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Title:	Coastal fisheries livelihoods – diversification and food security
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Summary:

Pacific Island countries and territories (PICTs) have expressed the need for support in enhancing coastal fisheries livelihood diversification. This is crucial for bolstering food security, increasing sources of income for communities, and lessening the strain on vulnerable habitats and fisheries resources.

In recent decades, numerous small-scale fisheries livelihood projects in Pacific Island countries and territories (PICTs) have benefited from support provided by international, regional organisations, donors, and non-governmental organisations. Although there are instances of success among these initiatives, the scarcity of comprehensive data has posed challenges in pinpointing the factors contributing to both success and failure. This challenge is further exacerbated by the presence of outdated literature and a paucity of relevant examples, particularly concerning coastal communities in the Pacific Islands region.

The selecting and implementation of suitable livelihood options for countries and communities in the region requires a deep understanding of the contextual nuances, unique challenges, opportunities, and essential environmental, technical, social, and economic data. This paper seeks to explore livelihood opportunities across three key dimensions: marine-based extractive alternatives, non-extractive alternatives in the coastal/marine sector, and land-based alternatives.

Recommendations:

Members and partners are invited to:

- Discuss* livelihood diversification initiatives challenges, identify solutions, focusing on identifying specific areas where support is required.
- Recognise* the significance of diversifying livelihoods to ensure food security and economic stability but *note* the limited capacity of SPC FAME to provide fisheries development, livelihood, social and economic support (only three staff members, and consultancies subject to funding).

- c. *Request* Heads of Fisheries to prioritise the collection of essential data to facilitate comprehensive feasibility and cost-benefit analysis (CBA) for livelihood diversification initiatives.

Coastal fisheries livelihoods – Diversification and food security

Introduction

1. Coastal and nearshore fisheries play a vital role in Pacific Island countries and territories (PICTs) by providing both food and income. However, overfishing of certain species, combined with external factors such as climate change and habitat degradation, has posed significant challenges.
2. PICTs encompass vast ocean spaces, many of their communities are situated in remote areas with limited infrastructure, including ice facilities, processing capabilities, raw materials, equipment, and access to markets. These constraints have spurred a growing need for support in improving existing livelihoods and when needed, diversifying livelihoods. This diversification is essential not only to enhance food security and income sources, but also to alleviate pressure on vulnerable habitats and species.
3. PICTs have launched various small-scale fisheries livelihood initiatives. These efforts encompass the deployment of fish aggregating devices (FADs), the introduction of nearshore fishing techniques, training fishers in onboard fish handling, and value-added activities like producing smoked tuna, salted dried tuna, and tuna jerky. Additionally, the installation of ice machines is improving the small-scale fisheries value chain and enhancing food safety standards. Enhanced fish handling at capture contributes to improved economic returns, nutrition, and employment opportunities for communities.
4. To address the challenges posed by declining fisheries resources, it is essential to adopt policies and strategies that support the development of livelihood opportunities for coastal communities. While aquaculture, water-based tourism, and small-scale tuna fisheries provide options, many solutions extend beyond the fisheries sector.
5. The Pacific Community's FAME division proposes a multi-faceted approach to support PICTs, encompassing three key fronts: marine-based extractive alternatives, non-extractive alternatives within the coastal/marine sector, and land-based alternatives.

Marine-based extractive opportunities

6. To effectively manage fisheries with medium or long-term objectives, there are parallel needs to develop and implement sustainable alternative livelihoods, especially for underutilised groups within the Pacific region, including the unemployed, disabled, fisherwomen, youth, and remote communities.
7. Options for marine-based extractive opportunities:
 - i. **Diversification of anchored FAD fishing methods:** Exploring different fishing techniques for food and income, in nearshore waters, midwater fishing, fishing with lights, and anchored FADs.
 - ii. **Alternative/supplementary target species:** Targeting species like squid, small pelagic fish (e.g., sardinella, anchovies, sprats), and flying fish.

- iii. **Improved utilisation of fisheries resources:** Enhancing the use of fisheries resources through activities such as fish preservation, processing, value addition, and distribution, employing low-tech methods to extend shelf life and increase returns, with a particular focus on involving youth and women.
- iv. **Sport/charter fishing activities:** Investigating the feasibility of sport and charter fishing activities in the region.
- v. **Enhanced fishing conditions:** Improving fishing conditions at sea, including safety measures, and ensuring access to ice.
- vi. **Aquarium fisheries:** targeting invertebrates or finfish for international aquarium trade.
- vii. **Handicraft products:** containing marine based resources.
- viii. **Aquaculture seed collection:** Initiating seed collection for aquaculture, for instance, collecting oyster spat for grow-out purposes.

Non-extractive alternatives within the coastal/marine sector

- 8. Beyond extractive activities, there are various non-extractive uses of coastal fisheries resources and the marine environment, including:
 - i. **Tourism:** Integrating recreational activities such as catch and release fishing into the tourism industry. This not only enhances the appeal of tourism but also provides sustainable opportunities for visitors to engage with the region's natural beauty and marine resources while promoting conservation efforts.
 - ii. **Nautical or ecosystem activities:** Promoting a range of nautical experiences, including whale watching, diving, kayaking, and more, to leverage the natural beauty of the region's marine environments. Encouraging the development of ecotourism opportunities that showcase the distinctive marine ecosystems and rich local cultures, providing sustainable alternatives that benefit both visitors and the communities that call these coastal areas home.
 - iii. **Closed-cycle aquaculture:** Advancing the development of closed-cycle aquaculture practices. This approach focuses on self-contained, sustainable systems that minimise environmental impact while producing seafood, contributing to food security, and offering economic benefits.

Land-based alternatives

- 9. Several land-based alternatives exist, such as agriculture and handicrafts. However, these options would require coordination with other SPC divisions or government agencies, as they fall outside the expertise of FAME and fisheries agencies.

Livelihood diversification challenges

- 10. Selecting and implementing the appropriate livelihood option can be challenging. Meeting food safety standards and quantity requirements for air transport and export facilities within different countries is particularly difficult for small-scale tuna fisheries in the region.

11. The perishable nature of fish products often leads to their storage in household freezers. However, these freezers are designed for storing / holding frozen products and may not meet the necessary temperature control standards required for processing, value addition, and preservation.
12. Achieving hygiene, food safety standards and hazard analysis critical control points in the processing and preservation of fish products is essential but can be challenging.
13. Several marine-based livelihood diversification options involve high fuel consumption. High fuel costs are a significant expense, given the distances to fishing grounds.
14. The cost of equipment and baitfish for extractive nearshore tuna fisheries can be substantial, making it necessary for fishers to catch their own bait to reduce operational costs.
15. Safety in small boat operations is a crucial consideration for marine-based livelihood alternatives. It includes promoting safe boat handling, the use of emergency grab bags, investigating cost-effective automatic identification or vessel monitoring systems, and exploring the use of sails for fishing operations and safety purposes.
16. Limited access to resources (e.g., infrastructure, equipment, inputs, finance, skills) and local preparedness to engage in new livelihoods (unwillingness to learn new things, financial inability to cover cash-flow issues, marketing failures)¹.

Economic and social analysis to understand the feasibility, cost-benefit, and success levels of different livelihood options.

17. Feasibility studies constitute a comprehensive examination of various aspects related to a livelihood initiative. These encompass an assessment of environmental conditions and their potential impacts; the technical prerequisites and needs; an exploration of social and cultural factors that can either be advantageous or limiting; and an analysis of economic conditions, encompassing both short and long-term financing options and investment requirements. Furthermore, cost-benefit analysis delves specifically into the relationship between the investment made and potential benefits reaped, aiding in determining if such investment is worthwhile or not (for a more detailed understanding, refer to Working paper 8). In this context, it is important to employ an action research or participatory process, engaging key stakeholders throughout the process. This ensures that the initiative is embraced and championed by the relevant individuals, communities, agencies, and organisations², promoting a sense of ownership and commitment to its success.
18. To underpin these studies, it is imperative to access a range of social and economic data from diverse sources. These sources encompass existing documents, some of which are publicly available, while specific organisations or individuals hold others. Additionally, expert opinions, insights from key informants, and comprehensive surveys are among a wealth of resources

¹ [SPC Fisheries Newsletter #125 - April-June 2008 \(windows.net\)](#) (pg. 32)

² For a clear guide on how to assess new livelihood ideas, see:
spc.int/DigitalLibrary/Doc/FAME/Manuals/Govan_19_New_Idea_Guide.html

utilised. For a deeper understanding of the various data types and their application, please refer to Information paper 11 on socioeconomic data.

19. In addition to information and data collected in the preliminary phases of developing or enhancing livelihoods initiatives, it is equally critical to employ monitoring data and conduct project assessments. These ongoing evaluations are vital for assessing both the factors contributing to success and those leading to failure. Such information, in turn, becomes foundational in steering and shaping future livelihood development efforts.

Recommendations

- a. *Discuss* livelihood diversification initiatives challenges, identify solutions, focusing on identifying specific areas where support is required.
- b. *Recognise* the significance of diversifying livelihoods to ensure food security and economic stability but *note* the limited capacity of SPC FAME to provide fisheries development, livelihood, social and economic support (only three staff members, and consultancies subject to funding).
- c. *Request* Heads of Fisheries to prioritise the collection of essential data to facilitate comprehensive feasibility and cost-benefit analysis (CBA) for livelihood diversification initiatives.

Questions for breakout groups

1. What examples can you share about successful and unsuccessful livelihoods development projects? What elements contributed to their success/failure?
2. Could you identify key livelihood challenges and solutions? Please identify specific areas where support is most needed.