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# POLICY BRIEF

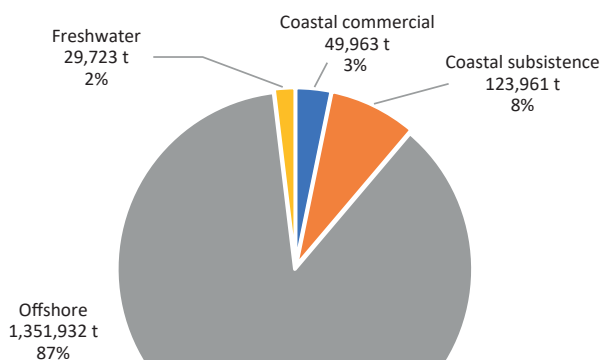
## The offshore fisheries findings and policy implications of the Benefish Study 4

### Purpose

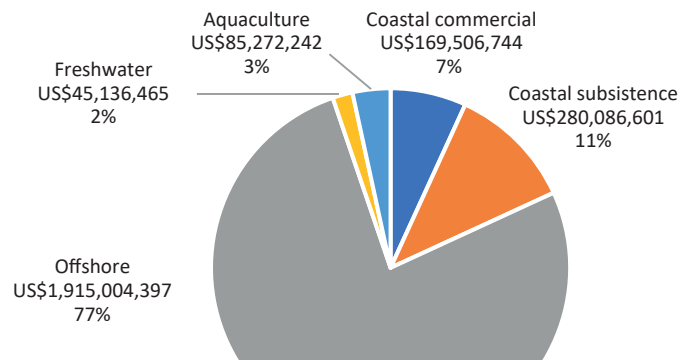
This policy brief highlights the results and policy implications related to offshore fisheries in the Benefish Study 4. The study examined fisheries production (coastal, offshore, aquaculture, and freshwater) on national and regional levels and quantified the benefits flowing from those fishery categories (i.e., contribution to GDP, exports, government revenue, employment, and nutrition).<sup>1</sup>

### Offshore fisheries production in the region in 2021

Using information available from each member, the Benefish Study 4 estimated the volume and value of fishery and aquaculture production in each Pacific Island country and territory (PICT) for the year 2021. The totals for all PICTs are shown in the two charts below, relative to total production from other sectors.<sup>2</sup> Offshore fisheries production in the region was 1,351,932 tonnes (t), worth US\$1,915,004,397.<sup>3</sup>



Regional total of volume of production (t)



Regional total of value of production (US\$)

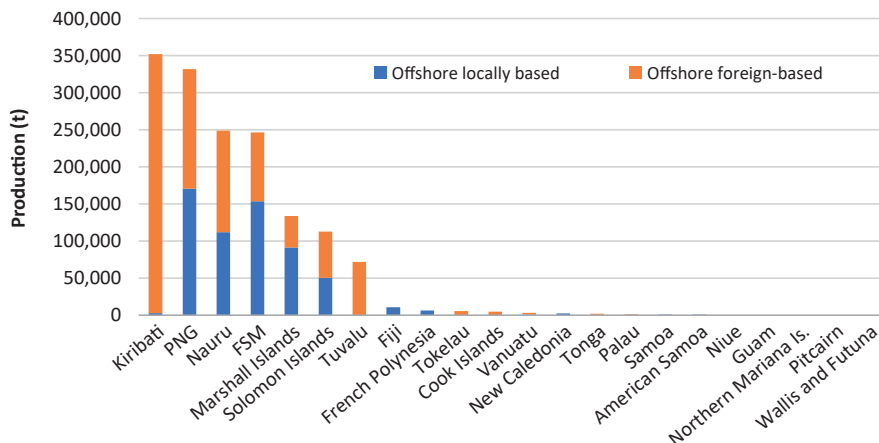
<sup>1</sup> The full Benefish Study 4 report is available at: <https://purl.org/spc/digilib/doc/ppizh>

<sup>2</sup> Aquaculture production is not shown in the volume production chart due to the use of mixed units (i.e., tonnes and pieces).

<sup>3</sup> In the paper prepared for the 2022 meeting of the Scientific Committee of the Western and Central Pacific Fisheries Commission titled *Overview of Tuna Fisheries in the Western and Central Pacific Ocean, Including Economic Conditions – 2021*, the volume and value of the offshore tuna fisheries of the WCPFC statistical area are given for 2021: 2,493,571 t and \$4.6 billion. This is much more than the present study's estimate due to the Williams and Ruaia (2022) estimate (a) covering a much larger geographic area, including the waters of some Asian countries and (b) using delivered values instead of the in-zone values used by the present study.

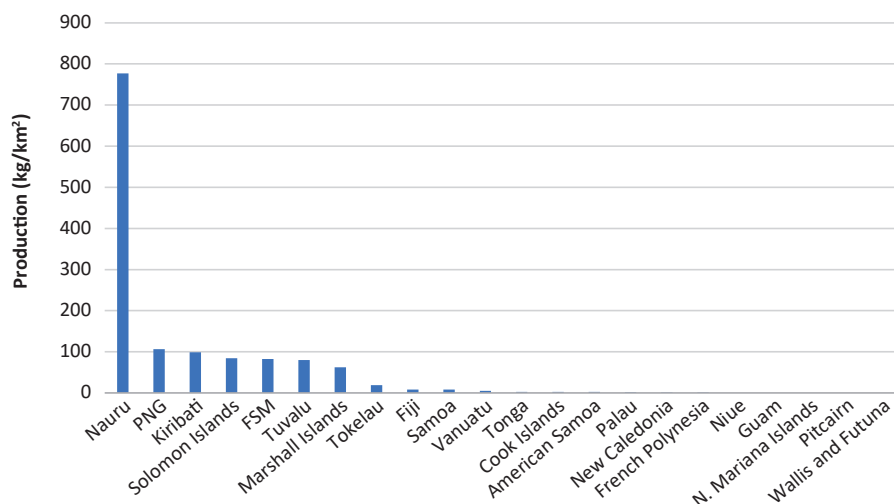


The offshore production in 2021 for each PICT is shown in the graph below, partitioned into that from locally based offshore vessels and from foreign-based offshore vessels.



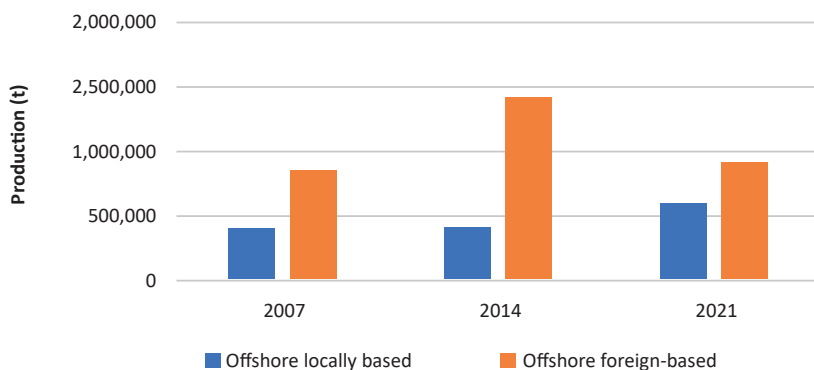
2021 offshore fishery production (t) of locally based and foreign-based fleets

Another way of looking at offshore fishing is the catch per square kilometre in each country's 200-mile zone. The combined 2021 production from locally and foreign-based offshore fishing (in kg) was divided by the area of each 200-mile zone, with the results shown in the figure below. The highest density of production is in countries which are Parties to the Nauru Agreement (PNA), with the exception of Palau. Nauru has by far the highest density of production, almost eight times that of the second highest. This is due to a small, very productive zone (320,000 km<sup>2</sup>) yielding a substantial offshore catch of 249,000 tonnes.



Offshore fishery production (kg) per square kilometre

The offshore fisheries production in tonnes is compared across the three Benefish studies (covering 2007, 2014 and 2021) and shown in the chart below.



PICTs offshore fishery production in 2007, 2014 and 2021

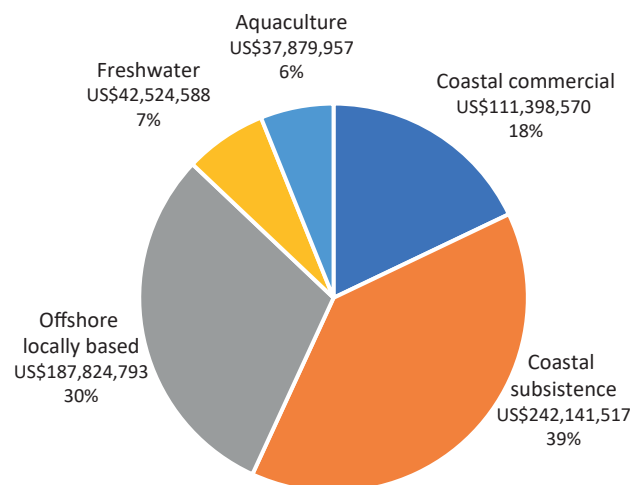
## Key messages

The key messages from the offshore production information from the Benefish Study 4 are:

- The situation for measuring offshore fisheries production in the region is vastly better than that for coastal fisheries. Overall, the offshore statistical systems are in relatively good condition at both national and regional levels – SPC’s Oceanic Fisheries Programme having played a major role in upgrading national capacity in this area.
- The total production by volume from offshore fisheries of the region is almost nine times that of coastal fisheries. By value, it is only about 4.4 times greater due to the high unit value of coastal fishery production and very high value of some coastal commodities (e.g., sea cucumber).
- 2021 was a COVID-19 year, and production from several offshore fisheries in the region was depressed. For most countries the impacts of COVID-19 were greatest in 2020, and by 2021 many (but not all) of those impacts were mitigated.
- Despite COVID-19 impacts, locally based offshore production was greater in 2021 than in previous Benefish evaluations. This is presumably due to increased efforts to domesticate offshore foreign-based fishing.
- The volume of production from offshore fishing in the Kiribati zone in 2021 (352,031 t) is greater than any other PICT in the region – despite 2021 not being an El Niño year, which historically has increased production in that zone.
- The vast majority of offshore fisheries production comes from PNA member countries and from areas within 10 degrees latitude of the equator.
- In about one third of the countries significantly involved in offshore fisheries, the fleet is all locally based; in one third it is a mixture of locally and foreign-based; and in one third it is all foreign-based.
- Almost half of the PICTs in the region have no offshore foreign-based fishing. The main reasons for this are because of the policies of the metropolitan country to which the territory is affiliated (4 territories), a desire to protect domestic fleets (2 countries, 2 territories), the zone being a large marine protected area (1 territory) and being located away from prime fishing areas (1 country).

The key messages related to the benefits from offshore fishing in the Benefish Study 4 are:

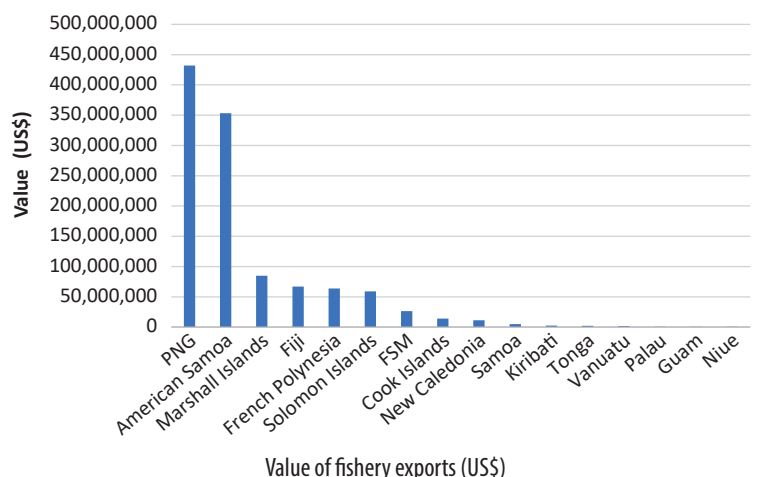
**Contribution of offshore fishing to GDP:** Because of the way that GDP calculations are made, offshore fishing, which is foreign-based, does not contribute to the GDP of a PICT.<sup>4</sup> The contribution of locally based offshore fishing to GDP is small compared to its relatively large volume of production due to (a) the higher unit value of coastal fisheries production, and (b) locally based offshore fishing having relatively high inputs from other economic sectors (e.g., machinery, fuel). The chart to the right shows that the offshore fishing contribution to GDP across the region is 30% of all fishing contribution to GDP, while coastal fishing (both coastal commercial and coastal subsistence) is responsible for 57%.



Fishing contribution to GDP across the Pacific Island region

**Contribution of offshore fisheries to exports:** The chart to the right shows the value of fishery exports in 2021:

- The PICTs with the largest values of fishery exports are PNG and American Samoa. Of the total of about US\$1.1 billion in fishery exports from the region in 2021, about 70% is from these two PICTs.
- The total fishery exports from the entire region increased in real value by about 20% over the 2014–2021 period, despite 2021 being a Covid year.
- In five of the countries/territories, fishery exports represent over 70% of the value of all exports.



<sup>4</sup> GDP is a measure of the value of the goods and services that an economy produces, whereas access fees are neither, and are therefore not a component of GDP.

### Contribution of offshore fisheries to government revenue:

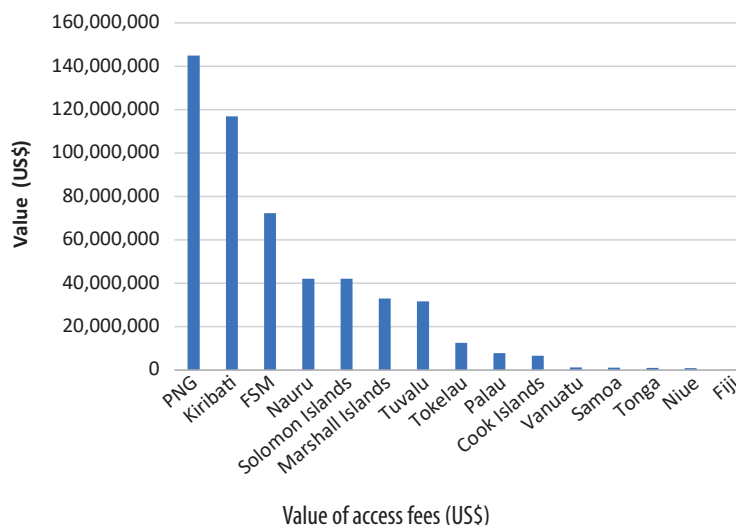
The value of fishery access fees in 2021 is given in the chart on the right.

Access fees for offshore fishing received by PICTs in 2021 are estimated to be US\$514,772,404, which is 26.8% the value of the total offshore catch of all PICTs in 2021 (US\$1,915,004,397).

### Contribution of offshore fisheries to employment:

Tuna canning and loining factories are labour intensive – and most offshore fisheries employment in the region is related to these operations, which are located in PNG, Solomon Islands, Marshall Islands, Fiji and American Samoa. The Forum Fisheries Agency (FFA) has done commendable work in collecting information on offshore fisheries employment in the region. Total employment related to offshore fisheries in FFA member countries for 2021 was estimated at 27,442, up 42% from 2015, due mainly to onshore processing.

**Contribution of offshore fisheries to nutrition:** Although the contribution of offshore fishing to the food supplies of the region is small compared to that from coastal fishing (i.e., most offshore fish are exported), that contribution is increasing. In 2015, Forum Leaders adopted the Regional Roadmap for Sustainable Pacific Fisheries<sup>5</sup> setting out shared goals and strategies for the management of the region’s tuna fisheries. The roadmap inter alia laid out a challenge, “The supply of tuna for domestic consumption in the region will increase by 40,000 tonnes per year by 2024.” It should be noted that a consistent methodology to track this progress has not yet been implemented.



## Recommended policy actions

This policy brief does not present recommended management-oriented policy actions for offshore fisheries that flow from the Benefish Study 4, as these do not fall within the mandate of SPC. The focus here is on policy actions needed to improve the data used for the measurement of benefits from offshore fisheries. The priority actions required in the various benefit areas are:

**GDP:** (a) National fisheries departments should be more involved in fisheries GDP issues, initially by working with national statistics agencies. In the longer term, consideration should be given to additional work in improving and standardising the methodology used for calculating the fishing contribution to GDP. (b) For GDP purposes, fish processing is outside of the formal fishing sector, but this is where much of the action in offshore fisheries-related benefits will occur in the future. This highlights the need to develop a conceptual framework for quantifying fish processing-related benefits for GDP purposes and combining that with the fishing contribution to GDP (i.e., the formulation of a “fishing plus fish processing sector”).

**Exports:** The treatment of transshipment of tuna as an export should receive additional attention at the regional level to ensure consistency across the region and compatibility with guidelines used by statistics agencies so that tuna export information is meaningful and comparable.

**Government revenue:** (a) Where there are large differences in the amount of access fees given by different government agencies within a single country, those differences should be reconciled, and (b) In terms of both good governance and giving due credit to the fisheries sector for any revenue generated, the annual reports of government fisheries departments should provide a reconciled list of access fees and other government income from fisheries (e.g. domestic fishing license fees).

**Employment:** It is clear that reliance on government statistics offices to know what fisheries-related employment information to collect and how to collect it simply does not work, especially for offshore fishing. Considerable technical knowledge of the fisheries sector is required to collect meaningful information. Fisheries departments should proactively seek involvement with statistics offices in the design of surveys that are intended to obtain useful comparative information on fisheries employment.

**Nutrition:** A priority need is to track the progress of the increasing amount of offshore fish in the regional food supply using a consistent methodology.

<sup>5</sup> Available at: <https://purl.org/spc/digilib/doc/xnc9f>