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# FAO REGIONAL CONFERENCE FOR ASIA AND THE PACIFIC

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**Building resilience of small-scale fisheries to ensure food security and nutrition in the Pacific**

### Executive Summary

Coastal fisheries are an important source of food and income and an integral element of cultural identity for Pacific Island nations. These resources play an indispensable role in the fight against a “triple burden of malnutrition” – undernutrition, micronutrient deficiency and obesity. However, this role is being undermined because coastal fisheries are often in decline and ineffectively managed.

Meeting current and future demands for locally produced, highly nutritious food remains one of the biggest challenges facing Pacific Island nations. Doing so will require accelerated and sustained efforts to more effectively manage, harvest, process and supply coastal fish to domestic consumers.

This paper presents information on actions needed to safeguard the contribution of small-scale fisheries to Pacific Island nations’ food security and livelihoods and seeks guidance from the FAO Regional Conference for Asia and the Pacific (APRC) on where FAO should focus its efforts. Suggested interventions by FAO across the subregion are intended to build resilience across ecosystems and communities, including through the implementation of supporting policies and frameworks at the regional and international levels.

### Suggested action by the Regional Conference

The APRC is invited to provide guidance on priorities for technical assistance to enhance resilience in small-scale fisheries and increase their contribution to food and nutrition security in the Pacific. In particular, this paper seeks guidance on:

- how FAO can best support actions to improve the health of Pacific Islanders, which has declined as a result of a shift away from traditional fresh fish and local vegetables to diets dominated by imported processed foods;

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- how FAO can assist in reducing the growing gap between the demand and supply for domestic fish and thereby improve nutrition outcomes for Pacific Islanders;
- how FAO technical assistance might best address problematic areas in small-scale value chains and better incorporate fish into Pacific food systems; and
- the priorities for FAO technical cooperation assistance in fisheries to accelerate building resilience in the small-scale fisheries sector.

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## Introduction

1. The exclusive economic zones of the 22 Pacific Island Countries and Territories (PICTs) span much of the tropical and subtropical Pacific Ocean, encompassing an area that exceeds 27 million km<sup>2</sup> or 8 percent of the global ocean, while coastal fishing areas across the Pacific account for only 1.25 percent of this ocean area. However, the coastal and marine environments play a major role in the economic, social and cultural well-being of Pacific Islanders and sustain a multitude of important activities that fuel local, national and international economies and provide livelihoods and food security for millions of people.



**Figure 1. Relative area of land (green), ocean (dark blue) and inshore fishing areas (light blue) of Pacific Island Countries and Territories<sup>1</sup>**

2. Fish has traditionally formed a cornerstone of a healthy and balanced diet in the PICTs. Its importance is reflected in the consumption patterns of the people of the Pacific Islands who, on average, consume two to four times the global per capita average of fish per year.<sup>2</sup> Coastal fisheries are the major source of fish consumed domestically and are a primary contributor to nutrition, food security, culture, employment and recreation in the PICTs.<sup>3</sup>

3. However, there is growing concern about whether benefits and services currently derived from coastal ecosystems, in terms of food security, nutrition and livelihoods, can be sustained. This concern has accelerated efforts to enhance the socio-ecological resilience of coastal communities in the Pacific which depend heavily on healthy ecosystems and sustainable fisheries. To this end, FAO has been supporting member countries by strengthening community and fishery stakeholder participation in governance; supporting effective implementation of national, regional and international instruments/regulations; and improving access to, and safety of, fish in domestic markets to ensure food security and nutrition. FAO seeks to continue supporting coastal fisheries and small-scale fishers and seeks guidance from APRC members on gaps in which FAO programming can complement existing regional programmes and on focal areas for collaboration between FAO and regional agencies and donors. Given the multisectoral nature of coastal fisheries and the magnitude of the threats faced –

<sup>1</sup> Govan, H. (*in press*). Coastal Fisheries Policies: Linkages between Pacific Island and global policies. FAO Fisheries and Aquaculture Circular No. C1192. Apia, FAO.

<sup>2</sup> Bell, J.D., Sharp, M.K., Havice, E., Batty, M., Charlton, K.E., Russell, J., Adams, W. et al. 2019. Realising the food security benefits for canned fish for the Pacific Island countries. *Marine Policy*, 100; 183-191.

<sup>3</sup> Gillett, R. and Tauati, M.I. 2018. Fisheries in the Pacific. Regional and national information. FAO Fisheries and Aquaculture Technical Paper No 625. Apia, FAO.

including from climate change – greater collaboration among donors, technical agencies and ministries on focused interventions is necessary to accelerate safeguards for coastal fisheries.

### Fisheries in the Pacific

4. It is undisputed that fisheries contribute to livelihoods, revenue and development in the Pacific Island region. At the recent Pacific Forum meeting, regional leaders made fisheries a regional priority and “reconfirmed their commitment to work collectively to harness, secure, protect and sustainably manage, use and conserve the living resources of the Blue Pacific such as coastal and oceanic fisheries”.<sup>4</sup> Fish contribute substantially to both the subsistence and market-based economies of PICTs. However, it is now acknowledged that increased fish supplies are needed to meet growing food security demands domestically and that enhancing domestic fish production, consumption and access is as important as export production. The Pacific Community (SPC) has reported<sup>5</sup> that by 2035, 25 percent of all fish required for the food security of Pacific Island people will need to be supplied by tuna, which suggests that coastal fisheries production will be insufficient to meet domestic needs.

#### *Oceanic fisheries*

5. In the past, oceanic fisheries have dominated policy agendas and regional agreements because of their importance in terms of volume and value. For example, in the period 2013-2015, the average annual catch of tuna in the exclusive economic zones of Pacific Islands Forum Fisheries Agency (FFA) member countries was 1.6 million tonnes, comprised of the main Western and Central Pacific Ocean (WCPO) tuna stocks (i.e. south Pacific albacore, bigeye, skipjack and yellowfin). This accounted for 58 percent of the WCPO tuna catch and 36 percent of the global catch of tuna. These four tuna stocks are deemed to be “biologically healthy” and account for 95 percent of the WCPO total tuna catch.<sup>6</sup> The value of catch in FFA member waters is estimated at just over USD 3.0 billion.<sup>7</sup>

6. PICTs have made great strides in developing tropical Pacific tuna fisheries within the limits set by regional and international agreements. The value derived from access fees paid by foreign vessels to FFA members has risen sharply over recent years, from less than USD 100 million in 2010 to an estimated USD 448 million in 2015.<sup>8</sup> However, there is still scope for increasing revenues through, *inter alia*, value addition, ensuring that measures are put in place to address Illegal, Unreported and Unregulated (IUU) fishing, and supporting adaptation to changes in abundance and distribution associated with climate change.

7. While the offshore fisheries provide an opportunity to increase supply of fish into domestic markets, the quantities of tuna currently landed and consumed by Pacific Islanders from these fisheries remains low. FFA has reported that in 2016, only 0.8 percent of the total tuna catch from locally based fleets in the region was entering local markets, while 99.2 percent was exported to foreign markets.<sup>9</sup>

8. This disparity between the amount of tuna available in national waters and the amount entering domestic markets at affordable prices concerns Pacific leaders. As a result, Pacific Island Forum Fisheries Ministers adopted a “Regional Roadmap for Sustainable Pacific Fisheries” (2015) which sets ambitious goals for a 10-year period, including a goal of increasing the supply of tuna for domestic consumption by 40 000 tonnes across the region by 2024. This goal aims to increase provision of fish

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<sup>4</sup> Fiftieth Pacific Islands Forum Communique. Funafuti, Tuvalu. 13-16 August 2019.

<https://www.forumsec.org/wp-content/uploads/2019/08/50th-Pacific-Islands-Forum-Communique.pdf>

<sup>5</sup> SPC Policy Brief #32: Implications of climate-driven redistribution of tuna for Pacific Island economies

<sup>6</sup> Tuna Fisheries Report Card 2018. FFA.

<sup>7</sup> <https://www.ffa.int/node/425>

<sup>8</sup> Tolvanen, S., Thomas, K., Lewis, T. McCoy, M. 2019. FFA study: Assessing the contribution of landings from locally based commercial tuna fishing vessels to food security. FFA.

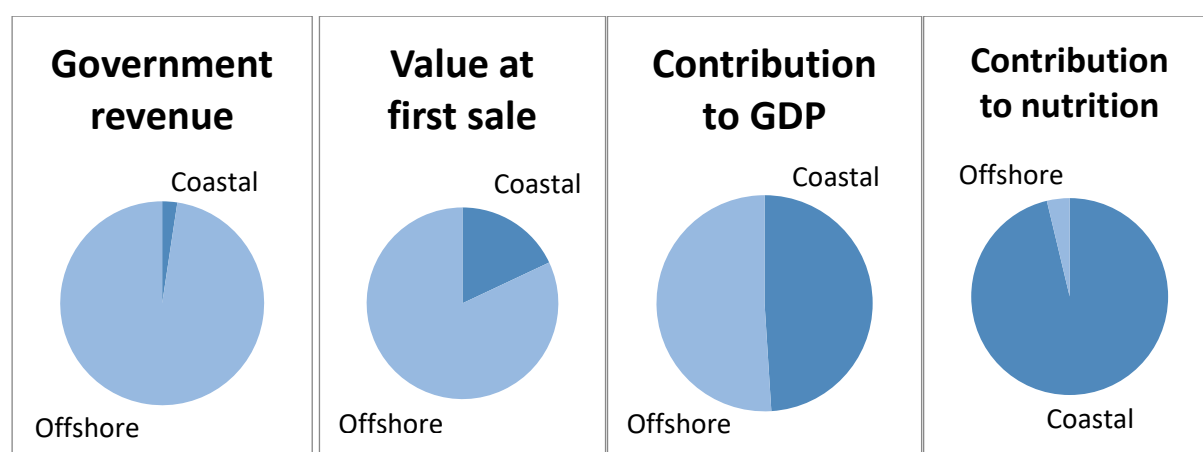
<sup>9</sup> Ibid.

for healthy diets from pelagic fisheries, which currently only contribute in a limited way to domestic supply.

9. Developing domestic fisheries' supply chains to include oceanic and neritic tunas is expected to reduce pressure on traditional nearshore shallow water species exploited by small-scale fisheries and therefore contribute to meeting the food security needs of PICTs. However, meeting this goal will be a formidable challenge. As of 2016, FFA member countries reported that only 28 891 tonnes of tuna were available to the local market from all sources. Achieving a goal of having an additional 40 000 tonnes of tuna available to the local market would require a 139 percent increase in eight years.<sup>10</sup>

### *Coastal fisheries*

10. The importance of coastal fisheries should not be underestimated, despite the clear dominance of offshore fisheries by volume and value. While coastal fisheries do not contribute significantly to government revenue, they provide half the fisheries-related contribution to gross domestic product and most of the contribution to nutrition (Figure 2). These results are even more striking given that inshore fishing depends on little more than 1 percent of the total ocean space under national jurisdictions. Aquaculture – which comprises a varied mix of low-value bulky products (such as seaweed) and small high-value products (such as pearls) – and freshwater fisheries production contribute comparatively little value to economic growth or food security in most PICTs.<sup>11</sup>



**Figure 2.** Fisheries contributions to revenue, development and food security

*Source:* Data from Gillett (2009) interpreted in Govan (2013)

11. The shallow water lagoons and coral reefs of the Pacific provide most of the fish consumed in the Pacific Island region. These fisheries<sup>12</sup> are large in terms of importance and numbers of people engaged but poorly documented in the Pacific and around the world. FAO is working on a study entitled “Illuminating hidden harvests: small-scale fisheries contribution to sustainable development” that will include local snapshots of at least two Pacific countries using the best available information to quantify the social, environmental, economic and governance contributions of small-scale fisheries.

<sup>10</sup> Tolvanen, S., Thomas, K., Lewis, T. McCoy, M. 2019. FFA study: Assessing the contribution of landings from locally based commercial tuna fishing vessels to food security.

<sup>11</sup> Govan, H. (2017), ‘Ocean Governance – Our Sea of Islands’ in Katafono, R. (ed.), *A Sustainable Future for Small States: Pacific 2050* (forthcoming), Commonwealth Secretariat, London.

<sup>12</sup> Small-scale fisheries include those that take place in nearshore areas for subsistence, semi-commercial or small-scale commercial (e.g. on the domestic market) purposes and include marine resources harvested by boat but also collected by hand, spear or net in shallow lagoon areas.

Such studies will contribute to understanding the contribution of coastal fisheries in the Pacific and elsewhere. Current best estimates suggest that coastal fisheries production (i.e. coastal commercial and coastal subsistence) across all PICTs in 2014 was approximately 164 000 metric tonnes (Figure 2) with an indicative value of USD 453 342 000.<sup>13</sup>

12. Recent data suggest that the overall contribution of coastal fisheries to food security is declining, with per capita production of coastal fish resources decreasing approximately six percent between 2007 and 2014.<sup>14</sup> Alarming, some countries already do not have enough domestically available fish to meet demand. Accordingly, there is an urgent need to apply adaptive measures to fill this gap, including the redirection of effort to nearshore pelagic fisheries to meet food security demands and the improved management and protection of reef fisheries and ecosystems to ensure that these crucial systems become more sustainable. Such an approach would reduce pressure on coastal shallow water lagoon stocks and facilitate efforts to rebuild stocks.

### ***The importance of fish for food security and nutrition***

13. Fish and invertebrates are important for nutrition as a source of protein and also micronutrients. Fish, and small pelagics in particular, provide high-quality protein with essential amino acids, omega-3 fatty acids, vitamins, minerals and trace elements.<sup>15</sup>

14. PICTs' reliance on fish is often intensified by a lack of other locally available nutritious food. This can be especially pronounced in many atoll islands where soil nutrition is poor, and fruit and vegetable production is severely constrained. This is exacerbated in areas prone to extended droughts and when island infrastructure and food production systems are prone to natural disasters.

15. In the absence of locally available fresh fish at reasonable cost, the food gap is being met through an influx of imported foods in the Pacific Islands which has resulted in a major transition in people's dietary habits. Foods based on refined starch, oils and processed meats have been identified as a major contributor to the triple burden of malnutrition. In addition, this shift in dietary habits leads to greater vulnerability to food insecurity as PICTs become more reliant on imports to meet food security needs rather than on traditional diets in which fresh fish played an important role.

16. To address the triple burden of malnutrition, food systems in the region need to be transformed to provide adequate, safe, diverse and nutritious food that contributes to healthy diets. PICTs and other small island developing states (SIDS) around the world have called for accelerated action to improve food and nutritional security through the SIDS Accelerated Modalities of Action (S.A.M.O.A) Pathway outcome statement. In response, the Global Action Programme on Food Security and Nutrition in Small Island Developing States (GAP)<sup>16</sup> was developed to provide a coordination framework for action across these key pillars: (1) creating enabling environments for food security and nutrition; (2) promoting sustainable, resilient nutrition-sensitive food systems; and (3) empowering people and communities for improved food security and nutrition. FAO is working with partners in the subregion to implement GAP and has created an implementation plan to identify opportunities for collaboration across agencies and organizations.

17. A viable and healthy coastal fisheries sector is recognized by Pacific Island leaders as the backbone of a resilience strategy and is afforded a very high priority within all PICTs.<sup>17</sup> While significant remedial efforts are required to rebuild locally depleted shallow water species, the abundance and availability of neritic and oceanic tuna and associated species provide significant potential for production growth. Realizing this potential and restoring coastal ecosystems will require supporting and strengthening existing traditional and community-based management;

<sup>13</sup> Gillett, R. 2016. Fisheries in the Economies of Pacific Island Countries and Territories

<sup>14</sup> Gillett, R. 2016.; Govan 2019.

<sup>15</sup> Tacon, A. G. J., & Metian, M. (2013). Fish Matters: Importance of Aquatic Foods in Human Nutrition and Global Food Supply. *Reviews in Fisheries Science*, 21(1), 22–38.

<sup>16</sup> Global Action Programme on Food Security and Nutrition in Small Island Developing States – Supporting the Implementation of the SAMOA Pathway. <http://www.fao.org/3/a-i7135e.pdf>

<sup>17</sup> Vava'u Declaration (2007); the Apia Policy (2008); FFA/SPC Future of Fisheries Report (2015); and New song for coastal fisheries: Pathways to change (2015)

production/processing systems to include these resources; and actions to safely and effectively transition nearshore coastal effort into fishery methods that can target pelagic and deeper-water species.

### **Fish in the Pacific food system**

18. In the tropical Pacific, fish has been the cornerstone of food security. Average annual consumption of fish (including shellfish) by coastal rural populations has ranged from 30–118 kg per person in Melanesia, 62–115 kg per person in Micronesia and 50–146 kg per person in Polynesia.<sup>18</sup> Even in urban centres, fish consumption usually greatly exceeds the global annual average of 21 kg per person.

#### ***Marine resources and nutrition***

19. To ensure that fish and fisheries remain vital components of Pacific food security and nutrition, they must be better integrated into food system planning and actions. The GAP provides a platform through which to strengthen and clarify the contribution and role of marine resources and fisheries throughout the value chain. However, fisheries are often poorly integrated into national or regional planning on integrative topics (e.g. nutrition policy) across the food system. Furthermore, the fisheries sector often focuses only on particular areas of the food system in sector-specific planning and policies. FAO, through the Food and Nutrition Security Impact, Resilience, Sustainability and Transformation programme (FIRST) project, has been working with Fiji, the Solomon Islands and Vanuatu to facilitate integrated food security and nutrition policy and planning that work across the sectors including agriculture, fisheries and forestry.

20. The connection between fish and nutrition has most recently been recognized in the Pacific at the Forty-ninth Pacific Islands Forum in Nauru, where leaders reiterated their commitment to ensuring the long-term sustainability and viability of the region's fisheries resources, recognizing its centrality to the well-being of communities and economies.<sup>19</sup>

#### ***Fish and improved value chains***

21. Effective interventions and investments must equally address the different components of the food system, including production, processing, distribution and consumption. However, fish are highly perishable, and spoilage and quality deterioration occur quickly in tropical areas because of high temperatures and rapid growth of bacteria. As a consequence, fish must be handled properly, and good phytosanitary practices must be implemented across the supply chain. As domestic production increases, so too will the requirement for a robust cold chain to maintain fish freshness and preserve quality. In those islands where energy costs prevent the use of ice for preservation, smoking and drying fish can extend its shelf life and contribute towards reducing loss and waste in small-scale fisheries. FAO has extensive experience in product development in the small-scale fisheries sector and demonstrated capacity to support all stages of value chain capacity-building. The production of safe nutritious food products with an extended shelf life at ambient temperature could help remote atoll communities participate in the growth of the small-scale sector by enabling them to harvest, process and transport their shelf-stable products to market.

22. Ensuring high quality and safety standards is also good economics. While reducing waste and improving quality will minimize losses that result from spoilage, improving safety will reduce damage to trade as well as illness among consumers. The fishing sector will need to ensure that its fish handling, processing and transportation facilities meet requisite standards. Support institutions must provide adequate training for industry and control authority staff and channels for consumer feedback.

<sup>18</sup> Bell, J.D., Johnson, J.E., Ganachaud, A.S., Gehrke, P.C., Hobday, A.J., Hoegh-Guldberg, O., Le Borgne, R., Lehodey, P., Lough, J.M., Pickering, T., Pratchett, M.S. and Waycott, M. (2011) Vulnerability of Tropical Pacific Fisheries and Aquaculture to Climate Change: Summary for Pacific Island Countries and Territories. Secretariat of the Pacific Community, Noumea, New Caledonia.

<sup>19</sup> Forty-ninth Pacific Islands Forum Communiqué. Yaren, Nauru. 3-6 September 2019.

<https://www.un.org/humansecurity/wp-content/uploads/2018/09/49th-Pacific-Islands-Forum-Communiqué.pdf>

FAO can bring a wealth of skills and experience to facilitate capacity-building to develop and effectively implement food laws.

23. Meeting current and future demands for locally produced highly nutritious food for both domestic consumption and income generation remains one of the biggest challenges facing Pacific Island nations. This will require accelerated and sustained efforts to more effectively govern, manage, harvest, process and supply coastal fish to domestic consumers. Critically, it will also require additional efforts to manage risks associated with sustainable development of national food production systems, including more effectively controlling depleted/overfished stocks; ensuring safe access to and harvesting of underutilized fish resources; building capacity to support growth of fishery value chains through strengthening the business and enterprise skills used by fishers and processors; improving food safety; and raising awareness on the health benefits of fish in the diet. The health and safety of workers involved in the small-scale fisheries sector will also need to be an integral part of the development process as well as strengthened fisheries associations and their participation in decision-making processes.

24. In order for Pacific leaders to meet their stated goal of addressing the food and nutrition needs of Pacific Islanders through increasing the supply of tuna and associated species into domestic markets and supporting small-scale fisheries, there will need to be more coordinated and concerted actions across the Pacific food system. In this regard, FAO's technical expertise could be utilized to assist from production to consumption, i.e. applying an "ocean to plate" strategy.

### **Resilience and empowerment in small-scale Pacific fisheries**

25. Globally, FAO estimates that small-scale fishers account for at least 90 percent of capture fishers. While the total number of small-scale fishers in the Pacific is not available, in PICTs an average of 47 percent of households earn their primary income from selling fish and invertebrates caught from small-scale fisheries.<sup>20</sup>

26. Engaging and empowering resource users and coastal communities, which directly rely on coastal resources for food security, nutrition and livelihoods is a vital component of ensuring healthy coastal ecosystems. Communities and fishers are not only resource users but also stewards of marine ecosystems, particularly in the Pacific where communities are often isolated from centres of governance and where marine tenure has remained or is being reinvigorated.

27. SPC has recommended that PICTs plan to provide access to at least 35 kg of fish per person per year,<sup>21</sup> but they and others also have warned that by 2030, 75 percent of PICTs will not be able to meet their food security needs because of factors such as the limited productivity of coastal fisheries as a result of degraded ecosystems exacerbated by climatic changes.<sup>22</sup> While some of the demand can be partially met by improving small-scale fisheries through investments to facilitate a safe transition from lagoon fishing to small-scale oceanic fishing, this alone will not be sufficient. A significant investment in improved resilience and adaptation to climate change will also need to be made in order to: (1) maintain and improve the health of coastal ecosystems; (2) empower and engage communities and fishers in governance and management; (3) support livelihood adaptation within the sector and between sectors; and (4) make fisheries an integral part of disaster risk reduction and management.<sup>23</sup>

28. Achieving the goal of the 2015 Regional Roadmap for Sustainable Pacific Fisheries – to increase

<sup>20</sup> Bell, J.D., Johnson, J.E., Ganachaud, A.S., Gehrke, P.C., Hobday, A.J., Hoegh-Guldberg, O., Le Borgne, R., Lehodey Pacific Fisheries and Aquaculture to Climate Change: Summary for Pacific Island Countries and Territories. Secretariat of the Pacific Community, Noumea, New Caledonia. And. Bell, J.D., Kronen, M., Vunisea, A., Nash, W.J., Keeble, G., Demmke, A., Pontifex, S., Andréfouet, S. 2009. Planning the use of fish for food security in the Pacific. *Marine Policy* 33(1).

<sup>21</sup> SPC. Fish and Food Security. Policy Brief 1/2008. Secretariat of the Pacific Community. Noumea. 2012.

<sup>22</sup> Gillett, R., Cartwright, I. 2010. The Future of Pacific Fisheries. Noumea, SPC and FFA.

<sup>23</sup> These three categories are complementary and ultimately aim to reduce the vulnerability of the sector to climate change (Poulain, F., Himes-Cornell, A. and Shelton, C., 2018).



the supply of tuna for domestic consumption by 40 000 tonnes across the region by 2024 – will require targeted actions that include an increased emphasis on small-scale fishing of underutilized oceanic species. One effective way to help bridge the gap is to facilitate and accelerate production from the small-scale nearshore fish aggregating device (FAD) fisheries. However, in addition to production and capacity-building, infrastructure development along the value chain will be required to upscale production. Analyses of fisheries development opportunities that encourage tools and methods not typically utilized in the coastal fisheries can assist in addressing viability concerns. In addition to contributing to food security in the region, these may open other employment opportunities in service industries to support fisheries operations.

### ***Expanding access to nearshore pelagic species***

29. Efforts to safely scale up nearshore FAD fisheries help reduce stress on lagoon ecosystems by migrating effort from shallow water-depleted resources to nearshore FADs attracting nearshore tuna and tuna-like species through safe design of vessels, safety at sea training and assistance in upscaling traditional nearshore coastal fisheries.

30. Encouraging fishers to operate away from relatively safe shallow-water lagoons for multiple days has significant safety implications and also requires concerted effort to prevent disaster. FAO has reported that at least 32 000 fishermen die every year from fishing-related accidents at sea. For this reason, linking safety at sea (i.e. small-scale vessel design and personal safety training) into a small-scale fisheries programme provides the necessary due diligence associated with safe fishing operations. FAO has a global programme on safety at sea and a long history of cooperation with SPC on the topic. However, FAO's technical competency in fishing vessel design and safety at sea need strengthened support from within FAO as well as from other donors to mainstream this work.

### ***Community resilience***

31. In a geographically dispersed region where over 75 percent of the population live in rural areas and are dependent on natural resources, strengthening community-based fisheries management is recognized as a pillar of resilience. Coastal communities in the Pacific have a unique sense of stewardship because of their strong cultural and historical association with marine ecosystems as well as a long-term dependence on its resources. An essential component to improving resilience of small-scale fisheries is to empower communities that have traditionally managed nearshore resources and which are often far from urban centres where ministries are located.<sup>24</sup>

32. In Samoa, community-based fisheries management (CBFM) is embedded in the Fisheries Division, with national staff supporting over 100 villages, which have subscribed to the CBFM programme. In Tonga, CBFM is expanding rapidly through the national Special Management Area programme, which is also integral to the work of the Ministry of Fisheries. FAO has been working with both countries to support improvements and new tools for existing CBFM programmes.

33. Empowerment of small-scale fishers and their communities will require concerted effort to engage people involved in fisheries across the value chain. Fisheries statistics often suggest that it is a male-driven sector, but direct employment data often obscure the extensive and important roles for women in production, harvesting and post-harvesting activities. The roles and development options for women are often distinct, require special consideration<sup>25</sup> and are essential for building sustainable resilient coastal fisheries. FAO recently worked with regional partners to develop the Pacific Handbook for Gender Equity and Social Inclusion in Coastal Fisheries and Aquaculture<sup>26</sup> which complements the Handbook: toward gender-equitable small-scale fisheries governance and

<sup>24</sup> Bell, J. D., et al. 2018. Adaptations to maintain the contributions of small-scale fisheries to food security in the Pacific Islands. *Marine Policy*, 88, 303–314.

<sup>25</sup> Kleiber, D., Cohen, P., Gomese, C. and McDougall, C. Integrating gender in Pacific coastal fisheries research; The Pathways Project. SPC Women in Fisheries Bulletin No. 29. 2019.

<sup>26</sup> <https://coastfish.spc.int/en/component/content/article/494>

development.<sup>27</sup> Working with countries and civil society to utilize these tools and implement gender equity planning will contribute significantly to empowerment.

### ***Fisher organizations and cooperatives***

34. Another strategy to enhance resilience in dealing with threats of fisheries mismanagement, livelihood insecurity and poverty is to enable community-based and small-scale fisheries organizations.<sup>28</sup> Small-scale fishers and coastal communities gather in associations or cooperatives to make their activities more profitable, sustainable and safer. These organizations can be effective tools to promote empowerment of small-scale fishing communities and fishers by providing increased access to decision-makers as well as other potential benefits such as shared costs, new fishing, processing and handling practices, and reduced acquisition and maintenance costs for equipment and infrastructures. These organizations also can be key local partners of the fisheries administration or others to promote collective benefits, such as good governance, safety of fish workers, inclusion of vulnerable groups, and local economic development. Cross-regional exchanges – such as those which took place in FAO's interregional initiative between small-scale FAD fishers of the Pacific Islands (i.e. Cook Islands, Samoa, Tonga and Vanuatu) and the Caribbean (i.e. Barbados, Dominica and Grenada) – can provide new ideas regarding strengths and weaknesses of different management regimes, including the engagement of fisher organizations, that can be adapted to suit country-specific contexts.

35. Socio-economic resilience will also rely on the ability of coastal communities and fishers to recover after disasters. In the cyclone-prone Pacific region, fisheries can provide the first line of defence against food insecurity after natural disasters. Coastal resources are an immediate source of food, which are unlikely to be dramatically impacted by events such as cyclones, while agriculture and land-based resources take a considerable amount of time to rebuild. However, coastal communities and fishers will require awareness-building and training to protect assets during disasters and to ensure that food sources can be safely supplied at the local level after such events. In addition, training from FAO and others at the national level on disaster risk reduction and management will need to incorporate specific modules and training for fisheries agencies or ministries which are often not adequately engaged in food security clusters at the national or regional levels and thus do not receive training. FAO has developed a training programme on Fisheries and Aquaculture Response to Emergencies to address this gap.

## **Conclusions and Recommendations**

36. In order to safeguard the contributions of coastal fisheries to food security and nutrition, while at the same time enhancing the socio-ecological resilience of fishing communities in the Pacific, small-scale fisheries need to be recognized and prioritized and actions must be taken to accelerate the rebuilding of depleted lagoon resources (i.e. the food reserve).

37. The congruence of statements made by Pacific leaders and the APRC<sup>28</sup> on the importance of small-scale fisheries in PICTs and their critical role in supporting national food security and nutrition provide a coherent action plan for the region. FAO, through its full range of fisheries expertise and experience, can support the goals outlined for the region.

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<sup>27</sup> FAO. 2017. Towards gender-equitable small-scale fisheries governance and development – a handbook. In support of the implementation of the Voluntary Guidelines for Securing Sustainable Small-Scale Fisheries in the Context of Food Security and Poverty Eradication, by Nilanjana Biswas. Rome, Italy.

<sup>28</sup> In 2018, the APRC recognized the important roles of smallholders and family fishers in contributing to food security and nutrition and called for efforts to enhance their capacity to more effectively link with modern value chains. In 2016, the APRC recognized the importance of prioritizing fisheries in the Pacific subregion, emphasized the importance of regional collaboration and cooperation between FAO and other regional partners, and recommended that FAO's Blue Growth Initiative be expanded to cover marine fisheries in the Pacific subregion.

38. The Secretariat invites the APRC to request FAO to work with its member countries in the region to meet international and regional goals for coastal and nearshore pelagic fisheries within the context of the Future of Fisheries Roadmap<sup>29</sup>, the Voluntary Guidelines for Securing Sustainable Small-Scale Fisheries in the Context of Food Security and Poverty Eradication (SSF Guidelines)<sup>30</sup>, and the New Song for Coastal Fisheries<sup>31</sup>.

39. To highlight and prioritize small-scale fisheries, APRC delegates are invited to join FAO in celebrating the importance of small-scale fisheries in 2022 – the International Year of Artisanal Fisheries and Aquaculture. FAO would be pleased to work with regional organizations and countries to develop collaborative celebrations and relevant activities.

40. Specifically, FAO recommends the following action points as areas for FAO interventions on small-scale fisheries for the Pacific region.

### ***Fish in the Pacific food system***

41. Mainstream fisheries into the Pacific food system

- a. Incorporate fisheries into food security and nutrition planning and policies and vice versa. Promote integrated planning and management of food resources, including for resilience-building and Disaster Risk Reduction (DRR) planning.
- b. Raise awareness on the nutritional benefits of fish in the diet, including through the proposed 2020 Symposium on Nutrition-sensitive Pacific Food Systems.
- c. Promote and support integrated planning and management of resources in connected ecosystems (e.g. link fisheries and marine resources to integrated management and planning, such as in source-to-sea or ridge-to-reef systems)

42. Address problems in value chains

- a. Provide support for product development, technical support and capacity-building in business and enterprise skills to support the growth of fishery value chains.
- b. Support the engagement of stakeholders across the value chain to improve full participation, ensuring gender equity and inclusion of vulnerable groups.

43. Improve food safety for fish and fish products

- a. Enhance domestic food safety through legislation and capacity-building on safe handling and quality control of fish.
- b. Facilitate and support engagement of the Pacific in international mechanisms such as Codex.

44. Support monitoring and reporting on regional and international goals and targets related to coastal fisheries in terms of food security and resilience, including Sustainable Development Goal 14 (target 14b).

### ***Safeguarding the contributions of coastal fisheries to food security, nutrition and resilience building***

45. Support a sustainable and safe transition from small-scale lagoon fishing to small-scale oceanic fishing

- a. Facilitate attaining regional goals to safely scale up the supply of tuna into domestic markets.
- b. Train and equip fishers to safely transition from small-scale lagoon fishing to small-scale oceanic fishing.

<sup>29</sup> <https://www.ffa.int/node/1569>

<sup>30</sup> <http://www.fao.org/3/a-i4356en.pdf>

<sup>31</sup> <https://coastfish.spc.int/component/content/article/461-a-new-song-for-coastal-fisheries.html>

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- c. Improve understanding about the vulnerability of communities to impacts from climate change in the marine ecosystem.
46. Improve safety for small-scale coastal fisheries
- a. Improve safety at sea through capacity-building, introduction of new or improved fishing techniques or gear, and safe vessel design and operations.
47. Empower and support good governance and management in small-scale fisheries
- a. Empower communities through capacity-building and institutional support to better manage and access nearshore resources.
  - b. Provide education and improve awareness on management measures and sustainable fisheries to enable communities and fishers to be better stewards of their marine resources including for youth, the next generation of fishers.
  - c. Provide access to and information on recommended adaptations, such as nearshore FAD fisheries for CBFM institutions and fisher organizations.
  - d. Ensure that all user groups (across socio-economic status, gender and age) are part of the governance process.