

Appendix 1: Executive Summaries of Past Benefish Studies

Gillett and Lightfoot (2001) Study

The 2001 Gillett and Lightfoot (2001) study focused on the year 1999. The main findings, conclusions and recommendations of the report are summarised below:

Official data on the contribution of fishing to GDP

According to current official data in Pacific Island countries, the percentage contribution of fishing to GDP in 1999 (or latest prior year available) ranges from 0.6% in Papua New Guinea (PNG) to 12.0% in Kiribati.

Re-estimation of the fishing contribution of fishing to GDP

Given the complexity of the issues to be addressed and the large variations in the accuracy of the official fishing estimates made in the Pacific Island countries, it was important for the study to re-estimate the fishing contribution to GDP using a consistent method across all countries. It was believed that, at the very least, these estimates would provide useful comparators for the compilers of national accounts. In addition, it was anticipated that the review of the different methods and approaches used in each country would provide useful insights into the effectiveness of alternative approaches to national accounting.

Comparison of official and re-estimates

The comparison between the official and the new estimates of fishing contribution to GDP is presented on Figure A1-1, below. The largest difference was found in Kiribati, Palau and Federated States of Micronesia (FSM),

where the new estimates nearly doubled or tripled the official figures. In contrast, this study lowered the estimate of fishing contribution to GDP in Marshall Islands, Samoa and, to a lesser extent, Cook Islands. On average, the new estimates indicated a higher contribution of fishing to GDPs than reported by national statistics (7.0% vs 5.4% across all countries).

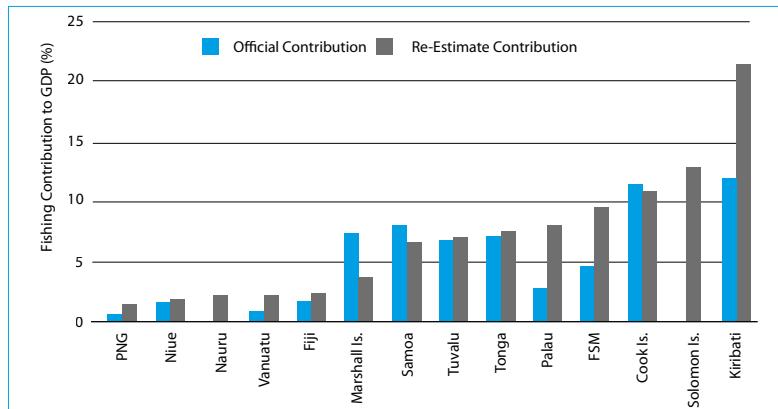


Figure A1-1: Comparison of Official and New Estimates of Fishing Contribution to the Gross Domestic Product of Pacific Island Countries

Major reasons for difference in estimates of fishing contribution

In some countries, notably FSM and PNG, the difference in estimates is primarily due to subsistence fishing not being included in the official figures. In other countries, in particular Palau, the differences are primarily due to the methods used. For most countries, it is a combination of differences in the estimate of production and the method used to calculate the GDP contribution. In Samoa, for example, subsistence production was valued at the full market value, rather than at “farm gate” prices. Cook Islands, Niue, Tonga, and Tuvalu all compile soundly based national accounts that include reasonable estimates of fishing contribution. Nauru and the Solomon Islands have weaknesses in compiling national accounts.

Common difficulties associated with calculating the contribution of fishing to GDP

The common difficulties found in estimating the contribution of fishing to GDP in many Pacific Island countries include:

- Fisheries technical input. There is a lack of coordination between fisheries agencies and statistical agencies in the calculation of fishing input.

- Treatment of subsistence fisheries. There is often a lack of data on subsistence fisheries and difficulties in isolating fishing from other subsistence activities.
- Fish processing. Because in the SNA scheme the processing of fish is outside the “fishing” sector, it is often not possible to isolate the contribution of this important fishing-related activity from other forms of food processing.
- Export data. Official export figures in the Pacific Island countries characteristically undervalue exported commodities, especially fisheries products.
- Economics of small-scale fisheries. Data on small-scale fisheries are often scarce, as is technical assistance for its analysis.
- Lack of “champions”. There is often a scarcity of individuals in Pacific Island countries who are vocal at stressing the importance of the fisheries sector, contributing to its undervaluation in national statistics.

Fishery production in specific Pacific Island countries

Figure A1-2 and Figure A1-3 show the estimated fisheries production and annual value in Pacific Island countries.

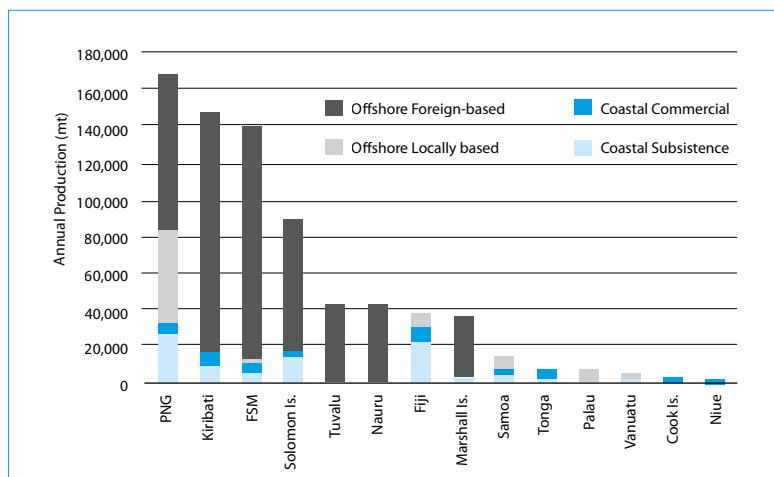


Figure A1-2: Estimated Annual Fisheries Production of Pacific Island Countries by Volume, late 1990s

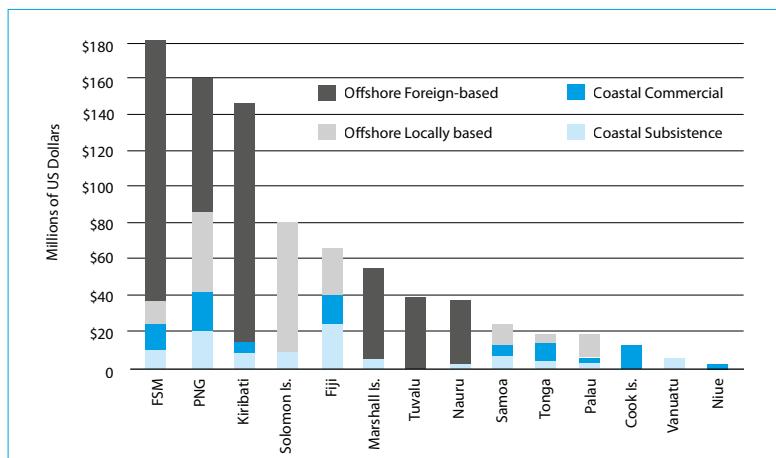


Figure A1-3: Estimated Annual Fisheries Production of Pacific Island Countries by Value, late 1990s

Fishery production patterns

Key patterns in the fisheries production data include :

- The weighted average price per kg in the region is US\$1.04 for subsistence fisheries, US\$2.41 for coastal commercial fisheries, US\$1.28 for locally based offshore fisheries, and US\$1.04 for foreign-based offshore fisheries.
- The ranking of countries by total fisheries production is strongly influenced by the level of tuna catches.
- There is a general pattern of total national catches decreasing going from west to east across the region, and from equatorial to higher latitudes.
- The higher value of longline tuna relative to purse seine tuna is apparent from the ranking of FSM where a relatively large proportion of the catch is taken by longline vessels. FSM ranks third by volume and first by value.
- Fiji appears to have the largest non-tuna production, in terms of both volume and value.
- The production from Nauru and Tuvalu is almost entirely related to tuna fishing

Fisheries-related employment

There are also certain observations that can be made about employment in the fisheries sector:

- The importance of fisheries in the subsistence economy seems to be strongly related to the type of island. In decreasing importance, atolls, islands, and large high islands are associated with very different levels of significance. This pattern is somewhat altered by PNG with its important freshwater subsistence fisheries.
- The importance of formal employment in fisheries seems to be related more to business conditions than to island type. Most formal employment in fisheries appears to be tuna-related.
- The importance of women employment in fisheries is generally understated due to (i) the practice of classifying activity according to a person's "main unpaid activity", which masks the importance of secondary activities—e.g. for many women, childcare is often the "main unpaid activity" so any fishing activity, even if it is a substantial amount of activity, is not duly reported; and (ii) placing commercial fish processing (where many women are employed) in the manufacturing sector.

Where commercial fish processing occurs (canning, loining) and when this is attributed to the fisheries sector, the increase in fisheries-related employment is remarkable.

Fishery exports

The most notable feature of fishery trade data in the Pacific Islands is the underestimation of the value of fishery exports. This underestimation appears large and is probably worse than in other trade sectors. In most cases, when the official export values are compared to other sources of similar information, the differences are remarkable. Figure 4 provides estimates of fisheries exports for end-1990.

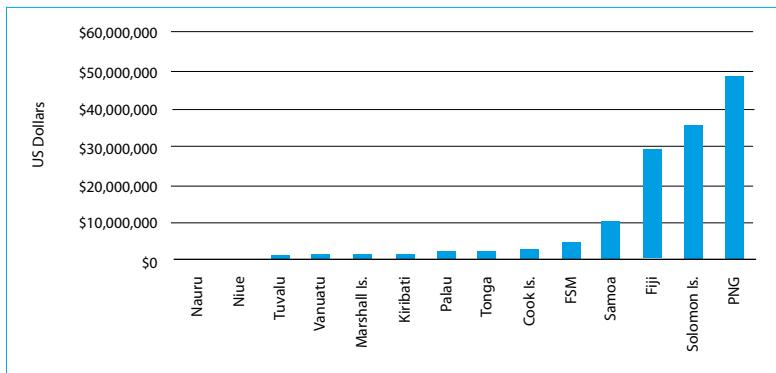


Figure A1-4: Estimated Values of Fisheries Exports of Pacific Island Countries, late 1990s

Features of the fishery import and export data

Some of the key features of fisheries trade in the region include:

- In general terms, the region exports tuna and other high-value species such as trochus and beche-de-mer, while importing canned and inexpensive frozen fish.
- Tuna products dominate the fishery exports of the region. For the five main exporting countries, tuna (fresh, frozen, and processed) overshadows all other fishery exports.
- Canned mackerel dominates the fishery imports.
- The relatively new aquarium fish industry is responsible for a significant portion of fishery exports. Aquarium fish export from Kiribati and the Marshall Islands now account for 78% and 95% of all fishery exports from those countries, respectively.
- There is considerable inter-annual variation in fishery exports.

The amount of fishery products exported as passenger baggage is quite large, especially in Marshall Islands, FSM, Palau, and Samoa.

Access fees

All Pacific Island countries received fees for foreign fishing activity in their waters. In some countries, the access fees form a very large portion of government revenue. In FSM, for example, the 1999 access fees represented an estimated 39% of non-tax revenue and 22% of total domestic revenue. In Kiribati, 34% of government income in 1999 was derived from fishing

license fees. Figure A1-5 summarises the value of access fees received by the different Pacific Island countries in 1999.

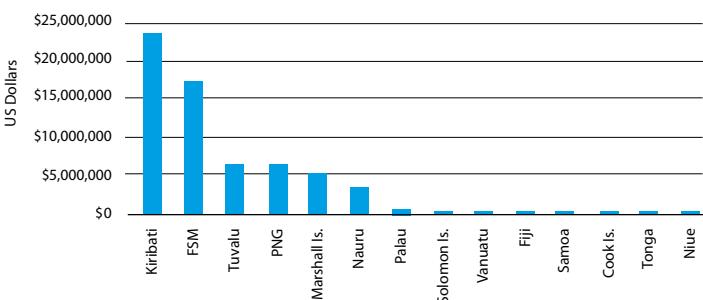


Figure A1-5: Estimated Access Fees from Foreign Fishing Vessels, 1999

Fish consumption

Key features of fishery product consumption in the region include:

- In general, countries made up of predominantly small islands have high fish consumption rates, while large island countries have low consumption rates. The exceptions to this are Tonga where the data suggest surprisingly low fish consumption rates, and Palau where fish consumption is remarkably high.
- Most of the Pacific Island countries exceed by a large margin the world average per capita fishery product consumption rate of 13.0 kg.
- Most estimates for Kiribati indicate that it has the highest rate of fish consumption in the world.

The estimates of per capita consumption are summarised in Figure A1-6.

Ranges in per capita fish consumption

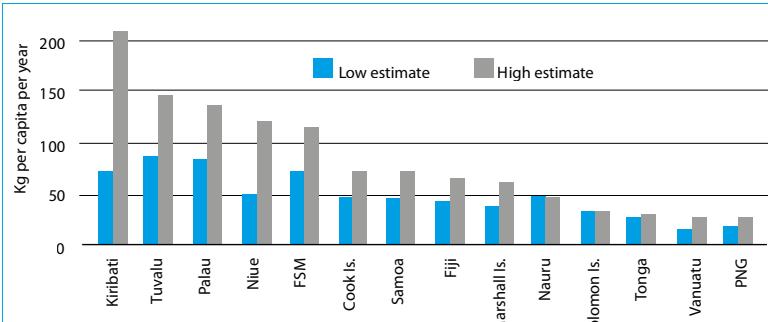


Figure A1-6: Ranges in Annual Per Capita Fisheries Consumption for Pacific Island Countries in the 1990s

Major conclusions

A major conclusion of the present study is that fisheries contribution to GDP is underestimated in most Pacific Island countries.

In countries where estimates of fishing contribution to GDP are markedly different from estimates made in this study, the process used in preparing the national accounts tends to rely on dated surveys, weak indicators, and/or poorly understood methods. It is recommended that, in these countries, the compilers of national accounts carefully examine and evaluate the data, the assumptions, and the methods used.

The accuracy of the estimate of fishing contribution to GDP could be improved with a closer liaison between the fisheries and the statistics agencies. The fisheries agencies are in a position to provide information on new developments, technical insight, and recent data, all of which could improve GDP estimates. This cooperation, however, rarely occurs in Pacific Island countries. Because the fisheries agencies have a vested interest in assuring that the importance of their sector is not underestimated, they should take the lead in improving the liaison with the compilers of national accounts.

One of the factors that often result in an underestimation of fisheries contribution to national economies is the limited information available on the production of small-scale fisheries. Throughout most of the region, the statistics on small-scale fisheries are incomplete, inaccurate and, in some cases, absent. Given this reality, it is recommended that maximum use be made of survey opportunities outside the fisheries sector. At little cost, production information on small-scale fisheries could be collected through such tools as the national census, nutrition surveys, agriculture censuses, household income and expenditure surveys (HIES), and poverty studies.

In many countries, the underestimation of the value of fisheries exports in official customs statistics is a major source of error in the calculation of fisheries contribution to national economies. It appears that the export information could be worse in fisheries than in most other sectors. In countries where this problem is especially acute, it is recommended that export valuation be based on a broader spectrum of information than what is provided by customs.

Additional information on the economics of small-scale fisheries would contribute to improving measurement of the fisheries contribution to GDP. Studies to gather the required data need not be complex but should cover the major small-scale commercial and subsistence fisheries.

Where the compilers of national accounts have access to comprehensive and detailed information on the income/expenditure of the participants in one or more sectors of the fishing industry, the income approach is the most appropriate method. In the Pacific, it is, however, rare for this data to be available. In these circumstances, the production approach is likely to produce the most accurate results.

Regional organisations could play an important role in improving the measurement of fisheries in the economies of their member countries.

Gillett (2009) Study

The Gillett (2009) study focused on the year 2007. The main findings, conclusions and recommendations of the report are summarised below:

The study

In 2008 discussions between ADB, SPC, FFA and the Australian Agency for International Development resulted in an agreement for an update and expansion of the Gillett and Lightfoot (2001) study. It was agreed that the scope would be expanded to include additional topics, including the production from aquaculture and from freshwater fisheries, and some important factors that are likely to affect the flow of benefits from fisheries in the future. It was decided ,to include the non-independent Pacific Island territories,

The content of this book

This report contains a fisheries-oriented discussion of macroeconomics, country information on specific topics (fisheries production, contribution to GDP, etc.), a discussion important topics across all countries (e.g. the regional significance of access and exports of fishery products), some important features of the benefits from fisheries that have emerged from this study, and finally, and some major factors that influence the flow of benefits from fisheries.

GDP, fishing, and fisheries

Background information on estimating gross domestic product is provided, along with guidelines on estimating the fishing contribution to GDP.

An important point is that, for national accounting purposes, the sector is “fishing”, rather than the more inclusive “fisheries”. Post-harvest activities,

including fish processing, are not included in the fishing sector when estimating GDP.

Country data on fisheries benefits

Information on benefits from fisheries is provided for each of the 22 Pacific Island countries and territories. These country and territory chapters contain the recent, readily available data in the following areas:

- The recent annual fishery harvests: values and volumes covering the six fishery production categories – (1) coastal commercial fishing, (2) coastal subsistence fishing, (3) locally based offshore fishing, (4) foreign-based offshore fishing, (5) freshwater fishing, and (6) aquaculture.
- Fishing contribution to GDP: the current fishing contribution, how it was calculated, and a locally production approach re-calculation based on annual harvest levels obtained during the study.
- Fishery exports: amounts, types, and the ratio to all exports
- Government revenue from the fisheries sector: access fees and other revenue
- Fisheries-related employment
- Fisheries contribution to nutrition.

Regional fisheries and aquaculture production information

The total volume of fisheries production in the region in 2007 is estimated to be 1,327,361 mt, plus an aquaculture production of 2,984 mt and 305,336 pieces. The total value of fisheries and aquaculture production in 2007 is estimated to be about US\$0.

Offshore foreign-based fishing is responsible for about half of the value of fisheries in the region, offshore locally based about a quarter, and for the remaining quarter, about equal shares of coastal commercial, coastal subsistence, and aquaculture.

With respect to changes in fishery production between 1999 and 2007, there was a remarkable increase by PNG and moderate increase by most other countries. By category of fishing, there were substantial production increases for the offshore fisheries, whereas the coastal fishery production levels showed no over-all change.

The estimated value in each country of six fishing categories: coastal commercial fishing, coastal subsistence fishing, locally based offshore fishing, foreign-based offshore fishing, freshwater fishing, and (6) aquaculture:

Value of national fisheries production in 2007

Table A1-7: Value of Fisheries and Aquaculture Production (2007)

Country	Total Value (US\$)	Country	Total Value (US\$)
PNG	812,067,902	Vanuatu	34,397,887
Kiribati	244,185,828	Palau	24,139,152
FSM	224,483,967	Tonga	20,571,101
Solomon Islands	202,003,233	American Samoa	14,793,083
French Polynesia	188,656,724	Cook Islands	10,323,529
Marshall Islands	108,125,102	Wallis & Futuna	7,540,230
Fiji	103,420,625	Niue	2,520,588
Nauru	81,518,168	Northern Marianas	1,786,700
New Caledonia	49,663,126	Guam	1,370,000
Tuvalu	43,773,582	Tokelau	1,108,812
Samoa	42,939,982	Pitcairn Islands	74,265

Relative value of regional fisheries production by sub-sector

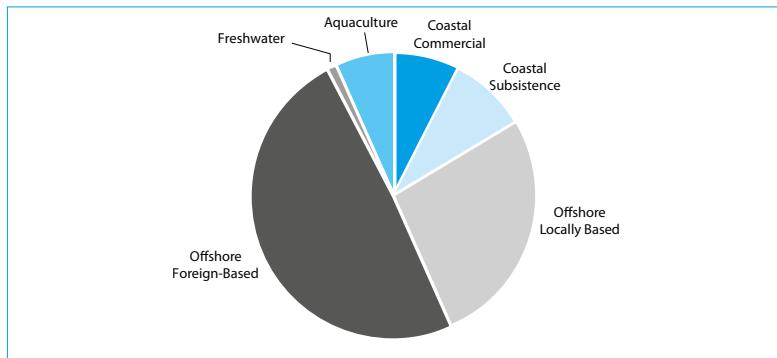


Figure A1-7: Relative Value of Fisheries Production

Aquaculture production

If aquaculture production from three atypical countries in the region is eliminated from consideration, significant aquaculture production comes from a limited range of activities: large-scale private sector pearl culture and shrimp

culture where there is a significant tourist trade. There is significant tilapia/milkfish and giant clam culture, but whether net benefits are produced depends on the degree of subsidization, a situation that is often not clear.

Measuring the production of small-scale fisheries

In most countries there is an extremely weak factual basis for the estimates of coastal commercial and coastal subsistence catches. There seem to be three types of situations, however, where good estimates are available:

- Countries that have a dedicated on-going national fisheries statistical system supported for many years by an overseas agency.
- Countries that have carried out an intensive, well-planned survey of fisheries to obtain an accurate snapshot.
- Countries that use a household income and expenditure survey (HIES) for small-scale fisheries production purposes.

GDP estimates

For each country the official fishery contributions to GDP are given, along with the relative importance in the economy. In addition, a re-estimation is provided for the fishing contribution to GDP in each country. It is not intended that the re-estimate replace the official methodology, but rather that the results obtained serve as a comparator to gain additional information about the appropriateness and accuracy of the official methodology, and to indicate any need for its modification.

In most locations the re-estimate is larger than the official figure. In two locations the re-estimate was substantially smaller. On the basis of a good knowledge of the fisheries sector, the results in those two countries are likely to be erroneous.

Fishing Contribution to GDP: 1999 vs Present Study

The changes in fishing contributions to GDP were greatest in the Marshall Islands (with the establishment of a locally based offshore fleet) and PNG (with increased activity of the locally based offshore fleet). The fishing contributions to GDP decreased the most in the Cook Islands (with the decrease in production from pearl farming) and Nauru (with the termination of locally based offshore fishing and a decrease in coastal commercial fishing). At least some of the observed changes were due to improved estimates of various categories of fishing.

Improving the official GDP estimate

General improvements to estimating GDP are far beyond the scope of the present project. However, there are some simple and obvious ways for improving the accuracy of estimating the fishing contribution to GDP. The most important are that statistics staff should: (a) obtain technical fisheries expertise when devising methodology, collecting data, making the estimate, and reviewing the results; and (b) compare the official estimate to the re-estimate of the fishing contribution given in the country and territory chapters of this book and evaluate the differences and any need for modification to the methodology.

Fishery exports

Fishery exports are very important to the countries of the region. In about half of the countries fishery exports represent over half of all exports. Where they represent less than half the value of national exports, they are mostly quite large in nominal terms: New Caledonia (US\$157 million), PNG (US\$101 million), Fiji (US\$63 million), and Marshall Islands (US\$37 million). The three entities that have the largest value of exports are American Samoa, New Caledonia, and French Polynesia. Of the total of about US\$996 million in fishery exports in the region in 2007, about three-quarters are from these three territories.

In terms of export commodities, by far the most important in value are the tuna products. The tuna exports from American Samoa alone approach the value of all the fishery exports in all other Pacific Island countries combined.

In nominal terms, the value of fisheries exports of the region almost doubled in the period 1999 – 2007. Fishery exports have increased relative to total exports in most countries, but have fallen significantly in the Solomon Islands and Samoa.

Foreign fishing access fees

Access fees received by Pacific Island countries are provided and compared to the total government revenue, population, and value of the catch. Total access fees received in 2007 were US\$78.5 million, an increase of about 25% since 1999.

Fisheries-related employment

The national fisheries-related employment information in the country and territory chapters is very much a mixed jumble of facts. Nevertheless, an attempt is made to extract information that best characterises the national fisheries-related employment situation. For each country of the region the best available information is provided on the relative importance of (a) employment in commercial fisheries, and (b) and involvement in subsistence fishing.

Two important features of the data are: (1) The importance of participation in subsistence fisheries seems to have a strong relationship to the type of island. The level of importance is highest in atolls, followed by small islands, and least in large high islands; and (b) The importance of fisheries in formal employment seems to be related more to business conditions than to island type. These conditions include, among others, the proximity to processing facilities and airline connections to fresh fish markets.

Participation of women in fisheries

Due to efforts over the past 15 years at the national and regional levels, much more is now known about women's fisheries activities in the Pacific Islands. Presently, the main difficulties that affect the accurate portrayal of the importance of women in fisheries-related employment appears to be: (1) the concept of using "main unpaid activity" in surveys for defining the subsistence fisheries sector, as it downplays the importance of secondary activities (e.g., even for women who do considerable fishing, childcare is often the main unpaid activity); and (2) placing commercial fish processing in some countries (where many women are employed) in the manufacturing sector.

Fish consumption

The readily available information on the consumption of fish and other fishery resources is compiled and compared. Some of the past comparisons between fish consumption surveys and between countries may be inappropriate due to methodological differences. The main difficulty is that most studies on fish consumption in the region determine one of two kinds of consumption: either the amount of food actually ingested or the whole weight of the fish that produces the food. Comparing fish consumption surveys should be avoided unless the methods used by the studies are known and they are either the same or corrected so that equal features are being compared.

Fishery benefits by zone

The fishery categories used in this report (coastal commercial, locally based offshore, etc.) could be re-arranged slightly to represent ecological zones. In partitioning benefits by those zones some interesting patterns emerge. A large part of the benefits from employment and nutrition - things that directly affect Pacific Islanders - come from the coastal zone. The less tangible and more abstract benefits (contribution to GDP, exports, and government revenue) tend to come disproportionately from the offshore area.

The household income and expenditure survey

In recent years most Pacific Island countries have had a household income and expenditure survey (HIES). All of the independent Pacific Island countries and several of the territories are planning for a HIES in the next few years. A HIES may be a good opportunity to improve the measurement of small-scale fisheries, but on the other hand, some significant problems are apparent in the use of HIES for fishery purposes. A feature common in many countries of the present study was to have the coastal fisheries production estimated by a HIES to be relatively low. The way forward appears to be for fisheries specialists to cooperate with HIES specialists on an initiative for improving the applicability of HIES to the fisheries sector.

A satellite account for fisheries

By international convention, the “fishing” sector for GDP purposes does not include post-harvest activities, which are quite important in many Pacific Island countries – and are likely to become more important in the future. To rectify this problem, a “satellite account” can be constructed. Groups and sub-groups of industries can be identified and aggregated – to form a satellite account that, in the case of fisheries would include post-harvest activities. As an example, a simple first order satellite account was constructed for Fiji’s fisheries sector. It showed that the F\$104,375,000 estimated for the broad fisheries sector in the satellite account is about 34% greater than the \$77.8 million estimated for the narrow fishing sector. If Fiji’s total GDP in 2003 was F\$4,390,551,000, then the contribution to GDP increases from 1.8% for the fishing sector to 2.3% for the fisheries sector.

Climate change

A preliminary assessment of the effects of climate change on fisheries and aquaculture in the Pacific Islands region is given. It outlines how the climate of the Pacific is projected to change, how climate change has affected fisheries elsewhere in the world, and how it is expected to affect fisheries and aquaculture in the Pacific

Fuel costs

The results of a complementary study on energy costs and fishing in the region are provided. This is an assessment of the direct impact of fuel price fluctuations on the financial performance of ongoing fishing operations of domestic fishing fleets in Pacific Island Countries

Changes 1999 to 2007

An earlier study covered the independent countries of the region and focused on the year 1999. It produced some results that can be compared to the present study:

- During the period 1999 – 2007 the relative contributions to GDP (i.e. ratio of fishing contribution to total GDP) increased in eleven countries and decreased in three.
- In nominal terms, fisheries exports of the region almost doubled in the period 1999 – 2007. Fishery exports have increased relative to total exports in most countries, but fell significantly in the Solomon Islands and Samoa.
- Foreign fishing access fees increased in nominal terms for all but three countries, with an over-all regional increase of almost one-quarter (US\$18.7 million) in the seven year period between the studies.
- The first two points indicate a larger role of fisheries in the economies of most Pacific Island countries. As to the third point, real gains were moderated by granting access fee concessions to encourage local basing (i.e. other types of benefits through domestic industry development).

The main recommendations of the Study

Coastal Resources: Reaching the Limits

For the region as a whole, offshore fisheries are expanding substantially while there is no over-all production increase from coastal fisheries. Limited fishery production expansion in the coastal zone equates to a non-increasing amount of food and employment being spread among a growing number of people. A major implication is that the government fisheries agencies of the region – many of which are oriented to developing coastal fishery potential may require a fundamental re-orientation to include a strong emphasis on safeguarding the existing levels of food and jobs from the coastal zone.

Subsidies: Hidden Costs of Benefits

Discussions of subsidies are not common in the fisheries and aquaculture literature of the region. Exploration of the subject could result in any subsidies being more effectively applied, or alternatively, it could point to more effective uses of public funds.

Estimating the Production from Coastal Fisheries: The Big Unknown

Estimating the production from coastal fisheries in about half of the Pacific Island countries is largely based on “educated” guesswork. In very few Pacific Island countries are the levels of coastal catches well known. Protection of village food fish supplies is arguably the most important objective of the management of coastal fisheries in the Pacific Islands, but to know if such management efforts are effective overall, some idea of the gross coastal fisheries production and its change is required. In terms of government priorities, it seems that a lack of production information tends to lead to lack of attention. Because these are the fisheries that have the greatest direct effect on the lives of Pacific Islanders determining production levels of coastal fisheries deserves more attention.

Aquaculture: Improving the track record

In this report the observations and comments on the past performance of the aquaculture sub-sector should not be taken to indicate that aquaculture has no potential in the region. On the contrary, given worldwide trends, it is likely that the contribution of aquaculture to the economies will increase. During the study a close examination of the net benefits of aquaculture in each Pacific Island country resulted in considerable reflection on the subject of success and failures in the development of aquaculture in the region. Two suggestions for improvement (applicable to both the national and regional levels) can be offered:

- The development models being pursued should be constantly evaluated for effectiveness, especially in cases where the model has resulted in limited success over many years.
- There should be periodic objective analysis of net benefits and potential of aquaculture development initiatives.

Access Fees: Getting to Know the Unknown

In the 2001 study of fisheries benefits in the region there was considerable secrecy surrounding levels of access fee payments, even at the aggregate national level, and much of the data on access fee payments in that study was estimated with considerable difficulty. For the present study, information on access fee receipts was available in the public domain for most countries. Where this was not the situation, fisheries and/or finance officials cooperated to furnish the information. This change appears to be in accordance with the “Vava’u Declaration on Pacific Fisheries Resources”, issued at the Thirty-Eighth Pacific Islands Forum held in October 2007, which stresses the importance of transparency in fisheries licensing arrangements.

Economic Analysis: Assuring Objectivity

In terms of economic analysis of benefits from the fisheries sector, observations during the field work lead to two general suggestions for improvement:

- In the analysis of benefits from specific fisheries sub-sectors, efforts should be taken to assure that the analytical work is completely independent of individuals involved in promoting that sub-sector.
- Schemes that subsidise various aspects of fisheries should be regularly analysed – by individuals external to the subsidy programme – to determine whether the objectives of the subsidisation are being achieved, whether there is a favourable cost-benefit ratio of the subsidy, and whether alternative mechanisms could more appropriate or effective than the subsidy.

Promoting the Fisheries Sector: Where Are the Champions?

Measuring the fisheries contribution to the economies of Pacific Island countries could be improved markedly with a closer liaison between the fisheries and the statistics agencies. The fisheries agencies are in a position to provide information on new developments, technical insights, and recent data, all of which could improve the measurement of fisheries benefits. This cooperation, however, rarely occurs in the Pacific Island countries.