability in resource availability and the heterogeneity of fishermen and fishing communities (Chen et al., 2020).

There is a broad effect of climate change on marine resources. The financial security of small-scale fisherman may be severely impacted. Small-scale fishermen's ability to carry out their fishing routines will be hampered by uncertain weather conditions, as highlighted by Colgan and Merrill and Macfadyen, since their small vessels will expose them to severe winds and waves. This will result in fewer days worked overall and reduced production levels among the fisherman, which will lower revenue. Due to the detrimental effects of climate change on marine habitats, small-scale fishermen may have to go fishing for longer periods of time since they must spend more time finding new spots. Fuel and ice expenses are extra for this. Numerous studies have demonstrated that the quantity and quality of fish have been significantly impacted by climate change; smaller fish translate into lower revenue for fishermen. Since small-scale fishermen depend entirely on fishing for their livelihood, they are predicted to have a harder time adapting to the changing climate than individuals with greater occupational mobility. Even yet, it is anticipated that fisherman with higher vocational mobility will be better equipped to adapt to the changing climate. However, issues still arise for individuals with alternative environmental jobs, particularly in the areas of tourism, recreation, and agriculture. Similarly, warmer weather and unpredictable rainfall patterns can have a negative impact on fishermen who work in agriculture as a second source of income, especially in the production of crops and cattle (Dowling et al., 2023).

The productive physical capital of fishermen, including their boats, jetties, and fishing gear, is susceptible to climate change. For instance, research by Badjeck et al has demonstrated that hurricanes can harm fishing equipment, which causes the fishermen to lose their revenue and incur higher replacement and maintenance costs. Ultimately, this impacts the fishermen's capacity to resume their fishing activities right away following such tragedies. According to Sagoe-Addy and Addo, infrastructure in 13 coastal areas in Ghana are likely to be threatened by sea level rise, with 31% of those areas not being able to physically tolerate the hazard. Due

to exposure to salt water and sanitary issues, residential buildings along the coast would probably have salinization issues. Due to Hurricane Gilbert in 1998, nearly all of the fish traps owned by Jamaican fishermen were lost, resulting in lower output and higher maintenance costs. Additionally, the fishermen were unable to immediately resume their fishing activities. Hurricane Mitch caused estimated damages of US\$1.2 million to infrastructure and fishing gear in Belize. Marketing and transportation have also been impacted by climate change (Fu & Niu, 2023).

It is important to take into account how climate change may affect the health of fishermen in coastal communities. Increased rates of respiratory illnesses, heat stress, skin conditions, asthma, ground-level ozone-related morbidity and mortality, and malaria and diarrhea have all been linked to more frequent thunderstorms and warmer weather. Climate change has had a notable and considerable impact on the number of dengue cases reported. Asthma and allergies become more dangerous when temperatures rise, according to the Union of Concerned Scientists. It has also been emphasized that people may be more susceptible to the risks of heart disease due to rising temperatures. According to Searle and Gow, those who obsess over the negative consequences and ramifications of climate change will endure stress, and their condition will only get worse if they have personally experienced the most extreme effects of the changing environment. Stress among small-scale fisherman has been linked to unfavorable environmental conditions, according to Kucera and McDonald's study on the subject. Salagrama has added credence to the findings of Kucera and McDonald by claiming that small-scale fishermen are experiencing stress as a result of fewer fishing trip days brought on by climate change. Due to their heavy reliance on marine resources for protein, Allison et al and Ogutu-Ohwayo et al predicted that fishermen, especially those in Asia and Africa, whose diets depend on marine protein, would be severely impacted (Gladju et al., 2022).

Small-scale sailors now face more dangers due to atypical climatic conduct, even though the impact on their social conditions has been less severe. This is because their smaller vessels are more susceptible to high winds, waves, and thunderstorms. Inadequate knowledge management may exacerbate the situation since small-scale fisherman might not have access to information regarding how these hazards will affect their fishing excursions. According to the World Resources Institute WRI, extreme weather events including high winds and waves and extremely hot or cold temperatures have resulted in a marked rise in the number of fatalities related to climate change (Gunawan, 2019).

It is clear that the socioeconomic conditions of fishermen and the effects of climate change are closely related. As a result, developing adaptation plans is essential to coping with the changing climate. While a number of communities have benefited from recommendations for climate change adaptation in earlier research, very few, if any, of those studies have specifically addressed fishing communities (Hossain et al., 2022).

Clearly, there are risks associated with fishing because each time a fisherman goes fishing, he must take into account severe and unpredictable weather. Such weather has dramatically increased the number of deaths, according to WRI. Additionally, the physical and mental well-being of the fisherman is being impacted by the changing climate. Measures to lessen the likelihood of calamity have been taken. A communication system

has shown to be a useful safety measure in Bangladesh, helping local fisherman become more aware of and resilient to abrupt changes in the weather. Another excellent example is the work of Qualcomm, a top telecommutes business in the globe. The company has created a smartphone application called "Fisher Friend," which has helped thousands of Indian fisherman by allowing them to use their phones to look up and receive a range of information, especially regarding the weather. It has been discovered that insurance plans improve fishermen's ability to adjust to climate dangers. Initiatives for sudden- and slow-onset weather-related disasters that would offer short- and long-term insurance protection against any unknown consequences are necessary to develop a successful insurance policy for climate change. According to Linnerooth-Bayer and Mechler, an insurance plan of this kind ought to be within the reach of the impoverished as well. This is crucial because the impoverished are the ones who are most likely to be affected by climate change because they cannot afford to deal with rising temperatures, moving or having to evacuate, or paying more for food (Jacquet & Pauly, 2022).

Most fisherman work as share or wage laborers on other vessels; they do not own boats, and many do not possess fishing equipment either. Some people are able to hire or borrow boats. Fishermen that rely solely on other people to retrieve them or on non-reliable equipment like homemade spearguns, a single hook-and-line, or pots that can be used without a boat are inevitably going to have lower production. The inadequate equipment and boats are undoubtedly a significant cause in the low output of individual fishermen. Most of them expect to acquire boats and equipment in the future since they observe their boatowner friends catching more fish, which puts pressure on development initiatives with technological bias (Kroetz et al., 2022).

The sections that come before this one suggest that low catches translate into low income. Fishermen's earning potential is undoubtedly influenced by production, but other elements also play a role. In addition to low catch rates, the price at which the catch is sold may also be a role in low incomes. Fishermen are sometimes accused of having little to no control over the venues through which their products are marketed or over the prices they are paid. Seasonal variations combined with low earnings put traditional fisherman in a position where they may become dependent on one another for marketing decisions as well as credit source selection. The fisherman must endure prolonged periods of low revenue, just like the farmer who must survive from planting to harvest without a source of income (Lennox et al., 2022).

For a very long time, Kerala's fishing communities have shared the resources of the ocean and kept strong social and economic bonds despite differences in culture and religion. Chekutty (2010) notes that the globalization and mechanization of fisheries, which have resulted in international subsidies, strict global trade regulations, and fierce competition for fishing rights, have caused a sharp decline in fish catch and profits, which has led to poverty and deprivation among fishermen, who are then likely to become angry and dissatisfied. Over the past several years, this has resulted in an increase in communalism and violence within Kerala's fishing community (S. K. M. Rahman, 2019).

According to him, the mechanization phenomenon, which was first observed in Keralan waters in the middle of the 1960s, caused the traditional fishermen to gradually lose ground to the trawlers because their small boats could not compete with them, and their old methods became outdated. In addition to negatively impacting the fishing communities' way of life, this also resulted in significant economic losses, a decline in fish output and capture, and the rise of a new class of businesspeople known as moneylenders turned boat owners who gained financial dominance over the beaches (S. K. M. Rahman, 2019).

The area has become a fertile ground for the expansion of social and communal tensions along the Kerala coast, which has led to an increase in conflicts between the traditional fish workers and the new class of mechanized boat workers. But he also contends that the altered situation has brought about conditions that have compelled the fishing villages to unite in order to confront the shared threat of external economic aggression (Chekutty, N.P., 2010).

The primary objective is to gain in depth understanding into the lived experiences, perspectives, and cultural heritage of traditional fishermen, exploring how the presence of commercial fishing impacts their livelihoods and cultural identity. Through purposive sampling, participants from traditional fishing communities will be selected, facilitating an understanding of their distinct needs and vulnerabilities (Reeder-Myers et al., 2022).

The study will employ an in depth interviews. These techniques will facilitate a an understanding about the socio-economic challenges faced by traditional fishermen, such as limited access to fishing grounds, declining fish stocks, technological disadvantages, social conflicts and market domination. Additionally, the research will dig into the cultural dimensions, exploring the protection or transformation of cultural practices, knowledge, and social dynamics within these traditional fishing communities (Robinson et al., 2022).

The findings from this research plans to contribute valuable knowledge to policymakers, local authorities, and stakeholders, enabling the formulation of inclusive fisheries management policies. By understanding the socio-economic and cultural challenges faced by traditional fishermen in the presence of commercial fishing activities, this study aims to promote cooperative approaches that empower traditional fisherfolk while safeguarding their rich cultural heritage (Gunawan, 2019).

1.2 Statement of the problem

The coastal district of Kollam in Kerala, India, is home to both traditional and commercial fishermen, each representing distinct fishing practices and socio-economic backgrounds. The coexistence of these two fishing communities has introduced a range of socio-economic and cultural challenges for traditional fisherfolk. As commercial fishing activities expand, traditional fishermen encounter declining fish stocks, limited access to fishing grounds, and increased market competition, impacting their livelihoods. Moreover, the cultural heritage of traditional fishing communities is at risk of transformation or break down due to the influence of modern commercial practices.

This research aims to comprehensively explore the socio-economic and cultural challenges faced by traditional fishermen in Kollam due to the presence of commercial fishermen. By identifying the specific challenges encountered by traditional fisherfolk, such as income imbalance and changes in cultural practices, this study seeks to inform inclusive fisheries management policies. The goal is to promote sustainable coexistence between traditional and commercial fishermen while preserving the cultural heritage and livelihoods of traditional fishing communities in Kollam.

Through a deeper understanding of these challenges, policymakers and stakeholders can work towards equitable and harmonious fishing practices in the district, ensuring the resilience and prosperity of Kollam's fishing communities in the face of changing fishing dynamics (Gunawan, 2019).

1.3 Background of the Study

Kollam, situated along the southwestern coast of India, is a coastal district renowned for its rich fishing heritage and vibrant fishing communities. Traditional fishing practices have been integral to the socio-economic fabric of the region, sustaining communities and preserving cultural values for generations. However, in recent years, the fishing landscape in Kollam has undergone significant changes due to the emergence of commercial fishing activities and evolving global demands for seafood.

The coexistence of traditional and commercial fishermen in Kollam has led to complex socio-economic and cultural interactions, presenting both opportunities and challenges. Traditional fishermen, reliant on time-tested fishing techniques passed down through centuries, now find themselves navigating the impact of commercial fishing practices that utilize modern technology and large-scale operations. These changes have raised concerns about the sustainability of traditional fishing practices, the preservation of cultural heritage, and the livelihoods of traditional fishing communities.

The growing presence of commercial fishing operations has brought about various socio-economic challenges for traditional fishermen. Overfishing and declining fish stocks have made it increasingly difficult for traditional fishermen to access sufficient catch, leading to income disparities and reduced market competitiveness. Limited access to fishing grounds and market domination by commercial fishermen have further strained the livelihoods of traditional fisherfolk, leading to economic vulnerability and uncertainty.

In addition to the socio-economic challenges, the coexistence of traditional and commercial fishermen has implications for the cultural fabric of Kollam's fishing communities. Traditional fishing practices are deeply rooted in cultural traditions, with knowledge and skills passed down through oral traditions from one generation to the next. The presence of commercial fishing activities may influence the preservation or erosion of these cultural practices, affecting the identity and social dynamics within the traditional fishing communities.

To address these intricate challenges, it becomes imperative to gain a deeper understanding of the socio-economic and cultural interactions between traditional and commercial fishermen in Kollam. This research aims to bridge the knowledge gap by employing a qualitative research approach with a case study design, focusing exclusively on traditional fishing communities.

Through a comprehensive exploration of their experiences, perspectives, and cultural practices, the research seeks to identify the unique challenges faced by traditional fishermen in the presence of commercial fishing activities. The findings from this study can inform policymakers, local authorities, and stakeholders in developing sustainable and inclusive fisheries management policies that empower traditional fisherfolk while preserving their cultural heritage.

By shedding light on the complexities of coexistence between traditional and commercial fishermen, this research endeavors to foster harmonious collaboration and equitable fisheries management in Kollam. Ultimately, the goal is to secure the livelihoods and cultural legacy of the traditional fishing communities, ensuring a sustainable and vibrant future for the coastal district of Kollam, Kerala.窗体底端

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1.4 REVIEW OF LITERATURE

Climate change: Social adaptation strategies for fishermen are expected to be increasingly negative. Fishermen and other occupational groups whose livelihoods depend on the environment would probably be at risk. Fishermen have significant challenges as a result of climate change, both commercially and socially. However, every member of fishing communities may take certain actions to both lessen the consequences and make the most of the chances. Additionally, efforts ought to be made to improve the fishermen's capacity for adjustment to the unavoidable changes. These initiatives will have a significant impact on how damaging climate change is. Prior research has emphasised the noteworthy influence of alterations in climate on the social, economic, and health conditions inside communities. Even fisherman have frequently observed that the current environment is different from historical climates, exhibiting an element of unpredictability that can jeopardize their livelihoods and quality of life. However, more research is needed to properly educate small-scale fishers for adaptation because their current degree of adaptation to the changing environment is far from optimal. According to this paper, the following six major methods should be prioritized in order to promote social adaptation: 1) Reducing the risks that fishermen face when going fishing; 2) fostering stronger social bonds; 3) managing information about climate change; 4) learning and acquiring substitute skills; 5) participating in the planning of climate change adaptation; and 6) offering credit facilities. With the help of this list of adaptation techniques, fisherman will be better able to adjust to climate change, and policymakers will have the tools necessary to increase community resilience to its future problems. Fisheries extension services may be crucial to small-scale fishing communities' effective implementation of strategies for climate change adaptation. By using these services, research groups and universities can concentrate on particular

research requirements and assist in transferring knowledge and skills to the local fishing communities. Fishermen can become more future-ready with such cooperation and teamwork(Shaffril et al., 2017).

The Traditional fisherfolk of Kerala - An article about their socio-economic organisation and the special relationship they share with the sea and the environment provides a comprehensive and insightful examination of the socio-economic and cultural challenges faced by the fisherfolk community in Kerala. Despite being an integral part of the state's coastal regions, they continue to struggle with neglect and marginalization amidst Kerala's overall progress. Through a detailed analysis, the research highlights the distinctiveness of the fishing community, their deep-rooted cultural practices, and their unique relationship with the sea and nature. By digging into the fisherfolk's socio-economic conditions, the study draws attention to the disparities in education, income opportunities, and access to basic services. It underscores the urgent need for targeted interventions to uplift their living standards and promote sustainable livelihoods. Furthermore, the research reveals the significance of understanding the shared cultural practices among Hindu, Christian, and Muslim fisherfolk, which reflects their historical connections and common beliefs (Kelkar-Khambete, A. 2012, August 13).

The Livelihood Security of Traditional Fishermen of Kerala: Analysing and Identify Self Help Groups digs into the major role of Self-Help Groups (SHGs) and cooperatives in ensuring the livelihood security of fishermen in Kerala. With a robust sample size of 900 collected from twelve fishing villages, the study reveals the significant impact of both fishing and non-fishing income on the socio-economic development of the fishing community. It highlights the positive outcomes brought about by the institutional setup of SHGs and cooperatives in uplifting the fishermen's livelihoods and providing them with enhanced economic opportunities. While the benefits of these mechanisms are evident, the research also points out that fishermen continue to face unique challenges, preventing them from fully integrating into the broader state development framework. Hence, the study strongly emphasizes the necessity for a well-tailored policy framework that addresses the specific needs and concerns of the fishing community. Such policies would foster their overall development, empowering them to play a more integral role in the socio-economic landscape of Kerala ((Dr.) D. Rajasen et al., 2011).

In coastal Kerala, climate change is disrupting the lives of fishers, the profound impact of climate change on Kerala's coastal fishing communities is vividly portrayed. The once-celebrated monsoon season, bringing abundant fishing hauls and economic stability, has now become a source of uncertainty and hardship. The changing marine environment, marked by erratic monsoons, cyclones, and dwindling fish stocks, has left the small-scale fishermen struggling to make ends meet. The loss of fishing days due to extreme weather events has further compounded their woes, pushing many into financial distress. The decline of the Indian oil sardine, a lifeline for these communities, has resulted in a sharp decline in catches and economic instability. The review powerfully highlights the urgent need for support and policies to address the climate-induced crisis faced by these marginalized fishermen. It calls for compassion and action to safeguard their livelihoods and ensure a sustainable future amidst the challenges of climate change (Khadar, 2021).

Impact of COVID-19 on Sundarbans Fishermen, examines the effects of the COVID-19 pandemic on fishermen in Sundarbans mangrove forest-dependent communities in Bangladesh, presents a poignant narrative of the challenges faced by these communities. The research adeptly combines qualitative and quantitative methods, providing a comprehensive understanding of the multifaceted impacts. The findings underscore the economic hardships induced by restricted access to fishing grounds and dwindling market demand, illuminating the ripple effects on livelihoods, family dynamics, and healthcare-seeking behavior. The article not only serves as a snapshot of the immediate struggles but also advocates for long-term governmental support and calls for sustained research to monitor the evolving situation, providing a valuable contribution to the discourse on the pandemic's socio-economic impact on vulnerable communities.

In conclusion, this article serves as a critical piece in the literature, emphasizing the interconnectedness of economic, health, and social aspects in the lives of Sundarbans fishermen. Its call for targeted interventions and longitudinal studies adds depth to the understanding of the pandemic's lasting implications for these communities, urging policymakers to address the unique challenges faced by those dependent on mangrove forest resources for their livelihoods (Hossain et al., 2022).

Exploring Fishermen's Response to Challenges in the English Channel Fishery

delves into the responses of fishermen in the English Channel fishery to the various challenges confronting their profession. With commercial fishing playing a pivotal role in the economic landscape of peripheral regions, this research is timely in addressing the administrative, socioeconomic, and environmental hurdles faced by fishermen. One prominent strategy examined is diversification, wherein fishermen engage in activities tangentially related to fishing but not bound by the same constraints. The article proposes a conceptual framework to comprehend this diversification phenomenon.

The key findings underscore that, when confronted with challenges, fishermen predominantly opt for adapting their fishing behavior before contemplating diversification. Moreover, the research identifies a segment of fishermen resistant to diversification, citing economic and sociocultural constraints as the primary reasons. By shedding light on these nuanced responses, the study provides valuable insights for policymakers and industry stakeholders aiming to support the resilience and sustainability of the English Channel fishery (Morgan, 2016).

Socioeconomic Characteristics and Fishing Patterns of Fishers in James Town, provides a comprehensive analysis of the socioeconomic characteristics, fishing patterns, and challenges faced by fishers in James Town, Ghana. The research employs a semi-structured questionnaire to gather information on various aspects, including demographics, socioeconomic features, fishing practices, expenditure dynamics, and challenges encountered by the fishers. The data, analyzed through descriptive statistics and an endogenous switching regression model, reveals insightful patterns.

The findings highlight that, on average, approximately 4 individuals are engaged in onshore activities, dedicating around 9.45 hours. Fishers typically spend an average of 3.09 days at sea. Notably, a significant proportion of respondents have not accessed loans or insurance for their operations. Major challenges identified include the lack of transparency in pre-mix distribution, high equipment costs, expensive premix,

and the detrimental practice of waste dumping by foreign vessels. Additionally, the study identifies key factors such as boat size, maintenance, household size, boat age, and the position of individuals on the boat as influential in determining fish catch volumes among fishermen. In conclusion, the study underscores the high variability in the socio-economic characteristics and fishing patterns among the fishers in James Town, Ghana (Larbi Ayisi et al., 2023).

Challenges Faced by Indigenous Fishermen in Bangladesh: A Socio-Economic Analysis delves into the predicaments encountered by indigenous fishing communities in Bangladesh, highlighting the transformative challenges to their traditional livelihoods. With over 30 indigenous fishing communities heavily reliant on fishing, the study notes historical ease of access to open water bodies. However, in recent decades, a confluence of factors, including river siltation, wetland changes, the influx of non-indigenous fishermen, and the absence of conducive entrepreneurship policies, has led to a significant shift in traditional occupations. The research methodology incorporates sample surveys involving 250 respondents, focus group discussions, and case studies spanning five distinct fishermen communities. Through these approaches, the article aims to provide a nuanced understanding of the multifaceted challenges faced by indigenous fishermen in Bangladesh. The socio-economic analysis presented in the article contributes to the ongoing discourse on sustainable livelihoods and policy considerations for safeguarding the economic conditions of indigenous fishing communities (Rahman, 2019).

Social Adaptation to Climate Change Among Fishermen in the East Coast Region of Peninsular Malaysia examines the social adaptation of fishermen in response to climate change in the East Coast Region of Peninsular Malaysia. The study, involving 300 registered fishermen, utilizes a comprehensive questionnaire based on the individual adaptive capacity framework. The key findings reveal a commendable level of adaptation in environmental awareness, attitudes, beliefs, and local environmental knowledge. However, there is a notable deficiency in adaptation concerning attachment to place, formal and informal networks, and attachment to occupation. The study suggests moderate adaptation in ten other aspects.

It's crucial to acknowledge the regional specificity of the findings, limited to registered fishermen in the East Coast Region. This limitation emphasizes the need for caution in generalizing the results to fishermen in different regions. The practical implications are significant, as the study not only identifies specific strengths and weaknesses in the fishermen's adaptive strategies but also offers suggestions and recommendations. These insights can serve as valuable tools for developing strategic and systematic adaptation options to address the impending impacts of climate change on coastal communities (Azril Mohamed Shaffril et al., 2013).

The Socio-economic Situation and Occupational Challenges of Fishermen in Sylhet investigates the existing socio-economic conditions of fishermen in Sylhet, shedding light on pertinent issues impacting their occupational struggle for survival. Conducted in the Sylheti dialect of Bengali and translated into English, the research outlines the challenging socio-economic circumstances faced by the fishing community, encompassing aspects such as very low income, large family size, extended working hours, and limited access to health, housing, and sanitation facilities. The study particularly focuses on a sub-urban area in close

proximity to Sylhet city, emphasizing occupational challenges that adversely affect their income, occupation, and overall satisfaction. Notably, a majority of participants express dissatisfaction with their current income, with a significant number expressing a desire to change their occupation. The paper concludes by presenting policy guidelines aimed at addressing these challenges and enhancing the general well-being of the fishing community (Hussain M, 2010).

Chinese fishermen in disputed waters: Not quite a “people's war” offers a nuanced perspective on China's fishermen in disputed waters, emphasizing that their presence is primarily motivated by concerns related to food security and economic interests rather than being solely driven by strategic or political considerations. The study, drawing on extensive interviews, official documents, and existing research, challenges the narrative of a “people's war” at sea, providing a more comprehensive understanding of the factors influencing China's marine fishery sector expansion. By focusing on the economic and food security dimensions, the research contributes valuable insights into the multifaceted dynamics of maritime conflicts in the South China Sea and the East China Sea, showcasing the centrality of China's fishermen in these complex geopolitical scenarios (Zhang, 2016).

Urban Fishermen in Gaya Island, Kota Kinabalu, Sabah: The Challenges highlights the evolving landscape of fishing activities in Kota Kinabalu, Sabah, particularly on Gaya Island, due to the city's rapid development. Despite being traditionally viewed as rural, artisanal fishing has become a significant source of income for urban dwellers. The paper aims to delve into the challenges confronted by fishermen on Gaya Island in the face of ongoing developments. Employing an ethnographic approach with in-depth interviews and participant observation, the study explores the experiences of these fishermen and their strategies for sustaining their fishing activities. Notably, the findings indicate that fishermen on Gaya Island contend with “congestion space” as they share resources with other stakeholders, including those involved in tourism and Sabah Parks, shedding light on the complex dynamics of urban fishing communities (Shah & Selamat, n.d.).

“Because if we talk about health issues first, it is easier to talk about human trafficking”; findings from a mixed methods study on health needs and service provision among migrant and trafficked fishermen in the Mekong delves into the disturbing realm of human trafficking within the fishing industry in the Greater Mekong Subregion, painting a stark picture of the severe exploitation and abuse faced by trafficked fishermen. It highlights the unique challenges of this largely unregulated sector, operating in international waters far from shore and beyond national jurisdiction, where workers are exposed to life-threatening risks. The study employs a systematic approach, involving a sample of 275 trafficked fishermen in Thailand and Cambodia, to explore their physical and mental health, occupational hazards, and post-trafficking well-being.

The findings uncover a troubling array of health issues, including dizzy spells, exhaustion, headaches, and memory problems, with one-quarter of the participants reporting being in “poor” health. The association between physical health symptoms and severe violence, injuries, long-haul fishing, and mental health disorders is underscored. The study emphasizes the multifaceted challenges faced by survivors,

including exposure to work hazards, struggles in obtaining healthcare, and post-trafficking concerns such as financial difficulties, guilt, and shame. The conclusion of the paper strongly advocates for the necessity of safe working conditions, targeted protections against human trafficking, and the provision of compensation and care for survivors. The urgent call for international attention and intervention is underscored, emphasizing the imperative of addressing this critical human rights issue and ameliorating the plight of those ensnared in the heinous crime of "sea slavery" (Pocock et al., 2018).

Exploring Prospects, Challenges and Pathways to Economic and Sustainable Growth: Perception of Omani Fishermen addresses the economic challenges and untapped potential in the fishing sector among Omanis. It underscores the significant economic loss, approximately 2.4 billion Omani rial, due to the underutilization of fishermen in the fishing value chain despite existing subsidies. The abstract emphasizes the need for a valid and reliable scale to measure fishermen's attitudes toward the fishery sector, highlighting the importance of understanding the factors influencing their perceptions and behaviors. The development of such a scale is positioned as a crucial step in fisheries decision-making and research, enabling the identification of areas for improvement and the formulation of targeted interventions.

Furthermore, the study suggests that unlocking Oman's fishing potential could lead to a profitable and sustainable fishing sector, contributing significantly to economic diversification and employment generation. It concludes by presenting key insights derived from the questionnaire, indicating that implementing measures such as improving access to finance, investing in new technologies, and strengthening government policies can enhance fishermen's livelihoods and foster sustainable growth in the fisheries sector (n.d.).

Marketing Challenges Faced by Poor Fishermen Communities of Rural Bangladesh highlights the challenges faced by indigenous fishing communities in Bangladesh, emphasizing their historical dependence on fishing for livelihood. It outlines the contemporary issues that have led to a shift in their traditional occupations, resulting in a precarious economic situation. The abstract points to marketing problems, river and wetland siltation, and the involvement of non-indigenous fishermen as key factors contributing to this alarming shift.

The study involves 250 respondents from diverse indigenous fishing communities, including Bagdi, Rajbangshi, Malo, Julla, and Barman. The challenges faced by these communities are further elucidated, with a focus on river, canal, and wetland siltation, difficulties in obtaining leases for open water bodies due to influential non-fishermen, and the absence of supportive financial institutions. The potential extinction of these indigenous communities is portrayed as a significant loss to the country (Rahman, 2019).

Livelihood Vulnerability of Marine Fishermen to Multi-Stresses under the Vessel Buyback and Fishermen Transfer Programs in China: The Case of Zhoushan City, Zhejiang Province discusses the impact of vessel buyback and fishermen transfer on the livelihoods of traditional marine fishermen, specifically their transition to related industries such as mariculture, fish processing, and recreational fishery. The paper aims to assess the livelihood vulnerability of different types of fishermen under multi-stresses,

offering insights for rebuilding sustainable livelihoods. The study, conducted in Zhoushan City, Zhejiang Province, China, introduces a framework for fishermen's livelihood vulnerability assessment and employs empirical analysis based on a survey. Approximately 37.35% of fishermen were identified as having a high level of vulnerability, characterized by advanced age and low education levels. Converted fishermen, despite facing fewer exposure risks, exhibited higher vulnerability due to poor adaptive ability. Recreational fishermen showed relatively low livelihood vulnerability compared to non-fisheries-related activities. The regression tree analysis highlighted factors such as the number of household income sources, conversion status, impacts of disturbances, and the presence of fishery facilities as determinants of fishermen's livelihood vulnerability. The paper recommends government attention to fishermen with single-family income sources and converted fishermen facing scarcity in productive physical capital (Chen et al., 2020).

Challenges in Experimental Economics: Discussions based on a field study among fishermen discusses the evolution of experimental economics, which has become an integral part of economic science and is regularly featured in economics journals. However, ongoing debates persist within this field, including discussions on whether experimental findings should prompt revisions to economic theory, the choice between laboratory and field experiments, and various methodological considerations. The thesis aims to delve into these debates and address challenges encountered when conducting experiments in economics. The discussions draw from existing literature and the authors' experiences, including a field study conducted in collaboration with researchers from the Beijer Institute in Stockholm. While the Beijer Institute conducted laboratory experiments with standard subjects focusing on common-pool resources, the authors replicated the experiment with Norwegian fishermen as non-standard subjects. The primary objective of the thesis is to elucidate why experiments remain a contentious topic in economic science and identify the key challenges inherent in implementing experiments for economic research (Uuskartano & Breivik, 2013).

Catch Share Design Manual: A Guide for Managers and Fishermen highlights the importance of the effective design of a catch share program in meeting the needs of a fishery and its communities under catch shares management. The "Catch Shares Design Manual: A Guide for Fishermen and Managers" offers valuable insights and recommendations to fishery managers and stakeholders, focusing on specific design elements related to conservation, economic considerations, and social objectives. The manual serves as a comprehensive resource, providing a roadmap for catch share design based on the extensive experience of numerous fisheries across over a dozen countries. It incorporates the expertise of more than 30 fishery experts globally, making it a valuable guide for optimizing catch share programs for the benefit of both fisheries and their associated communities (*Digital library of the commons*, n.d.).

Cross-scale Adaptation Challenges in the Coastal Fisheries: Findings from Lebesby, Northern Norway discusses cross-scale adaptation challenges in the coastal fisheries of Lebesby municipality, Finnmark County, northern Norway, based on fieldwork conducted in the region. While fishery actors in Lebesby recognize connections between climate variability and coastal fishing activities, they don't perceive their livelihoods as

particularly vulnerable to climate change. However, they identify various social factors influencing the flexibility of coastal fishing activities and livelihoods in response to changing environmental conditions. The study emphasizes that these factors, along with actors' perceptions of their resilience, play crucial roles in adaptive capacity, potentially impacting local responses to climate variability and change. Four adaptation arenas are identified: local perceptions of vulnerability and resilience, Lebesby's social and economic viability, national fishery management and regulations, and the markets and economy of coastal fishing. These adaptation arenas manifest across geographic and temporal scales, creating specific challenges and opportunities for local adaptation. The study underscores the importance of addressing cross-scale adaptation challenges in Arctic communities dependent on natural resources and advocates for a broader application of the concept of adaptation arenas (n.d.-b).

Health-Related Exposures and Conditions among US Fishermen highlights the health conditions, behaviors, and coverage among US fishermen, a high-risk occupation lacking sufficient surveillance. Publicly available data, including the National Health Interview Survey – Occupational Health Supplement (NHIS-OHS, 2015) and Behavioral Risk Factor Surveillance System (BRFSS) (2013–2015), were used to identify common exposures and outcomes among fishermen. The study reveals that fishermen frequently experience general and psychosocial exposures, non-standard work arrangements, night shifts, and shift work. High prevalence rates of musculoskeletal conditions such as carpal tunnel syndrome (33%) and severe low-back pain (27%) are reported. Widespread smoking (45%) and second-hand smoke exposure (25%) are noted, and 21% lack health care coverage. Comparisons with agricultural workers and all-workers are made. The study advocates for increased access to health care and health promotion programs for this workforce, emphasizing the importance of utilizing national household surveys to assess the health status of fishermen (Doza et al., 2022).

1.5 OBJECTIVES

1.5.1 General Objectives:

1. To explore the socioeconomic impacts faced by traditional fishermen due to the increasing presence of commercial fishermen in their fishing grounds.

1.5.2 Specific Objectives:

1. To understand the socio demographic characteristics of the participants.
2. To assess the socioeconomic challenges faced by traditional fishermen in Kollam.
3. To explore the challenges faced by traditional fishermen in the arrival of commercial fisherman.
4. To study the coping strategies adapted by the traditional fishermen in the light of commercial fishermen.

1.5.3 Research Questions:

1. What are the socio demographic characteristics of the participants?
2. What are the socioeconomic challenges faced by traditional fishermen in Kollam?
3. What are the challenges faced by traditional fishermen in the arrival of commercial fisherman?
4. What are the coping strategies adapted by the traditional fishermen in the light of commercial fishermen?

1.6 KEY CONCEPT

1.6.1 Theoretical Definitions

1. **Tradition Fishermen:** Traditional Fishing Community is a defined group of people who share identity and attachment toward one another and interact on an ongoing basis to perform activities along the fisheries value chain based on experiential knowledge accumulated over time and passed along generations. (Nayak et al., 2021)
2. **Socioeconomic Challenges:** Socio-economic challenges encompass various aspects, including but not limited to income disparities, limited access to resources, unemployment, poverty, inadequate education, healthcare, and social inequalities, which can significantly affect the well-being and livelihoods of people, particularly in vulnerable or marginalized groups. (Gunawan, 2019)
3. **Commercial Fisherman:** Traditional fishermen who fish primarily for their own consumption or local community needs, commercial fishermen operate on a larger scale and typically sell their catch to markets, seafood processors, or distributors. (Davis, 2012).

1.6.2 Operational Definition

1. **Traditional Fishermen:** Traditional fishermen are individuals who have long been associated with fishing activities as a means of subsistence and cultural heritage, often passed down through generations. Unlike commercial fishermen who fish for profit, traditional fishermen typically rely on small-scale and artisan fishing methods to sustain their families and local communities with fresh seafood.
2. **Socioeconomic Challenges:** Socio-economic challenges refer to the complex and interrelated difficulties faced by traditional fishermen that are related to both social and economic factors. These challenges encompass a wide range of issues, including but not limited to, declining fish stocks, reduced fishing yields, fluctuating market prices, inadequate access to credit and financial resources, limited market opportunities, poverty, lack of education and skill development, and social marginalization.
3. **Commercial Fisherman:** Commercial fishermen are individuals or groups engaged in fishing activities with the primary objective of generating profit and commercial gain. They are driven by market demand and economic incentives, seeking to maximize their catch and earnings. Commercial fishermen are usually associated with larger vessels, modern fishing equipment, and the integration of business practices into their fishing operations.

1.7 Significance of the Study

Studying the socio-economic and cultural challenges faced by traditional fishermen in the presence of commercial fishermen is significant as it provides valuable knowledge into the complex interactions between these two fishing communities. The research allows for a in depth understanding of how traditional and commercial fishermen coexist, share fishing resources, and navigate the changing fishing methods in Kollam.

The findings from the research paper can contribute to sustainable fisheries management in Kollam. By identifying specific challenges such as declining fish stocks and limited access to fishing grounds, policymakers can design targeted interventions to address these issues and ensure the long-term sustainability of fishery resources. Understanding the economic changes and market domination faced by traditional fishermen can guide efforts to promote equitable opportunities and economic empowerment for these communities.(Nayak et al., 2021)

Preserving cultural heritage is another significant aspect of the study. Traditional fishing practices are deeply rooted in the cultural identity of fishing communities in Kollam. By exploring the impact of commercial fishing on cultural practices and knowledge, the research paper can inform efforts to preserve and strengthen cultural heritage, ensuring that traditional fishing traditions are passed down to future generations (Davis, 2012).

Furthermore, the research paper's contribution to the academic literature on fisheries management and cultural heritage enriches the knowledge base in these fields. It can serve as a reference for future researchers and policymakers interested in similar coexistence scenarios in other regions. Through the research findings, the study can raise awareness among the general public and stakeholders about the unique challenges faced by traditional fishermen in Kollam. Increased awareness can lead to support for initiatives that promote sustainable and inclusive fishing practices and policy advocacy to protect the rights and interests of traditional fishing communities.

CHAPTER II METHODOLOGY

2.1 INTRODUCTION

The present study's methodology used to explore the multifaceted challenges faced by traditional fishermen in the Kollam district. The study adopts a qualitative research approach employing thematic analysis to delve into the complexities surrounding the economic, social, and environmental aspects influencing the livelihoods of these fishermen. The research design, objectives, and procedural aspects are elaborated upon in detail. In contrast to a quantitative approach used in previous studies, this investigation employs a qualitative descriptive study design. The sampling method applied for this study involves purposeful sampling, allowing for a comprehensive understanding of the experiences and perspectives of traditional fishermen in various contexts and fishing communities within the Kollam district."

2.2 TITLE OF THE STUDY

Traditional Fishermen's Struggles and Coping Strategies in the Presence of Commercial Fishing – A Case Study in Kollam

2.3 AREA OF THE STUDY

The area of the study focuses on understanding the challenges, socio-economic dynamics, and environmental impacts affecting traditional fishermen within this coastal region. The geographical area of study for this research encompasses the Kollam district, a region situated in the southern part of Kerala, India. Kollam district is renowned for its expansive coastline along the Arabian Sea, making it a significant hub for traditional fishing communities. Through an in-depth exploration of various fishing communities within the Kollam district, the research aims to light the complex interplay between economic hardships, social factors, environmental changes, and the resilience exhibited by these traditional fishing populations.

2.4 RESEARCH APPROACH

The research approach used in this study is **Qualitative approach**.

The qualitative research approach was considered the most suitable methodology for this study due to its strengths in digging into the intricate and context-specific issues prevalent among traditional fishermen in Kollam. One of the primary advantages of employing a qualitative approach lies in its capacity to facilitate a comprehensive understanding of the multifaceted challenges faced by these fishermen. By allowing for a deeper exploration of the local context, cultural values, and community dynamics, this approach enables researchers to navigate and respect the complex cultural sensitivities inherent within the fishing communities. The qualitative approach aligns well with the need for longitudinal exploration, offering a flexible and adaptable framework to conduct ongoing studies. This longitudinal aspect is crucial in capturing the evolving nature of the challenges faced by traditional fishermen over time, allowing researchers to track changes and fluctuations within the community's issues.

The qualitative approach ensures a direct and immersive engagement with the community in Kollam. By establishing a close rapport and trust with the fishermen, researchers can obtain firsthand insights into the unique challenges, needs, and aspirations of the community. This direct connectivity fosters a more comprehensive understanding of the complexities surrounding the traditional fishing practices and the various socio-economic and environmental factors affecting the community's livelihoods.

Overall, the qualitative approach was chosen due to its ability to provide a nuanced, in-depth exploration of the challenges faced by traditional fishermen in Kollam, respecting their cultural values, engaging directly with the community, and offering a platform for continuous, contextualized research.

2.5 RESEARCH DESIGN

The research design in this study is **Case Study design**.

The choice of a qualitative approach, specifically employing a case study design, was deliberate for its capacity to delve deeply into the intricate dynamics of traditional and commercial fishing communities. Qualitative research allows for a comprehensive exploration of participants' perspectives, experiences, and the contextual factors shaping their lives. The case study design, focusing on specific instances within the broader context, enables a detailed examination of the unique challenges faced by these fishermen. This approach is particularly valuable for unraveling the complexities and nuances inherent in the coexistence of traditional and commercial

fishermen in the same community. It offers a more holistic and contextualized understanding, which is essential for informing effective interventions and policies.

2.6 RECRUITMENT OF THE PARTICIPANTS

Participants for the study will be recruited through purposive sampling. Initially, contact will be established with local fishing communities and relevant fishing associations to seek their cooperation. Potential participants who meet the inclusion criteria will be identified, and their interest in participating will be assessed.

2.6.1 UNIVERSE OF THE STUDY

Traditional Fishermen.

2.6.2 POPULATION OF THE STUDY

Traditional Fishermen from the **Kollam coastal line.**

2.7 SAMPLING TECHNIQUE

Purposive Sampling Technique

The purposive sampling technique was used in this study to select participants intentionally based on their knowledge, experience, and relevance to the research topic. Since the study focuses on the impact faced by traditional fishermen due to the arrival of commercial fishermen, purposive sampling ensures that individuals with direct involvement in the fishing community.

2.8 SAMPLE SIZE

6 to 10 size of participants is considered a good sample size for a study of this nature.

A sample size ranging from 6 to 10 participants holds considerable significance in qualitative studies, particularly when investigating the context of traditional fishermen in Kollam. This size is optimal due to several reasons. It allows for a profound and detailed exploration of each participant's experiences, perspectives, and challenges within the fishing community. Given the depth and richness of qualitative data collection, this sample size aligns with resource constraints by ensuring manageable data collection, transcription, and analysis efforts. It is often observed that after interviewing approximately 6 to 10 participants, researchers reach a saturation point where new interviews fail to yield significantly novel insights. This indicates that the sample size is sufficient to capture a comprehensive range of perspectives. Such a smaller sample size offers researchers an opportunity to deeply engage with individual stories and narratives, enabling a nuanced understanding of the intricacies and contextual factors specific to the traditional fishing practices in Kollam.

2.9 INCLUSION CRITERIA

1. Fishermen who practices traditional methods which is typically involving age-old techniques that have been passed down through generations. These methods often include the use of non-mechanized tools and practices that rely on indigenous knowledge and experience. The approach is often more sustainable and aligned with the local ecosystem, aiming to minimize environmental impact while ensuring a steady catch.

2. Fishermen with more than 10 years of experiences, because they have depth knowledge about the challenges and with more than 10 years of experiences they will be able to share their experiences which will be helpful for the study.
3. Participants must be currently residing in the coastal region and actively involved in traditional fishing practices, relying on fishing as their primary source of livelihood..

2.10 EXCLUSION CRITERIA

1. Participant who was a traditional fishermen but currently a commercial fishermen.
2. Participant who used to be a fishermen for the past 10 years but currently unemployed.
3. Participant who have less than 5 years of experience in traditional method.

2.11 METHOD OF DATA COLLECTION

The method of data collection adopted in this study is in dept **interview**.

The selection of interviews as the method of data collection for this study is underpinned by its capacity to delve deeply into the perspectives and experiences of participants. Interviews offer a dynamic and adaptive approach, enabling researchers to explore complex and multifaceted topics in a nuanced manner. The interactive nature of interviews cultivates a level of participant engagement that is conducive to obtaining candid and detailed insights. Furthermore, the flexibility inherent in this method allows for the adjustment of questions based on emerging responses, ensuring a more responsive and contextually rich exploration. Given the study's focus on socioeconomic and cultural challenges, the depth provided by interviews becomes particularly crucial in unraveling the intricacies of the participants' lived realities. Overall, the adoption of interviews is a deliberate choice aimed at facilitating a thorough and comprehensive understanding of the subject matter.

2.12 TOOLS

Interview Guide is used as tool.

The interview schedule was structured around four core objectives to comprehensively explore the dynamics and challenges faced by traditional fishermen in Kollam. Firstly, it aimed to gather demographic data, investigative about age, gender, family structure, educational background, and tenure in the fishing profession. Secondly, it delved into the socioeconomic challenges encountered, probing into issues like escalating fuel costs, limitations in accessing modern fishing gear, income instability due to market fluctuations, and the impact of climate change on their livelihoods. The third objective revolved around understanding the specific challenges emerging from the arrival of commercial fishermen, focusing on changes in fishing practices, depletion of fish stocks, competition for fishing grounds, and sociocultural disruptions. Finally, the schedule explored coping mechanisms utilized by traditional fishermen, encompassing adaptations in fishing schedules, collaborative initiatives among fishermen, technological adjustments, and diversification of income sources as strategies to counter the adversities posed by commercial competition.

2.13 DATA ANALYSIS METHOD

Thematic Analysis: The choice of Thematic Analysis as the method for data analysis in this study is driven by its suitability for exploring and interpreting qualitative data in a systematic and rigorous manner. Thematic Analysis offers a flexible yet structured approach to identifying, analyzing, and reporting patterns (themes) within the data. Here are some reasons why Thematic Analysis is apt for this study:

Thematic Analysis stands as the preferred method for data analysis in this study due to its adaptability and structured process, perfectly aligned with unraveling the complex narratives and experiences of traditional fishermen in Kollam. Specifically tailored to handle qualitative data, this approach allows for a systematic examination of various themes or patterns embedded within the narratives, stories, and insights shared by the fishermen.

In the context of the fishermen in Kollam, Thematic Analysis serves as an ideal method due to its flexibility in accommodating diverse perspectives and experiences. By breaking down the data into manageable parts, it enables researchers to explore a wide array of issues—ranging from socio-economic challenges to environmental impacts and cultural dynamics—prevalent within the fishing communities.

Thematic Analysis offers a structured framework for examining the qualitative data collected from interviews, focus groups, or observations. This systematic process aids in organizing the rich and diverse information gathered from the fishermen, allowing for the identification of recurring themes or patterns that encapsulate their experiences, struggles, coping mechanisms, and aspirations within the context of their traditional fishing practices.

Furthermore, this method provides a nuanced understanding of the interconnections of various themes, shedding light on how different factors, such as economic constraints, environmental changes, or cultural values, intertwine to shape the lives and livelihoods of traditional fishermen in Kollam. Its adaptability and systematic nature empower researchers to uncover not just the surface-level challenges but also the underlying complexities and nuances embedded within the fishermen's narratives, contributing to a more comprehensive and insightful analysis of their experiences.

2.14 ETHICAL CONSIDERTION

1. Anonymity and confidentiality of the participants will be kept.
2. The participants have the right to withdraw from the study during the data collection period.
3. The participants will not get any personal benefits or rewards for participating in the study.

CHAPTER III: RESULT*Demographic Details:***Figure 1**

Income :	Exp in fishing field :	Working/ Not:	Residence:	Number of Members in family:	Education Status:	Age:	Participant No:
15k-20k	47 Years	Working	Kochupilamood	6, including participant.	Uneducated	56yrs	1
15k-20k	33 Years	Working	Kochupilamood	4, including participant.	Primary Education	45yrs	2
	55 Years	Not, retired	Kochupilamood	7, including participant.	Uneducated	64yrs	3
15k-20k	37 Years	Working	Pallithottam	5, including participant.	Primary Education	49yrs	4
15k-20k	40 Years	Working	Pallithottam	4, including participant	Primary Education	50yrs	5
15k-20k	37 Years	Working	Pallithottam	4, including participant.	Primary Education	47yrs	6

There are a total of six participants, with the majority of them (participants 2, 4, 5, and 6) falling between the ages of 45 and 50. Specifically, the first participant is 56 years old, the second is 45 years old, the third is 64 years old, the fourth is 49 years old, the fifth is 50 years old, and the sixth is 47 years old.

Most of the participants have received primary education, while two of them are uneducated. The two uneducated participants began practicing fishing at the ages of 9 and 10, while the others started their fishing careers after completing their primary education.

The number of family members varies from 4 to 7, including the participants. Five of the participants live in nuclear families, while the third participant resides in a joint family. Interestingly, the children of these participants have chosen not to pursue fishing. Many of them have moved abroad or are studying and working outside of Kollam.

The first three participants reside in the Kochupilamoodu neighborhood, while the remaining three live in the Pallithottam neighborhood under the Kollam Cooperation.

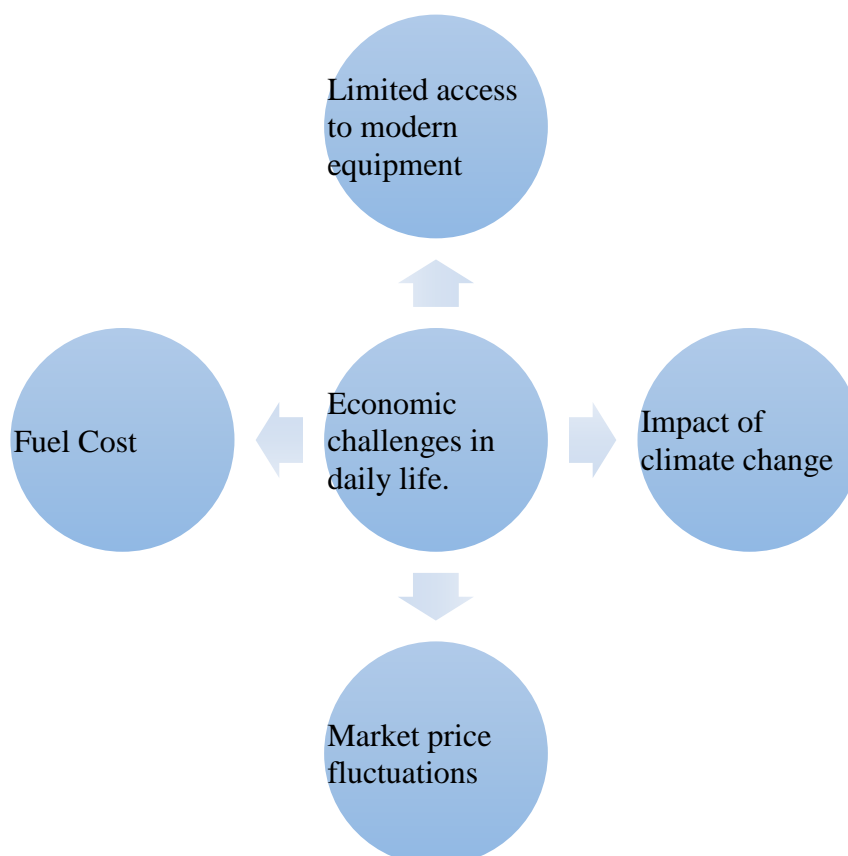
Five of the participants are actively engaged in fishing and earn between 15,000 and 20,000 per month. However, the third participant, aged 64, has retired from fishing after accumulating an impressive 55 years of experience in the field. The other participants have between 33 and 47 years of experience in the fishing industry. Interestingly, all participants believe that their fishing tradition can be traced back to the period of St. Thomas The Apostle, dating back to the 9th century.

THEMES

THEME 1

What are the socioeconomic challenges faced by traditional fishermen in Kollam? The first Theme emerged from the study is **Economic Challenges in Daily Fishing Activities**. It includes the Sub themes: Fuel Cost Pressures, Limited Access to Modern Equipment, Impact of Climate Change, Market Price Fluctuations, Catch Efficiency Limitations, Long-term Financial Planning Challenges.

Figure 2



Rise in Fuel Cost

First participant claimed that they face a multitude of economic challenges that significantly impact their daily fishing activities and livelihoods. They have claimed that the relentless increase in fuel costs is a major concern that weighs heavily on their profitability. With each fishing expedition, they find themselves grappling with the soaring expenses of fueling their boats, and this financial burden significantly eats into their profits.

As traditional fishermen in Kollam, our daily fishing activities and livelihoods are marked by a multitude of economic challenges. Among these, the relentless rise in fuel costs stands out. Each fishing expedition becomes increasingly costly as we grapple with the soaring expenses of fueling our boats, which significantly eats into our profits. This puts us at a disadvantage compared to the larger, modern fishing vessels that can better absorb such expenses.

The second participant claimed that the main economic challenges faced as traditional fishermen in Kollam encompass various facets of daily life. Notably, they pointed out the relentless surge in fuel costs, which places a significant burden on their budgets.

Participant 2: *“The economic challenges we face as traditional fishermen in Kollam are multifaceted, impacting various aspects of our daily lives. On top of the persistent issue of soaring fuel costs, we continue to grapple with the need for access to modern fishing techniques and equipment. Using traditional methods and older boats hampers our catch efficiency, directly affecting our income and making it a struggle to provide for our families”.*

The third participant highlighted that the main economic challenges they face as traditional fishermen in Kollam during their daily fishing activities are extensive and multifaceted. Notably, they emphasized the relentless rise in fuel costs, which consistently erodes their profits. The continuous increase in fuel expenses creates a financial burden for each fishing expedition.

As traditional fishermen in Kollam, we confront a complex web of economic challenges in our daily fishing activities and livelihoods. The relentless rise in fuel costs is a constant source of financial strain. Every time we set out to sea, the escalating expenses of fueling our boats erode our profits, putting us at a disadvantage compared to larger, modern fishing vessels.

The fourth participant highlighted that as traditional fishermen in Kollam, they face an array of economic challenges during their daily fishing activities. They pointed out that the relentless increase in fuel costs is a prominent issue, with each fishing trip incurring higher expenses for fueling their boats, substantially reducing profits. This situation, as claimed, puts them at a disadvantage when compared to larger, modern fishing vessels that can better absorb these costs.

As traditional fishermen in Kollam, our daily fishing activities and livelihoods are marked by a multitude of economic challenges. Among these, the relentless rise in fuel costs stands out. Each fishing expedition becomes increasingly costly as we grapple with the soaring expenses of fueling our boats, which significantly eats into our profits. This puts us at a disadvantage compared to the larger, modern fishing vessels that can better absorb such expenses.

The fifth participant pointed out that they encounter various economic challenges as traditional fishermen in Kollam during their daily fishing activities. Notably, the relentless rise in fuel costs is a major concern, significantly increasing the expenses of each fishing trip and reducing their profits.

Our daily fishing activities as traditional fishermen in Kollam are marked by numerous economic challenges. The relentless increase in fuel costs is a prominent issue that eats into our profits, making each fishing expedition more costly.

As observed by the sixth participant, traditional fishermen in Kollam encounter an array of economic challenges in their daily fishing activities. Notably, the relentless increase in fuel costs looms large as a significant concern. This ongoing surge in the cost of fuel substantially impacts their profitability with each fishing trip, placing them at a disadvantage compared to modern, larger fishing vessels that can better absorb such expenses.

As traditional fishermen in Kollam, our daily fishing activities and livelihoods are marked by a multitude of economic challenges. The relentless rise in fuel costs stands out as a significant issue. With each fishing expedition, we find ourselves grappling with the soaring expenses of fueling our boats, significantly impacting our profitability. This puts us at a disadvantage compared to the larger, modern fishing vessels that can better absorb such costs.

Limited access to modern equipment

First participant claimed that they face a multitude of economic challenges that significantly impact their daily fishing activities and livelihoods. They have claimed that the relentless increase in fuel costs is a major concern that weighs heavily on their profitability. And, they have highlighted that the lack of access to modern fishing techniques and equipment remains a persistent challenge. Their continued reliance on traditional methods and older boats limits their catch efficiency, which directly affects their income. They have also shared that this situation makes it a constant struggle to provide for their families and ensure their well-being.

As traditional fishermen in Kollam, our daily fishing activities and livelihoods are marked by a multitude of economic challenges. Access to modern fishing techniques and equipment remains a distant dream. Our continued reliance on traditional methods and older boats limits our catch efficiency, directly affecting our income and making it a constant struggle to provide for our families.

The second participant claimed that the main economic challenges faced as traditional fishermen in Kollam encompass various facets of daily life. Notably, they pointed out the relentless surge in fuel costs, which places a significant burden on their budgets. They also highlighted the critical need for access to modern fishing techniques and equipment, as reliance on traditional methods and older boats impacts catch efficiency, thereby affecting income and the ability to support their families.

The economic challenges we face as traditional fishermen in Kollam are multifaceted, impacting various aspects of our daily lives. On top of the persistent issue of soaring fuel costs, we continue to grapple with the need for access to modern fishing techniques and equipment. Using traditional methods and older boats hampers our catch efficiency, directly affecting our income and making it a struggle to provide for our families.

The third participant highlighted that the main economic challenges they face as traditional fishermen in Kollam during their daily fishing activities are extensive and multifaceted. Notably, they emphasized the relentless rise in fuel costs, which consistently erodes their profits. The continuous increase in fuel expenses creates a financial burden for each fishing expedition. Furthermore, they shared that access to modern fishing techniques and equipment remains out of reach. Their dependence on traditional methods and older boats limits the efficiency of their catches, directly impacting their income and making it a constant struggle to support their families.

As traditional fishermen in Kollam, we confront a complex web of economic challenges in our daily fishing activities and livelihoods. The relentless rise in fuel costs is a constant source of financial strain. Every time we set out to sea, the escalating expenses of fueling our boats erode our profits, putting us at a disadvantage compared to larger, modern fishing vessels. The pressing need for access to modern fishing techniques and equipment remains unmet. Our reliance on traditional methods and older boats hinders our catch efficiency, directly impacting our income and making it challenging to provide for our families.

The fourth participant highlighted that as traditional fishermen in Kollam, they face an array of economic challenges during their daily fishing activities. They pointed out that the relentless increase in fuel costs is a prominent issue, with each fishing trip incurring higher expenses for fueling their boats, substantially reducing profits. This situation, as claimed, puts them at a disadvantage when compared to larger, modern fishing vessels that can better absorb these costs. The participant also shared that access to modern fishing techniques and equipment remains elusive. Their reliance on traditional methods and older boats hinders catch efficiency, directly impacting income and creating an ongoing struggle to provide for their families..

As traditional fishermen in Kollam, our daily fishing activities and livelihoods are marked by a multitude of economic challenges. Access to modern fishing techniques and equipment remains a distant dream. Our continued reliance on traditional methods and older boats limits our catch efficiency, directly affecting our income and making it a constant struggle to provide for our families.

The fifth participant pointed out that they encounter various economic challenges as traditional fishermen in Kollam during their daily fishing activities. Notably, the relentless rise in fuel costs is a major concern, significantly increasing the expenses of each fishing trip and reducing their profits. Limited access to modern fishing techniques and equipment impairs their catch efficiency, directly affecting their income.

Our daily fishing activities as traditional fishermen in Kollam are marked by numerous economic challenges. The relentless increase in fuel costs is a prominent issue that eats into our profits, making each fishing expedition more costly. Limited access to modern fishing techniques and equipment hampers our catch efficiency, impacting our income.

As observed by the sixth participant, traditional fishermen in Kollam encounter an array of economic challenges in their daily fishing activities. Notably, the relentless increase in fuel costs looms large as a significant concern. Furthermore, their limited access to contemporary fishing techniques and equipment hinders catch efficiency, directly affecting their income.

As traditional fishermen in Kollam, our daily fishing activities and livelihoods are marked by a multitude of economic challenges. The relentless rise in fuel costs stands out as a significant issue. With each fishing expedition, we find ourselves grappling with the soaring expenses of fueling our boats, significantly impacting our profitability. Additionally, access to modern fishing techniques and equipment remains a distant dream for us. Our continued reliance on traditional methods and older boats limits our catch efficiency, directly affecting our income.

Impact of climate change

First participant claimed that they face a multitude of economic challenges that significantly impact their daily fishing activities and livelihoods. They have claimed that the relentless increase in fuel costs is a major concern that weighs heavily on their profitability. Additionally, they have highlighted that the lack of access to modern fishing techniques and equipment remains a persistent challenge. The impact of climate change further complicates their economic situation, with unpredictable weather patterns and extreme events like storms and heavy rains. They have pointed out that these events not only damage their fishing gear but also disrupt their schedules, making it challenging to plan and maintain a steady income.

As traditional fishermen in Kollam, our daily fishing activities and livelihoods are marked by a multitude of economic challenges. Among these, the relentless rise in fuel costs stands out. Each fishing expedition becomes increasingly costly as we grapple with the soaring expenses of fueling our boats, which significantly eats into our profits. Climate change, with its unpredictable weather patterns and extreme events like storms and heavy rains, adds further complexity to our economic woes. These events not only damage our fishing gear but also disrupt our schedules, making it challenging to plan and maintain a steady income.

The second participant claimed that the main economic challenges faced as traditional fishermen in Kollam encompass various facets of daily life. Notably, they pointed out the relentless surge in fuel costs, which places a significant burden on their budgets. And, they shared that unpredictable weather patterns driven by climate change lead to more frequent extreme weather events, resulting in damage to fishing gear and disrupted schedules, thereby challenging the maintenance of a steady income.

The economic challenges we face as traditional fishermen in Kollam are multifaceted, impacting various aspects of our daily lives. On top of the persistent issue of soaring fuel costs, we continue to grapple with the need for access to modern fishing techniques and equipment. Moreover,unpredictable weather patterns caused by climate change have brought about more frequent extreme weather events like storms and heavy rains. These events not only damage our fishing gear but also disrupt our fishing schedules, making it harder to plan and maintain a steady income.

The third participant highlighted that the main economic challenges they face as traditional fishermen in Kollam during their daily fishing activities are extensive and multifaceted. Notably, they emphasized the relentless rise in fuel costs, which consistently erodes their profits. The participant also pointed out that climate change has introduced further complexities to their economic challenges. Unpredictable weather patterns, including storms and heavy rains, have become more frequent, resulting in damage to their fishing gear and disruptions in their schedules, which affects both planning and income stability.

As traditional fishermen in Kollam, we confront a complex web of economic challenges in our daily fishing activities and livelihoods. The relentless rise in fuel costs is a constant source of financial strain. Every time we set out to sea, the escalating expenses of fueling our boats erode our profits, putting us at a disadvantage compared to larger, modern fishing vessels. The pressing need for access to modern fishing techniques and equipment remains unmet. Our reliance on traditional methods and older boats hinders our catch efficiency, directly impacting our income and making it challenging to provide for our families. Climate change has added yet another layer of complexity to our economic woes. Unpredictable weather patterns, including storms and heavy rains, have become more frequent, damaging our fishing gear and disrupting our schedules. This volatility not only affects our planning but also our ability to maintain a stable income

The fourth participant highlighted that as traditional fishermen in Kollam, they face an array of economic challenges during their daily fishing activities. They pointed out that the relentless increase in fuel costs is a prominent issue, with each fishing trip incurring higher expenses for fueling their boats, substantially reducing profits. Climate change, characterized by unpredictable weather patterns and extreme events like storms and heavy rains, adds complexity to their economic challenges by damaging fishing gear and disrupting schedules.

As traditional fishermen in Kollam, our daily fishing activities and livelihoods are marked by a multitude of economic challenges. Among these, the relentless rise in fuel costs stands out. Climate change, with its unpredictable weather patterns and extreme events like storms and heavy rains, adds further complexity to our economic woes. These events not only damage our fishing gear but also disrupt our schedules, making it challenging to plan and maintain a steady income.

The fifth participant pointed out that they encounter various economic challenges as traditional fishermen in Kollam during their daily fishing activities. Notably, the relentless rise in fuel costs is a major concern, significantly increasing the expenses of each fishing trip and reducing their profits. Additionally, the unpredictability of climate change, characterized by erratic weather patterns and the occurrence of storms, damages their fishing gear and disrupts schedules, making economic matters even more intricate.

Our daily fishing activities as traditional fishermen in Kollam are marked by numerous economic challenges. The relentless increase in fuel costs is a prominent issue that eats into our profits, making each fishing expedition more costly. Climate change, with its unpredictable weather patterns and extreme events like storms, disrupts our schedules and damages our fishing gear, adding further complexity to our economic struggles.

As observed by the sixth participant, traditional fishermen in Kollam encounter an array of economic challenges in their daily fishing activities. Notably, the relentless increase in fuel costs looms large as a significant concern. The unpredictable impacts of climate change, characterized by erratic weather patterns and extreme events like storms and heavy rains, introduce additional layers of complexity to their economic hardships. These events not only inflict damage on their fishing gear but also disrupt their schedules, rendering income stability an elusive goal.

As traditional fishermen in Kollam, our daily fishing activities and livelihoods are marked by a multitude of economic challenges. The relentless rise in fuel costs stands out as a significant issue. Climate change, with its unpredictable weather patterns and extreme events like storms and heavy rains, adds further complexity to our economic woes. These events not only damage our fishing gear but also disrupt our schedules, making it challenging to plan and maintain a steady income.

Market price fluctuations

First participant claimed that they face a multitude of economic challenges that significantly impact their daily fishing activities and livelihoods. They have claimed that market fluctuations pose yet another source of economic stress. Prices for their catch can vary widely from day to day, forcing them at times to sell at lower rates due to oversupply in the market. This creates income instability and complicates their long-term financial planning. Despite these formidable challenges, they remain dedicated to their traditional way of life and the sustainable use of their local marine resources. They continue to work towards finding solutions to these economic hardships and secure a better future for themselves and their families.

As traditional fishermen in Kollam, our daily fishing activities and livelihoods are marked by a multitude of economic challenges. Market fluctuations are yet another source of economic stress. Prices for our catch can fluctuate widely from day to day, forcing us at times to sell at lower rates due to oversupply. This creates income instability and complicates our long-term financial planning.

The second participant claimed that the main economic challenges faced as traditional fishermen in Kollam encompass various facets of daily life. They emphasized the volatility of market fluctuations, which causes variations in catch prices and often forces them to sell at lower rates due to oversupply, causing income instability and complicating long-term financial planning. These perspectives from traditional fishermen in Kollam underscore the multifaceted economic challenges they face in their daily fishing activities.

The economic challenges we face as traditional fishermen in Kollam are multifaceted, impacting various aspects of our daily lives. Market fluctuations are another headache we contend with. Prices for our catch can vary widely from day to day, and sometimes we're forced to sell at lower rates due to oversupply. This volatility creates income instability and makes long-term financial planning a significant challenge.

The third participant highlighted that the main economic challenges they face as traditional fishermen in Kollam during their daily fishing activities are extensive and multifaceted. They noted market fluctuations as a significant economic stressor. Prices for their catch can fluctuate widely, forcing them to sell at lower rates during times of oversupply, creating income instability and complicating long-term financial planning.

As traditional fishermen in Kollam, we confront a complex web of economic challenges in our daily fishing activities and livelihoods. The relentless rise in fuel costs is a constant source of financial strain. The prices we receive for our catch can fluctuate significantly from day to day, and sometimes we're compelled to sell at lower rates due to oversupply, creating income instability and complicating our long-term financial planning.

The fourth participant highlighted that market fluctuations present another source of economic stress. Prices for their catch can vary significantly from day to day, occasionally forcing them to sell at lower rates due to oversupply. This fluctuation creates income instability and complicates long-term financial planning.

As traditional fishermen in Kollam, our daily fishing activities and livelihoods are marked by a multitude of economic challenges. Among these, the relentless rise in fuel costs stands out. Market fluctuations are yet another source of economic stress. Prices for our catch can fluctuate widely from day to day, forcing us at times to sell at lower rates due to oversupply. This creates income instability and complicates our long-term financial planning.

The fifth participant pointed out that they encounter various economic challenges as traditional fishermen in Kollam during their daily fishing activities. The participant highlighted the issue of market fluctuations, which leads to income instability. There are times when they are compelled to sell their catch at lower rates due to market oversupply, further complicating their long-term financial planning. Despite these challenges, their commitment to preserving their traditional way of life and the marine resources in their local community remains unwavering. They are dedicated to overcoming these economic hurdles to secure a better future for their families.

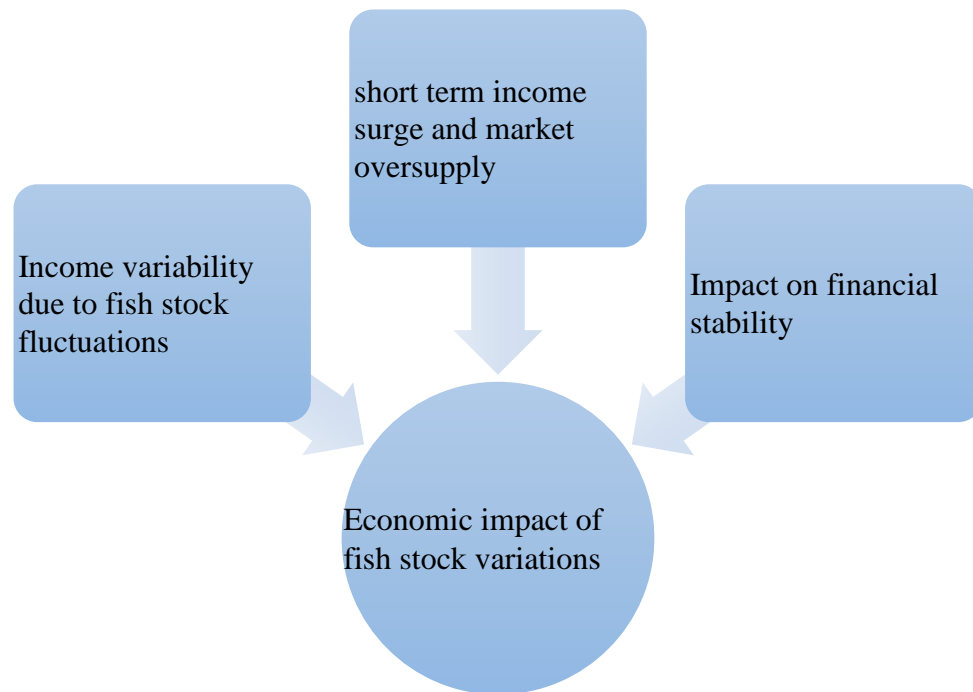
Our daily fishing activities as traditional fishermen in Kollam are marked by numerous economic challenges. Market fluctuations add to our suffering, causing income instability. We are sometimes forced to sell our catch at lower rates on certain days due to oversupply in the market. This creates income instability and further complicates our long-term financial planning. Despite these challenges, our commitment to our traditional way of life and the conservation of our local marine resources remains unwavering as we strive to overcome these economic hurdles and secure a better future for our families.

As observed by the sixth participant, traditional fishermen in Kollam encounter an array of economic challenges in their daily fishing activities. Notably, market fluctuations present yet another economic stressors, with catch prices oscillating widely from day to day. This forces them, at times, to sell their catch at reduced rates due to oversupply, thereby creating income instability and complicating their long-term financial planning.

As traditional fishermen in Kollam, our daily fishing activities and livelihoods are marked by a multitude of economic challenges. The relentless rise in fuel costs stands out as a significant issue. Market fluctuations are yet another source of economic stress. Prices for our catch can fluctuate widely from day to day, forcing us at times to sell at lower rates due to oversupply. This creates income instability and complicates our long-term financial planning.

THEME 2**What are the socioeconomic challenges faced by traditional fishermen in Kollam?**

The Second Theme emerged from the study is **Economic Impact of Fish Stock Variations**. It includes the Sub themes: Income variability due to fish stock fluctuations, Short term income surge and market oversupply, Direct Impact on Financial Stability.

Figure 3**Income variability due to fish stock fluctuations**

The first participant claimed that the income and financial stability of traditional fishermen in Kollam are substantially affected by the fluctuations in fish stocks and catches. According to their insights, when fish stocks are abundant, there is often a short-term increase in income. However, this situation frequently results in an oversupply in the market, leading to reduced prices that, in turn, have a negative impact on earnings.

The variations in fish stocks and catches have a direct connection on our income and financial stability as traditional fishermen in Kollam. When fish stocks are lavish, it can lead to a temporary increase in income. However, this also often results in oversupply in the market, causing prices to drop, which ultimately impacts our earnings negatively.

The second participant claimed that the variations in fish stocks and catches serve as a critical determinant of their income and financial stability as traditional fishermen. They pointed out that the presence of abundant fish stocks can yield short-term financial gains; however, this often results in market over saturation, subsequently lowering prices and affecting overall income.

The ebb and flow of fish stocks and catches play a pivotal role in determining our income and financial stability as traditional fishermen. When fish stocks are abundant, it can provide a short-term boost to our earnings. However, this often leads to market over saturation and subsequently lower prices, affecting our overall income. Conversely, when fish stocks are depleted, it becomes increasingly difficult to make a sustainable income.

The third participant claimed that variations in fish stocks and catches have a direct connection to their income and financial stability as traditional fishermen. They pointed out that when fish stocks are abundant, it can result in a short-term increase in income. However, this often leads to over saturation in the market, causing prices to drop, ultimately impacting their earnings negatively.

The fluctuations in fish stocks and catches have a direct impact on our income and financial stability as traditional fishermen in Kollam. When fish stocks are plentiful, it can lead to a brief surge in income. However, this often results in an oversupply of fish in the market, causing prices to plummet, which adversely affects our earnings. Conversely, when fish stocks are scarce, it becomes increasingly challenging to generate a substantial income.

The fourth participant claimed that variations in fish stocks and catches play a vital role in shaping their income and financial stability as traditional fishermen. They emphasized that when fish stocks are abundant, it can offer a temporary income boost. However, this often results in an oversupply in the market, leading to lower prices and negatively affecting their overall earnings. Conversely, when fish stocks are depleted, maintaining a sustainable income becomes increasingly challenging.

The ups and downs of fish stocks and catches significantly influence our income and financial stability as traditional fishermen. When fish stocks are abundant, it can result in a temporary boost in income. However, this frequently leads to an over saturated market, driving prices down and impacting our overall earnings negatively. Conversely, when fish stocks are depleted, it becomes increasingly difficult to sustain our income.

The fifth participant highlighted that the oscillations in fish stocks and catches hold significant sway over their income and financial stability as traditional fishermen in Kollam. They pointed out that when fish stocks are abundant, it can result in a brief upsurge in income. However, this often triggers an oversupply in the market, leading to price reductions and, consequently, detrimental impacts on their earnings. Conversely, during periods of fish scarcity, they struggle to maintain a reasonable income.

The fluctuations in fish stocks and catches have a substantial bearing on our income and financial stability as traditional fishermen in Kollam. When fish stocks are plentiful, it can lead to a brief increase in income. However, this often results in market oversupply and subsequent price drops, affecting our earnings negatively.

In line with the observations made by the sixth participant, the impact of variations in fish stocks and catches on traditional fishermen's income and financial stability is significant. Abundant fish stocks can yield a temporary boost in earnings, but this often leads to market oversupply and subsequently lower prices, resulting in an overall impact on income. Conversely, when fish stocks are in decline, sustaining a viable income becomes increasingly challenging.

The variations in fish stocks and catches are pivotal in determining our income and financial stability as traditional fishermen. When fish stocks are abundant, it can provide a short-term boost to our earnings. However, this often leads to an over saturated market and lower prices, affecting our overall income.

Short term income surge and market oversupply

The first participant claimed that the income and financial stability of traditional fishermen in Kollam are substantially affected by the fluctuations in fish stocks and catches. According to their insights, when fish stocks are abundant, there is often a short-term increase in income. However, this situation frequently results in an oversupply in the market, leading to reduced prices that, in turn, have a negative impact on earnings. The participant highlighted that in cases where fish stocks are limited, it becomes notably more challenging for these fishermen to generate a reasonable income.

The variations in fish stocks and catches have a direct connection on our income and financial stability as traditional fishermen in Kollam. When fish stocks are lavish, it can lead to a temporary increase in income. However, this also often results in oversupply in the market, causing prices to drop, which ultimately impacts our earnings negatively.

The second participant claimed that the variations in fish stocks and catches serve as a critical determinant of their income and financial stability as traditional fishermen. They pointed out that the presence of abundant fish stocks can yield short-term financial gains; however, this often results in market over saturation, subsequently lowering prices and affecting overall income. They highlighted the converse situation, where depleted fish stocks make it increasingly challenging to maintain a sustainable income, leading to more significant investments of time and resources in fishing with limited returns.

The ebb and flow of fish stocks and catches play a pivotal role in determining our income and financial stability as traditional fishermen. When fish stocks are abundant, it can provide a short-term boost to our earnings. However, this often leads to market over saturation and subsequently lower prices, affecting our overall income. Conversely, when fish stocks are depleted, it becomes increasingly difficult to make a sustainable income.

The third participant claimed that variations in fish stocks and catches have a direct connection to their income and financial stability as traditional fishermen. They pointed out that when fish stocks are abundant, it can result in a short-term increase in income. However, this often leads to over saturation in the market, causing prices to drop, ultimately impacting their earnings negatively. On the flip side, when fish stocks are scarce, it becomes much harder to make a decent income, as they spend more time and resources on fishing without significant returns.

The fluctuations in fish stocks and catches have a direct impact on our income and financial stability as traditional fishermen in Kollam. When fish stocks are plentiful, it can lead to a brief surge in income. However, this often results in an oversupply of fish in the market, causing prices to plummet, which adversely affects our earnings. Conversely, when fish stocks are scarce, it becomes increasingly challenging to generate a substantial income. We spend more time and resources on fishing, but the returns are diminished”.

The fourth participant claimed that variations in fish stocks and catches play a vital role in shaping their income and financial stability as traditional fishermen. They emphasized that when fish stocks are abundant, it can offer a temporary income boost. However, this often results in an oversupply in the market, leading to lower prices and negatively affecting their overall earnings. Conversely, when fish stocks are depleted, maintaining a sustainable income becomes increasingly challenging.

The ups and downs of fish stocks and catches significantly influence our income and financial stability as traditional fishermen. When fish stocks are abundant, it can result in a temporary boost in income. However, this frequently leads to an over saturated market, driving prices down and impacting our overall earnings negatively. Conversely, when fish stocks are depleted, it becomes increasingly difficult to sustain our income.

The fifth participant highlighted that the oscillations in fish stocks and catches hold significant sway over their income and financial stability as traditional fishermen in Kollam. They pointed out that when fish stocks are abundant, it can result in a brief upsurge in income. However, this often triggers an oversupply in the market, leading to price reductions and, consequently, detrimental impacts on their earnings. Conversely, during periods of fish scarcity, they struggle to maintain a reasonable income.

The fluctuations in fish stocks and catches have a substantial bearing on our income and financial stability as traditional fishermen in Kollam. When fish stocks are plentiful, it can lead to a brief increase in income. However, this often results in market oversupply and subsequent price drops, affecting our earnings negatively.

In line with the observations made by the sixth participant, the impact of variations in fish stocks and catches on traditional fishermen's income and financial stability is significant. Abundant fish stocks can yield a temporary boost in earnings, but this often leads to market oversupply and subsequently lower prices, resulting in an overall impact on income.

The variations in fish stocks and catches are pivotal in determining our income and financial stability as traditional fishermen. When fish stocks are abundant, it can provide a short-term boost to our earnings. However, this often leads to an over saturated market and lower prices, affecting our overall income. Conversely, when fish stocks are depleted, it becomes increasingly difficult to make a sustainable income. We invest more time and resources in fishing, but the returns are limited. This fluctuation in fish availability directly impacts our financial stability.

Impact on financial stability

The first participant claimed that the income and financial stability of traditional fishermen in Kollam are substantially affected by the fluctuations in fish stocks and catches. According to their insights, when fish stocks are abundant, there is often a short-term increase in income. However, this situation frequently results in an oversupply in the market, leading to reduced prices that, in turn, have a negative impact on earnings. The participant highlighted that in cases where fish stocks are limited, it becomes notably more challenging for these fishermen to generate a reasonable income. This scenario forces them to invest more time and resources into fishing activities with less financial return. The inherent variability in fish stocks and catches, as shared by the participant, adds a layer of complexity to maintaining financial stability for these individuals.

The variations in fish stocks and catches have a direct connection on our income and financial stability as traditional fishermen in Kollam. When fish stocks are lavish, it can lead to a temporary increase in income. However, this also often results in oversupply in the market, causing prices to drop, which ultimately impacts our earnings negatively. On the other side, when fish stocks are less, it becomes much harder to make a decent income, as we spend more time and resources on fishing without returns. This variability makes it challenging to maintain financial stability.

The second participant claimed that the variations in fish stocks and catches serve as a critical determinant of their income and financial stability as traditional fishermen. They pointed out that the presence of abundant fish stocks can yield short-term financial gains; however, this often results in market over saturation, subsequently lowering prices and affecting overall income. They highlighted the converse situation, where depleted fish stocks make it increasingly challenging to maintain a sustainable income, leading to more significant investments of time and resources in fishing with limited returns. This fluctuation in fish availability, they shared, has a direct and considerable impact on their financial stability. These viewpoints from traditional fishermen underscore the influence of fish stock variations on their economic well-being.

The ebb and flow of fish stocks and catches play a pivotal role in determining our income and financial stability as traditional fishermen. When fish stocks are abundant, it can provide a short-term boost to our earnings. However, this often leads to market over saturation and subsequently lower prices, affecting our overall income. Conversely, when fish stocks are depleted, it becomes increasingly difficult to make a sustainable income. We invest more time and resources in fishing, but the returns are limited. This fluctuation in fish availability directly impacts our financial stability.

The third participant claimed that variations in fish stocks and catches have a direct connection to their income and financial stability as traditional fishermen. They pointed out that when fish stocks are abundant, it can result in a short-term increase in income. However, this often leads to over saturation in the market, causing prices to drop, ultimately impacting their earnings negatively. On the flip side, when fish stocks are scarce, it becomes much harder to make a decent income, as they spend more time and resources on fishing without significant returns. This variability in fish stocks makes it challenging for them to achieve and maintain financial stability.

The fluctuations in fish stocks and catches have a direct impact on our income and financial stability as traditional fishermen in Kollam. When fish stocks are plentiful, it can lead to a brief surge in income. However, this often results in an oversupply of fish in the market, causing prices to plummet, which adversely affects our earnings. Conversely, when fish stocks are scarce, it becomes increasingly challenging to generate a substantial income. We spend more time and resources on fishing, but the returns are diminished. This constant variation in fish availability makes it difficult to maintain financial stability.

The fourth participant claimed that variations in fish stocks and catches play a vital role in shaping their income and financial stability as traditional fishermen. They emphasized that when fish stocks are abundant, it can offer a temporary income boost. However, this often results in an oversupply in the market, leading to lower prices and negatively affecting their overall earnings. Conversely, when fish stocks are depleted, maintaining a sustainable income becomes increasingly challenging. As the fourth participant highlighted, this situation forces them to invest more time and resources in fishing while yielding limited returns. These fluctuations in fish availability, as claimed, have direct and profound impacts on their financial stability.

The ups and downs of fish stocks and catches significantly influence our income and financial stability as traditional fishermen. When fish stocks are abundant, it can result in a temporary boost in income. However, this frequently leads to an over saturated market, driving prices down and impacting our overall earnings negatively. Conversely, when fish stocks are depleted, it becomes increasingly difficult to sustain our income. We invest more time and resources in fishing, but the returns are meager. These fluctuations in fish availability directly impact our financial stability.

The fifth participant highlighted that the oscillations in fish stocks and catches hold significant sway over their income and financial stability as traditional fishermen in Kollam. They pointed out that when fish stocks are abundant, it can result in a brief upsurge in income. However, this often triggers an oversupply in the market, leading to price reductions and, consequently, detrimental impacts on their earnings. Conversely, during periods of fish scarcity, they struggle to maintain a reasonable income. Despite investing more time and resources in fishing, the returns are minimal. As claimed, this continual ebb and flow in fish availability has a direct impact on their overall financial stability.

The fluctuations in fish stocks and catches have a substantial bearing on our income and financial stability as traditional fishermen in Kollam. When fish stocks are plentiful, it can lead to a brief increase in income. However, this often results in market oversupply and subsequent price drops, affecting our earnings negatively. Conversely, when fish stocks are scarce, it becomes increasingly challenging to maintain a reasonable income. We invest more time and resources in fishing, but the returns are minimal. This constant variation in fish availability directly impacts our financial stability.

In line with the observations made by the sixth participant, the impact of variations in fish stocks and catches on traditional fishermen's income and financial stability is significant. Abundant fish stocks can yield a temporary boost in earnings, but this often leads to market oversupply and subsequently lower prices, resulting in an overall impact on income. Conversely, when fish stocks are in decline, sustaining a viable income becomes increasingly challenging. This requires greater investment in terms of time and resources, yet the returns remain constrained. These fluctuations in fish availability, as highlighted, directly affect the financial stability of traditional fishermen.

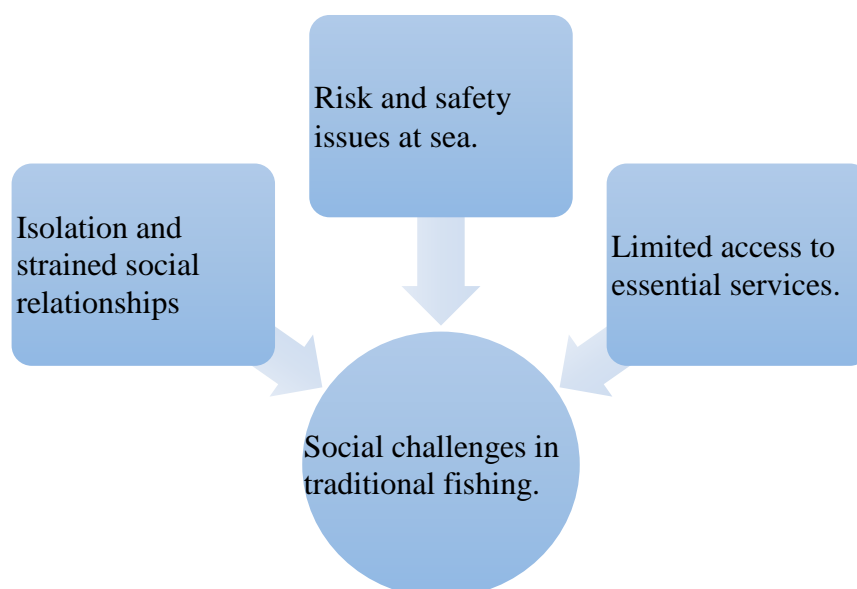
The variations in fish stocks and catches are pivotal in determining our income and financial stability as traditional fishermen. When fish stocks are abundant, it can provide a short-term boost to our earnings. However, this often leads to an over saturated market and lower prices, affecting our overall income. Conversely, when fish stocks are depleted, it becomes increasingly difficult to make a sustainable income. We invest more time and resources in fishing, but the returns are limited. This fluctuation in fish availability directly impacts our financial stability.

THEME 3

What are the socioeconomic challenges faced by traditional fishermen in Kollam?

The Third Theme emerged from the study is **Social Challenges in Traditional Fishing**. It includes the Sub themes: Risk and safety issues at sea, Isolation and Strained Social Relationships, Limited access to essential services.

Figure 4



Risk and safety issues at sea

The first participant highlighted that as traditional fishermen in Kollam, they confront a multitude of social challenges that significantly impact their well-being and livelihoods. They pointed out that one of the prominent challenges is the risk to their lives when venturing into the sea, with no assurance of a safe return.

As a traditional fishermen in Kollam, we face several social challenges that very much impact our well-being and livelihoods. Firstly, we are risking our own lives and going to the sea, we have no guarantee on returning and spending extended time at sea and away from our families can lead to feelings of loneliness and detachment.

The second participant pointed out that as traditional fishermen in Kollam, they face several social challenges that significantly impact their well-being and livelihoods. They shared sentiment is that the persistent risk to their lives when venturing to sea is a daunting reality. There is no assurance of a safe return, and this uncertainty, as claimed by the participant, deeply affects their livelihoods. These insights underscore the substantial social challenges traditional fishermen face in Kollam and their profound implications on their overall well-being and livelihoods.

The social challenges we encounter as traditional fishermen in Kollam have profound effects on our overall well-being and livelihoods. And, the constant risk to our lives when we venture out to sea is a haunting reality. There's no assurance of a safe return, and this uncertainty casts a shadow over our livelihoods.

Isolation and strained social relationships

The first participant highlighted that as traditional fishermen in Kollam, they confront a multitude of social challenges that significantly impact their well-being and livelihoods. They pointed out that one of the prominent challenges is the risk to their lives when venturing into the sea, with no assurance of a safe return. The participant shared that extended periods spent at sea, away from their families, can lead to feelings of loneliness and detachment, further affecting their overall well-being.

As a traditional fishermen in Kollam, we face several social challenges that very much impact our well-being and livelihoods. Firstly, we are risking our own lives and going to the sea, we have no guarantee on returning and spending extended time at sea and away from our families can lead to feelings of loneliness and detachment.

The second participant pointed out that as traditional fishermen in Kollam, they face several social challenges that significantly impact their well-being and livelihoods. Loneliness and disconnection are highlighted as a major concern due to the extended periods spent at sea. There is no assurance of a safe return, and this uncertainty, as claimed by the participant, deeply affects their livelihoods. These insights underscore the substantial social challenges traditional fishermen face in Kollam and their profound implications on their overall well-being and livelihoods.

The social challenges we encounter as traditional fishermen in Kollam have profound effects on our overall well-being and livelihoods. Isolation is a significant issue; spending long stretches at sea can result in feelings of loneliness and disconnection from our families and communities. And, the constant risk to our lives when we venture out to sea is a haunting reality. There's no assurance of a safe return, and this uncertainty casts a shadow over our livelihoods.

Limited access to essential services.

The first participant highlighted that as traditional fishermen in Kollam, they confront a multitude of social challenges that significantly impact their well-being and livelihoods. They also claimed that access to quality healthcare and education for their children is a constant worry, and when these essential needs are unmet, it adds to their concerns. And, the participant highlighted that the ongoing uncertainty of returning safely from each sea voyage is a constant source of anxiety, which takes a toll on their mental and emotional well-being. These social challenges are intricately connected with their overall quality of life and the well-being of their families, as they revealed.

As a traditional fishermen in Kollam, we face several social challenges that very much impact our well-being and livelihoods. And, the lack of access to quality healthcare and education for our children is a constant worry. Our well-being is closely connected to the well-being of our families, and when they face health and educational challenges, it affects us deeply. Moreover, the present risk to our lives at sea is a constant anxiety. There's no guarantee of returning safely from each voyage, and this uncertainty weighs heavily on our minds.

The second participant pointed out that as traditional fishermen in Kollam, they face several social challenges that significantly impact their well-being and livelihoods. Loneliness and disconnection are highlighted as a major concern due to the extended periods spent at sea. These insights underscore the substantial social challenges traditional fishermen face in Kollam and their profound implications on their overall well-being and livelihoods.

The social challenges we encounter as traditional fishermen in Kollam have profound effects on our overall well-being and livelihoods. Isolation is a significant issue; spending long stretches at sea can result in feelings of loneliness and disconnection from our families and communities. Moreover, the limited access to healthcare and education services for our families creates a constant source of concern. Our own well-being is intricately linked to the well-being of our loved ones, and when they face difficulties in accessing essential services, it adds to our daily challenges. Additionally, the constant risk to our lives when we venture out to sea is a haunting reality. There's no assurance of a safe return, and this uncertainty casts a shadow over our livelihoods.

The third participant highlighted that they face several social challenges as traditional fishermen in Kollam, which significantly impact their well-being and livelihoods. They pointed out that isolation during long fishing trips can lead to feelings of loneliness and disconnection from their families and communities. Additionally, the limited access to quality healthcare and education services for their families is an ongoing concern, affecting their overall well-being. They also shared the constant anxiety and risk associated with their lives at sea, where there are no guarantees for a safe return from each fishing trip, placing a heavy burden on their minds and affecting their livelihoods.

Our lives as traditional fishermen in Kollam are marked by various social challenges that have far-reaching consequences for our well-being and livelihoods. The isolation we experience during long fishing expeditions can take a toll on our emotional health, leading to feelings of loneliness and disconnection from our families and communities. Moreover, the limited access to quality healthcare and education services for our families is an ongoing concern. Our well-being is deeply intertwined with that of our families, and when they face health and educational challenges, it affects us profoundly. Additionally, the ever-present risk to our lives at sea is a constant source of anxiety. The absence of guarantees for a safe return from each fishing trip weighs heavily on our minds and impacts our overall livelihoods.

The fourth participant highlighted that as traditional fishermen in Kollam, they face significant social challenges that have far-reaching effects on their well-being and livelihoods. One of the key issues, as claimed, is the lack of recognition and respect for their profession within society. This, as pointed out, has implications for their self-esteem and the perception of their families and communities towards their work. Isolation emerged as another challenge, with the demanding hours at sea resulting in a sense of detachment from their families and communities. This, as shared, can strain their social relationships. Moreover, the need to pass down traditional fishing knowledge to the next generation was underlined as a challenge. The fourth participant claimed that the younger generation often leans toward modern, less labor-intensive occupations, making it a struggle to sustain their traditional way of life. These challenges, as highlighted, collectively impact their social well-being and livelihoods.

As traditional fishermen in Kollam, we face significant social challenges that have a profound impact on our well-being and livelihoods. One of the major challenges is the lack of social recognition and respect for our profession. This affects our self-esteem and the way our families and communities perceive us. Another issue is the isolation we experience due to the nature of our work. Long hours at sea often lead to a sense of detachment from our families and communities, affecting our social relationships. Additionally, the traditional fishing profession requires us to pass down our knowledge and skills to the next generation. However, the younger generation is often inclined toward more modern and less labor-intensive occupations, making it difficult to sustain our traditional way of life.

The fifth participant pointed out that as traditional fishermen in Kollam, they encounter significant social challenges, and these challenges have far-reaching consequences for their well-being and livelihoods. They highlighted the lack of understanding and appreciation for the demands and risks of their profession within the broader society as one of the major issues. As shared, this lack of recognition not only affects their self-esteem but also hinders their ability to garner support. They also claimed that the mental and physical toll of isolation at sea takes a considerable toll on their well-being, leading to strained social relationships due to prolonged separation from their families and communities. Additionally, the participant highlighted the generational gap within their profession, emphasizing the need to pass down traditional fishing knowledge and skills. However, as they shared, the younger generation's declining interest in this way of life poses a significant challenge and makes it difficult to sustain their livelihoods.

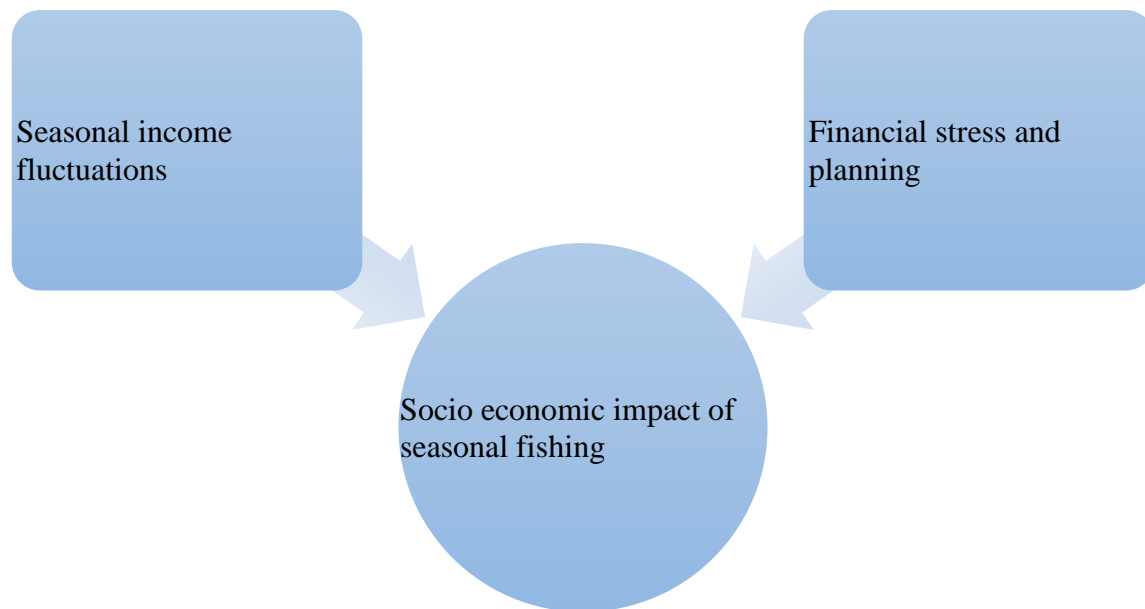
The social challenges we encounter as traditional fishermen in Kollam have a profound impact on our overall well-being and livelihoods. One major challenge is the lack of understanding and appreciation for the demands and risks of our profession within the broader society. This lack of recognition affects our self-esteem and our ability to garner support. Another significant issue is the mental and physical toll that isolation at sea takes on our well-being. Long hours spent away from our families and communities often lead to strained social relationships. Moreover, the generational gap in our profession poses a challenge. The traditional fishing knowledge and skills we possess need to be passed down, but the younger generation is often less inclined to pursue this way of life, making it challenging to sustain our livelihoods

In alignment with the sixth participant's account, it's evident that traditional fishermen in Kollam confront significant social challenges, which have far-reaching implications for their well-being and livelihoods. A primary challenge pertains to the lack of recognition and esteem accorded to their profession within the broader society. This absence of appreciation not only affects their self-worth but also shapes the perceptions of their families and communities, which can be disheartening. Another notable concern revolves around the isolation that characterizes their work. The extended periods spent at sea lead to detachment from their families and communities, straining their social relationships. Moreover, the transmission of traditional fishing knowledge and skills to the younger generation poses a considerable challenge. The allure of more modern and less labor-intensive occupations among the youth threatens the continuity of their traditional way of life and, consequently, their livelihoods.

The social challenges we face as traditional fishermen in Kollam have a profound impact on our well-being and livelihoods. One major challenge is the lack of social recognition and respect for our profession. This lack of understanding affects our self-esteem and how our families and communities perceive us. Another significant issue is the isolation we experience due to the demands of our work. Long hours at sea lead to detachment from our families and communities, which takes a toll on our social bonds. Additionally, passing down our traditional fishing knowledge and skills to the next generation is a challenge. The younger generation is often more interested in modern and less labor-intensive occupations, which poses a threat to our traditional way of life and livelihoods.

THEME 4**What are the socioeconomic challenges faced by traditional fishermen in Kollam?**

The Fourth Theme emerged from the study is **Socioeconomic Impact of Seasonal Fishing**. It includes the Sub themes: Seasonal income fluctuations, Financial stress and planning.

Figure 5**Seasonal income fluctuations**

The first participant pointed out that the seasonal nature of fishing exerts a significant influence on the socioeconomic conditions of traditional fishermen in Kollam, as well as those of their families. They shared that during the fishing seasons, particularly the trawling months of June, July, and August, there is a notable improvement in their income, enabling them to provide better for their families. However, they highlighted that these prosperous periods last only for three months, and for the rest of the year, when commercial fishermen dominate the fishing grounds, traditional fishermen are left struggling to make the most of the resources that remain.

The seasonal nature of fishing has a huge impact on our socioeconomic conditions as traditional fishermen in Kollam, as well as those of our families. During the fishing seasons, the time of trawling (June, July and August) the catch is good, our income rises, and we can provide better for our families. However, these periods are only for three months and the rest of the months the commercial fishermen starts fishing, they will catch even the eggs and small fishes and we must make the most of them while they last.

The second participant highlighted that the seasonal nature of fishing in Kollam has a direct and profound impact on their socioeconomic conditions and those of their families. They pointed out that during the fishing seasons, when the catch is abundant, there is an increase in income, allowing for more comfortable provisions for their families. However, these periods of abundance are transient, and the participant emphasized the need to make the most of them while they last.

The seasonal nature of fishing has a pronounced impact on our socioeconomic conditions as traditional fishermen in Kollam, as well as those of our families. During the fishing seasons, when the catch is abundant, our income sees a welcome increase, allowing us to provide more comfortably for our families. However, these periods of abundance are often brief, and we must make the most of them while they last.

The third participant highlighted that the seasonal nature of fishing has a significant impact on their socioeconomic conditions as traditional fishermen in Kollam, as well as on their families. They claimed that during the fishing seasons, when the catch is abundant, their income rises, allowing them to provide better for their families. However, they pointed out that these periods of abundance are brief, and during the off-seasons, when fishing is less productive, their income decreases significantly.

The seasonal nature of fishing exerts a significant influence on our socioeconomic conditions as traditional fishermen in Kollam, and this impact extends to our families as well. During the fishing seasons, when the catch is plentiful, our income experiences a notable upswing, enabling us to better support our families and meet their needs. However, these periods of abundance tend to be short-lived, and we must maximize our earnings while they last. Conversely, during the off-seasons, when fishing yields are lower, our income takes a substantial hit, and it becomes challenging to cover basic expenses.

The fourth participant highlighted that the seasonal nature of fishing exerts a significant impact on their socioeconomic conditions and those of their families. During the fishing season, as claimed, there is a brief income surge, enabling them to fulfill immediate financial requirements and support their families.

The seasonal nature of fishing has a significant impact on our socioeconomic conditions and those of our families. During the fishing season, when the catch is abundant, we experience a temporary improvement in our income. This allows us to meet our immediate financial needs and provide for our families.

The fifth participant highlighted that the seasonal nature of fishing is a pivotal factor influencing their socioeconomic conditions and those of their families. They pointed out that during the fishing season, their income experiences a notable increase, allowing them to comfortably manage their immediate expenses and provide for their families. .

The seasonal nature of fishing plays a crucial role in shaping our socioeconomic conditions and those of our families. When the fishing season is in full swing, our income sees a notable boost. We can meet our immediate expenses and provide for our families more comfortably.

In accordance with the sixth participant's insights, the seasonal nature of fishing profoundly influences the socioeconomic conditions of traditional fishermen and their families. During the fishing season, characterized by abundant catches, their income experiences a noticeable upswing. This financial upturn enables them to adequately support their families and set aside savings for the future.

The seasonal aspect of fishing has a profound impact on our socioeconomic conditions and the financial well-being of our families. During the fishing season, when the catch is plentiful, we enjoy a surge in income. This allows us to provide for our families and even save for the future.

Financial stress and planning

The first participant pointed out that the seasonal nature of fishing exerts a significant influence on the socioeconomic conditions of traditional fishermen in Kollam, as well as those of their families. During the no-trawling seasons, when fishing becomes less productive for traditional fishermen, they claimed that their income experiences a significant drop, posing challenges in covering even basic expenses. This variation in income creates substantial financial stress for their families, making long-term financial planning and investments in areas such as education and healthcare for their children increasingly challenging.

The seasonal nature of fishing has a huge impact on our socioeconomic conditions as traditional fishermen in Kollam, as well as those of our families. During the no trawling seasons, when fishing is less productive for traditional fishermen, our income drops significantly, and it becomes a challenge to cover even basic expenses. This variation in income places considerable stress on our family finances, making it difficult to plan for the future or invest in education and healthcare for our children.

The second participant highlighted that the seasonal nature of fishing in Kollam has a direct and profound impact on their socioeconomic conditions and those of their families. During the off-seasons, the participant claimed that fishing becomes less productive, resulting in a significant decrease in income. They pointed out that this instability in income creates substantial pressure on their family finances, making it difficult to plan for the future or invest in education and healthcare for their children. These observations underscore the significant socioeconomic challenges traditional fishermen face in Kollam due to the seasonal nature of their profession.

The seasonal nature of fishing has a pronounced impact on our socioeconomic conditions as traditional fishermen in Kollam, as well as those of our families. During the off-seasons, when fishing is less productive, our income dwindles significantly, and it becomes challenging to meet even our basic needs. This income instability places substantial pressure on our family finances, making it difficult to plan for the future or invest in education and healthcare for our children.

The third participant highlighted that the seasonal nature of fishing has a significant impact on their socioeconomic conditions as traditional fishermen in Kollam, as well as on their families. They pointed out that these periods of abundance are brief, and during the off-seasons, when fishing is less productive, their income decreases significantly. This variation in income, they shared, places considerable financial stress on their families, making it difficult to plan for the future or invest in education and healthcare for their children.

The seasonal nature of fishing exerts a significant influence on our socioeconomic conditions as traditional fishermen in Kollam, and this impact extends to our families as well. During the off-seasons, when fishing yields are lower, our income takes a substantial hit, and it becomes challenging to cover basic expenses. This cyclical variation in income creates substantial economic stress for our families, making it difficult to plan for the future or invest in education and healthcare for our children.

The fourth participant highlighted that the seasonal nature of fishing exerts a significant impact on their socioeconomic conditions and those of their families. When the off-season arrives, as shared, their income diminishes, making it challenging to cover their expenses. This cyclical income fluctuation, as pointed out, influences their capacity to save for the future and ensure their family's financial stability.

The seasonal nature of fishing has a significant impact on our socioeconomic conditions and those of our families. When the off-season arrives, our income dwindles, and we struggle to make ends meet. This cyclic pattern of income fluctuation affects our ability to save for the future and secure our family's financial stability.

The fifth participant highlighted that the seasonal nature of fishing is a pivotal factor influencing their socioeconomic conditions and those of their families. As claimed, the off-season brings financial challenges, impacting their standard of living and requiring them to use their savings to cover essential costs. This fluctuation has implications for their long-term financial security and the overall well-being of their families.

The seasonal nature of fishing plays a crucial role in shaping our socioeconomic conditions and those of our families. During the off-season, our income takes a hit, and it becomes challenging to maintain the same standard of living. We often need to dip into our savings to cover essential costs, impacting our long-term financial security and the well-being of our families.

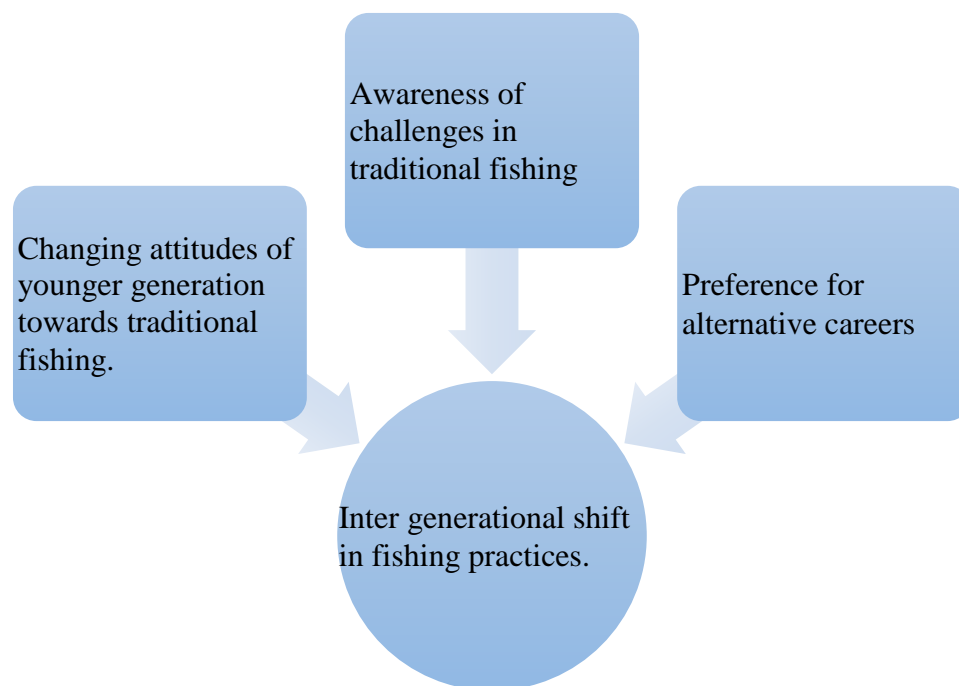
In accordance with the sixth participant's insights, the seasonal nature of fishing profoundly influences the socioeconomic conditions of traditional fishermen and their families. As the off-season approaches, their earnings dwindle, making it challenging to sustain the same level of financial stability. This cyclical fluctuation in income presents a significant obstacle to planning for their family's economic security, leading to periods of financial hardship.

The seasonal aspect of fishing has a profound impact on our socioeconomic conditions and the financial well-being of our families. When the off-season arrives, our income dwindles, and we struggle to maintain the same level of financial stability. This cyclical variation in income makes it challenging to plan for our family's financial security and can lead to periods of economic stress.

THEME 5**What are the socioeconomic challenges faced by traditional fishermen in Kollam?**

The Fifth Theme emerged from the study is **Inter generational Shift in Fishing Practices**. It includes the Sub themes: Changing Attitudes of Younger Generation Towards Traditional Fishing, Awareness of challenges in traditional fishing, Preference for alternative careers.

Figure 6

**Changing attitudes of younger generation towards traditional fishing.**

The first participant highlighted that within their family of six members, including themselves, there has been a noticeable shift in the younger generation's willingness and ability to carry on the traditional fishing practices that have been passed down through their community. They pointed out that their elder child is married and residing in Kottayam, while the middle child is pursuing studies in polytechnic in Thiruvananthapuram, and the youngest child is in the 12th standard.

In my Family there are 6 members including myself and my elder child is married and living in Kottayam, the middle child is studying polytechnic in Thiruvananthapuram and the younger one is in 12th standard, I have observed that as parents in this generation we are not willing to send our children to sea for fishing. And also there is a noticeable change in the younger generation's willingness and ability to continue practicing the traditional fishing methods that have been passed down through our community.

The second participant pointed out that they have indeed noticed a significant shift in the younger generations' willingness and ability to continue the traditional fishing methods passed down through their community. The participant claimed that many young people, even if their parents are traditional fishermen, are showing reluctance to pursue fishing as their livelihood. They highlighted that one of the primary reasons behind this shift is the realization among the younger generation that there are more lucrative opportunities available in other professions. The participant shared that these young individuals have observed the challenges faced by their parents in the fishing profession, including the seasonal nature of the work, the financial instability it brings, and the physical risks involved.

In my experience, there has been a noticeable change in the younger generations' willingness and ability to continue practicing the traditional fishing methods passed down through our community. Many young people, even if their parents are traditional fishermen, are showing a reluctance to pursue fishing as their livelihood. One of the key reasons behind this shift is the realization among the younger generation that there are more lucrative opportunities available in other professions.

The third participant highlighted that, in their experience, there has been a significant shift in the younger generation's willingness and ability to continue practicing the traditional fishing methods passed down through their community. They claimed that, even when their parents are traditional fishermen, many young individuals are reluctant to embrace fishing as their livelihood.

In my experience, I've observed a significant change in the younger generation's willingness and ability to continue practicing the traditional fishing methods that have been passed down through our community. Even when their parents have been traditional fishermen, many young people are hesitant to follow in their footsteps. The primary reason for this shift is the awareness among the younger generation that there are more financially rewarding opportunities available in other professions.

The fourth participant highlighted that they have indeed observed a significant shift in the younger generations' inclination to continue the practice of traditional fishing methods inherited from their community. The primary reason, as claimed, for this transformation is the perception of traditional fishing as physically demanding and fraught with risk.

Yes, there has been a noticeable shift in the younger generations' willingness to continue practicing the traditional fishing methods that our community has passed down. The primary reason behind this change is the perception of traditional fishing as a physically demanding and risky profession.

The fifth participant pointed out that a discernible change exists in the willingness of the younger generation to adopt traditional fishing methods. They highlighted that the primary factor behind this shift is the younger generation's inclination towards occupations that are more stable and less physically demanding. The risks and physical toll associated with traditional fishing make it a less appealing choice for them. Instead, many are choosing careers that promise a more predictable income and a better work-life balance

I have certainly observed a shift in the younger generation's willingness to embrace traditional fishing methods. The primary reason is the desire for more stable and less physically demanding occupations. Traditional fishing, with its inherent risks and physical toll, is perceived as a less attractive choice by the younger generation. Many of them are opting for careers that offer a more predictable income and a better work-life balance.

As highlighted by the sixth participant, there has been an observable transformation in the younger generation's willingness to carry on the traditions of traditional fishing. This shift primarily arises from the perceived challenges and risks that come with the profession. The younger members of the community are increasingly drawn to careers that promise greater financial stability and involve less physical toil.

Yes, there has been a noticeable change in the younger generation's inclination to continue the traditional fishing methods. The primary reason is the perceived challenges and risks associated with this profession. The younger generation is increasingly looking for careers that offer greater economic stability and involve less physical hardship.

Awareness of challenges in traditional fishing

The first participant highlighted that within their family of six members, including themselves, there has been a noticeable shift in the younger generation's willingness and ability to carry on the traditional fishing practices that have been passed down through their community. According to the participant, this change is primarily attributed to the awareness among the younger generation that there are more favorable opportunities in alternative professions. They shared that their children perceive fishing as financially unstable due to its seasonal nature and the challenges it presents. Moreover, the participant claimed that their children are well-informed about the risks associated with fishing, such as the unpredictability of the sea and other hazards.

In my Family there are 6 members including myself and my elder child is married and living in Kottayam, the middle child is studying polytechnic in Thiruvananthapuram and the younger one is in 12th standard, I have observed that as parents in this generation we are not willing to send our children to sea for fishing. And also there is a noticeable change in the younger generation's willingness and ability to continue practicing the traditional fishing methods that have been passed down through our community. The main reason behind this quitting is the awareness among the younger generation that there are more good opportunities available in other professions. Our children see that fishing can be financially unstable due to its seasonal nature and the

challenges we face. Additionally, they understand the risks associated with fishing, including the unpredictability of the sea and the risks

The second participant pointed out that they have indeed noticed a significant shift in the younger generations' willingness and ability to continue the traditional fishing methods passed down through their community. The participant claimed that many young people, even if their parents are traditional fishermen, are showing reluctance to pursue fishing as their livelihood. They highlighted that one of the primary reasons behind this shift is the realization among the younger generation that there are more lucrative opportunities available in other professions. The participant shared that these young individuals have observed the challenges faced by their parents in the fishing profession, including the seasonal nature of the work, the financial instability it brings, and the physical risks involved. Additionally, the participant claimed that parents are increasingly supportive of their children exploring alternative careers that offer greater financial security and a more predictable future.

In my experience, there has been a noticeable change in the younger generations' willingness and ability to continue practicing the traditional fishing methods passed down through our community. Many young people, even if their parents are traditional fishermen, are showing a reluctance to pursue fishing as their livelihood. One of the key reasons behind this shift is the realization among the younger generation that there are more lucrative opportunities available in other professions. They have seen the challenges their parents face in fishing, including the seasonal nature of the work, the financial instability it brings, and the physical risks involved. Moreover, parents are increasingly supportive of their children exploring alternative careers that offer greater financial security and a more predictable future.

The third participant highlighted that, in their experience, there has been a significant shift in the younger generation's willingness and ability to continue practicing the traditional fishing methods passed down through their community. They claimed that, even when their parents are traditional fishermen, many young individuals are reluctant to embrace fishing as their livelihood. The primary reason for this shift, they pointed out, is the awareness among the younger generation that other professions offer more lucrative opportunities. They shared that these young individuals have witnessed the challenges their parents face in fishing, including the seasonal income fluctuations and the physical risks associated with the profession. And, they believe that parents are increasingly supportive of their children exploring alternative careers that offer better financial security and a more predictable future.

In my experience, I've observed a significant change in the younger generation's willingness and ability to continue practicing the traditional fishing methods that have been passed down through our community. Even when their parents have been traditional fishermen, many young people are hesitant to follow in their footsteps. The primary reason for this shift is the awareness among the younger generation that there are more financially rewarding opportunities available in other professions. They've witnessed the challenges their parents face in fishing, including the seasonal income fluctuations and the physical risks associated with

the profession. Furthermore, parents themselves are increasingly open to their children pursuing alternative careers that promise better financial stability and a more secure future.

The fourth participant highlighted that they have indeed observed a significant shift in the younger generations' inclination to continue the practice of traditional fishing methods inherited from their community. The primary reason, as claimed, for this transformation is the perception of traditional fishing as physically demanding and fraught with risk.

Yes, there has been a noticeable shift in the younger generations' willingness to continue practicing the traditional fishing methods that our community has passed down. The primary reason behind this change is the perception of traditional fishing as a physically demanding and risky profession.

The fifth participant pointed out that a discernible change exists in the willingness of the younger generation to adopt traditional fishing methods. They highlighted that the primary factor behind this shift is the younger generation's inclination towards occupations that are more stable and less physically demanding. The risks and physical toll associated with traditional fishing make it a less appealing choice for them. Instead, many are choosing careers that promise a more predictable income and a better work-life balance.

I have certainly observed a shift in the younger generation's willingness to embrace traditional fishing methods. The primary reason is the desire for more stable and less physically demanding occupations. Traditional fishing, with its inherent risks and physical toll, is perceived as a less attractive choice by the younger generation.

As highlighted by the sixth participant, there has been an observable transformation in the younger generation's willingness to carry on the traditions of traditional fishing. This shift primarily arises from the perceived challenges and risks that come with the profession. The younger members of the community are increasingly drawn to careers that promise greater financial stability and involve less physical toil.

Yes, there has been a noticeable change in the younger generation's inclination to continue the traditional fishing methods. The primary reason is the perceived challenges and risks associated with this profession. The younger generation is increasingly looking for careers that offer greater economic stability and involve less physical hardship.

Preference for alternative careers

The first participant highlighted that within their family of six members, including themselves, there has been a noticeable shift in the younger generation's willingness and ability to carry on the traditional fishing practices that have been passed down through their community. These factors often prompt many young individuals to choose alternative careers that offer greater financial security and stability, a choice that the participant and their fellow parents frequently endorse.

I have observed that as parents in this generation we are not willing to send our children to sea for fishing. And also there is a noticeable change in the younger generation's willingness and ability to continue practicing the traditional fishing methods that have been passed down through our community. These factors lead many young individuals to opt for alternative careers that provides more financial security and stability, and as their parents we often support these choices.

The second participant pointed out that they have indeed noticed a significant shift in the younger generations' willingness and ability to continue the traditional fishing methods passed down through their community. These insights shed light on the changing attitudes and career choices among the younger generations within the traditional fishing community.

In my experience, there has been a noticeable change in the younger generations' willingness and ability to continue practicing the traditional fishing methods passed down through our community. As a result, young individuals are opting for professions outside of fishing, believing they can achieve higher incomes and better lifestyles in other fields.

The third participant highlighted that, in their experience, there has been a significant shift in the younger generation's willingness and ability to continue practicing the traditional fishing methods passed down through their community. As a result, they believe that young individuals are opting for professions outside of fishing, believing they can achieve higher incomes and better lifestyles in other fields.

In my experience, I've observed a significant change in the younger generation's willingness and ability to continue practicing the traditional fishing methods that have been passed down through our community. Consequently, young individuals are opting for careers outside of fishing, believing they can achieve higher incomes and improved quality of life in other fields.

The fourth participant highlighted that they have indeed observed a significant shift in the younger generations' inclination to continue the practice of traditional fishing methods inherited from their community. The primary reason, as claimed, for this transformation is the perception of traditional fishing as physically demanding and fraught with risk. The younger generation, as shared, is increasingly drawn to less physically taxing and more economically stable professions. The irregular income and the challenges linked with extended hours at sea make traditional fishing less appealing to them.

Yes, there has been a noticeable shift in the younger generations' willingness to continue practicing the traditional fishing methods that our community has passed down. The primary reason behind this change is the perception of traditional fishing as a physically demanding and risky profession. The younger generation is increasingly seeking opportunities in less labor-intensive and more economically stable occupations. The unpredictability of income in traditional fishing, along with the challenges associated with long hours at sea, has made it less attractive to them.

The fifth participant pointed out that a discernible change exists in the willingness of the younger generation to adopt traditional fishing methods. They highlighted that the primary factor behind this shift is the younger generation's inclination towards occupations that are more stable and less physically demanding. The risks and physical toll associated with traditional fishing make it a less appealing choice for them. Instead, many are choosing careers that promise a more predictable income and a better work-life balance. As shared, this transformation is rooted in their aspirations for economic stability and an enhanced quality of life. This fluctuation has implications for their long-term financial security and the overall well-being of their families.

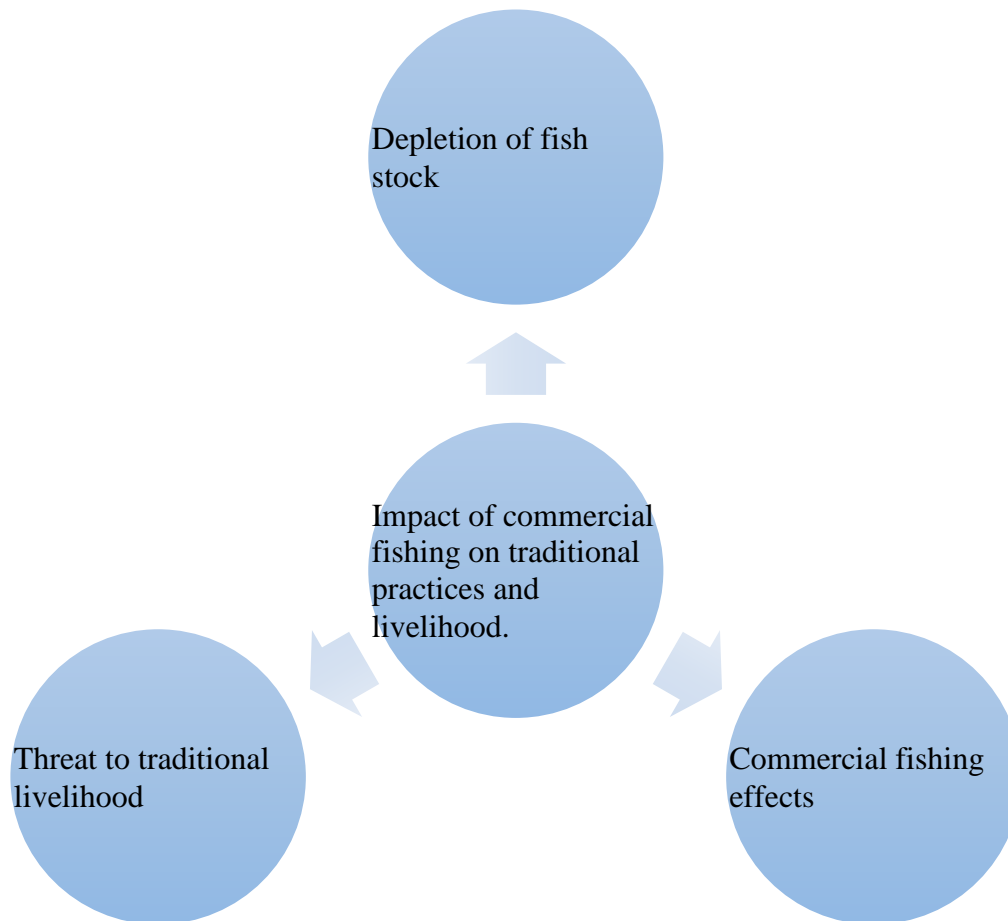
I have certainly observed a shift in the younger generation's willingness to embrace traditional fishing methods. The primary reason is the desire for more stable and less physically demanding occupations. Traditional fishing, with its inherent risks and physical toll, is perceived as a less attractive choice by the younger generation. Many of them are opting for careers that offer a more predictable income and a better work-life balance. This shift is driven by their aspirations for economic stability and improved quality of life.

As highlighted by the sixth participant, there has been an observable transformation in the younger generation's willingness to carry on the traditions of traditional fishing. This shift primarily arises from the perceived challenges and risks that come with the profession. The younger members of the community are increasingly drawn to careers that promise greater financial stability and involve less physical toil. Their concerns center around the financial unpredictability inherent to traditional fishing and the physically demanding nature of the occupation. This transition is strongly influenced by their desire for a more secure and comfortable lifestyle.

Yes, there has been a noticeable change in the younger generation's inclination to continue the traditional fishing methods. The primary reason is the perceived challenges and risks associated with this profession. The younger generation is increasingly looking for careers that offer greater economic stability and involve less physical hardship. They are concerned about the unpredictability of income in traditional fishing and the demanding nature of the work. This shift is driven by their aspirations for a more secure and comfortable life.

THEME 6**What are the challenges faced by traditional fishermen in the arrival of commercial fisherman?**

The Sixth Theme emerged from the study is **Impact of Commercial Fishing on Traditional Practices and Livelihood**. It includes the Sub themes: Technological Disparity, Depletion of Fish Stocks, Market Impact, Threat to Traditional Livelihood, Changes in Fishing Practices and Livelihood, Commercial Fishing Effects.

Figure 7**Depletion of fish stock**

The first participant pointed out that the arrival of commercial fishermen has had a profound impact on their traditional fishing practices and livelihoods. They claimed that commercial fishing operations often involve large groups of fishermen working in bulk, with boats accommodating up to 40 to 50 individuals. The participant highlighted that these commercial fishing methods, which include the capture of even larva and eggs, and the extensive exploitation of marine resources, have had a significant effect on fish populations.

The arrival of commercial fishermen made a profound impact on our traditional fishing practices and livelihoods. These commercial fishing operations often involve large numbers of fishermen working together in bulk, with boats carrying 40 to 50 people. Their fishing methods, such as catching even larva and eggs and taking everything from the sea bed, have a big effect on fish populations, including the depletion of fish eggs. This has resulted in a significant decrease in the fish population in our traditional fishing areas. Nowadays, we are only able to catch fish varieties like Sardine, Indian Mackerel, King Prawns and Anchovy (chala, ayala, konj, and netholi) whereas the old varieties of fish have become scarce.

The second participant highlighted that the arrival of commercial fishermen has resulted in substantial changes in their traditional fishing practices and livelihoods. The participant pointed out that these commercial fishing operations often involve large groups of fishermen traveling in bulk, with boats accommodating 40 to 50 individuals. Their fishing methods, which include scraping the sea bed, have had detrimental effects on fish populations, leading to the depletion of fish eggs. This, the participant claimed, has resulted in a significant decline in the fish population in their traditional fishing areas. Nowadays, they primarily catch fish varieties like Sardine, Indian Mackerel, King Prawns, and Anchovy (chaala, ayla, konj, and natholi), while the old varieties have become increasingly rare. The participant also pointed out that they estimate the fish population in the sea has decreased by approximately 25% due to the presence of commercial fishermen.

The arrival of commercial fishermen has brought about substantial changes in our traditional fishing practices and livelihoods. These commercial fishing ventures often involve large groups of fishermen traveling in bulk, with boats accommodating 40 to 50 individuals. Their fishing methods, which include scraping the sea bed, have had detrimental effects on fish populations, including the depletion of fish eggs. As a result, there has been a significant decline in the fish population in our traditional fishing areas. Nowadays, we primarily catch fish varieties like Sardine, Indian Mackerel, King Prawns and Anchovy (chaala, ayla, konj, and natholi), while the old varieties have become increasingly rare.

The third participant, in response to the question, highlighted that the arrival of commercial fishermen has led to substantial changes in their traditional fishing practices and livelihoods. They claimed that these commercial fishing operations typically involve large groups of fishermen, with boats accommodating 40 to 50 individuals. Their fishing methods, particularly the practice of scraping the sea bed, have had detrimental effects on fish populations, including the depletion of fish eggs. Consequently, they pointed out, there has been a significant decline in the fish population in their traditional fishing areas. They shared that their catches primarily consist of fish varieties like chaala, ayla, konj, and natholi, while the old varieties have become increasingly rare.

In our experience, the arrival of commercial fishermen has brought significant changes to our traditional fishing practices and livelihoods. These commercial fishing ventures often involve large groups of fishermen traveling in bulk, with boats accommodating 40 to 50 individuals. Their fishing methods, particularly the practice of scraping the sea bed, have had detrimental impacts on fish populations, including the depletion of fish eggs. Consequently, there has been a substantial decline in the fish population in our traditional fishing areas. Nowadays, our catches primarily consist of fish varieties like chaala, ayla, konj, and natholi, while the old varieties have become increasingly rare.

The fourth participant highlighted that the introduction of commercial fishermen has indeed made a significant impact on their traditional fishing practices and overall livelihoods. Commercial fishing operations, as claimed, often incorporate advanced technologies and larger vessels, accelerating the depletion of fish stocks in their traditional fishing areas. Consequently, this has resulted in a noticeable decrease in the availability of fish.

The arrival of commercial fishermen has had a significant impact on our traditional fishing practices and livelihood. Commercial fishing operations often employ advanced technologies and larger vessels, which can deplete fish stocks more rapidly. This has led to a decline in the availability of fish in our traditional fishing grounds.

The fifth participant highlighted that the arrival of commercial fishermen has led to noticeable changes in their traditional fishing practices and livelihood. They pointed out that commercial fishing operations often involve the use of modern technologies and larger boats, which can result in the depletion of fish stocks in their traditional fishing areas. This, as claimed, has led to a decreased availability of fish.

The presence of commercial fishermen has brought about noticeable changes in our traditional fishing practices and livelihood. Commercial fishing operations tend to utilize modern technologies and larger boats, which can deplete fish stocks in our fishing areas. As a result, the availability of fish has decreased.

As claimed by the sixth participant, the entry of commercial fishermen into their traditional fishing grounds has indeed influenced their conventional fishing practices and livelihoods. Commercial fishing operations often leverage advanced technologies and larger vessels, which accelerate the depletion of fish stocks in their fishing areas. Consequently, the availability of fish has dwindled.

The arrival of commercial fishermen has had a discernible impact on our traditional fishing practices and livelihood. Commercial fishing operations typically employ advanced technologies and larger vessels, which can lead to faster depletion of fish stocks in our fishing grounds. This has resulted in reduced availability of fish.

Threat to traditional livelihood

The first participant pointed out that the arrival of commercial fishermen has had a profound impact on their traditional fishing practices and livelihoods. The participant highlighted that these commercial fishing methods, which include the capture of even larva and eggs, and the extensive exploitation of marine resources, have had a significant effect on fish populations. This has resulted in a notable reduction in the fish varieties available in their traditional fishing areas, with certain older varieties becoming scarce. They further shared their estimation that the fish population in the sea has decreased by as much as 25% due to the presence of commercial fishermen.

The arrival of commercial fishermen made a profound impact on our traditional fishing practices and livelihoods. These commercial fishing operations often involve large numbers of fishermen working together in bulk, with boats carrying 40 to 50 people. Their fishing methods, such as catching even larva and eggs and taking everything from the sea bed, have a big effect on fish populations, including the depletion of fish eggs. This has resulted in a significant decrease in the fish population in our traditional fishing areas. Nowadays, we are only able to catch fish varieties like Sardine, Indian Mackerel, King Prawns and Anchovy (chala,

ayala, konj, and netholi) whereas the old varieties of fish have become scarce. We estimate that the fish population in the sea has decreased by as much as 25% due to the presence of commercial fishermen.

The second participant highlighted that the arrival of commercial fishermen has resulted in substantial changes in their traditional fishing practices and livelihoods. The participant pointed out that these commercial fishing operations often involve large groups of fishermen traveling in bulk, with boats accommodating 40 to 50 individuals. Their fishing methods, which include scraping the sea bed, have had detrimental effects on fish populations, leading to the depletion of fish eggs. This, the participant claimed, has resulted in a significant decline in the fish population in their traditional fishing areas. Nowadays, they primarily catch fish varieties like Sardine, Indian Mackerel, King Prawns, and Anchovy (chaala, ayla, konj, and natholi), while the old varieties have become increasingly rare. The participant also pointed out that they estimate the fish population in the sea has decreased by approximately 25% due to the presence of commercial fishermen.

The arrival of commercial fishermen has brought about substantial changes in our traditional fishing practices and livelihoods. These commercial fishing ventures often involve large groups of fishermen traveling in bulk, with boats accommodating 40 to 50 individuals. Their fishing methods, which include scraping the sea bed, have had detrimental effects on fish populations, including the depletion of fish eggs. As a result, there has been a significant decline in the fish population in our traditional fishing areas. Nowadays, we primarily catch fish varieties like Sardine, Indian Mackerel, King Prawns and Anchovy (chaala, ayla, konj, and natholi), while the old varieties have become increasingly rare. We estimate that the fish population in the sea has decreased by approximately 25% due to the presence of commercial fishermen.

The third participant, in response to the question, highlighted that the arrival of commercial fishermen has led to substantial changes in their traditional fishing practices and livelihoods. They claimed that these commercial fishing operations typically involve large groups of fishermen, with boats accommodating 40 to 50 individuals. Their fishing methods, particularly the practice of scraping the sea bed, have had detrimental effects on fish populations, including the depletion of fish eggs. Consequently, they pointed out, there has been a significant decline in the fish population in their traditional fishing areas. They shared that their catches primarily consist of fish varieties like chaala, ayla, konj, and natholi, while the old varieties have become increasingly rare. According to their estimation, the fish population in the sea has decreased by as much as 25% due to the presence of commercial fishermen.

In our experience, the arrival of commercial fishermen has brought significant changes to our traditional fishing practices and livelihoods. These commercial fishing ventures often involve large groups of fishermen traveling in bulk, with boats accommodating 40 to 50 individuals. Their fishing methods, particularly the practice of scraping the sea bed, have had detrimental impacts on fish populations, including the depletion of fish eggs. Consequently, there has been a substantial decline in the fish population in our traditional fishing areas. Nowadays, our catches primarily consist of fish varieties like chaala, ayla, konj, and natholi, while the

old varieties have become increasingly rare. We estimate that the fish population in the sea has decreased by as much as 25% due to the presence of commercial fishermen.

The fourth participant highlighted that the introduction of commercial fishermen has indeed made a significant impact on their traditional fishing practices and overall livelihoods. Commercial fishing operations, as claimed, often incorporate advanced technologies and larger vessels, accelerating the depletion of fish stocks in their traditional fishing areas. Consequently, this has resulted in a noticeable decrease in the availability of fish. Additionally, commercial fishing activities can occasionally lead to overfishing and an oversupply in the market, which, as shared, causes a drop in prices. These developments have made it increasingly challenging for the traditional fishermen to sustain their income and uphold their traditional way of life.

The arrival of commercial fishermen has had a significant impact on our traditional fishing practices and livelihood. Commercial fishing operations often employ advanced technologies and larger vessels, which can deplete fish stocks more rapidly. This has led to a decline in the availability of fish in our traditional fishing grounds. Moreover, commercial fishing can sometimes lead to overfishing and market oversupply, causing prices to drop. These changes have made it harder for us to sustain our income and maintain our traditional way of life.

The fifth participant highlighted that the arrival of commercial fishermen has led to noticeable changes in their traditional fishing practices and livelihood. They pointed out that commercial fishing operations often involve the use of modern technologies and larger boats, which can result in the depletion of fish stocks in their traditional fishing areas. This, as claimed, has led to a decreased availability of fish. Additionally, increased competition with commercial fishermen has sometimes forced them to sell their catch at lower prices due to market oversupply. These combined factors have made it more challenging for them to maintain their livelihood and sustain their traditional fishing practices.

The presence of commercial fishermen has brought about noticeable changes in our traditional fishing practices and livelihood. Commercial fishing operations tend to utilize modern technologies and larger boats, which can deplete fish stocks in our fishing areas. As a result, the availability of fish has decreased. Moreover, the competition with commercial fishermen sometimes forces us to sell our catch at lower prices due to market oversupply. This has made it more challenging for us to secure our livelihood and continue our traditional fishing practices.

As claimed by the sixth participant, the entry of commercial fishermen into their traditional fishing grounds has indeed influenced their conventional fishing practices and livelihoods. Commercial fishing operations often leverage advanced technologies and larger vessels, which accelerate the depletion of fish stocks in their fishing areas. Consequently, the availability of fish has dwindled. Moreover, competition with commercial fishermen can result in market oversupply and fluctuations in prices, making it increasingly challenging for them to maintain a steady income and preserve their traditional way of life.

The arrival of commercial fishermen has had a discernible impact on our traditional fishing practices and livelihood. Commercial fishing operations typically employ advanced technologies and larger vessels, which can lead to faster depletion of fish stocks in our fishing grounds. This has resulted in reduced availability of fish. Additionally, competition with commercial fishermen can cause market oversupply and price fluctuations, making it more difficult for us to maintain a stable income and continue our traditional way of life.

Commercial fishing effects

The first participant pointed out that the arrival of commercial fishermen has had a profound impact on their traditional fishing practices and livelihoods. They claimed that commercial fishing operations often involve large groups of fishermen working in bulk, with boats accommodating up to 40 to 50 individuals. The participant highlighted that these commercial fishing methods, which include the capture of even larva and eggs, and the extensive exploitation of marine resources, have had a significant effect on fish populations. This has resulted in a notable reduction in the fish varieties available in their traditional fishing areas, with certain older varieties becoming scarce. They further shared their estimation that the fish population in the sea has decreased by as much as 25% due to the presence of commercial fishermen. While they couldn't provide a definitive explanation for the fluctuations in fish populations, the participant strongly believes that the activities of commercial fishermen play a substantial role in these changes.

The arrival of commercial fishermen made a profound impact on our traditional fishing practices and livelihoods. These commercial fishing operations often involve large numbers of fishermen working together in bulk, with boats carrying 40 to 50 people. Their fishing methods, such as catching even larva and eggs and taking everything from the sea bed, have a big effect on fish populations, including the depletion of fish eggs. This has resulted in a significant decrease in the fish population in our traditional fishing areas. Nowadays, we are only able to catch fish varieties like Sardine, Indian Mackerel, King Prawns and Anchovy (chala, ayala, konj, and netholi) whereas the old varieties of fish have become scarce. We estimate that the fish population in the sea has decreased by as much as 25% due to the presence of commercial fishermen. While I cannot provide a clear explanation for the fluctuations in fish populations, but I strongly believe that the activities of commercial fishermen play a significant role in these changes.

The second participant highlighted that the arrival of commercial fishermen has resulted in substantial changes in their traditional fishing practices and livelihoods. The participant pointed out that these commercial fishing operations often involve large groups of fishermen traveling in bulk, with boats accommodating 40 to 50 individuals. Their fishing methods, which include scraping the sea bed, have had detrimental effects on fish populations, leading to the depletion of fish eggs. This, the participant claimed, has resulted in a significant decline in the fish population in their traditional fishing areas. Nowadays, they primarily catch fish varieties like Sardine, Indian Mackerel, King Prawns, and Anchovy (chaala, ayla, konj, and natholi), while the old varieties have become increasingly rare. The participant also pointed out that they estimate the fish population in the sea has decreased by approximately 25% due to the presence of commercial fishermen. Although the

participant couldn't provide a clear explanation for the fluctuations in fish populations, they strongly believed that the activities of commercial fishermen play a significant role in these changes. This perspective sheds light on the ecological and economic impacts of the commercial fishing industry on traditional fishing practices.

The arrival of commercial fishermen has brought about substantial changes in our traditional fishing practices and livelihoods. These commercial fishing ventures often involve large groups of fishermen traveling in bulk, with boats accommodating 40 to 50 individuals. Their fishing methods, which include scraping the sea bed, have had detrimental effects on fish populations, including the depletion of fish eggs. As a result, there has been a significant decline in the fish population in our traditional fishing areas. Nowadays, we primarily catch fish varieties like Sardine, Indian Mackerel, King Prawns and Anchovy (chaala, ayla, konj, and natholi), while the old varieties have become increasingly rare. We estimate that the fish population in the sea has decreased by approximately 25% due to the presence of commercial fishermen. Although we cannot pinpoint the exact reasons for these population fluctuations, we strongly suspect that the activities of commercial fishermen are a major contributing factor.

The third participant, in response to the question, highlighted that the arrival of commercial fishermen has led to substantial changes in their traditional fishing practices and livelihoods. They claimed that these commercial fishing operations typically involve large groups of fishermen, with boats accommodating 40 to 50 individuals. Their fishing methods, particularly the practice of scraping the sea bed, have had detrimental effects on fish populations, including the depletion of fish eggs. Consequently, they pointed out, there has been a significant decline in the fish population in their traditional fishing areas. They shared that their catches primarily consist of fish varieties like chaala, ayla, konj, and natholi, while the old varieties have become increasingly rare. According to their estimation, the fish population in the sea has decreased by as much as 25% due to the presence of commercial fishermen. They couldn't pinpoint the exact reasons for these population fluctuations but strongly believe that the activities of commercial fishermen play a significant role in these changes.

In our experience, the arrival of commercial fishermen has brought significant changes to our traditional fishing practices and livelihoods. These commercial fishing ventures often involve large groups of fishermen traveling in bulk, with boats accommodating 40 to 50 individuals. Their fishing methods, particularly the practice of scraping the sea bed, have had detrimental impacts on fish populations, including the depletion of fish eggs. Consequently, there has been a substantial decline in the fish population in our traditional fishing areas. Nowadays, our catches primarily consist of fish varieties like chaala, ayla, konj, and natholi, while the old varieties have become increasingly rare. We estimate that the fish population in the sea has decreased by as much as 25% due to the presence of commercial fishermen. While the exact reasons for these population fluctuations remain unclear, we strongly believe that the activities of commercial fishermen are a significant contributing factor.

The fourth participant highlighted that the introduction of commercial fishermen has indeed made a significant impact on their traditional fishing practices and overall livelihoods. Commercial fishing operations, as claimed, often incorporate advanced technologies and larger vessels, accelerating the depletion of fish stocks in their traditional fishing areas. Consequently, this has resulted in a noticeable decrease in the availability of fish. Additionally, commercial fishing activities can occasionally lead to overfishing and an oversupply in the market, which, as shared, causes a drop in prices. These developments have made it increasingly challenging for the traditional fishermen to sustain their income and uphold their traditional way of life.

The arrival of commercial fishermen has had a significant impact on our traditional fishing practices and livelihood. Commercial fishing operations often employ advanced technologies and larger vessels, which can deplete fish stocks more rapidly. This has led to a decline in the availability of fish in our traditional fishing grounds. Moreover, commercial fishing can sometimes lead to overfishing and market oversupply, causing prices to drop. These changes have made it harder for us to sustain our income and maintain our traditional way of life.

The fifth participant highlighted that the arrival of commercial fishermen has led to noticeable changes in their traditional fishing practices and livelihood. They pointed out that commercial fishing operations often involve the use of modern technologies and larger boats, which can result in the depletion of fish stocks in their traditional fishing areas. This, as claimed, has led to a decreased availability of fish. Additionally, increased competition with commercial fishermen has sometimes forced them to sell their catch at lower prices due to market oversupply. These combined factors have made it more challenging for them to maintain their livelihood and sustain their traditional fishing practices.

The presence of commercial fishermen has brought about noticeable changes in our traditional fishing practices and livelihood. Commercial fishing operations tend to utilize modern technologies and larger boats, which can deplete fish stocks in our fishing areas. As a result, the availability of fish has decreased. Moreover, the competition with commercial fishermen sometimes forces us to sell our catch at lower prices due to market oversupply. This has made it more challenging for us to secure our livelihood and continue our traditional fishing practices.

As claimed by the sixth participant, the entry of commercial fishermen into their traditional fishing grounds has indeed influenced their conventional fishing practices and livelihoods. Commercial fishing operations often leverage advanced technologies and larger vessels, which accelerate the depletion of fish stocks in their fishing areas. Consequently, the availability of fish has dwindled. Moreover, competition with commercial fishermen can result in market oversupply and fluctuations in prices, making it increasingly challenging for them to maintain a steady income and preserve their traditional way of life.

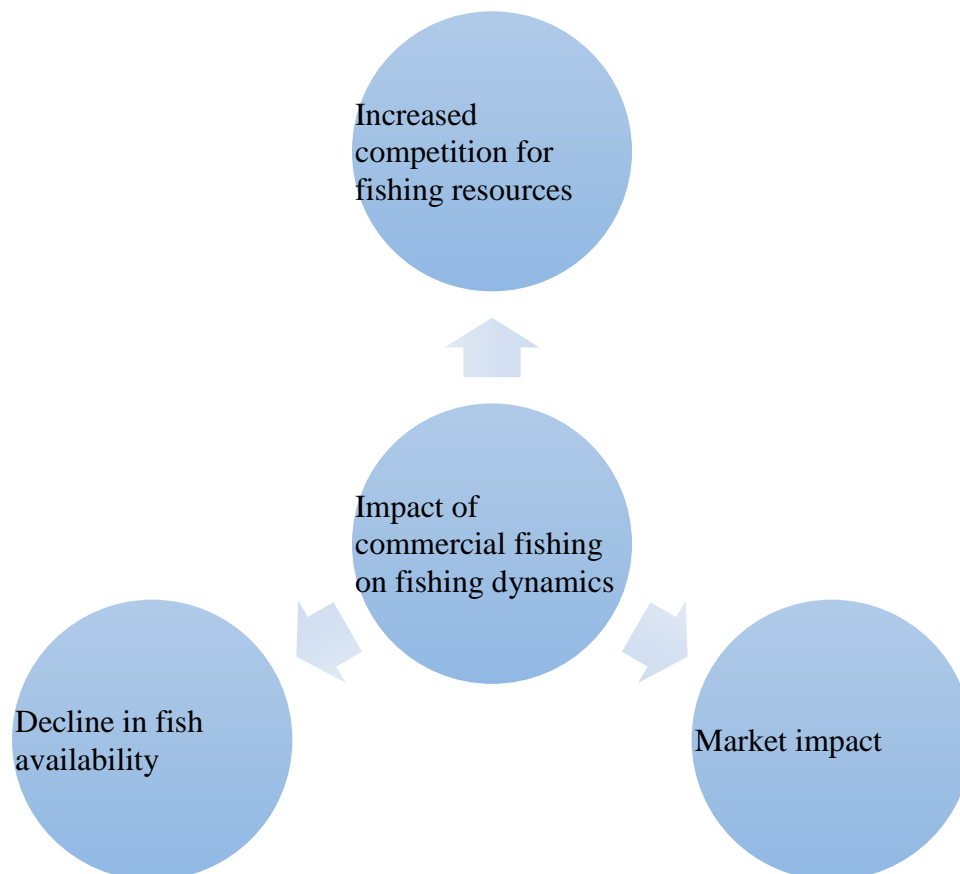
The arrival of commercial fishermen has had a discernible impact on our traditional fishing practices and livelihood. Commercial fishing operations typically employ advanced technologies and larger vessels, which can lead to faster depletion of fish stocks in our fishing grounds. This has resulted in reduced availability of fish. Additionally, competition with commercial fishermen can cause market oversupply and price fluctuations, making it more difficult for us to maintain a stable income and continue our traditional way of life.

THEME 7

What are the challenges faced by traditional fishermen in the arrival of commercial fisherman?

The Seventh Theme emerged from the study is **Impact of Commercial Fishing on Fishing Dynamics**. It includes the Sub themes: Impact of Commercial Fishing on Traditional Fishing, Increased Competition for Fish Resources, Decline in Fish Availability for Traditional Fishermen, Impact of Overfishing on Traditional Fishing Areas, Market impact.

Figure 8



Increased competition for fishing resources

The first participant pointed out that the fishing dynamics have undergone significant changes since the commercial fishermen began operating in the same fishing grounds as traditional fishermen. They claimed that one of the most noticeable changes is the increased competition for fish resources. With the establishment of commercial operations involving large numbers of fishermen in each boat and the adoption of aggressive fishing techniques, such as capturing larva and eggs, there is now greater pressure on the available fish stocks. This has made it increasingly challenging for traditional fishermen to secure an adequate catch.

The fishing dynamics have stated facing significant changes since the commercial fishermen started practicing fishing in the same fishing grounds as us. One of the most notable changes is that increasing competition for fish resources. With commercial operations establishment, large numbers of fishermen in each boat and practicing aggressive fishing techniques like catching the larva and egg, there is an increased pressure for the available fish stocks. This has made it more challenging for us to secure a sufficient catch.

The second participant pointed out that the fishing dynamics have experienced substantial shifts since the arrival of commercial fishermen in the same fishing grounds as traditional fishermen. The participant highlighted that one of the most significant changes is the heightened competition for fish resources. They claimed that commercial operations involve large groups of fishermen, and their aggressive fishing techniques have put immense pressure on the available fish stocks. This increased competition, the participant pointed out, makes it increasingly difficult for traditional fishermen to maintain their catch levels. And, the participant shared that the introduction of bulk fishing methods, including sea bed scraping, has led to a reduction in fish populations, particularly the depletion of fish eggs.

The fishing dynamics have experienced substantial shifts since the commercial fishermen began operating in the same fishing grounds as traditional fishermen. The most significant change is the heightened competition for fish resources. Commercial operations involve large groups of fishermen, and their aggressive fishing techniques have put immense pressure on the available fish stocks. This increased competition makes it increasingly difficult for traditional fishermen to maintain their catch levels. And, the introduction of bulk fishing methods, including sea bed scraping, has led to a reduction in fish populations, particularly the depletion of fish eggs.

The third participant, in response to the question, highlighted that the fishing dynamics have seen notable transformations since the commercial fishermen started operating in the same fishing grounds as traditional fishermen. They claimed that one of the most prominent changes is the intensified competition for fish resources, as commercial operations involve large numbers of fishermen. They pointed out that the aggressive fishing techniques employed by commercial fishermen have placed significant pressure on the available fish stocks. They also shared that the introduction of bulk fishing methods, such as scraping the sea bed, has contributed to the depletion of fish eggs and an overall decline in fish populations.

The fishing dynamics have seen notable transformations since the commercial fishermen started operating in the same fishing grounds as traditional fishermen. The most prominent change is the intensified competition for fish resources. Commercial operations involve large numbers of fishermen, and their aggressive fishing techniques have placed significant pressure on the available fish stocks. This heightened competition has made it more challenging for traditional fishermen to secure adequate catches. moreover, the introduction of bulk fishing methods, like scraping the sea bed, has contributed to the depletion of fish eggs and an overall decline in fish populations.

The fourth participant highlighted that the fishing dynamics have indeed seen notable transformations since the arrival of commercial fishermen in their traditional fishing grounds. One prominent change, as claimed, is the escalated competition for fish resources. With the deployment of more efficient and larger vessels by commercial fishermen, fish stocks are being depleted at a faster pace, intensifying the struggle to secure an adequate catch. Additionally, as shared, commercial fishing operations have at times resulted in overfishing, contributing to the reduction of fish populations in the traditional fishing areas.

The fishing dynamics have undergone significant changes since the commercial fishermen began operating in the same fishing grounds as traditional fishermen. One noticeable change is increased competition for fish resources. Commercial fishermen often use more efficient and larger vessels, which can deplete fish stocks rapidly. This intensifies competition for the available catch. Moreover, commercial fishing can sometimes lead to overfishing, causing a decline in fish populations in our traditional fishing areas.

The fifth participant highlighted that the presence of commercial fishermen in their fishing grounds has brought several significant changes to fishing dynamics. They pointed out that the foremost change is intensified competition for fish resources. This heightened competition arises because commercial fishermen frequently employ advanced technology and larger boats, enabling them to cover more extensive areas and deplete fish stocks more rapidly. As claimed, this results in a reduced availability of fish for traditional fishermen.

The presence of commercial fishermen in our fishing grounds has led to several notable changes in fishing dynamics. First and foremost, there is heightened competition for fish resources. Commercial fishermen often use advanced technology and larger boats, enabling them to cover larger areas and deplete fish stocks more rapidly. This results in reduced availability of fish for traditional fishermen.

As highlighted by the sixth participant, the fishing dynamics have indeed experienced notable transformations following the introduction of commercial fishermen into their traditional fishing grounds. A key alteration is the intensified competition for fish resources. Commercial fishermen, equipped with advanced technology and larger vessels, have enhanced their fishing efficiency, leading to heightened competition for limited fish stocks. This heightened rivalry has, in turn, resulted in a decrease in the availability of fish for the traditional fishermen.

The fishing dynamics have undergone considerable changes with the entry of commercial fishermen into our fishing grounds. One significant change is the increased competition for fish resources. Commercial fishermen employ modern technology and larger vessels, allowing them to harvest fish more efficiently. This competition for limited fish stocks has led to a decline in the availability of fish for traditional fishermen.

Decline in fish availability

The first participant pointed out that the fishing dynamics have undergone significant changes since the commercial fishermen began operating in the same fishing grounds as traditional fishermen. They claimed that one of the most noticeable changes is the increased competition for fish resources. With the establishment of commercial operations involving large numbers of fishermen in each boat and the adoption of aggressive fishing techniques, such as capturing larva and eggs, there is now greater pressure on the available fish stocks. This has made it increasingly challenging for traditional fishermen to secure an adequate catch. Furthermore, they highlighted that the commercial fishermen's practices, including scraping the sea bed, have resulted in the depletion of fish eggs and a 25% decline in the overall fish population.

The fishing dynamics have stated facing significant changes since the commercial fishermen started practicing fishing in the same fishing grounds as us. One of the most notable changes is that increasing competition for fish resources. With commercial operations establishment, large numbers of fishermen in each boat and practicing aggressive fishing techniques like catching the larva and egg, there is an increased pressure for the available fish stocks. This has made it more challenging for us to secure a sufficient catch. And, the commercial fisherman's practicing methods such as scraping the sea bed, has led to the depletion of fish eggs and a decline in the overall fish population to 25%. As a result, our practices have become less productive and economically viable.

The second participant pointed out that the fishing dynamics have experienced substantial shifts since the arrival of commercial fishermen in the same fishing grounds as traditional fishermen. The participant highlighted that one of the most significant changes is the heightened competition for fish resources. They claimed that commercial operations involve large groups of fishermen, and their aggressive fishing techniques have put immense pressure on the available fish stocks. This increased competition, the participant pointed out, makes it increasingly difficult for traditional fishermen to maintain their catch levels. Furthermore, the participant shared that the introduction of bulk fishing methods, including sea bed scraping, has led to a reduction in fish populations, particularly the depletion of fish eggs. The participant highlighted that these changes have had a direct impact on the sustainability and productivity of traditional fishing practices.

The fishing dynamics have experienced substantial shifts since the commercial fishermen began operating in the same fishing grounds as traditional fishermen. The most significant change is the heightened competition for fish resources. Commercial operations involve large groups of fishermen, and their aggressive fishing techniques have put immense pressure on the available fish stocks. This increased competition makes it increasingly difficult for traditional fishermen to maintain their catch levels. Furthermore, the introduction of bulk fishing methods, including sea bed scraping, has led to a reduction in fish populations, particularly the depletion of fish eggs.

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The fishing dynamics have seen notable transformations since the commercial fishermen started operating in the same fishing grounds as traditional fishermen. The most prominent change is the intensified competition for fish resources. Commercial operations involve large numbers of fishermen, and their aggressive fishing techniques have placed significant pressure on the available fish stocks. This heightened competition has made it more challenging for traditional fishermen to secure adequate catches. moreover, the introduction of bulk fishing methods, like scraping the sea bed, has contributed to the depletion of fish eggs and an overall decline in fish populations.

The fourth participant highlighted that the fishing dynamics have indeed seen notable transformations since the arrival of commercial fishermen in their traditional fishing grounds. One prominent change, as claimed, is the escalated competition for fish resources. With the deployment of more efficient and larger vessels by commercial fishermen, fish stocks are being depleted at a faster pace, intensifying the struggle to secure an adequate catch. Additionally, as shared, commercial fishing operations have at times resulted in overfishing, contributing to the reduction of fish populations in the traditional fishing areas.

The fishing dynamics have undergone significant changes since the commercial fishermen began operating in the same fishing grounds as traditional fishermen. One noticeable change is increased competition for fish resources. Commercial fishermen often use more efficient and larger vessels, which can deplete fish stocks rapidly. This intensifies competition for the available catch. Moreover, commercial fishing can sometimes lead to overfishing, causing a decline in fish populations in our traditional fishing areas.

The fifth participant highlighted that the presence of commercial fishermen in their fishing grounds has brought several significant changes to fishing dynamics. They pointed out that the foremost change is intensified competition for fish resources. This heightened competition arises because commercial fishermen frequently employ advanced technology and larger boats, enabling them to cover more extensive areas and deplete fish stocks more rapidly. As claimed, this results in a reduced availability of fish for traditional fishermen.

The presence of commercial fishermen in our fishing grounds has led to several notable changes in fishing dynamics. First and foremost, there is heightened competition for fish resources. Commercial fishermen often use advanced technology and larger boats, enabling them to cover larger areas and deplete fish stocks more rapidly. This results in reduced availability of fish for traditional fishermen.

As highlighted by the sixth participant, the fishing dynamics have indeed experienced notable transformations following the introduction of commercial fishermen into their traditional fishing grounds. A key alteration is the intensified competition for fish resources. Commercial fishermen, equipped with advanced technology and larger vessels, have enhanced their fishing efficiency, leading to heightened competition for limited fish stocks. This heightened rivalry has, in turn, resulted in a decrease in the availability of fish for the traditional fishermen.

The fishing dynamics have undergone considerable changes with the entry of commercial fishermen into our fishing grounds. One significant change is the increased competition for fish resources. Commercial fishermen employ modern technology and larger vessels, allowing them to harvest fish more efficiently. This competition for limited fish stocks has led to a decline in the availability of fish for traditional fishermen. Moreover, the overfishing by commercial fishermen has affected the fish populations in our traditional fishing areas.

Market Impact

The fourth participant highlighted that the fishing dynamics have indeed seen notable transformations since the arrival of commercial fishermen in their traditional fishing grounds. One prominent change, as claimed, is the escalated competition for fish resources. With the deployment of more efficient and larger vessels by commercial fishermen, fish stocks are being depleted at a faster pace, intensifying the struggle to secure an adequate catch. And, as shared, commercial fishing operations have at times resulted in overfishing, contributing to the reduction of fish populations in the traditional fishing areas. These changes have presented formidable challenges to the traditional fishermen in maintaining their sustainable catch levels.

The fishing dynamics have undergone significant changes since the commercial fishermen began operating in the same fishing grounds as traditional fishermen. One noticeable change is increased competition for fish resources. Commercial fishermen often use more efficient and larger vessels, which can deplete fish stocks rapidly. This intensifies competition for the available catch. Moreover, commercial fishing can sometimes lead to overfishing, causing a decline in fish populations in our traditional fishing areas. These changes have made it harder for us to secure a sustainable catch.

The fifth participant highlighted that the presence of commercial fishermen in their fishing grounds has brought several significant changes to fishing dynamics. They pointed out that the foremost change is intensified competition for fish resources. This heightened competition arises because commercial fishermen frequently employ advanced technology and larger boats, enabling them to cover more extensive areas and deplete fish stocks more rapidly. As claimed, this results in a reduced availability of fish for traditional

fishermen. Furthermore, they shared that the competition sometimes leads to market oversupply and subsequent price fluctuations, which, affects the economic stability of traditional fishermen.

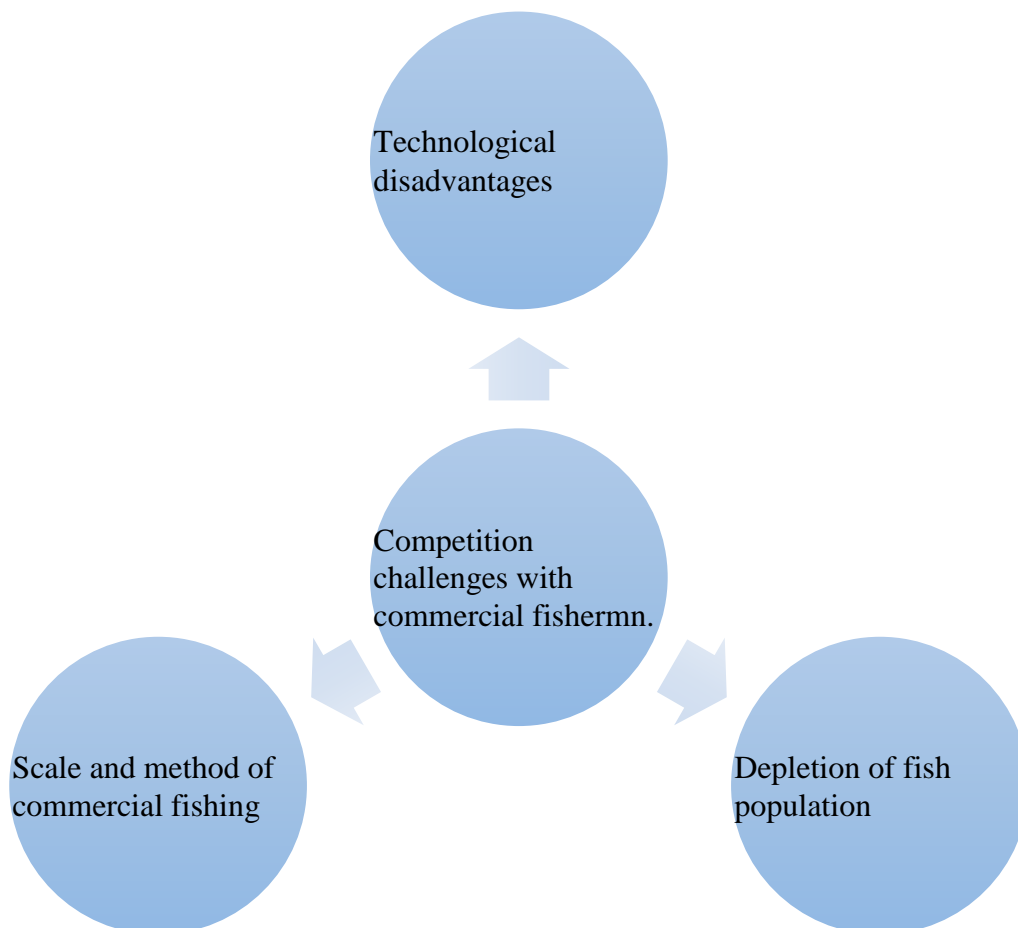
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As highlighted by the sixth participant, the fishing dynamics have indeed experienced notable transformations following the introduction of commercial fishermen into their traditional fishing grounds. A key alteration is the intensified competition for fish resources. Commercial fishermen, equipped with advanced technology and larger vessels, have enhanced their fishing efficiency, leading to heightened competition for limited fish stocks. This heightened rivalry has, in turn, resulted in a decrease in the availability of fish for the traditional fishermen. Furthermore, the extensive fishing by the commercial sector has exerted pressure on the fish populations in these traditional fishing areas, creating additional challenges for their conventional fishing methods.

The fishing dynamics have undergone considerable changes with the entry of commercial fishermen into our fishing grounds. One significant change is the increased competition for fish resources. Commercial fishermen employ modern technology and larger vessels, allowing them to harvest fish more efficiently. This competition for limited fish stocks has led to a decline in the availability of fish for traditional fishermen. Moreover, the overfishing by commercial fishermen has affected the fish populations in our traditional fishing areas. These dynamics have posed challenges to our traditional fishing practices.

THEME 8**What are the challenges faced by traditional fishermen in the arrival of commercial fisherman?**

The Eighth Theme emerged from the study is **Competition Challenges with Commercial Fishermen**. It includes the Sub themes: Challenges Faced in Competition with Commercial Fishermen, Technological Disadvantage, Overfishing Pressures, Scale and methods of Commercial Fishing, Depletion of fish populations and disrupt the ecosystem.

Figure 9**Scale and method of commercial fishing**

The first participant pointed out that the main challenges traditional fishermen face in competing with commercial fishermen for resources, such as fishing grounds and fish stocks, stem primarily from the sheer scale of the commercial operations. They claimed that commercial fishermen utilize large numbers of boats with numerous crew members, often 40-50 members per boat, allowing them to cover a vast and extensive area of fishing grounds. This effectively reduces the available space for traditional fishermen. And, they highlighted that the commercial fishermen's bulk fishing techniques, which involve capturing eggs and larva and scraping the sea bed, are highly efficient but ecologically damaging. These methods not only result in decreased fish populations but also harm the seabed habitat.

The main challenges we face in competing with commercial fishermen for resources, such as fishing grounds and fish stocks, are primarily related to the complete scale of their operations. Commercial fishermen employ large numbers of boats with numerous crew members (40-50 members), making them to cover a wide and larger area of fishing grounds. This diminishes the available space for traditional fishermen like us. Additionally, their bulk fishing techniques, which include catching egg and larva through scraping the sea bed, are highly efficient but ecologically damaging. These methods not only reduce fish populations but also damage the seabed habitat.

The second participant pointed out that the primary challenges they encounter when competing with commercial fishermen for resources like fishing grounds and fish stocks stem from the scale and intensity of their operations. The participant highlighted that commercial fishermen operate large fleets of boats with numerous crew members, enabling them to occupy a significant portion of the fishing grounds. This, the participant claimed, limits the available space for traditional fishermen. Additionally, the participant shared that the aggressive fishing methods of commercial fishermen, such as scraping the sea bed, have a profound impact on the fish populations and the ecological balance of the area.

The primary challenges we encounter when competing with commercial fishermen for resources like fishing grounds and fish stocks stem from the scale and intensity of their operations. Commercial fishermen operate large fleets of boats with numerous crew members, enabling them to occupy a significant portion of the fishing grounds. This limits the available space for traditional fishermen. Furthermore, their aggressive fishing methods, such as scraping the sea bed, have a profound impact on the fish populations and the ecological balance of the area.

According to the third participant, the main challenges they face when competing with commercial fishermen for resources, such as fishing grounds and fish stocks, are closely related to the scale and methods of the commercial operations. They claimed that commercial fishermen employ large fleets of boats with numerous crew members, which allows them to dominate significant portions of the fishing grounds, reducing available space for traditional fishermen. They highlighted that the aggressive fishing techniques, especially scraping the sea bed, are efficient but environmentally damaging, leading to fish population depletion and ecosystem disruption.

The main challenges we confront in competing with commercial fishermen for resources, such as fishing grounds and fish stocks, are primarily linked to the scale and methods of their operations. Commercial fishermen operate large fleets of boats with numerous crew members, allowing them to dominate substantial portions of the fishing grounds. This reduces the available space for traditional fishermen. Additionally, their aggressive fishing techniques, particularly the practice of scraping the sea bed, are highly efficient but detrimental to the environment. These methods lead to the depletion of fish populations and disrupt the ecosystem.

Depletion of fish population

The first participant pointed out that the main challenges traditional fishermen face in competing with commercial fishermen for resources, such as fishing grounds and fish stocks, stem primarily from the sheer scale of the commercial operations. These methods not only result in decreased fish populations but also harm the seabed habitat. Furthermore, they shared that the competition for fish stocks has led to overfishing, making it increasingly challenging for traditional fishermen to secure an adequate catch.

The main challenges we face in competing with commercial fishermen for resources, such as fishing grounds and fish stocks, are primarily related to the complete scale of their operations. And, their bulk fishing techniques, which include catching egg and larva through scraping the sea bed, are highly efficient but ecologically damaging. These methods not only reduce fish populations but also damage the seabed habitat. Moreover, the competition for fish stocks has resulted in overfishing, making it increasingly difficult for us to secure an adequate catch.

The second participant pointed out that the primary challenges they encounter when competing with commercial fishermen for resources like fishing grounds and fish stocks stem from the scale and intensity of their operations. The second participant claimed that over time, this has led to the depletion of fish stocks, making it increasingly challenging for traditional fishermen to maintain their catch levels. The participant further pointed out that the competition with commercial fishermen has intensified and poses a considerable threat to their traditional fishing practices.

The primary challenges we encounter when competing with commercial fishermen for resources like fishing grounds and fish stocks stem from the scale and intensity of their operations. Furthermore, their aggressive fishing methods, such as scraping the sea bed, have a profound impact on the fish populations and the ecological balance of the area. Over time, this has led to the depletion of fish stocks, making it increasingly challenging for us to maintain our catch levels. The competition with commercial fishermen has intensified and poses a considerable threat to our traditional fishing practices.

According to the third participant, the main challenges they face when competing with commercial fishermen for resources, such as fishing grounds and fish stocks, are closely related to the scale and methods of the commercial operations. They highlighted that the aggressive fishing techniques, especially scraping the sea bed, are efficient but environmentally damaging, leading to fish population depletion and ecosystem disruption. And, they shared that the competition for fish stocks has resulted in overfishing, making it increasingly difficult for traditional fishermen to secure adequate catches during their traditional fishing seasons. As per their perspective, these challenges have significant implications for the sustainability of their traditional fishing practices.

The main challenges we confront in competing with commercial fishermen for resources, such as fishing grounds and fish stocks, are primarily linked to the scale and methods of their operations. And, their aggressive fishing techniques, particularly the practice of scraping the sea bed, are highly efficient but detrimental to the environment. These methods lead to the depletion of fish populations and disrupt the ecosystem. Furthermore, the competition for fish stocks has resulted in overfishing, making it increasingly difficult for us to secure a sufficient catch during our traditional fishing seasons. The challenges posed by commercial fishermen have significant implications for the sustainability of our traditional fishing practices.

As claimed by the fourth participant the intense competition with commercial fishermen results in overcrowded fishing areas, potentially leading to overfishing and a faster depletion of fish stocks. This, as shared, significantly impacts their ability to maintain a sustainable catch.

The intense competition with commercial fishermen often results in overcrowded fishing areas. This can lead to overfishing, depleting fish stocks more rapidly and affecting our ability to secure a sustainable catch.

The fifth participant claimed that competition with commercial fishermen often results in overcrowding in fishing areas, which can contribute to overfishing. This overfishing directly affects the sustainability of fish stocks and makes it increasingly difficult for traditional fishermen to secure an adequate catch.

The competition with commercial fishermen can lead to overcrowding in fishing areas, contributing to overfishing. This overfishing affects the sustainability of fish stocks and makes it harder for us to secure a sufficient catch.

As claimed by the sixth participant, the heightened competition can result in overfishing in the traditional fishing areas, leading to the rapid depletion of fish stocks. These circumstances make it notably challenging for traditional fishermen to maintain a sustainable catch.

The intense competition can lead to overfishing in our fishing areas, depleting fish stocks more rapidly. This creates challenges for us in maintaining a sustainable catch.

Technological disadvantages

The fourth participant emphasized that the main challenges in competing with commercial fishermen for resources revolve around two central issues. Firstly, they underlined the lack of access to advanced technology and larger vessels that are commonplace in commercial fishing. This, as they highlighted, places traditional fishermen at a distinct disadvantage in terms of efficiently covering fishing grounds.

The primary challenges we face in competing with commercial fishermen for resources are twofold. Firstly, we often lack access to the advanced technology and larger vessels that commercial fishermen utilize. This puts us at a disadvantage in terms of covering fishing grounds efficiently.

The fifth participant highlighted that the main challenges they encounter when competing with commercial fishermen for resources are technology and overfishing. They pointed out that commercial fishermen have access to advanced technology and larger vessels, which allow them to cover more extensive fishing areas and harvest fish more efficiently. This places traditional fishermen at a technological disadvantage.

The main challenges we encounter when competing with commercial fishermen for resources are technology and overfishing. Commercial fishermen have access to advanced technology and larger vessels, which enable them to cover larger areas and harvest fish more efficiently. This puts us at a technological disadvantage.

As claimed by the sixth participant, the foremost challenges encountered in competing with commercial fishermen for resources pertain to technological disparities and overfishing. Commercial fishermen, due to their advanced technology and larger vessels, hold a distinct advantage in covering extensive fishing grounds and efficiently harvesting fish. This technological gap places traditional fishermen at a significant disadvantage.

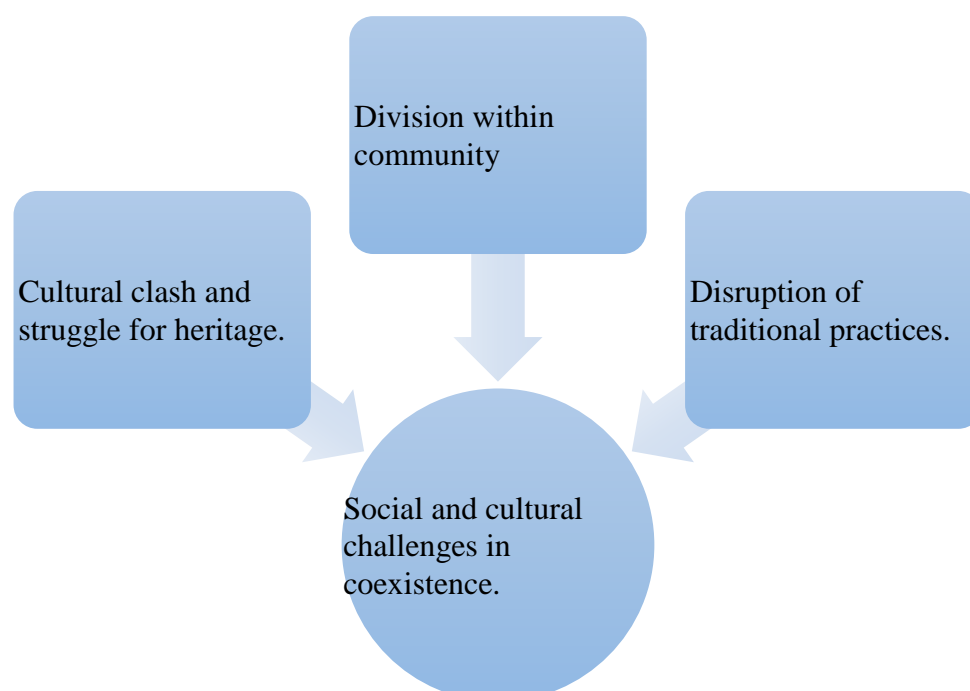
The key challenges we face when competing with commercial fishermen for resources include technology and overfishing. Commercial fishermen have the advantage of advanced technology and larger boats, which allow them to cover more fishing grounds and harvest fish more efficiently. This technological gap puts us at a disadvantage.

THEME 9

What are the challenges faced by traditional fishermen in the arrival of commercial fisherman?

The Ninth Theme emerged from the study is **Social and Cultural Challenges in Coexistence**. It includes the Sub themes: Social and Cultural Challenges Arising from Coexistence, Division within the Community, Cultural Clash and Struggle for Heritage, Disruption of Traditional Practices.

Figure 10



Cultural clash and struggle for heritage

The first participant pointed out that the coexistence of traditional and commercial fishermen in the same fishing community has indeed given rise to various social and cultural challenges. They claimed that while the community's culture and language slang have largely remained unchanged, the introduction of new fishing methods and practices has led to confusion and conflicts within the community. The participant highlighted the profound cultural ties that exist with their traditional fishing practices and the disruption caused by the more aggressive and ecologically harmful methods employed by commercial fishermen. These changes have not only led to conflicts over fishing grounds and resources but also raised concerns about the sustainability of their cultural heritage.

The coexistence of traditional and commercial fishermen in the same fishing community has given rise to various social and cultural challenges. While our culture and language slang have remained largely unchanged, the shift in fishing methods and practices has caused confusions within the community. We have deep-rooted cultural ties to our fishing practices, which are now being affected by the more aggressive and ecologically harmful methods introduced by commercial fishermen. This has led to conflicts over fishing grounds and resources, as well as concerns about the sustainability of our cultural heritage.

The second participant pointed out that one of the main challenges arising from the coexistence of traditional and commercial fishermen in their fishing community is the transformation of fishing practices. While the participant highlighted that their traditional fishing methods have been passed down through generations, the introduction of bulk and aggressive techniques by commercial fishermen has raised concerns about the preservation of their cultural heritage. This, the participant claimed, has led to debates within the community about the ethics of these changes and their impact on their way of life.

The coexistence of traditional and commercial fishermen in our fishing community has brought about social and cultural challenges, despite the retention of our language slang and core cultural values. The main challenge arises from the transformation of fishing practices. While our traditional fishing methods have been passed down through generations, the introduction of bulk and aggressive techniques by commercial fishermen has raised concerns about the preservation of our cultural heritage. This has led to debates within the community about the ethics of these changes and their impact on our way of life.

According to the third participant, the coexistence of traditional and commercial fishermen in their fishing community has resulted in social and cultural challenges. They shared that, while their culture and language slang have remained largely unchanged, the shift in fishing methods and practices has caused confusion within the community. They claimed that their deep-rooted cultural ties to their traditional fishing practices are now being affected by the more aggressive and ecologically harmful methods introduced by commercial fishermen. This situation has led to conflicts over fishing grounds and resources, as well as concerns about the sustainability of their cultural heritage.

The coexistence of traditional and commercial fishermen within our fishing community has posed social and cultural challenges, even though our culture and language slang remain largely unchanged. The primary challenge stems from the evolving fishing methods. Our traditional practices, deeply embedded in our cultural heritage, are now confronted by the aggressive and ecologically harmful methods employed by commercial fishermen. This has sparked tensions within the community regarding the sustainability of our cultural traditions..

The fourth participant highlighted that the coexistence of traditional and commercial fishermen in the same fishing community has given rise to several social and cultural challenges. Firstly, as pointed out, there is a shift in the social fabric of their community. Traditional fishermen and commercial fishermen often have different backgrounds, lifestyles, and practices, leading to a sense of separation within the community, and this shift in social dynamics can affect social cohesion. And, as they claimed, the introduction of commercial fishing practices can sometimes clash with their traditional values and customs.

The coexistence of traditional and commercial fishermen in the same fishing community has given rise to several social and cultural challenges. Firstly, there is a shift in the social fabric of our community. Traditional fishermen and commercial fishermen often have different backgrounds, lifestyles, and practices, leading to a sense of separation within the community. This can affect social cohesion. Additionally, the introduction of commercial fishing practices can sometimes clash with our traditional values and customs.

The fifth participant highlighted that the coexistence of traditional and commercial fishermen in their fishing community has resulted in significant social and cultural challenges. They pointed out that a prominent issue is the division within the community, with traditional fishermen and commercial fishermen often having conflicting interests and practices, which can lead to social divides. And, they claimed that the influx of commercial fishing has the potential to disrupt their traditional way of life and practices, causing tension and conflicts related to cultural values, customs, and the preservation of their traditional fishing heritage.

The coexistence of traditional and commercial fishermen in our fishing community has led to social and cultural challenges. One key issue is the division within the community. Traditional fishermen and commercial fishermen may have conflicting interests and practices, leading to social divides. Furthermore, the influx of commercial fishing can disrupt our traditional way of life and practices. This can create tension and conflicts related to cultural values, customs, and the preservation of our traditional fishing heritage.

As highlighted by the sixth participant, the coexistence of traditional and commercial fishermen in the same community has indeed brought forth a set of social and cultural challenges. A significant issue revolves around the potential division within the community, stemming from differences in lifestyles, practices, and economic interests. Additionally, the clash between commercial fishing practices and traditional values and customs has presented a notable cultural challenge. This cultural disparity has the potential to generate tensions within the community as the preservation of cultural heritage confronts the forces of modernization.

The presence of both traditional and commercial fishermen in the same community has given rise to social and cultural challenges. One significant challenge is the potential for division within the community. Differences in lifestyles, practices, and economic interests can create social divides. Moreover, the introduction of commercial fishing practices may clash with our traditional values and customs. This cultural clash can lead to tensions within the community as we strive to maintain our cultural heritage in the face of modernization.

Division within community

The first participant pointed out that the coexistence has created divisions within the community, with some members being enticed by the economic opportunities offered by commercial fishing, while others are dedicated to preserving their traditional way of life.

The coexistence has created divisions within the community, as some members are drawn to the economic opportunities presented by commercial fishing, while others strive to preserve our traditional way of life.

The second participant pointed out that there are social divisions emerging, with some community members opting for commercial fishing due to economic incentives, while others remain committed to preserving their traditional practices. The second participant further pointed out that these divisions have created tension and uncertainty about the future of their fishing community.

There are social divisions emerging, with some community members opting for commercial fishing due to economic incentives, while others remain committed to preserving our traditional practices. These divisions have created tension and uncertainty about the future of our fishing community.

According to the third participant the coexistence has created divisions within the community, with some members attracted to the economic opportunities presented by commercial fishing, while others strive to preserve their traditional way of life. As per their perspective, these divisions have strained social relationships and created uncertainty about the future of their fishing community.

The coexistence has led to divisions among community members. Some are drawn to the economic prospects offered by commercial fishing, while others are dedicated to preserving our traditional way of life. These divisions have strained social relationships and created uncertainty about the future direction of our fishing community.

The fourth participant highlighted that the introduction of commercial fishing practices can sometimes clash with their traditional values and customs. The community dynamics change as commercial fishing operations bring in more diverse influences.

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The community dynamics change as commercial fishing operations bring in more diverse influences.

The fifth participant highlighted that the influx of commercial fishing has the potential to disrupt their traditional way of life and practices, causing tension and conflicts related to cultural values, customs, and the preservation of their traditional fishing heritage.

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As highlighted by the sixth participant, the clash between commercial fishing practices and traditional values and customs has presented a notable cultural challenge. This cultural disparity has the potential to generate tensions within the community as the preservation of cultural heritage confronts the forces of modernization.

The introduction of commercial fishing practices may clash with our traditional values and customs. This cultural clash can lead to tensions within the community as we strive to maintain our cultural heritage in the face of modernization.

Disruption of traditional practices

The first participant highlighted the profound cultural ties that exist with their traditional fishing practices and the disruption caused by the more aggressive and ecologically harmful methods employed by commercial fishermen. These changes have not only led to conflicts over fishing grounds and resources but also raised concerns about the sustainability of their cultural heritage. Moreover, they shared that this coexistence has created divisions within the community, with some members being enticed by the economic opportunities offered by commercial fishing, while others are dedicated to preserving their traditional way of life.

We have deep-rooted cultural ties to our fishing practices, which are now being affected by the more aggressive and ecologically harmful methods introduced by commercial fishermen. This has led to conflicts over fishing grounds and resources, as well as concerns about the sustainability of our cultural heritage. Additionally, the coexistence has created divisions within the community, as some members are drawn to the economic opportunities presented by commercial fishing, while others strive to preserve our traditional way of life.

The second participant highlighted that their traditional fishing methods have been passed down through generations, the introduction of bulk and aggressive techniques by commercial fishermen has raised concerns about the preservation of their cultural heritage. This, the participant claimed, has led to debates within the community about the ethics of these changes and their impact on their way of life. The participant also shared that there are social divisions emerging, with some community members opting for commercial fishing due to economic incentives, while others remain committed to preserving their traditional practices. The second

participant further pointed out that these divisions have created tension and uncertainty about the future of their fishing community.

The main challenge arises from the transformation of fishing practices. While our traditional fishing methods have been passed down through generations, the introduction of bulk and aggressive techniques by commercial fishermen has raised concerns about the preservation of our cultural heritage. This has led to debates within the community about the ethics of these changes and their impact on our way of life. Additionally, there are social divisions emerging, with some community members opting for commercial fishing due to economic incentives, while others remain committed to preserving our traditional practices. These divisions have created tension and uncertainty about the future of our fishing community.

The third participant shared that, while their culture and language slang have remained largely unchanged, the shift in fishing methods and practices has caused confusion within the community. They claimed that their deep-rooted cultural ties to their traditional fishing practices are now being affected by the more aggressive and ecologically harmful methods introduced by commercial fishermen. This situation has led to conflicts over fishing grounds and resources, as well as concerns about the sustainability of their cultural heritage. Additionally, they highlighted that the coexistence has created divisions within the community, with some members attracted to the economic opportunities presented by commercial fishing, while others strive to preserve their traditional way of life. As per their perspective, these divisions have strained social relationships and created uncertainty about the future of their fishing community.

The primary challenge stems from the evolving fishing methods. Our traditional practices, deeply embedded in our cultural heritage, are now confronted by the aggressive and ecologically harmful methods employed by commercial fishermen. This has sparked tensions within the community regarding the sustainability of our cultural traditions. Moreover, the coexistence has led to divisions among community members. Some are drawn to the economic prospects offered by commercial fishing, while others are dedicated to preserving our traditional way of life. These divisions have strained social relationships and created uncertainty about the future direction of our fishing community.

The fourth participant pointed out, there is a shift in the social fabric of their community. Traditional fishermen and commercial fishermen often have different backgrounds, lifestyles, and practices, leading to a sense of separation within the community, and this shift in social dynamics can affect social cohesion. Additionally, as they claimed, the introduction of commercial fishing practices can sometimes clash with their traditional values and customs. The community dynamics change as commercial fishing operations bring in more diverse influences.

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The fifth participant pointed out that a prominent issue is the division within the community, with traditional fishermen and commercial fishermen often having conflicting interests and practices, which can lead to social divides. Additionally, they claimed that the influx of commercial fishing has the potential to disrupt their traditional way of life and practices, causing tension and conflicts related to cultural values, customs, and the preservation of their traditional fishing heritage.

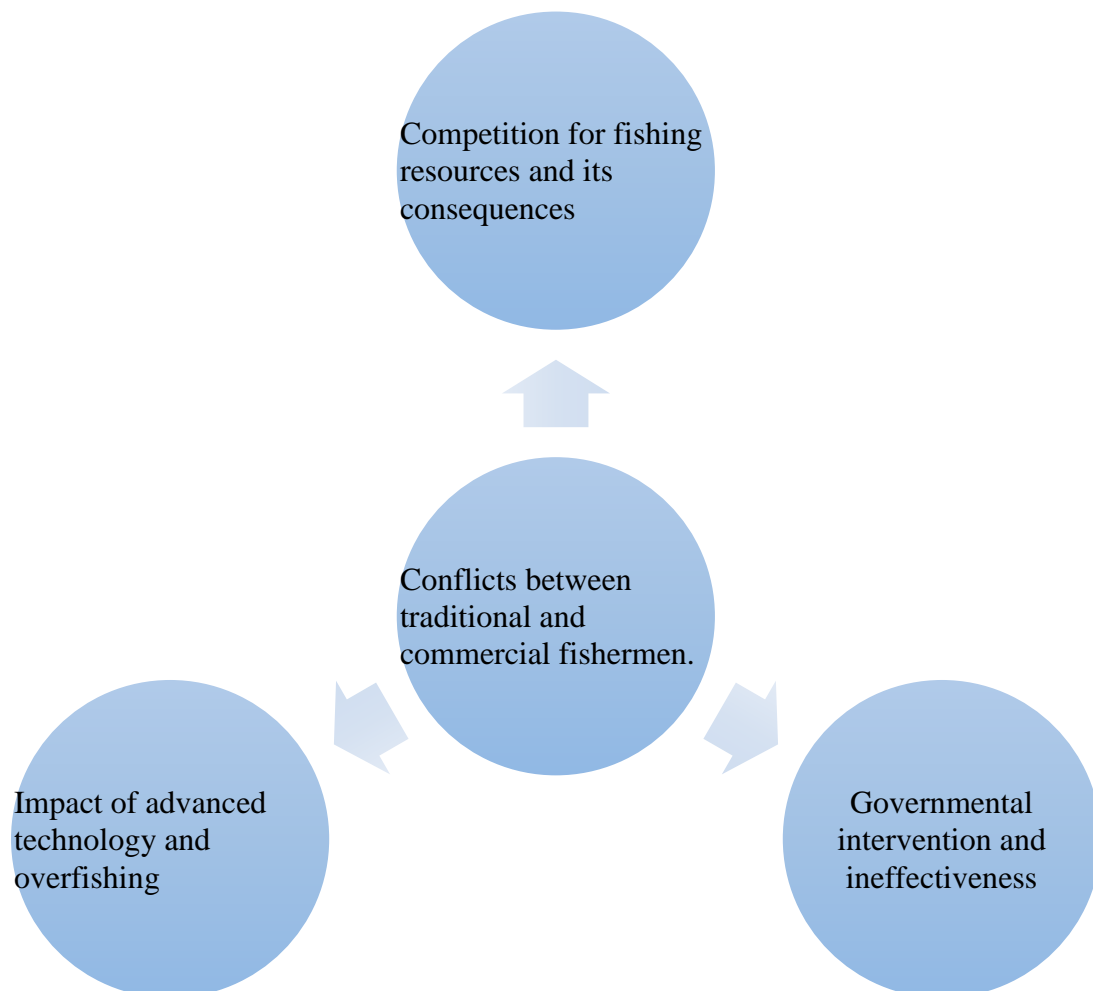
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As highlighted by the sixth participant a significant issue revolves around the potential division within the community, stemming from differences in lifestyles, practices, and economic interests. Additionally, the clash between commercial fishing practices and traditional values and customs has presented a notable cultural challenge. This cultural disparity has the potential to generate tensions within the community as the preservation of cultural heritage confronts the forces of modernization.

The presence of both traditional and commercial fishermen in the same community has given rise to social and cultural challenges. One significant challenge is the potential for division within the community. Differences in lifestyles, practices, and economic interests can create social divides. Moreover, the introduction of commercial fishing practices may clash with our traditional values and customs. This cultural clash can lead to tensions within the community as we strive to maintain our cultural heritage in the face of modernization.

THEME 10**What are the challenges faced by traditional fishermen in the arrival of commercial fisherman?**

The Tenth Theme emerged from the study is **Conflict Between Traditional and Commercial Fishermen**. It includes the Sub themes: Competition for Fishing Resources and Its Consequences, Impact of advanced technology and overfishing, Technological Disparity, Overfishing in Traditional Areas, Disputes and Tensions, Governmental intervention and ineffectiveness.

Figure 11**Competition for fishing resources and its consequences**

The first participant pointed out that while visible conflicts between traditional and commercial fishermen in their community have not been observed, there have been persistent concerns and issues raised. The participant highlighted the major issues leading to these concerns, which include increased competition for fishing grounds, overfishing, and the ecological damage resulting from the bulk fishing methods employed by commercial fishermen. Although conflicts have not arisen, these issues continue to be a point of contention within the community, and the participants are actively seeking solutions to ensure the sustainability of their traditional fishing practices.

While there haven't been any visible conflicts between us and commercial fishermen in our community, there have been ongoing concerns and issues raised. The major issues leading to these concerns are increased competition for fishing grounds, overfishing, and the ecological damage resulting from the bulk fishing methods done by commercial fishermen. While conflicts have not occurred, these issues remain a point of conflict within the community, and we continue to seek solutions to ensure the sustainability of our traditional fishing practices.

The second participant pointed out that, thus far, there have not been any visible conflicts or disputes between traditional and commercial fishermen in their community. The participant shared that while there have been ongoing concerns and issues, measures have been taken, although their impact has been limited. The second participant highlighted that the major issues leading to these concerns include heightened competition for fishing grounds, overfishing, and the environmental consequences of the aggressive fishing techniques employed by commercial fishermen. The participant claimed that while conflicts have been avoided, these issues remain a source of tension within the community.

Thus far, there have not been any visible conflicts or disputes between traditional and commercial fishermen in our community. However, there have been ongoing concerns and issues that have been brought to the attention of the ruling authorities. While some measures have been taken, their impact has been limited. The major issues leading to these concerns include heightened competition for fishing grounds, overfishing, and the environmental consequences of the aggressive fishing techniques employed by commercial fishermen. While conflicts have been avoided, these issues remain a source of tension within the community.

According to the third participant, there haven't been any visible conflicts or disputes between traditional and commercial fishermen in their community. They mentioned that while some measures have been taken, the impact has been limited. The major issues leading to these concerns, as per their perspective, include increased competition for fishing grounds, overfishing, and the ecological damage caused by the aggressive fishing methods of commercial fishermen. Despite the absence of overt conflicts, these issues continue to be a point of discussion and concern within their community. They emphasized their commitment to finding solutions to ensure the long-term sustainability of their traditional fishing practices.

To date, there have not been any visible conflicts or disputes between traditional and commercial fishermen in our community. The major issues leading to these concerns include increased competition for fishing grounds, overfishing, and the ecological damage caused by the aggressive fishing methods of commercial fishermen. While conflicts have been avoided, these issues continue to be a subject of discussion and concern within the community. We remain committed to finding solutions to ensure the long-term sustainability of our traditional fishing practices.

The fourth participant highlighted that the utilization of advanced technology and larger vessels by commercial fishermen frequently leads to overfishing, with direct consequences for traditional fishing practices. This heightened competition for limited resources has, as they claimed, triggered tensions and disputes within their community.

One major issue leading to these conflicts is competition for fishing resources, including fishing grounds and fish stocks. The use of advanced technology and larger vessels by commercial fishermen often results in overfishing, which directly impacts our traditional fishing practices. This competition for limited resources has created tensions and disputes.

There have been conflicts and disputes between traditional and commercial fishermen in their community. The primary issue leading to these conflicts, as pointed out by the fifth participant, is competition for fishing resources. They highlighted that the advanced technology and larger boats used by commercial fishermen enable them to harvest fish more efficiently, sometimes leading to overfishing in traditional fishing areas. This competition for resources, which includes fishing grounds and fish stocks, has sparked disputes and tensions within the community.

Indeed, there have been conflicts and disputes between traditional and commercial fishermen. The primary issue at the core of these conflicts is competition for fishing resources. Commercial fisherman's use of advanced technology and larger boats allows them to harvest fish more efficiently, sometimes leading to overfishing in our traditional fishing areas. This competition for resources, including fishing grounds and fish stocks, has sparked disputes and tensions within our community.

As claimed by the sixth participant, there have been conflicts and disputes between traditional and commercial fishermen. The primary issue that fuels these disputes is the fierce competition for fishing resources. Commercial fishermen, leveraging modern technology and larger vessels, often exhaust fish stocks at an accelerated rate within our traditional fishing zones. This heightened competition for finite resources, encompassing fishing grounds and fish stocks, has engendered discord and tensions between the two factions.

Yes, conflicts and disputes have arisen between traditional and commercial fishermen. The central issue contributing to these conflicts is competition for fishing resources. Commercial fishermen, with their modern technology and larger vessels, often deplete fish stocks rapidly in our traditional fishing areas. This has led to intense competition for limited resources, including fishing grounds and fish stocks, resulting in disputes and tensions between the two groups.

Governmental intervention and ineffectiveness

The first participant pointed out that while visible conflicts between traditional and commercial fishermen in their community have not been observed, there have been persistent concerns and issues raised. They claimed that they have communicated these problems to the ruling party, but the measures taken haven't had a significant impact.

While there haven't been any visible conflicts between us and commercial fishermen in our community, there have been ongoing concerns and issues raised. We have communicated our problems caused by the presence of commercial fishermen to the ruling party, and they have taken some measures, although the impact hasn't been affected.

The second participant pointed out that, thus far, there have not been any visible conflicts or disputes between traditional and commercial fishermen in their community. The participant shared that while there have been ongoing concerns and issues, measures have been taken, although their impact has been limited.

Thus far, there have not been any visible conflicts or disputes between traditional and commercial fishermen in our community. However, there have been ongoing concerns and issues that have been brought to the attention of the ruling authorities. While some measures have been taken, their impact has been limited.

According to the third participant, there haven't been any visible conflicts or disputes between traditional and commercial fishermen in their community. However, they have communicated their concerns and issues stemming from the coexistence with commercial fishermen to the ruling authorities. They mentioned that while some measures have been taken, the impact has been limited.

To date, there have not been any visible conflicts or disputes between traditional and commercial fishermen in our community. However, we have raised concerns and issues stemming from the coexistence with commercial fishermen with the ruling authorities. While they have taken some measures, the impact has been somewhat limited.

Impact of advanced technology and overfishing

The fourth participant pointed out that conflicts and disputes have indeed arisen between traditional and commercial fishermen in their community. These tensions primarily revolve around the competition for fishing resources, encompassing fishing grounds and fish stocks. The fourth participant highlighted that the utilization of advanced technology and larger vessels by commercial fishermen frequently leads to overfishing, with direct consequences for traditional fishing practices. This heightened competition for limited resources has, as they claimed, triggered tensions and disputes within their community.

Yes, there have been conflicts and disputes between traditional and commercial fishermen in our community. One major issue leading to these conflicts is competition for fishing resources, including fishing grounds and fish stocks. The use of advanced technology and larger vessels by commercial fishermen often results in overfishing, which directly impacts our traditional fishing practices. This competition for limited resources has created tensions and disputes.

There have been conflicts and disputes between traditional and commercial fishermen in their community. The primary issue leading to these conflicts, as pointed out by the fifth participant, is competition for fishing resources. They highlighted that the advanced technology and larger boats used by commercial fishermen enable them to harvest fish more efficiently, sometimes leading to overfishing in traditional fishing areas. This competition for resources, which includes fishing grounds and fish stocks, has sparked disputes and tensions within the community.

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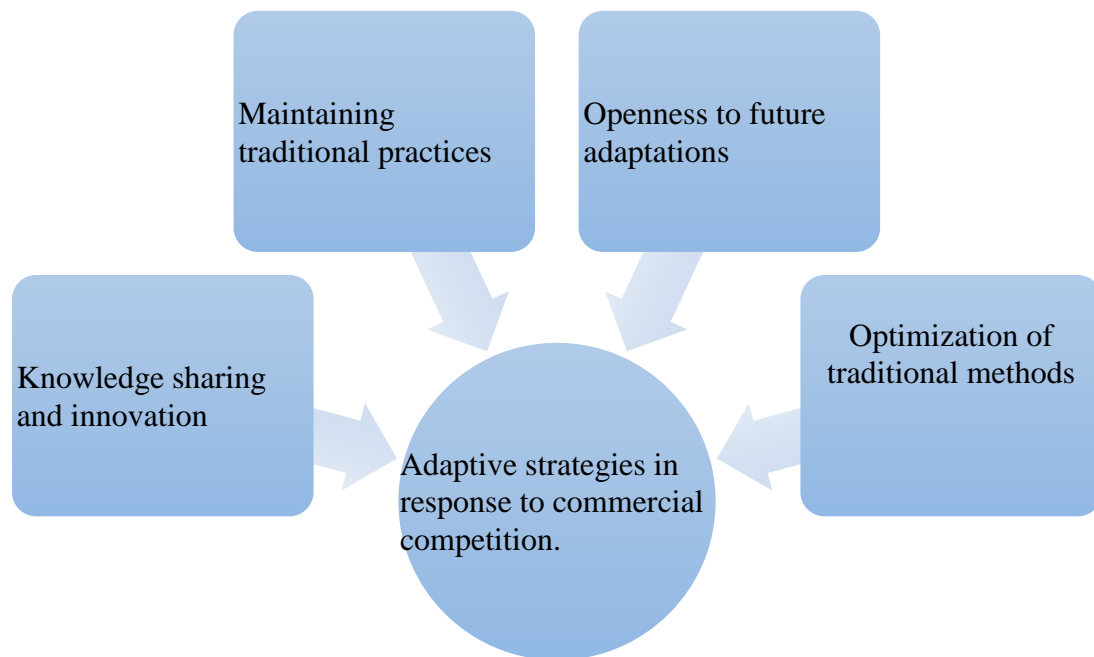
Yes, conflicts and disputes have arisen between traditional and commercial fishermen. The central issue contributing to these conflicts is competition for fishing resources. Commercial fishermen, with their modern technology and larger vessels, often deplete fish stocks rapidly in our traditional fishing areas. This has led to intense competition for limited resources, including fishing grounds and fish stocks, resulting in disputes and tensions between the two groups

THEME 11

What are the coping strategies adapted by the traditional fishermen in the light of commercial fishermen?

The Eleventh Theme emerged from the study is **Adaptive Strategies in Response to Commercial Competition**. It includes the Sub themes: Enhanced Efficiency of Traditional Fishing Methods, Knowledge-sharing and Innovation, Collaboration Strategies in Response to Commercial Competition, Optimization of traditional methods.

Figure 12



Maintaining traditional practices

The participant pointed out that, up to the present time, they have not implemented significant changes to their fishing techniques or strategies in response to the heightened competition from commercial fishermen. For now, they continue to rely on their traditional methods and practices but express readiness to make changes if the situation requires.

To date, we have not made any significant changes to our fishing techniques or strategies to cope with the increased competition from commercial fishermen. As of now, we continue to rely on our traditional methods and practices, but we remain open to exploring new approaches if they become necessary.

The second participant pointed out that they have not made any significant changes to their fishing techniques or strategies in response to the increased competition from commercial fishermen. The participant shared that their traditional methods have been passed down through generations, and they have a deep connection to these practices.

We have not made any substantial changes to our fishing techniques or strategies in response to the increased competition from commercial fishermen. Our traditional methods have been passed down through generations, and we have a deep connection to these practices.

According to the third participant, there haven't been any significant changes made to their fishing techniques or strategies to cope with the increased competition from commercial fishermen. They highlighted the deep connection and attachment to their traditional fishing methods, which have been passed down through generations.

As of now, we have not made any notable changes to our fishing techniques or strategies to address the increased competition from commercial fishermen. Our traditional methods have been a cornerstone of our community's identity, and we have a strong attachment to these practices.

The fourth participant highlighted that, in light of the heightened competition from commercial fishermen, they have implemented several changes to their fishing techniques and strategies. One notable shift is their emphasis on refining and optimizing traditional fishing methods to improve overall efficiency. They've also taken strides to enhance knowledge sharing within their traditional fishing community, fostering innovation and adaptation to remain competitive in the face of the challenges brought about by commercial fishing.

In response to the increased competition from commercial fishermen, we have made several changes to our fishing techniques and strategies. One significant change is our effort to optimize our traditional fishing methods. We focus on maximizing the efficiency of our fishing practices and exploring innovative ways to make the most of our limited resources. Additionally, we have enhanced our knowledge sharing within the traditional fishing community, enabling us to adapt and remain competitive despite the challenges posed by commercial fishing.

The fifth participant highlighted that, in response to heightened competition posed by commercial fishermen, notable changes have been implemented in their fishing techniques and strategies. A significant point brought forward is the enhancement of traditional fishing methods, emphasizing increased efficiency and effectiveness. Additionally, it has been shared that efforts have been directed toward fostering collaboration and communication within the traditional fishing community to facilitate the exchange of valuable insights and innovative approaches. According to these insights, these adaptations play a pivotal role in enabling traditional fishermen to effectively adjust and maintain their competitive edge amidst the challenges presented by the presence of commercial fishing operations.

To cope with the increased competition from commercial fishermen, we have made several adjustments to our fishing techniques and strategies. One notable change is the improvement of our traditional fishing methods. We have worked on making our practices more efficient and effective. Additionally, we have established better

collaboration and communication within our traditional fishing community to share insights and innovations. These efforts help us adapt and remain competitive in the face of competition from commercial fishing.

As highlighted by the sixth participant, several adjustments have been initiated in response to the amplified competition posed by commercial fishermen. Of notable significance is the drive to optimize our conventional fishing methods. We have diligently worked on refining our techniques, striving for enhanced efficiency and effectiveness. Additionally, a heightened emphasis has been placed on the exchange of knowledge and insights within our traditional fishing community, fostering an environment of innovation and adaptability. These changes stand as a testimony to our collective effort to counter the escalated competition from commercial fishermen while upholding our traditional fishing practices.

In light of the heightened competition from commercial fishermen, we have introduced changes to our fishing techniques and strategies. One key change is our focus on enhancing the efficiency of our traditional fishing methods. We have fine-tuned our practices to make the most of available resources. Moreover, we have strengthened our knowledge-sharing networks within the traditional fishing community, fostering innovation and adaptation. These changes enable us to cope with the increased competition from commercial fishermen and sustain our traditional fishing practices.

Openness to future adaptations

The participant claimed that, however, they acknowledge the need for potential adaptations to the changing dynamics in their fishing grounds and remain open to exploring new approaches in the future. For now, they continue to rely on their traditional methods and practices but express readiness to make changes if the situation requires.

To date, we have not made any significant changes to our fishing techniques or strategies to cope with the increased competition from commercial fishermen. However, we recognize the need to adapt to the changing dynamics in our fishing grounds, and it's possible that we may consider adjustments in the future. As of now, we continue to rely on our traditional methods and practices, but we remain open to exploring new approaches if they become necessary.

The second participant pointed out that they have not made any significant changes to their fishing techniques or strategies in response to the increased competition from commercial fishermen. The participant shared that their traditional methods have been passed down through generations, and they have a deep connection to these practices. The second participant highlighted that, while no changes have been made so far, they acknowledge the evolving fishing landscape and may explore adjustments in the future if it becomes essential.

We have not made any substantial changes to our fishing techniques or strategies in response to the increased competition from commercial fishermen. Our traditional methods have been passed down through generations, and we have a deep connection to these practices. While we haven't made changes thus far, we acknowledge the evolving fishing landscape and may explore adjustments in the future if it becomes essential.

According to the third participant, there haven't been any significant changes made to their fishing techniques or strategies to cope with the increased competition from commercial fishermen. They highlighted the deep connection and attachment to their traditional fishing methods, which have been passed down through generations. However, they also acknowledged the evolving fishing landscape and expressed their openness to adapting their techniques if circumstances necessitate it in the future.

As of now, we have not made any notable changes to our fishing techniques or strategies to address the increased competition from commercial fishermen. Our traditional methods have been a cornerstone of our community's identity, and we have a strong attachment to these practices. While we haven't made changes to date, we are aware of the challenges posed by commercial fishermen and remain open to the possibility of adjusting our techniques in the future if the need arises.

Knowledge sharing and innovation

The fourth participant highlighted that, in light of the heightened competition from commercial fishermen, they have implemented several changes to their fishing techniques and strategies. One notable shift is their emphasis on refining and optimizing traditional fishing methods to improve overall efficiency. They've also taken strides to enhance knowledge sharing within their traditional fishing community, fostering innovation and adaptation to remain competitive in the face of the challenges brought about by commercial fishing.

In response to the increased competition from commercial fishermen, we have made several changes to our fishing techniques and strategies. One significant change is our effort to optimize our traditional fishing methods. We focus on maximizing the efficiency of our fishing practices and exploring innovative ways to make the most of our limited resources. Additionally, we have enhanced our knowledge sharing within the traditional fishing community, enabling us to adapt and remain competitive despite the challenges posed by commercial fishing.

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To cope with the increased competition from commercial fishermen, we have made several adjustments to our fishing techniques and strategies. One notable change is the improvement of our traditional fishing methods. We have worked on making our practices more efficient and effective. Additionally, we have established better collaboration and communication within our traditional fishing community to share insights and innovations. These efforts help us adapt and remain competitive in the face of competition from commercial fishing.

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In light of the heightened competition from commercial fishermen, we have introduced changes to our fishing techniques and strategies. One key change is our focus on enhancing the efficiency of our traditional fishing methods. We have fine-tuned our practices to make the most of available resources. Moreover, we have strengthened our knowledge-sharing networks within the traditional fishing community, fostering innovation and adaptation. These changes enable us to cope with the increased competition from commercial fishermen and sustain our traditional fishing practices.

Optimization of traditional methods

The fourth participant highlighted that, in light of the heightened competition from commercial fishermen, they have implemented several changes to their fishing techniques and strategies. One notable shift is their emphasis on refining and optimizing traditional fishing methods to improve overall efficiency. They've also taken strides to enhance knowledge sharing within their traditional fishing community, fostering innovation and adaptation to remain competitive in the face of the challenges brought about by commercial fishing.

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The fifth participant highlighted that, in response to heightened competition posed by commercial fishermen, notable changes have been implemented in their fishing techniques and strategies. A significant point brought forward is the enhancement of traditional fishing methods, emphasizing increased efficiency and effectiveness. Additionally, it has been shared that efforts have been directed toward fostering collaboration

and communication within the traditional fishing community to facilitate the exchange of valuable insights and innovative approaches. According to these insights, these adaptations play a pivotal role in enabling traditional fishermen to effectively adjust and maintain their competitive edge amidst the challenges presented by the presence of commercial fishing operations.

To cope with the increased competition from commercial fishermen, we have made several adjustments to our fishing techniques and strategies. One notable change is the improvement of our traditional fishing methods. We have worked on making our practices more efficient and effective. Additionally, we have established better collaboration and communication within our traditional fishing community to share insights and innovations. These efforts help us adapt and remain competitive in the face of competition from commercial fishing.

As highlighted by the sixth participant, several adjustments have been initiated in response to the amplified competition posed by commercial fishermen. Of notable significance is the drive to optimize our conventional fishing methods. We have diligently worked on refining our techniques, striving for enhanced efficiency and effectiveness. Additionally, a heightened emphasis has been placed on the exchange of knowledge and insights within our traditional fishing community, fostering an environment of innovation and adaptability. These changes stand as a testimony to our collective effort to counter the escalated competition from commercial fishermen while upholding our traditional fishing practices.

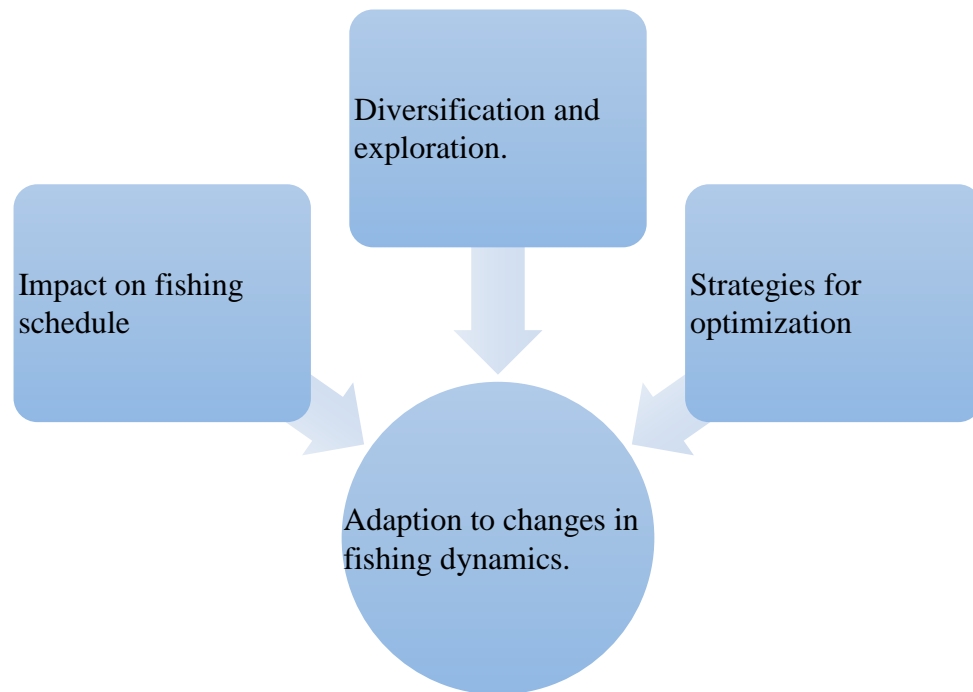
In light of the heightened competition from commercial fishermen, we have introduced changes to our fishing techniques and strategies. One key change is our focus on enhancing the efficiency of our traditional fishing methods. We have fine-tuned our practices to make the most of available resources. Moreover, we have strengthened our knowledge-sharing networks within the traditional fishing community, fostering innovation and adaptation. These changes enable us to cope with the increased competition from commercial fishermen and sustain our traditional fishing practices.

THEME 12

What are the coping strategies adapted by the traditional fishermen in the light of commercial fishermen?

The Twelfth Theme emerged from the study is **Adaptation to Changes in Fishing Dynamics**. It includes the Sub themes: Impact on fishing schedule, Strategies for optimization, Diversification and exploration.

Figure 13



Impact on fishing schedule

Claimed that, the participant highlighted that the arrival of commercial fishermen significantly influenced their fishing schedules and routines. The increased competition for fish stocks due to the commercial fishermen's operations necessitated adjustments in their approach. Despite the challenges posed by commercial fishermen, these adjustments have allowed them to adapt to the changing dynamics in their fishing community.

The arrival of commercial fishermen has indeed influenced our fishing schedules and routines. With their over and bulk fishing operations, there is increased pressure on the available fish stocks. This has made it necessary for us to adjust our fishing schedules and routines to optimize our catch. We have found that timing our fishing trips to avoid direct competition with commercial fishermen, such as fishing during off-peak hours or focusing on different fishing grounds, can be beneficial. While the presence of commercial fishermen has created challenges, we have made these adjustments to maintain our livelihoods.

The second participant highlighted that the arrival of commercial fishermen has indeed influenced their fishing schedules and routines. The participant claimed that the large-scale operations and aggressive fishing methods of commercial fishermen have required them to make adjustments to optimize their catch. They have changed their fishing schedules to avoid direct competition with commercial fishermen by fishing during less crowded

times or exploring different fishing grounds. These adjustments have enabled them to maintain their catch levels and livelihoods in the face of increased competition.

The arrival of commercial fishermen has had a notable impact on our fishing schedules and routines. Their large-scale operations and aggressive fishing methods have made it necessary for us to adapt to optimize our catch. We have adjusted our fishing schedules to avoid direct competition with commercial fishermen, such as fishing during less crowded times or exploring different fishing grounds. These adjustments have allowed us to maintain our catch levels and livelihoods in the face of increased competition.

According to the third participant, the arrival of commercial fishermen has impacted their fishing schedules and routines. They've made adjustments to their fishing schedules, such as fishing during non-peak times and exploring alternative fishing grounds to minimize direct competition with commercial fishermen. These adaptations have proven crucial in helping them maintain their catch levels and continue their traditional fishing practices.

The presence of commercial fishermen has brought about changes in our fishing schedules and routines. Their extensive operations and aggressive fishing techniques have influenced our approach to optimizing our catch. We have made adjustments to our fishing schedules, often choosing to fish during non-peak times to minimize direct competition with commercial fishermen. Additionally, we have explored alternative fishing grounds that may be less impacted by their activities. These adaptations have been essential in helping us maintain our catch levels and preserve our traditional way of life in the midst of heightened competition.

The fourth participant pointed out that the arrival of commercial fishermen has notably impacted their fishing schedules and routines. These modifications include altering their fishing hours to avoid direct competition with commercial fishermen. Furthermore, they've diversified their fishing strategies by targeting different fish species and exploring alternative fishing areas, all in an effort to enhance their chances of achieving a successful catch.

The arrival of commercial fishermen has had a notable influence on our fishing schedules and routines. We often modify our fishing hours to avoid direct competition with commercial fishermen. And, we have diversified our fishing strategies, targeting different fish species or exploring alternative fishing areas to improve our chances of a successful catch.

The fifth participant highlighted that the arrival of commercial fishermen has notably influenced their fishing schedules and routines. A significant adaptation they pointed out is increased flexibility in their fishing hours, often venturing out at different times to circumvent direct competition with commercial fishermen. Furthermore, they've diversified their fishing techniques and explored new fishing areas to enhance their catch. According to their insights, these modifications are integral in maintaining competitiveness and upholding

their traditional fishing practices amidst the evolving dynamics introduced by the presence of commercial fishing operations.

The presence of commercial fishermen has indeed influenced our fishing schedules and routines. To optimize our catch and adapt to the changing dynamics, we have made adjustments. We have become more flexible with our fishing hours, often going out at different times to avoid direct competition with commercial fishermen. Moreover, we have diversified our fishing techniques and explored new areas to improve our catch. These adjustments help us remain competitive and sustain our traditional fishing practices.

As claimed by the sixth participant, the presence of commercial fishermen has indeed prompted changes in fishing schedules and routines. And, diversification in our fishing strategies has been a key focus. We now explore alternative fishing areas and target different fish species, all geared towards improving our catch rates. These strategic shifts stand as a testament to our dedication to preserving our traditional fishing practices while effectively responding to the challenges posed by the commercial fishermen.

The arrival of commercial fishermen has brought about changes in our fishing schedules and routines. To optimize our catch and navigate the increased competition, we have made necessary adjustments. We often modify our fishing hours to avoid head-to-head competition with commercial fishermen. Additionally, we have diversified our fishing strategies, such as targeting different species or exploring alternative fishing grounds. These adaptations are essential to our efforts to sustain our traditional fishing practices and remain competitive.

Strategies for optimization

Claimed that, the participant highlighted that the arrival of commercial fishermen significantly influenced their fishing schedules and routines. The increased competition for fish stocks due to the commercial fishermen's operations necessitated adjustments in their approach. They shared that timing fishing trips to avoid direct competition, focusing on different fishing grounds, and exploring improved storage and preservation methods have been key strategies to optimize their catch and livelihood.

The arrival of commercial fishermen has indeed influenced our fishing schedules and routines. With their over and bulk fishing operations, there is increased pressure on the available fish stocks. This has made it necessary for us to adjust our fishing schedules and routines to optimize our catch. We have found that timing our fishing trips to avoid direct competition with commercial fishermen, such as fishing during off-peak hours or focusing on different fishing grounds, can be beneficial. Additionally, we have explored more efficient storage and preservation methods to ensure that our catch remains fresh and valuable.

The second participant highlighted that the arrival of commercial fishermen has indeed influenced their fishing schedules and routines. The participant claimed that the large-scale operations and aggressive fishing methods of commercial fishermen have required them to make adjustments to optimize their catch. They have changed their fishing schedules to avoid direct competition with commercial fishermen by fishing during less crowded times or exploring different fishing grounds. The second participant shared that they have also fine-tuned their fishing techniques to be more precise, allowing them to target specific fish species more effectively.

The arrival of commercial fishermen has had a notable impact on our fishing schedules and routines. Their large-scale operations and aggressive fishing methods have made it necessary for us to adapt to optimize our catch. We have adjusted our fishing schedules to avoid direct competition with commercial fishermen, such as fishing during less crowded times or exploring different fishing grounds. Additionally, we have fine-tuned our fishing techniques to be more precise, enabling us to target specific fish species more effectively.

According to the third participant, the arrival of commercial fishermen has impacted their fishing schedules and routines. They've made adjustments to their fishing schedules, such as fishing during non-peak times and exploring alternative fishing grounds to minimize direct competition with commercial fishermen. These adaptations have proven crucial in helping them maintain their catch levels and continue their traditional fishing practices.

The presence of commercial fishermen has brought about changes in our fishing schedules and routines. Their extensive operations and aggressive fishing techniques have influenced our approach to optimizing our catch. We have made adjustments to our fishing schedules, often choosing to fish during non-peak times to minimize direct competition with commercial fishermen. Additionally, we have explored alternative fishing grounds that may be less impacted by their activities. These adaptations have been essential in helping us maintain our catch levels and preserve our traditional way of life in the midst of heightened competition.

The fourth participant pointed out that the arrival of commercial fishermen has notably impacted their fishing schedules and routines. In response to this change and to optimize their catch in the face of increased competition, they've made substantial adjustments to their fishing schedules. These modifications include altering their fishing hours to avoid direct competition with commercial fishermen. Furthermore, they've diversified their fishing strategies by targeting different fish species and exploring alternative fishing areas, all in an effort to enhance their chances of achieving a successful catch.

The arrival of commercial fishermen has had a notable influence on our fishing schedules and routines. To optimize our catch and adapt to the increased competition, we have made significant adjustments to our fishing schedules. We often modify our fishing hours to avoid direct competition with commercial fishermen. Additionally, we have diversified our fishing strategies, targeting different fish species or exploring alternative fishing areas to improve our chances of a successful catch.

The fifth participant highlighted that the arrival of commercial fishermen has notably influenced their fishing schedules and routines. In response to these changes, it has been shared that they have made several adjustments aimed at optimizing their catch. A significant adaptation they pointed out is increased flexibility in their fishing hours, often venturing out at different times to circumvent direct competition with commercial fishermen. Furthermore, they've diversified their fishing techniques and explored new fishing areas to enhance their catch.

The presence of commercial fishermen has indeed influenced our fishing schedules and routines. To optimize our catch and adapt to the changing dynamics, we have made adjustments. We have become more flexible with our fishing hours, often going out at different times to avoid direct competition with commercial fishermen. Moreover, we have diversified our fishing techniques and explored new areas to improve our catch. These adjustments help us remain competitive and sustain our traditional fishing practices.

As claimed by the sixth participant, the presence of commercial fishermen has indeed prompted changes in fishing schedules and routines. The adjustments made have been integral to optimizing the catch and addressing the heightened competition. One notable adaptation is the flexibility in our fishing hours, allowing us to circumvent direct competition with the commercial fishing operations. Additionally, diversification in our fishing strategies has been a key focus. We now explore alternative fishing areas and target different fish species, all geared towards improving our catch rates.

The arrival of commercial fishermen has brought about changes in our fishing schedules and routines. To optimize our catch and navigate the increased competition, we have made necessary adjustments. We often modify our fishing hours to avoid head-to-head competition with commercial fishermen. Additionally, we have diversified our fishing strategies, such as targeting different species or exploring alternative fishing grounds. These adaptations are essential to our efforts to sustain our traditional fishing practices and remain competitive.

Diversification and exploration.

The fourth participant pointed out that they've diversified their fishing strategies by targeting different fish species and exploring alternative fishing areas, all in an effort to enhance their chances of achieving a successful catch.

We have diversified our fishing strategies, targeting different fish species or exploring alternative fishing areas to improve our chances of a successful catch.

The fifth participant highlighted that they've diversified their fishing techniques and explored new fishing areas to enhance their catch. According to their insights, these modifications are integral in maintaining competitiveness and upholding their traditional fishing practices amidst the evolving dynamics introduced by the presence of commercial fishing operations.

We have diversified our fishing techniques and explored new areas to improve our catch. These adjustments help us remain competitive and sustain our traditional fishing practices.

As claimed by the sixth participant, , diversification in their fishing strategies has been a key focus. They now explore alternative fishing areas and target different fish species, all geared towards improving their catch rates. These strategic shifts stand as a testament to our dedication to preserving traditional fishing practices while effectively responding to the challenges posed by the commercial fishermen.

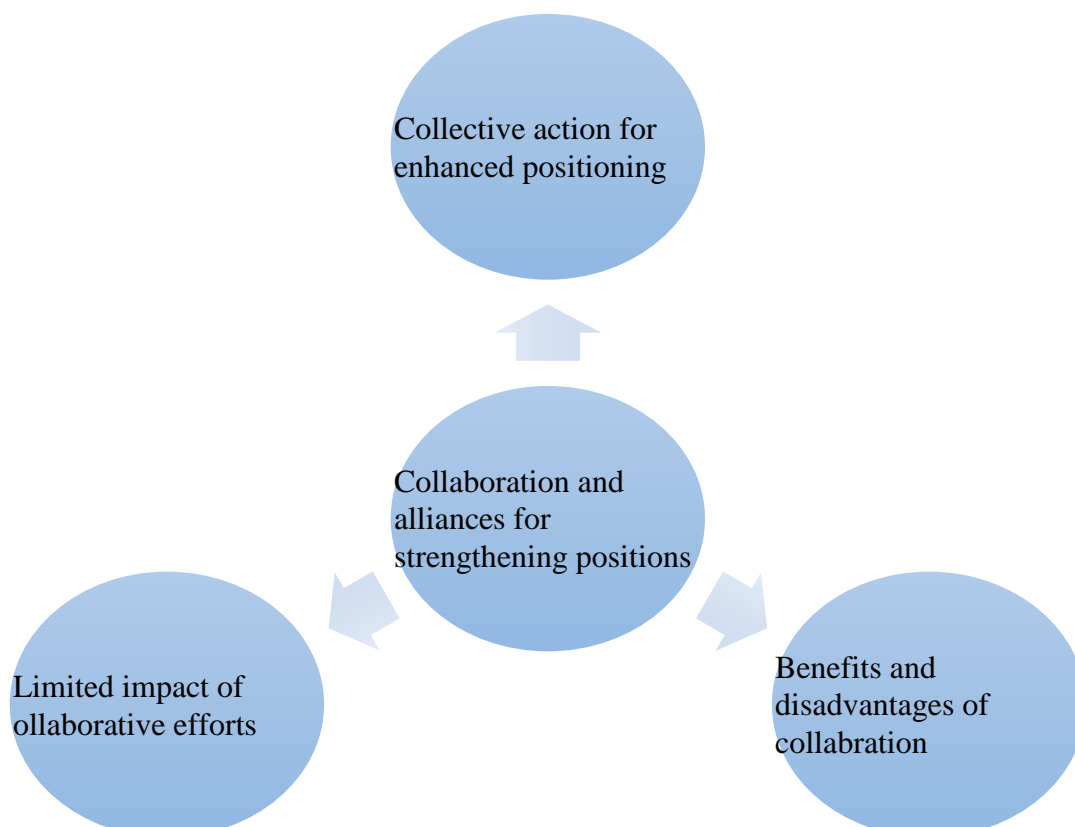
The arrival of commercial fishermen has brought about changes in our fishing schedules and routines. To optimize our catch and navigate the increased competition, we have made necessary adjustments. We often modify our fishing hours to avoid head-to-head competition with commercial fishermen. Additionally, we have diversified our fishing strategies, such as targeting different species or exploring alternative fishing grounds. These adaptations are essential to our efforts to sustain our traditional fishing practices and remain competitive.

THEME 13

What are the coping strategies adapted by the traditional fishermen in the light of commercial fishermen?

The Thirteenth Theme emerged from the study is **Collaboration and Alliances for Strengthening Position.** It includes the Sub themes: Collective action for enhanced positioning, Limited impact of collaborative efforts, Benefits and disadvantages of collaboration.

Figure 14



Collective action for enhanced positioning

The participant highlighted that they have collaborated and formed alliances with other traditional fishermen to enhance their position in response to commercial competition. They shared that their collective efforts involved reaching out to both the government and the ruling party, seeking assistance and addressing their concerns. They noted that, despite these endeavors, there has been limited impact on their situation, with government initiatives like interest-free loans falling short in addressing the challenges posed by commercial fishermen. This cooperative approach reflects their commitment to finding solutions in the face of adversity.

Yes, we have collaborated and formed alliances with other traditional fishermen to strengthen our position in the face of commercial competition. Together, we have contacted the government to seek assistance, but unfortunately, they haven't been very responsive. In response to the lack of support, we reached out to the ruling party in our area, and they helped us convey our concerns to higher authorities. However, despite these efforts, there has been no significant change in our situation. Although the government offers various schemes, such as interest-free loans, they have not taken substantial measures to address the challenges posed by commercial fishermen.

The second participant claimed that they have indeed collaborated and formed alliances with other traditional fishermen to bolster their position in the face of commercial competition. The participant highlighted that they reached out to the government to seek assistance, but their efforts were met with limited responsiveness. Faced with the lack of support, they shared that they turned to the ruling party in their area for help, and they assisted in conveying their concerns to higher authorities. Unfortunately, despite these efforts, there has been no significant change in their situation. They pointed out that while the government offers various schemes, such as interest-free loans, substantial measures have not been taken to address the challenges posed by commercial fishermen.

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The third participant pointed out that, as traditional fishermen, they've actively collaborated and formed alliances with fellow traditional fishermen to strengthen their position amid commercial competition. They claimed that their collective efforts involved reaching out to the government for support, but the response has been lackluster. Faced with this limited assistance, they highlighted that they sought the support of the ruling party in their area to bring their concerns to higher authorities. Regrettably, even with these combined endeavors, their situation has seen minimal change. Despite government schemes, such as interest-free loans,

they emphasized that no substantial measures have been taken to address the challenges posed by commercial fishermen.

Yes, we have actively collaborated and formed alliances with other traditional fishermen to bolster our position in the face of commercial competition. Our collective efforts included reaching out to the government for assistance, but the response has been lackluster. In light of this, we sought the support of the ruling party in our area to escalate our concerns to higher authorities. Regrettably, even with these endeavors, there has been minimal change in our situation. Although the government offers schemes such as interest-free loans, they have not implemented substantial measures to address the challenges presented by commercial fishermen.

The fourth participant highlighted that they have indeed collaborated and formed alliances with fellow traditional fishermen in their community to bolster their position in response to commercial competition. This cooperative effort has brought significant benefits. By joining forces, they can collectively address shared challenges and leverage their combined knowledge and resources. This collaborative approach enables them to negotiate more advantageous terms for their catch in the market and advocate for their rights and interests more effectively. Moreover, the exchange of insights and strategies within this alliance allows them to enhance their fishing practices and better withstand the pressures of commercial competition.

Yes, we have actively collaborated and formed alliances with other traditional fishermen in our community to strengthen our position in response to commercial competition. This cooperation has been highly beneficial. By working together, we can collectively address common challenges and pool our knowledge and resources. This allows us to negotiate better terms for our catch in the market and advocate for our rights and interests. Additionally, by sharing insights and strategies, we can optimize our fishing practices and better withstand the pressures of commercial competition.

The fifth participant highlighted that they have actively engaged in collaborations and alliances with their fellow traditional fishermen to strengthen their position in response to commercial competition. As shared, this cooperation has yielded significant benefits. Through their collective efforts, they can negotiate more effectively in the market, resulting in improved prices for their catch. Furthermore, the exchange of knowledge and expertise among these traditional fishermen has enabled continuous enhancements in their fishing techniques, facilitating adaptation to the evolving dynamics of their fishing environment. It's emphasized that this cooperative approach is indispensable in supporting the preservation of their traditional way of life.

Absolutely, we have formed collaborations and alliances with fellow traditional fishermen to bolster our position in the face of commercial competition. This cooperation has brought significant benefits. Through our collective efforts, we can negotiate with more leverage in the market, leading to better prices for our catch. Moreover, the exchange of knowledge and expertise among us allows us to continuously improve our

fishing techniques and adapt to changing dynamics. This cooperation is vital in helping us sustain our traditional way of life.

The sixth participant highlighted that collaboration and alliances with fellow traditional fishermen have been a cornerstone of their strategy in responding to commercial competition. This cooperative approach has yielded substantial benefits. By working collectively, they have been able to secure better market prices for their catch and advocate more effectively for their community's interests. Furthermore, the exchange of insights and expertise among traditional fishermen has paved the way for enhanced fishing practices, bolstering their competitive edge. It's evident that this collaboration is pivotal in their commitment to preserving their traditional way of life and livelihood in the face of commercial challenges.

Yes, we have actively collaborated and formed alliances with other traditional fishermen in our community to strengthen our position against commercial competition. This cooperation has been instrumental in our efforts to cope with the challenges. By working together, we can collectively negotiate better prices for our catch and advocate for our rights. Sharing knowledge and experiences has enabled us to enhance our fishing practices and remain competitive. This cooperation is a valuable asset in preserving our traditional way of life and livelihood.

Limited impact of collaborative efforts

The participant highlighted that they shared that their collective efforts involved reaching out to both the government and the ruling party, seeking assistance and addressing their concerns. They noted that, despite these endeavors, there has been limited impact on their situation, with government initiatives like interest-free loans falling short in addressing the challenges posed by commercial fishermen. This cooperative approach reflects their commitment to finding solutions in the face of adversity.

Together, we have contacted the government to seek assistance, but unfortunately, they haven't been very responsive. In response to the lack of support, we reached out to the ruling party in our area, and they helped us convey our concerns to higher authorities. However, despite these efforts, there has been no significant change in our situation. Although the government offers various schemes, such as interest-free loans, they have not taken substantial measures to address the challenges posed by commercial fishermen.

The second participant claimed that they have reached out to the government to seek assistance, but their efforts were met with limited responsiveness. Faced with the lack of support, they shared that they turned to the ruling party in their area for help, and they assisted in conveying their concerns to higher authorities. Unfortunately, despite these efforts, there has been no significant change in their situation. They pointed out that while the government offers various schemes, such as interest-free loans, substantial measures have not been taken to address the challenges posed by commercial fishermen.

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Benefits and disadvantages of collaboration

The participant highlighted that they have collaborated and formed alliances with other traditional fishermen to enhance their position in response to commercial competition. They shared that their collective efforts involved reaching out to both the government and the ruling party, seeking assistance and addressing their concerns. They noted that, despite these endeavors, there has been limited impact on their situation, with government initiatives like interest-free loans falling short in addressing the challenges posed by commercial fishermen. This cooperative approach reflects their commitment to finding solutions in the face of adversity.

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The second participant claimed that they have indeed collaborated and formed alliances with other traditional fishermen to bolster their position in the face of commercial competition. The participant highlighted that they reached out to the government to seek assistance, but their efforts were met with limited responsiveness. Faced with the lack of support, they shared that they turned to the ruling party in their area for help, and they assisted

in conveying their concerns to higher authorities. Unfortunately, despite these efforts, there has been no significant change in their situation. They pointed out that while the government offers various schemes, such as interest-free loans, substantial measures have not been taken to address the challenges posed by commercial fishermen.

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The third participant pointed out that, as traditional fishermen, they've actively collaborated and formed alliances with fellow traditional fishermen to strengthen their position amid commercial competition. They claimed that their collective efforts involved reaching out to the government for support, but the response has been lackluster. Faced with this limited assistance, they highlighted that they sought the support of the ruling party in their area to bring their concerns to higher authorities. Regrettably, even with these combined endeavors, their situation has seen minimal change. Despite government schemes, such as interest-free loans, they emphasized that no substantial measures have been taken to address the challenges posed by commercial fishermen.

Yes, we have actively collaborated and formed alliances with other traditional fishermen to bolster our position in the face of commercial competition. Our collective efforts included reaching out to the government for assistance, but the response has been lackluster. In light of this, we sought the support of the ruling party in our area to escalate our concerns to higher authorities. Regrettably, even with these endeavors, there has been minimal change in our situation. Although the government offers schemes such as interest-free loans, they have not implemented substantial measures to address the challenges presented by commercial fishermen.

The fourth participant highlighted that they have indeed collaborated and formed alliances with fellow traditional fishermen in their community to bolster their position in response to commercial competition. This cooperative effort has brought significant benefits. By joining forces, they can collectively address shared challenges and leverage their combined knowledge and resources. This collaborative approach enables them to negotiate more advantageous terms for their catch in the market and advocate for their rights and interests more effectively. Moreover, the exchange of insights and strategies within this alliance allows them to enhance their fishing practices and better withstand the pressures of commercial competition.

Yes, we have actively collaborated and formed alliances with other traditional fishermen in our community to strengthen our position in response to commercial competition. This cooperation has been highly beneficial. By working together, we can collectively address common challenges and pool our knowledge and resources. This allows us to negotiate better terms for our catch in the market and advocate for our rights and interests. Additionally, by sharing insights and strategies, we can optimize our fishing practices and better withstand the pressures of commercial competition.

The fifth participant highlighted that they have actively engaged in collaborations and alliances with their fellow traditional fishermen to strengthen their position in response to commercial competition. As shared, this cooperation has yielded significant benefits. Through their collective efforts, they can negotiate more effectively in the market, resulting in improved prices for their catch. Furthermore, the exchange of knowledge and expertise among these traditional fishermen has enabled continuous enhancements in their fishing techniques, facilitating adaptation to the evolving dynamics of their fishing environment. It's emphasized that this cooperative approach is indispensable in supporting the preservation of their traditional way of life.

Absolutely, we have formed collaborations and alliances with fellow traditional fishermen to bolster our position in the face of commercial competition. This cooperation has brought significant benefits. Through our collective efforts, we can negotiate with more leverage in the market, leading to better prices for our catch. Moreover, the exchange of knowledge and expertise among us allows us to continuously improve our fishing techniques and adapt to changing dynamics. This cooperation is vital in helping us sustain our traditional way of life.

The sixth participant highlighted that collaboration and alliances with fellow traditional fishermen have been a cornerstone of their strategy in responding to commercial competition. This cooperative approach has yielded substantial benefits. By working collectively, they have been able to secure better market prices for their catch and advocate more effectively for their community's interests. Furthermore, the exchange of insights and expertise among traditional fishermen has paved the way for enhanced fishing practices, bolstering their competitive edge. It's evident that this collaboration is pivotal in their commitment to preserving their traditional way of life and livelihood in the face of commercial challenges.

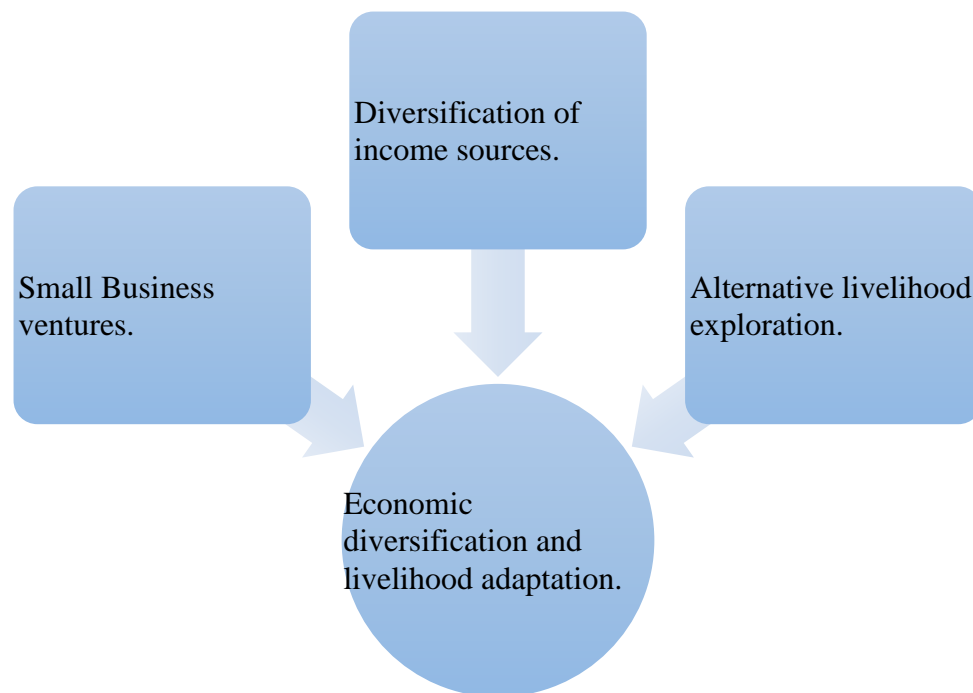
Yes, we have actively collaborated and formed alliances with other traditional fishermen in our community to strengthen our position against commercial competition. This cooperation has been instrumental in our efforts to cope with the challenges. By working together, we can collectively negotiate better prices for our catch and advocate for our rights. Sharing knowledge and experiences has enabled us to enhance our fishing practices and remain competitive. This cooperation is a valuable asset in preserving our traditional way of life and livelihood.

THEME 14

What are the coping strategies adapted by the traditional fishermen in the light of commercial fishermen?

The Fourteenth Theme emerged from the study is **Economic Diversification and Livelihood Adaptation**. It includes the Sub themes: Economic Adaptation Strategies in Response to Commercial Competition, Diversification of Income Sources, Small Business Ventures, Alternative Livelihood Exploration.

Figure 15



Diversification of income sources

The participant highlighted that they have diversified their income sources and engaged in alternative livelihood activities to counter the potential decline in fishing income caused by commercial competition. They shared that recognizing the need for a financial safety net, they have pursued small-scale agriculture during non-fishing seasons, which has proven to be a valuable supplementary income source. Additionally, they have explored opportunities in the hospitality sector by offering home stay services to coastal area tourists. These alternative income initiatives have effectively mitigated the financial setbacks resulting from decreasing fishing income. This proactive approach exemplifies their resilience in the face of economic challenges.

Yes, in response to the potential decline in fishing income due to commercial competition, I have taken steps to diversify my income sources. I recognized the need for a backup plan to safeguard my family's financial stability. I've ventured into small-scale agriculture during the non-fishing season, which has proven to be a valuable source of supplementary income. Additionally, I explored opportunities in the hospitality sector by providing home stay services to tourists who visit our coastal area. These alternative income activities have helped my financial setbacks from declining fishing income.

The second participant claimed that diversifying income sources has become a necessity as they faced the risk of declining fishing income due to commercial competition. They highlighted that in response to this challenge, they have actively engaged in alternative livelihood activities. The participant pointed out that they started a small business focused on selling seafood directly to local consumers, which has helped them capture a fair share of the market and provided a reliable income source. Additionally, they shared that they have been involved in community-based tourism initiatives, which have offered an additional stream of income for their family. They claimed that these alternative livelihood activities have been crucial in mitigating the potential impact of commercial competition on their financial stability.

Diversifying income sources became a necessity as we faced the risk of declining fishing income due to commercial competition. In response, I engaged in alternative livelihood activities. I started a small business that involves selling seafood directly to local consumers, ensuring that I capture a fair share of the market. This has proven to be a reliable income source. I've also been involved in community-based tourism initiatives, which have provided an additional stream of income for my family. These alternative livelihood activities have been crucial in mitigating the potential impact of commercial competition on our financial stability.

The third participant highlighted that in response to the potential decline in fishing income due to commercial competition, they have diversified their income sources. They claimed that they recognized the importance of having multiple revenue streams to secure their family's financial well-being. The participant shared that they have ventured into eco-tourism, offering boat tours and experiences for travelers visiting the coastal region during the non-fishing season. This initiative, as highlighted, has been a rewarding endeavor. Additionally, they pointed out that they explored opportunities in the local art and craft industry, using their creativity to craft and sell handmade items. These alternative income activities, as claimed, have helped offset any potential decline in fishing income and maintain financial stability.

Indeed, in light of the potential decline in fishing income resulting from commercial competition, I have diversified my income sources. I recognized the importance of having multiple revenue streams to secure my family's financial well-being. I've delved into eco-tourism, offering boat tours and experiences for travelers visiting our coastal region during the non-fishing season. This has been a rewarding endeavor. Additionally, I explored opportunities in the local art and craft industry, using my creativity to craft and sell handmade items. These alternative income activities have helped offset any potential decline in fishing income and maintain our financial stability.

The fourth participant highlighted that, indeed, they have recognized the need to diversify their income sources and explore alternative livelihood activities to counteract potential declines in fishing income due to commercial competition. In response, some of them have delved into activities such as seafood processing, which not only adds value to their catch but also generates supplementary income. Others have chosen to engage in small-scale agriculture or offer tourism-related services during non-fishing seasons, thus creating

multiple revenue streams. This diversification, as shared, has been instrumental in helping them maintain financial stability in the face of the challenges posed by commercial competition.

Yes, we have recognized the need to diversify our income sources and explore alternative livelihood activities to offset potential declines in fishing income due to commercial competition. Some of us have ventured into related activities like seafood processing, which adds value to our catch and generates additional income. Others have explored small-scale agriculture or tourism-related services during non-fishing seasons to create supplementary revenue streams. This diversification has helped us maintain financial stability despite the challenges posed by commercial competition.

The fifth participant highlighted that in response to potential declines in fishing income due to commercial competition, many traditional fishermen have undertaken diversification of their income sources. As shared, some have ventured into small-scale businesses like seafood processing or fish retailing, enabling them to enhance the value of their catch and increase their earnings. Furthermore, a portion of these fishermen has explored alternative livelihood activities, such as engaging in agriculture or offering tourism-related services during the fishing off-seasons. These endeavors have contributed to financial stability and have served as a means of withstanding the economic pressures stemming from commercial competition.

To address potential declines in fishing income caused by commercial competition, many of us have taken steps to diversify our income sources. Some traditional fishermen have started small businesses like seafood processing or fish retailing, which allow them to add value to their catch and increase their earnings. Additionally, a few have explored alternative livelihood activities, such as agriculture or tourism-related services, during fishing off-seasons. These efforts have provided financial stability and helped us withstand the economic pressures of commercial competition.

The sixth participant highlighted that diversifying income sources and pursuing alternative livelihood activities have emerged as crucial strategies to counter the potential decline in fishing income due to commercial competition. This multifaceted approach has included various endeavors. Some have delved into businesses such as seafood processing and retail, effectively augmenting their income by adding value to their catch. Meanwhile, others have diversified into alternative fields like agriculture or services related to tourism during periods when fishing is less active. These diversified efforts have played a pivotal role in ensuring their financial stability amidst the challenges posed by commercial competition.

Yes, diversifying income sources and engaging in alternative livelihood activities have become crucial strategies to offset potential declines in fishing income due to commercial competition. Some of us have ventured into businesses like seafood processing or retailing, which have added value to our catch and increased our earnings. Others have explored alternative livelihoods such as agriculture or tourism-related services during non-fishing seasons to generate supplementary income. This diversification has been essential in ensuring our financial stability in the face of commercial competition.

Small Business ventures

The participant highlighted that they have diversified their income sources and engaged in alternative livelihood activities to counter the potential decline in fishing income caused by commercial competition. They shared that recognizing the need for a financial safety net, they have pursued small-scale agriculture during non-fishing seasons, which has proven to be a valuable supplementary income source. Additionally, they have explored opportunities in the hospitality sector by offering home stay services to coastal area tourists. These alternative income initiatives have effectively mitigated the financial setbacks resulting from decreasing fishing income. This proactive approach exemplifies their resilience in the face of economic challenges.

Yes, in response to the potential decline in fishing income due to commercial competition, I have taken steps to diversify my income sources. I recognized the need for a backup plan to safeguard my family's financial stability. I've ventured into small-scale agriculture during the non-fishing season, which has proven to be a valuable source of supplementary income. Additionally, I explored opportunities in the hospitality sector by providing home stay services to tourists who visit our coastal area. These alternative income activities have helped my financial setbacks from declining fishing income.

The second participant claimed that diversifying income sources has become a necessity as they faced the risk of declining fishing income due to commercial competition. They highlighted that in response to this challenge, they have actively engaged in alternative livelihood activities. The participant pointed out that they started a small business focused on selling seafood directly to local consumers, which has helped them capture a fair share of the market and provided a reliable income source. Additionally, they shared that they have been involved in community-based tourism initiatives, which have offered an additional stream of income for their family. They claimed that these alternative livelihood activities have been crucial in mitigating the potential impact of commercial competition on their financial stability.

Diversifying income sources became a necessity as we faced the risk of declining fishing income due to commercial competition. In response, I engaged in alternative livelihood activities. I started a small business that involves selling seafood directly to local consumers, ensuring that I capture a fair share of the market. This has proven to be a reliable income source. I've also been involved in community-based tourism initiatives, which have provided an additional stream of income for my family. These alternative livelihood activities have been crucial in mitigating the potential impact of commercial competition on our financial stability.

The third participant highlighted that in response to the potential decline in fishing income due to commercial competition, they have diversified their income sources. They claimed that they recognized the importance of having multiple revenue streams to secure their family's financial well-being. The participant shared that they have ventured into eco-tourism, offering boat tours and experiences for travelers visiting the coastal region during the non-fishing season. This initiative, as highlighted, has been a rewarding endeavor. Additionally, they pointed out that they explored opportunities in the local art and craft industry, using their creativity to

craft and sell handmade items. These alternative income activities, as claimed, have helped offset any potential decline in fishing income and maintain financial stability.

Indeed, in light of the potential decline in fishing income resulting from commercial competition, I have diversified my income sources. I recognized the importance of having multiple revenue streams to secure my family's financial well-being. I've delved into eco-tourism, offering boat tours and experiences for travelers visiting our coastal region during the non-fishing season. This has been a rewarding endeavor. Additionally, I explored opportunities in the local art and craft industry, using my creativity to craft and sell handmade items. These alternative income activities have helped offset any potential decline in fishing income and maintain our financial stability.

The fourth participant highlighted that, indeed, they have recognized the need to diversify their income sources and explore alternative livelihood activities to counteract potential declines in fishing income due to commercial competition. In response, some of them have delved into activities such as seafood processing, which not only adds value to their catch but also generates supplementary income. Others have chosen to engage in small-scale agriculture or offer tourism-related services during non-fishing seasons, thus creating multiple revenue streams. This diversification, as shared, has been instrumental in helping them maintain financial stability in the face of the challenges posed by commercial competition.

Yes, we have recognized the need to diversify our income sources and explore alternative livelihood activities to offset potential declines in fishing income due to commercial competition. Some of us have ventured into related activities like seafood processing, which adds value to our catch and generates additional income. Others have explored small-scale agriculture or tourism-related services during non-fishing seasons to create supplementary revenue streams. This diversification has helped us maintain financial stability despite the challenges posed by commercial competition.

The fifth participant highlighted that in response to potential declines in fishing income due to commercial competition, many traditional fishermen have undertaken diversification of their income sources. As shared, some have ventured into small-scale businesses like seafood processing or fish retailing, enabling them to enhance the value of their catch and increase their earnings. Furthermore, a portion of these fishermen has explored alternative livelihood activities, such as engaging in agriculture or offering tourism-related services during the fishing off-seasons. These endeavors have contributed to financial stability and have served as a means of withstanding the economic pressures stemming from commercial competition.

To address potential declines in fishing income caused by commercial competition, many of us have taken steps to diversify our income sources. Some traditional fishermen have started small businesses like seafood processing or fish retailing, which allow them to add value to their catch and increase their earnings. Additionally, a few have explored alternative livelihood activities, such as agriculture or tourism-related

services, during fishing off-seasons. These efforts have provided financial stability and helped us withstand the economic pressures of commercial competition.

The sixth participant highlighted that diversifying income sources and pursuing alternative livelihood activities have emerged as crucial strategies to counter the potential decline in fishing income due to commercial competition. This multifaceted approach has included various endeavors. Some have delved into businesses such as seafood processing and retail, effectively augmenting their income by adding value to their catch. Meanwhile, others have diversified into alternative fields like agriculture or services related to tourism during periods when fishing is less active. These diversified efforts have played a pivotal role in ensuring their financial stability amidst the challenges posed by commercial competition.

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Alternative livelihood exploration

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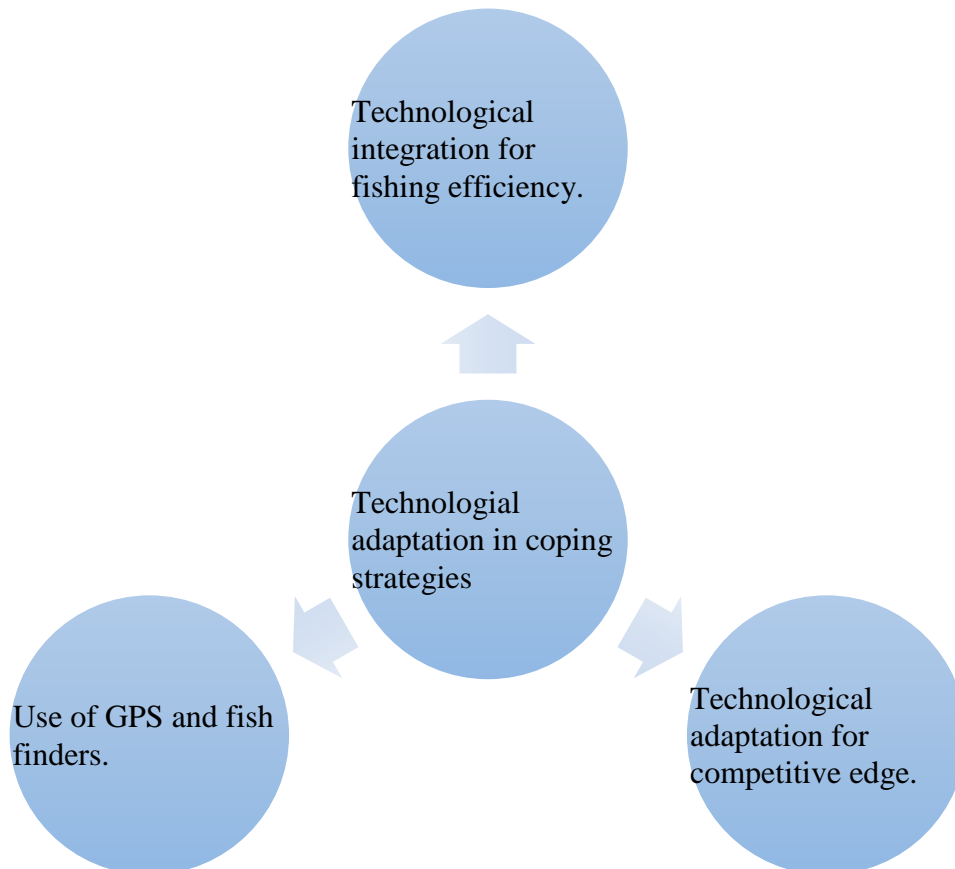
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THEME 15

What are the coping strategies adapted by the traditional fishermen in the light of commercial fishermen?

The Fifteenth Theme emerged from the study is **Technological Adaptation in Coping Strategies**. It includes the Sub themes: Technological Integration for Fishing Efficiency, Use of GPS and Fish Finders, Communication Technology for Information Sharing, Technological Adaptation for Competitive Edge.

Figure 16



Use of GPS and fish finders

The participant claimed that technology has played a pivotal role in their coping strategies against the challenges of commercial competition. The participant highlighted that they have adopted new tools and equipment to enhance fishing efficiency and competitiveness, such as GPS navigation systems integrated into their boats to pinpoint promising fishing grounds and optimize their catch.

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The second participant pointed out that technology has played a crucial role in their coping strategies. To enhance their fishing efficiency and competitiveness, they've adopted new tools and equipment. They claimed that one significant addition is the utilization of advanced fishing nets designed to reduce bycatch and improve

catch rates. Moreover, they highlighted that they've incorporated fish finders into their vessels, which have proven effective in identifying the most productive areas for fishing. These technological advancements, as per the participant, have allowed them to adapt to the changing fishing landscape and maintain their competitiveness in the presence of commercial fishermen.

Technology has been a valuable asset in our coping strategies. To enhance our fishing efficiency and competitiveness, we've adopted new tools and equipment. One notable addition is the use of advanced fishing nets that are designed to reduce bycatch and enhance our catch rates. Additionally, we've incorporated fish finders into our vessels, which help us identify the most productive areas for fishing. These technological advancements have allowed us to adapt to the changing fishing landscape and maintain our competitiveness in the presence of commercial fishermen.

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Technology has played a significant role in our coping strategies. To boost our fishing efficiency and competitiveness, we've embraced new tools and equipment. One notable addition is the use of underwater cameras, which provide real-time visibility into the underwater environment, helping us assess the presence of fish schools.

The fourth participant pointed out that technology has indeed played a significant role in their coping strategies as traditional fishermen. Despite not having access to the same advanced tools and equipment as commercial fishermen, they have actively adopted new technologies to enhance their fishing efficiency and competitiveness. Notably, they have incorporated GPS navigation systems and fish finders into their traditional boats to improve navigation and fish location.

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As highlighted by the fifth participant, technology has played a pivotal role in the coping strategies of traditional fishermen. While they may not have the same access to advanced equipment as commercial fishermen, these traditional fishermen have embraced new tools and technologies to boost their fishing efficiency and competitiveness. Notably, some have integrated GPS navigation systems and fish finders into their boats, elevating their ability to navigate and locate fish with greater precision.

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Technological adaptation for competitive edge

The participant claimed that technology has played a pivotal role in their coping strategies against the challenges of commercial competition. The participant highlighted that they have adopted new tools and equipment to enhance fishing efficiency and competitiveness, such as GPS navigation systems integrated into their boats to pinpoint promising fishing grounds and optimize their catch. Additionally, they shared that sonar technology has been embraced to more accurately locate schools of fish. These technological advancements have effectively improved efficiency and strengthened competitiveness in the face of commercial competition, showcasing their adaptability to changing circumstances.

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CHAPTER IV: DISCUSSION

4.1 DISCUSSION

There are total of 15 themes find out in the study, and pointing out the main themes which are:

Economic Challenges:

Under this theme, study emphasizes the economic hardships faced by traditional fishermen in Kollam due to rising fuel costs, limited access to modern fishing equipment, market fluctuations, and seasonal income variations. This aligns with economic instability among fishermen globally. Studies like Shaffril et al., Khadar, Azril Mohamed Shaffril, and Rahman (2019) in Bangladesh and Malaysia emphasize economic challenges related to unpredictable weather, declining fish stocks, marketing issues, and limited access to facilities. The similarity in economic struggles across regions suggests a common pattern of financial stress and income vulnerability among traditional fishermen worldwide.

Impact of Commercial Fishing:

Under this theme study highlights how the arrival of commercial fishermen has significantly affected traditional practices in Kollam. Studies like Morgan (2016), Rahman (2019), and various others depict how commercial fishing disrupts traditional fishing dynamics, leading to reduced fish stocks, increased competition, market fluctuations, and conflicts over fishing resources. The adverse effects of commercial fishing observed in Kollam parallel the challenges faced by traditional fishermen in other regions due to similar ecological and economic disruptions caused by modern fishing methods.

Social Challenges and Generational Shifts:

Under this theme the study underscores the social challenges faced by traditional fishermen in Kollam, including isolation at sea, lack of recognition, passing down of traditional knowledge, and the younger generation's reluctance to continue traditional practices. This corresponds to broader social issues highlighted in studies like Kelkar-Khambete, Dr. D. Rajasenan, Hossain et al., and (Sylhet, Bangladesh Study), which discuss challenges related to mental well-being, lack of societal recognition, generational shifts in career preferences, and the diminishing interest of younger individuals in pursuing traditional fishing. This alignment suggests a common trend of social disconnection and the erosion of traditional practices within fishing communities globally.

Adaptation Strategies:

Under this theme the study indicates that traditional fishermen in Kollam are resilient in preserving their way of life and are exploring adaptation strategies. These strategies include diversifying income sources, adopting new technology, and modifying fishing schedules. Similar adaptive measures are highlighted by Chen et al., Rahman (2019), and Uuskartano & Breivik, emphasizing the adoption of technology, alternative livelihoods, and collaboration among fishermen as strategies to cope with challenges posed by modernization and ecological changes. This similarity suggests a universal inclination among traditional fishermen to adapt and innovate to sustain their livelihoods in the face of changing circumstances.

The combination of findings reveals a consistent pattern of challenges faced by traditional fishermen globally. Economic struggles, impacts of commercial fishing, social challenges, generational shifts, and adaptation strategies are recurring themes across different geographical regions. The findings collectively highlight the inter connectedness of challenges and coping mechanisms shared by traditional fishing communities worldwide.

This convergence calls for holistic interventions and policy frameworks that acknowledge the multifaceted challenges faced by traditional fishermen. Strategies should include support for economic stability, preservation of traditional knowledge, fostering mental well-being, technological assistance, and sustainable fishing practices. Moreover, recognizing the resilience and adaptability of traditional fishermen is essential for implementing context-specific solutions that address the unique needs of these communities while ensuring the sustainability of marine resources.

MAJOR FINDINGS

What are the socioeconomic challenges faced by traditional fishermen in Kollam?

Economic Challenges:

The majority of the participants revealed that traditional fishermen in Kollam face a myriad of economic challenges that significantly impact their daily fishing activities and livelihoods. The relentless increase in fuel costs emerges as a prominent issue, creating a financial burden with each fishing expedition. Limited access to modern fishing techniques and equipment hampers catch efficiency, affecting income. Climate change introduces further complexity, disrupting schedules and damaging fishing gear. Market fluctuations add to the economic stress, causing income instability. Traditional fishermen often find themselves compelled to sell at lower rates due to oversupply.

Fluctuation in fish stock and Economic impact:

The participants collectively emphasized the substantial impact of fluctuations in fish stocks and catches on the income and financial stability of traditional fishermen in Kollam. The majority underscores that during periods of abundance, there is a temporary surge in income, yet this often leads to market oversupply and reduced prices, negatively affecting overall earnings. Also, in times of fish scarcity, sustaining a reasonable income becomes notably challenging, requiring increased investments of time and resources in fishing activities with limited returns. The responses collectively highlight the intricate connection between fish availability and the economic well-being of traditional fishermen, with an acknowledgment of the complexities involved in maintaining financial stability among the unpredictable nature of fish stocks. While there is a consensus on the challenges formed, variations exist in the degree to which participants perceive the impact and the specific dynamics emphasized, providing a fine understanding of the economic challenges faced by these individuals in their traditional fishing practices.

Isolation and Emotional Well-being:

The participants consistently highlighted various social challenges faced by traditional fishermen in Kollam. The majority of responses emphasized the impact of isolation during extended periods at sea on the fishermen's mental and emotional well-being. Loneliness and detachment from families and communities were recurrent themes, with participants expressing the strain on social relationships.

Lack of Recognition and Respect:

The lack of recognition and respect for the traditional fishing profession within broader society emerged as another predominant finding. This absence of appreciation not only affects the self-esteem of the fishermen but also influences how their families and communities perceive their work.

Risk and Anxiety at Sea:

The ongoing risk to life at sea and the uncertainty of a safe return were common concerns expressed by the participants, creating constant anxiety that affects the overall well-being of traditional fishermen and their families.

Passing Down Traditional Fishing Knowledge:

Furthermore, passing down traditional fishing knowledge to the younger generation was noted as a significant challenge. The majority of responses indicated that the younger generation is often less inclined to pursue the traditional way of life, opting for more modern and less labor-intensive occupations. This poses a threat to the continuity of the traditional fishing practices and, consequently, the livelihoods of the fishermen. While there were consistent themes across the responses, there were also variations in the emphasis placed on certain challenges. For instance, some participants underscored the lack of recognition as a primary concern, while others placed greater emphasis on the mental and emotional toll of isolation at sea. These variations highlight the multifaceted nature of the social challenges faced by traditional fishermen in Kollam and the diverse perspectives within the community.

Seasonal nature of fishing and socio economic impact:

The participants responded a consistent acknowledgment among the participants regarding the significant impact of the seasonal nature of fishing on the socioeconomic conditions of traditional fishermen and their families in Kollam. The majority of participants noted that during the fishing seasons, characterized by abundant catches, there is a noticeable increase in income, allowing for better provision for their families. However, these prosperous periods are short-lived, lasting for only a few months. There is a common observation across the responses that the off-season, when fishing becomes less productive, leads to a significant drop in income for traditional fishermen. This decrease in income creates challenges in covering even basic expenses, creating substantial financial stress for their families. The repeated variation in income during different seasons makes it difficult for these fishermen to plan for the future or invest in critical areas such as education and healthcare for their children.

While the responses share a common understanding of the seasonal challenges faced by traditional fishermen, there are grading in the way participants express these challenges. Some participants provide additional details, such as specific trawling months (June, July, and August), emphasizing the shortness of the prosperous fishing seasons. Others highlight the need to maximize earnings during these brief periods of abundance. Despite these grading, the overall findings align in conveying the economic struggles and financial stress experienced by traditional fishermen due to the seasonal fluctuations in their income.

Generational shift from Traditional fishing:

The majority of participants across the responses highlighted a noticeable shift in the younger generation's willingness to continue the traditional fishing methods passed down through their community. The reasons cited include the perceived challenges, risks, and physical demands associated with traditional fishing. A common theme is the awareness among the younger generation that alternative professions offer more lucrative opportunities, greater financial security, and a more predictable future. The majority of participants noted that parents are increasingly supportive of their children exploring alternative careers. However, there are slight differences in the responses. While some participants emphasized the financial instability and seasonal nature of fishing, others focused more on the physical risks and demanding nature of the profession. These grading suggest that the decision of the younger generation to move away from traditional fishing is

influenced by a combination of factors, including economic considerations and lifestyle preferences.

In terms of differences, one participant highlighted the reluctance of young individuals to pursue fishing despite their parents being traditional fishermen, indicating a broader shift in attitudes within families. Another participant specifically mentioned that their children are well-informed about the risks associated with fishing, suggesting a more informed decision-making process among the younger generation. These variations underscore the multifaceted reasons behind the observed shift and the diverse factors influencing career choices among the younger generation within the traditional fishing community.

What are the challenges faced by Traditional Fishermen in the arrival of commercial Fishermen?

Resilience and Commitment:

Despite these challenges, their commitment to preserving their traditional way of life and local marine resources remains unwavering. The findings underscore the multifaceted nature of economic hardships and the resilience of traditional fishermen in the face of these challenges.

Impact of Commercial fishing on Traditional fishermen:

The majority of participants, including the first, second, third, fourth, fifth, and sixth, unanimously pointed out that the arrival of commercial fishermen has brought about significant changes in their traditional fishing practices and livelihoods. Common themes across their responses include the large groups of fishermen involved in commercial operations, the use of advanced technologies and larger vessels, and the resulting depletion of fish stocks in their traditional fishing areas. All participants noted a decline in the availability of fish varieties, with certain older species becoming scarce. Though there were some differences in the details provided by the participants. For instance, the first participant specifically mentioned the capture of larva and eggs by commercial fishermen, emphasizing the extensive exploitation of marine resources. The second participant highlighted the practice of scraping the sea bed as a detrimental fishing method used by commercial fishermen. The fourth participant pointed out that market oversupply caused by commercial fishing sometimes forces them to sell their catch at lower prices, impacting their income. The fifth participant emphasized the increased competition with commercial fishermen, which led to challenges in maintaining prices for their catch.

While there were slight differences, the overall consensus among the participants is that commercial fishing has negatively impacted their traditional way of life. The majority revealed a reduction in fish stocks and changes in the types of fish they can catch. The half majority responded by pointing out challenges in sustaining income and preserving their traditional fishing practices due to increased competition and market dynamics influenced by commercial fishermen. Thus, the responses collectively underscore the ecological and economic consequences of the arrival of commercial fishermen on traditional fishing communities.

The participants responses reveal a common agreement among the participants regarding the substantial changes in fishing dynamics due to the presence of commercial fishermen in traditional fishing grounds. The majority of participants highlighted increased competition for fish resources as a significant consequence. They emphasized that commercial operations, involving large numbers of fishermen and aggressive fishing techniques, have heightened the pressure on available fish stocks.

Social and Cultural Challenges:

Interestingly, a common concern across the responses is the negative impact on traditional fisherman's catch levels. The majority of participants expressed challenges in securing adequate catches due to intensified competition and depletion of fish populations. This shared concern suggests a consensus among traditional fishermen regarding the adverse effects of commercial fishing on their livelihoods. Also, a notable aspect mentioned by the majority of participants is the use of advanced technology and larger vessels by commercial fishermen. This technological advantage was consistently cited as a factor contributing to the increased efficiency of commercial operations and the depletion of fish stocks in traditional fishing areas.

While there is a general consensus among participants, differences in emphasis and detail exist. For instance, some participants highlighted specific aggressive fishing techniques such as capturing larva and eggs, while others focused on the broader impact of overfishing. Additionally, variations were observed in the extent of the reported decline in fish populations, with figures ranging from 25% to general terms like "rapid depletion."

The majority revealed that the primary challenges stem from the extensive scale of commercial operations, including large fleets and numerous crew members, limiting the available space for traditional fishermen. The bulk fishing techniques employed by commercial fishermen, such as scraping the sea bed, were unanimously acknowledged as highly efficient but ecologically damaging, leading to decreased fish populations and harm to seabed habitats. Additionally, the consensus was that overfishing due to competition for fish stocks poses a significant threat to the ability of traditional fishermen to secure an adequate catch.

While there was broad agreement on the challenges, some differences emerged in the responses. The fourth participant specifically highlighted the lack of access to advanced technology and larger vessels as a major challenge, emphasizing its impact on efficiently covering fishing grounds. This technological disadvantage was not explicitly mentioned by others. The sixth participant underscored technological disparities and overfishing as the foremost challenges, giving equal weight to both factors. On the other hand, the second and fifth participants primarily emphasized the scale and intensity of commercial operations as the key challenges, with a focus on overfishing and the ecological impact of aggressive fishing methods. Despite these differences, a common thread among participants was the shared concern about the ecological consequences of commercial fishing practices, indicating a unified perspective on the need for sustainable fishing practices.

The majority of participants revealed that the coexistence of traditional and commercial fishermen in the same fishing community has resulted in significant social and cultural challenges. They unanimously pointed out the shifts in community dynamics, the emergence of divisions, and the clash between traditional and modern practices. The majority revealed that these challenges are particularly evident in the conflicts over fishing grounds, the disruption of cultural ties, and the uncertainty about the future of their fishing community. However, there were slight differences among the responses. While the majority highlighted the conflicts and tensions, there were variations in the emphasis on economic incentives drawing some community members towards commercial fishing. Some participants underscored the potential ecological harm caused by commercial practices, while others focused on the cultural disruptions.

Perception regarding conflicts between Commercial fishermen and Traditional fishermen:

The majority of participants consistently stated that, as of now, there haven't been visible conflicts or disputes between traditional and commercial fishermen in their community. However, they emphasized ongoing concerns and issues related to increased competition for fishing grounds, overfishing, and ecological damage caused by commercial fishing methods. These participants actively communicated these concerns to ruling authorities, with varying degrees of impact. They share a commitment to finding solutions to ensure the sustainability of their traditional fishing practices.

The fourth participant stood out by explicitly stating that conflicts and disputes have indeed arisen between traditional and commercial fishermen in their community. This participant highlighted tensions revolving around the competition for fishing resources, including fishing grounds and fish stocks. The utilization of advanced technology and larger vessels by commercial fishermen, leading to overfishing, was underscored as a significant point of contention. This viewpoint contrasts with the majority, suggesting a potential divergence in experiences or perceptions among the participants. The fifth participant, while not explicitly stating visible conflicts, acknowledged that there have been conflicts and disputes. This participant focused on the competition for fishing resources, emphasizing the efficiency of commercial fishermen due to advanced technology and larger boats. This viewpoint aligns with the fourth participant's perspective, indicating a shared concern about the impact of modern fishing practices on traditional fishing resources.

What are the coping strategies adapted by the traditional fishermen by the arrival of commercial fishermen?

Adaptability and Tradition:

The majority of participants, including the first, second, third, and fourth, emphasized a reluctance or hesitance to make significant changes to their traditional fishing methods. These participants expressed a deep connection to their time-honored practices, passed down through generations, and exhibited a readiness to adapt only if circumstances required.

In contrast, the fifth and sixth participants presented a different perspective, noting significant changes made in response to the heightened competition. Both participants highlighted a proactive approach, with an emphasis on optimizing traditional fishing methods for increased efficiency and effectiveness. They also underscored the importance of knowledge sharing and collaboration within the traditional fishing community to foster innovation and adaptability.

The findings indicate a split in the responses, with a notable difference in the willingness to adapt. While the majority exhibited a conservative approach, valuing the preservation of traditional practices, a significant portion, the fifth and sixth participants, demonstrated a proactive stance by actively implementing changes to counter the challenges posed by commercial fishing operations.

The majority of participants, including the first, second, third, fourth, fifth, and sixth, concurred that the arrival of commercial fishermen has significantly impacted their fishing schedules and routines. All participants highlighted the necessity to make adjustments to optimize their catch in the face of increased competition for fish stocks due to commercial operations. There is a consensus among the participants that modifications in fishing schedules are crucial for avoiding direct competition with commercial fishermen. The majority revealed that altering fishing hours to fish during non-peak times or exploring different fishing grounds has been a common strategy.

While all participants emphasized the need to adapt, there were nuanced differences in the strategies employed. The half majority focused on modifying fishing hours to avoid direct competition, suggesting a shared emphasis on timing as a key strategy. Additionally, the second participant uniquely mentioned fine-tuning fishing techniques for precision, demonstrating a more detailed approach to adaptation.

Collaborative efforts to address commercial competition:

In the majority of responses, it's highlighted that traditional fishermen have indeed collaborated and formed alliances with each other to strengthen their position amidst commercial competition. These collaborative efforts involved reaching out to governmental authorities and the ruling party to address concerns, seek assistance, and advocate for their rights and interests. However, despite these endeavors, participants across various responses noted a consistent lack of substantial impact on their situation. They expressed disappointment in the limited responsiveness of the government despite initiatives like interest-free loans. The shared consensus underscores the persistent challenges faced by traditional fishermen in obtaining adequate support in their battle against commercial competition.

The participants unanimously revealed that collaboration and alliance-building among traditional fishermen have been pivotal in their efforts to combat commercial competition. They collectively reached out to governmental bodies and the ruling party to seek assistance and convey their concerns. However, despite these collective endeavors, there has been a unanimous sentiment across responses regarding the limited impact of these efforts on their situation. The consensus emphasizes a consistent lack of substantial government support,

despite the provision of schemes like interest-free loans, portraying the ongoing challenges traditional fishermen face in securing necessary aid to counter commercial competition.

Among the responses, the half majority highlighted that traditional fishermen have engaged in collaborations and alliances with their peers to confront commercial competition. These joint efforts involved approaching both government bodies and the ruling party to seek support and address their concerns. However, despite these collective endeavors, the participants expressed disappointment in the limited impact of these actions on their situation. They echoed a common sentiment of frustration due to the government's insufficient responsiveness, despite offering schemes like interest-free loans.

The responses unanimously emphasized the collaborative efforts among traditional fishermen to fortify their position in the face of commercial competition. These collective actions involved reaching out to governmental authorities and the ruling party to seek aid and address concerns. Despite these united endeavors, participants conveyed a shared disappointment regarding the limited impact of these actions on their circumstances. They highlighted the government's inadequate responsiveness, despite initiatives like interest-free loans, reflecting the consistent challenges traditional fishermen experience in garnering sufficient support to combat commercial competition.

Overall, the majority of participants revealed a shared experience of collaboration and alliance-building among traditional fishermen to address commercial competition. These joint efforts encompassed interactions with government bodies and the ruling party to seek assistance and convey concerns. Despite these concerted endeavors, participants consistently expressed disappointment in the limited impact of these actions on their circumstances. They highlighted the government's inadequate responsiveness, despite offering programs like interest-free loans. These findings underscore the enduring challenges traditional fishermen face in obtaining ample support to confront commercial competition.

Diversification of income sources and technological adaptation:

The majority of participants, representing traditional fishermen, revealed a shared strategy of diversifying income sources and engaging in alternative livelihood activities to counter potential declines in fishing income due to commercial competition. This proactive approach to financial security was predominantly expressed through various initiatives, such as small-scale agriculture, seafood processing, tourism-related services, and local businesses. Almost all responses emphasized the importance of creating multiple revenue streams to safeguard financial stability in the face of fluctuating fishing income.

In analyzing the responses, the majority of participants across various traditional fishing communities have highlighted the crucial role of technology in their coping strategies amid commercial competition. The consensus emphasized the adoption of new tools and equipment, such as GPS navigation systems, fish finders, and communication technology, to enhance fishing efficiency and competitiveness. These technological advancements have significantly contributed to their ability to adapt to changing circumstances and remain competitive in traditional fishing practices despite not having the same resources as commercial fishermen.

However, there are differences in the specific technological tools adopted among the participants. While GPS navigation systems and fish finders were commonly mentioned across responses, some participants, such as the third participant, emphasized the use of underwater cameras and advanced weather forecasting technology as crucial aids in assessing fish presence and strategically planning fishing trips. Another difference lies in the depth of detail provided regarding the impacts of these technological enhancements. For instance, the fourth participant highlighted the role of communication technology in exchanging information about favorable fishing conditions, an aspect not extensively detailed in other responses.

Despite these slight differences, the overarching consensus remains consistent—the adoption of technology has been instrumental in improving efficiency, navigation, fish location, and information exchange, enabling traditional fishermen to adapt and compete effectively with commercial counterparts.

SOCIAL WORK IMPLICATIONS

- ❖ Social workers can hold an important role in addressing the multifaceted challenges experienced by traditional fishing communities. Their engagement can span various domains, starting with advocacy and empowerment. They serve as key advocates for these communities, louden their concerns and needs to policymakers, governmental bodies, and non-governmental organizations. Through organizing workshops and community gatherings, social workers empower fishermen to voice their challenges and actively participate in decision-making processes.
- ❖ The social workers facilitate access to crucial resources and services. They can work in collaboration with local authorities and NGOs to ensure fishermen have access to financial aid, healthcare, education, and legal support. Recognizing the psychological toll of isolation, they provide counseling and mental health assistance, conducting individual or group sessions to address the emotional strains.
- ❖ Preserving cultural heritage is another side where social workers play a vital role. They design educational programs to transmit traditional knowledge and values to younger generations, ensuring the continuity of fishing practices while integrating modern techniques. Mediating conflicts between traditional and commercial fishermen is another crucial task. Social workers organize forums and workshops to foster understanding, collaboration, and sustainable solutions.
- ❖ Social workers initiate skill development and vocational training programs tailored to the fishermen's needs, focusing on improved fishing methods, technology adoption, and diversified livelihood options. Community development projects, including infrastructure enhancements and sanitation facilities, are also part of their initiatives. Additionally, research conducted by social workers contributes insights for evidence-based policies and programs that support these communities.
- ❖ Capacity building and collaboration are integral aspects of their work. By empowering local leaders and community-based organizations, social workers promote self-sufficiency and sustainable development within these marginalized communities. Ultimately, their involvement is pivotal in promoting social justice, resilience, and empowerment among traditional fishing communities.

SUGGESTIONS

To confront the multifaceted challenges confronting traditional fishermen, a comprehensive strategy encompassing economic, environmental, social, and technological dimensions is important. Firstly, economic support mechanisms like financial aid, micro credit schemes, or subsidies should be established to reduce the burden of soaring fuel costs and provide access to modern fishing equipment, boosting catch efficiency and overall income. Diversification of income sources, including small-scale agriculture, seafood processing, or engaging in tourism-related services, is crucial to reduce reliance solely on fishing income, thereby ensuring financial stability during fishing off-seasons or when market conditions variate. Climate resilience initiatives must be implemented, including workshops on climate-smart fishing techniques and the provision of climate information management systems to enable fishermen to plan their activities effectively in the face of unpredictable weather patterns due to climate change.

Embracing technological advancements such as GPS navigation systems, fish finders, and communication technology will significantly enhance fishing efficiency, enabling traditional fishermen to compete effectively with commercial counterparts. Preserving traditional knowledge and expertise through knowledge-sharing platforms and mentor ship programs is pivotal, ensuring the transmission of ancestral fishing wisdom to future generations. And, advocating for the recognition of the traditional fishing profession within broader society is essential to bolster the self-esteem of fishermen and their families, fostering a sense of pride and respect for their occupation.

Resolving conflicts between traditional and commercial fishermen by establishing collaborative platforms and advocating for sustainable fishing practices is fundamental to maintaining ecological balance and ensuring long-term sustainability of fishing resources. Engaging the younger generation through awareness campaigns, vocational training, and alternative career pathways that align with their aspirations while integrating aspects of traditional fishing practices can bridge the gap between generational knowledge and innovative approaches.

A key aspect of these strategies involves fostering partnerships between governmental bodies, non-governmental organizations, community leaders, and traditional fishing communities. These collaborations are essential for effective implementation, resource mobilization, and sustainability of the proposed interventions. And, tailoring these initiatives to the unique needs, cultural contexts, and regional specifics of each fishing community is imperative to ensure their relevance and acceptance within these communities.

LIMITATIONS

One of the key limitations of the study pertains to the small sample size of participants, which was limited to 6 to 10 individuals. Such a small sample size might restrict the representation of diverse perspectives and experiences within the broader population of traditional fishermen in Kollam. Consequently, the findings might not capture the full spectrum of challenges or coping strategies prevalent among these communities. As a result, caution should be exercised while generalizing the study's findings to a larger population.

The qualitative approach, particularly the thematic analysis method, might be susceptible to researcher bias during data collection, analysis, and interpretation. The researchers' perspectives, experiences, or preconceived notions could inadvertently influence the identification and interpretation of themes within the data. This could impact the objectivity of the study's findings and conclusions.

Due to the specific focus on traditional fishermen in Kollam, the findings might lack generalizability to other fishing communities in different geographical locations or with varying socio-economic contexts. The context-specific nature of the study might limit the broader applicability of its conclusions beyond the studied population.

While thematic analysis is a robust method, it might not comprehensively capture all nuances or intricacies within the data. Certain subtle or less evident themes or patterns in the participants' narratives might go unnoticed or underexplored due to the structured nature of thematic analysis, potentially limiting a more exhaustive understanding of the fishermen's experiences.

Despite the emphasis on longitudinal exploration in the research approach, the study's cross-sectional design might restrict the depth of insight into changes and evolutions over time within the fishing communities. A more extended or repeated data collection process could have provided a deeper understanding of how challenges and coping mechanisms have shifted or evolved over time.

The study might have faced challenges in recruiting participants due to the specific inclusion criteria and the population of traditional fishermen. Such difficulties in recruitment might have influenced the sample size and possibly introduced a selection bias, impacting the representativeness of the participants.

CONCLUSION

The study delving into the lives of traditional fishermen reflects the complex interplay of economic, social, and environmental challenges they face in maintaining their traditional livelihoods. Despite enduring adversities like economic instability, fluctuating fish stocks, and the encroachment of commercial fishing, these individuals showcase remarkable resilience in preserving their cultural heritage and connection to marine resources.

Economic hardships, primarily influenced by fuel costs, limited access to modern fishing techniques, and market fluctuations, remain a significant concern. The seasonal nature of fishing leads to income volatility, making financial planning a challenge. Additionally, social isolation, lack of recognition for their profession, and the struggle to pass down traditional knowledge to the younger generation compound their difficulties.

The arrival of commercial fishermen has notably altered fishing dynamics, leading to ecological pressures, declining fish stocks, and intensified competition. This has sparked conflicts between traditional and commercial fishing practices, impacting both the community dynamics and fishing resources.

Strategies adopted by traditional fishermen, such as diversifying income sources, leveraging technology, and collective alliances, highlight their adaptive capacity. However, limitations in participation and access to diverse fishing groups were encountered during the study.

In conclusion, this research underscores the multifaceted challenges faced by traditional fishermen and their tenacious efforts to navigate these obstacles while safeguarding their heritage. It calls for comprehensive support systems, government interventions, and sustainable management practices to preserve these traditional livelihoods amidst evolving socio-economic and environmental landscapes.

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