

CHAPTER 5

Priority Sectors for Regional Action

Introduction

This chapter summarizes the findings of a series of independent studies assessing potential benefits and costs of implementing a variety of regional initiatives.¹ The initiatives were chosen for study because of their perceived potential to yield significant net benefits and enhance economic welfare in the region. The chosen initiatives, however, do not comprise a definitive or exhaustive list of possible initiatives.

Most of the studies are not formal cost-benefit analyses, due to data, time, resource, and other practical constraints. They do, however, represent systematic efforts to identify and assess qualitatively and, where possible, quantitatively, the estimated benefits and costs likely to arise from each of the regional activities studied. Should any of these initiatives be approved for implementation, additional work would be necessary to better define and quantify these preliminary assessments.

The following section briefly outlines the methodology underpinning the separate studies. Thereafter, each of the individual initiatives are presented, with a summary of the critical findings and conclusions from its supporting study. The initiatives are grouped under the pillar of the Pacific Plan to which it would contribute improvement, i.e.,:

- good governance,
- economic growth,
- sustainable development, and
- security.

The penultimate section draws together the main lessons and conclusions from all of the studies of potential regional activities. Finally, the indicative costs and benefits of the proposed initiatives are summarized in tabular form at the end of this chapter.

Methodology

Few of the studies of initiatives summarized below approached the level of a comprehensive cost-benefit analysis. Such analysis would entail systematic identification and valuation of both costs and benefits, and calculation of the net present value (NPV) of the whole stream of estimated benefits and costs over the long term, if not the life of the intervention. Such rigorous methodology generally was not possible due to inadequate information and many uncertainties.

The various studies embraced in varying degree some of the following sequence of basic steps involved in formal cost-benefit analysis.²

1. **Decide whose benefits and costs count.** This is the first step in evaluating the costs and benefits of an intervention.
2. **Define target activity.** Clarity is needed here on its prospective functions and outputs, the nature of its likely impacts, and who is likely to be affected.
3. **Identify the counterfactual scenario.** Identification of the likely situation in the absence of the target intervention, which is usually known as the counterfactual scenario, and is most commonly the status quo.
4. **List and explain impacts (qualitative assessment).** Description of the nature of impacts, and, where possible, explain systematically why and how they are expected to occur—including any interrelationships between impacts. This amounts to a qualitative cost-benefit analysis.
5. **Select measurement indicators of impacts.** Attempt to quantify as many as possible of the key impacts.
6. **Monetize all identified impacts.** This is the most challenging and difficult step in practice, because of its demanding and often unattainable information requirements. Many studies monetized a number of obvious costs, but few attempted to value the expected benefits from the regional interventions studied, in terms of “willingness to pay.” Expected impacts in the studies are mostly addressed as financial costs and cost savings, and revenue gained or forgone.
7. **Discount all costs and benefits.** Where values for relevant opportunity costs and benefits can be estimated and allocated to each year over the appropriated time horizon, these should be discounted to obtain an estimate of the NPV of the target intervention. This is also done for the counterfactual scenario. The difference between these would be a measure of the net contribution of the intervention.

8. **Sensitivity analysis.** The choice of the discount rate is sometimes problematic. However, potential concerns can be managed by using alternative discount rates to calculate NPVs and assess the sensitivity of the resulting NPVs and conclusions derived from them.

Appendix 11 provides a more detailed discussion of the conceptual basis for measuring costs and benefits.

Governance

Scope for Regional Institutions to Foster Good Governance in FICs

Chapter 2 highlighted the very high opportunity cost of weak governance in selected FICs. Calculations by Duncan (2005) of the projected opportunity costs of forgone gross domestic product (GDP) over the next 10 years also illustrate the gross potential benefits FICs could achieve by acting to strengthen their governance arrangements, and so avoid or mitigate such costs. These potential benefits over 10 years from 2004 are in the order of US\$10 billion for Papua New Guinea (PNG), US\$2.4 billion for the Fiji Islands, and US\$250–320 million for Solomon Islands.

While there is no panacea for achieving good governance, there are potential regional institutional initiatives that could help strengthen public sector governance by providing specialist expertise not available locally. Objective, impartial advice or management of governance challenges might be provided by such initiatives. Chapter 2 demonstrated that, among other factors, capacity weaknesses compromised the effectiveness of governance institutions in the Pacific.

Within the broad range of possible good governance initiatives, we recommend an initial focus on the priority areas of strengthening economic management and accountability of FIC governments. Four interventions are examined:

- a regional economic and statistical technical assistance facility,
- a regional customs agency,
- a regional panel of auditors, and
- a regional ombudsman.

Regional Economic and Statistical Technical Assistance Facility³

Overview

The main areas of economic and statistical technical assistance envisaged for supply by a restructured regional facility are

- **Macroeconomics and tax policy and administration**, including public financial management (i.e., budgeting, accounting, and financial management systems), taxation, and macroeconomic policy analysis;
- **Financial sector supervision**, including supervision and regulation of banking and other financial institutions, insurance (e.g., provident funds and pensions), and action to prevent money laundering;
- **Microeconomics**, including, at minimum, trade, investment, and competition policy; management of state-owned enterprises and natural resources; environmental policy; and education and labor market policy; and
- **Statistics**, including assistance in the collection and compilation of financial statistics, national accounts, balance-of-payments information, and labor market statistics. Additionally, assistance would be provided in constructing price indexes, developing survey questionnaires—e.g., for household expenditure, employment, investment, and population census—and in database construction and management.

Envisaged Role of the New TA Facility

It is important to recognize that assistance in many of the above areas is currently being provided by existing regional agencies, such as

- Pacific Financial Technical Assistance Centre (PFTAC) in Suva, Fiji Islands;⁴
- Economic services in the Pacific Islands Forum Secretariat (PIFS) in Suva,
- Economic and statistical services provided via the Secretariat of the Pacific Community in Noumea, New Caledonia, and Suva;
- Forum Fisheries Agency (FFA) in Honiara, Solomon Islands; and
- South Pacific Regional Environmental Programme in Apia, Samoa.

A new facility would need to draw on, enhance, in some cases merge, and in total, upscale this existing regional assistance. In addition, donors such as the Australian Agency for International Development (AusAID),

New Zealand Agency for International Development (NZAID), and Japan provide substantial related technical assistance on a bilateral basis. International agencies also provide related technical assistance, such as ADB, the IMF (mainly during their Article IV consultations), and the World Bank group. Finally, the OECD Secretariat devotes considerable resources to the compilation and publication of statistical databases. A regional TA facility would need to be actively supported by these partners, and provide TA that is coordinated with and complementary to donor and international programs.

Options for Restructuring Regional Economics and Statistical TA Services

1. Merge most existing economic and statistical TA resources into PIFS.

The merged facility could be located in the Pacific Islands Forum Secretariat in Suva, which would also consolidate existing PIFS resources devoted to the same subject areas. Negotiations with the IMF and other donors would be required to ensure a smooth handover of capacity from PFTAC to PIFS, and retain significant IMF involvement. The merged facility could be overseen by a deputy secretary-general, with directors heading the separate divisions overseeing the four main classes of services identified above. Divisional staff could comprise one adviser, three project officers, and four technical/support staff. Local offices would be established in several other FICs to enable provision of more direct assistance. Each such local office would be headed by a separate director, and would have a representative from each of the headquarters divisions.⁵

It would be important to assess whether the statistics functions of the merged facility might better be located in the South Pacific Community (SPC) Secretariat at Noumea, in view of the significant statistical services resources already in place there.

2. Merge most existing economic and statistical TA resources into PFTAC. As in the first option, it would be desirable to establish local offices in several FICs to provide the needed breadth and intensity of interaction with national departments. If the enhanced PFTAC were to remain outside the oversight of the Forum bodies, strengthening of existing oversight mechanisms, such as a board comprised of FIC reserve bank governors, would be essential to ensure FIC ownership and commitment to the expanded facility.

Qualitative Assessment of Case for Merging

Economic and Statistical TA

The primary case for merging the region's economic and statistical TA is the recognition that, *prima facie*, existing institutional arrangements that are providing such assistance seem to have had little observable impact on FIC performance to date. This is despite sizable amounts of such assistance over the last decade or so.

The current lack of impact reflects, in part, two shortcomings of the PFTAC facility. One is that PFTAC is severely understaffed relative to FIC needs. The second is that PFTAC is not sufficiently “owned” by the region. Pooling existing regional economics and statistics expertise into a single facility, gearing up the operations, and using more local staff could enhance the effectiveness of TA resources by addressing both of these issues. It could harness economies of scale and scope in the supply of TA services. A higher concentration of technical expertise, for example, could lead to more robust advice by stimulating competition of ideas. It could also lead to more local “ownership” of the TA outputs, thereby improving the probability of advice being accepted and implemented.

A merged facility could contribute significantly to FIC economic and social well-being if it succeeds in improving TA quality and accessibility to FICs, thereby increasing the likelihood that advice culminates in effective action. In doing so, it would contribute to FICs achieving improved governance in public sector activities, and improve the regulatory and policy environment for the private sector. The opportunity costs of the merger would likely be miniscule compared with the benefits from strengthening governance (and reducing the very high costs of poor governance).

To assess whether a merged regional facility is likely to be the best way to achieve this contribution will require more comprehensive evaluation. The underlying problems that prompted consideration of restructuring regional economic and statistical TA should be thoroughly evaluated, as should other possible options for resolving them. Existing providers of such TA services in the region will need to be consulted further.

Quantitative Assessment of Case for Creating New Regional TA Facility

The opportunity costs of creating a merged regional TA facility were not assessed comprehensively in the preliminary study. A full quantitative assessment will require, for example, identification of any cost saving for

existing agencies, relocation and transfer costs, one-time establishment costs, as well as recurrent operating costs.

The total annual cost of a regional facility, if activities merged into PIFS, are estimated at around F\$8 million. Salaries would account for about F\$6 million of the total if it is assumed the facility had the following personnel: deputy secretary-general (1), directors (4 in headquarters, 3 in subregional offices), advisors (4), project officers (12 in headquarters, and 12 in subregional offices), and technical/support staff (22). Yearly travel costs and in-country training costs would each account for about F\$500,000. Administrative support costs would amount to about F\$1 million per year.

Regional Facility to Assist Customs Officials in Collecting Revenue

Overview

A possible means of both improving customs revenue collection and reducing costs of poor governance in FICs would be to develop an independent regional customs facility. Such a facility would specialize in providing customs-related services, such as specialist training for national agencies, information sharing, and on-the-spot surveillance checks of customs import documentation in FICs. Strictly speaking, this would be an intergovernmental facility, complementing the work of national customs agencies and providing services on behalf of all FICs. It would be answerable to a high-level governance body comprising representatives of each FIC. To be effective, the regional facility would require operational independence from executive branches of FIC governments through appropriate governance, institutional arrangements, and resourcing—in much the same way as central banks ensure their operational independence.

Case for Creating Regional Customs Capacity

A preliminary study of customs collection in a sample of FICs was conducted by Professor Ron Duncan to assess whether there is a strong case for establishing such a regional customs facility.⁶ Signs of avoidance of customs duty on imports were evaluated through a statistical examination of the reported value and tariff classification of imports into Fiji Islands, Kiribati, and PNG, and their comparison with the reported value of exports from other countries to these three countries.

The following were the main findings of the statistical evaluation of the study.

- In PNG and Kiribati in recent years, undervaluation of imports in customs declaration documents was less likely to have occurred than in earlier years.
- In Fiji Islands, the opposite seems to hold, as there are substantial, persistent patterns of differences in the classification of merchandise that merit further inquiry.⁷

The Fiji Islands findings could be the result of innocent differences in classification between exporting countries and importers, or could point to deliberate evasion of duty payable. Although more disaggregated data on imports are available for Fiji Islands and PNG, it would be difficult even from these data to confirm suspicions.

The study emphasizes that independent, on-the-spot inspections are needed to determine whether importers are deliberately misclassifying or undervaluing (underinvoicing) imports in order to evade the payment of duty, and whether any customs officers are knowingly “overlooking” or accepting such fraudulent acts. Two possible options for achieving such inspections were highlighted by the study.

- **Independent Surveillance Teams:** This is the most common means of reducing evasion of duty payable and corruption in customs operations. Such teams check the valuation of merchandise imported and the classifications of goods for purposes of charging customs duty. The inspections may be comprehensive, or involve a random sample of customs transactions.
- **Independent Inspection Agency:** In Indonesia, where the customs service had been seen as particularly corrupt, the Government recently adopted an effective alternative approach. An independent inspection agency was created that assumed all responsibilities of the customs agency, resulting in a dramatic increase in customs duty collected.

National customs agencies in FICs have an ongoing need for practical training in customs administration, inspection, and enforcement. They also require information sharing to learn from relevant developments in other jurisdictions.

Qualitative and Quantitative Assessment of Implementation Impacts

Independent surveillance teams. Stationing an independent inspection team in one FIC with a mandate to undertake random checks on customs

practices in FICs that have tariff regimes, is one means of checking the extent of duty evasion and corrupt practices in the region's customs services. Random audits, combined with severe sanctions for evasion of customs duties, also could be effective in increasing duty collection and reducing corruption. Random audits alone would not be as effective as having a continuous inspection service stationed in each country, but it would be much less expensive. Some checks could be conducted on a random basis while others could target suspected cases.

Independent surveillance teams, as an adjunct to their inspection role, could usefully provide local specialist training to help build the operational capacity of FIC national customs services. They could serve as a conduit for sharing technical information about customs issues and practices, drawing on lessons from international experience.

The cost of creating a customs surveillance team to carry out random checks as well as training programs is estimated at about F\$1 million per year. This estimate assumes a surveillance team of four with average salary/benefits costing F\$200,000 each (including administrative support costs); an average of five country visits by each staff member for inspection/training purposes costing F\$5,000 per visit, or around F\$100,000 annually; and office rental and equipment costs of about F\$100,000 annually.

Independent Inspection Agency: The services of such inspection agencies are quite expensive. To justify contracting an independent customs inspection agency to assume the role of national customs services throughout Pacific island countries would require strong evidence of corruption and sizable public revenue loss.

The risk of corruption in customs services is highest where average duty rates are high and vary significantly. Accordingly, an independent inspection agency, if used, would likely encounter its largest payoffs in countries where customs regimes have these features, and in the larger countries such as the Fiji Islands and PNG, where a significant amount of customs duty is collected (around F\$150 million a year in the Fiji Islands).

Like an independent inspection team, an independent inspection agency could also provide training for national customs agencies and act as a conduit to facilitate information sharing.

Regional Panel of Public Sector Auditors⁸

Overview

An independent, impartial, competent, and properly funded public audit agency is a vital component in the institutional arrangements that all countries, including FICs, need in order to foster and maintain good governance. This requirement also applies to regional and international public sector activities. Governments and legislatures rely on ex post audits of public expenditure, revenue, financial assets, and liabilities to achieve two valuable public benefits:

- Ex post attestation that public sector personnel have used public money and resources for properly authorized purposes, and have met their publicly funded commitments; thus
- encouraging, ex ante, proper use of public resources, and deterring improper use by increasing the perception that public sector personnel will be accountable for proper/improper use via kudos/opprobrium.

Many FICs, however, find it very difficult to attract and retain staff with the necessary skills and experience to carry out the required quality of auditing needed to attain these two important benefits. Professionally qualified, experienced accountancy staff are in high demand and tend to be attracted to larger countries. Wide disparities therefore exist in operational capacities of FIC offices of auditor-general (OAGs).

The merits of adopting a three-phased approach to regional intervention are assessed below. This approach would culminate, if conditions are suitable, in the creation of a regional panel of auditors to provide public sector auditing services, in order to strengthen the quality and quantity of public sector auditing in all FICs. These services would include attestation and capacity-building functions, such as specialist advice and training, and extend to state-owned enterprises as well as to government departments.

Envisaged Regional Audit Intervention in Three Phases

The preliminary study envisages the following three phases of regional intervention to strengthen public sector auditing capacity and performance in FICs.

(i) **Strengthen capacities of OAGs and harmonize standards.** Phase 1 would fund the South Pacific Association of Supreme Audit Institutions (SPASAI)⁹ sufficiently to enable it to (a) provide training and secondment programs for national OAGs to strengthen their operating capacities, and

(b) encourage and assist FICs to adopt common standards and institutional frameworks for the role of OAGs. SPASAI's role would remain one of technical support and acting as a clearinghouse for exchanging ideas on audit issues.

(ii) **Create formal Federation of Pacific-Forum OAGs.** Phase 2 would aim to boost further the operational capacities of FIC OAGs by creating the Federation of Pacific-Forum OAGs (superseding SPASAI) with a formal mandate to (a) continue OAG training programs to bolster national OAGs' operational capacity, (b) provide resources and advice to national OAGs to reduce their operational capacity disparities, and (c) consider thoroughly the case for creating a regional panel of public sector auditors. A formal federation could even become directly involved in auditing public sector regional institutions. Alternatively, Phase 2 could upgrade SPASAI to achieve the same ends.

(iii) **Create a fully integrated Regional Panel of Auditors.** Phase 3 could entail FICs devolving to the Regional Panel of Auditors some functions of national OAGs, to act on their behalf. This would be a medium-term option.

Qualitative and Quantitative Assessment of Benefits and Costs

Phase 1: Strengthen capacities of OAGs and harmonize standards. This phase would mark the start of progressive steps to enhance public sector auditing capacities and performance to achieve the benefits mentioned above. The goal of encouraging and enabling FICs to establish a common regulatory framework for OAGs is just one means of helping them enhance their auditing performance. While the SPASAI already has a mandate to undertake the phase 1 functions, it does not have the resources to do so. It needs public funding to carry out this role to any significant extent. The study estimates that SPASAI would require funding to cover the annual costs shown in Table 5.1.

Phase 2: Create a federation of OAGs. While the study expects Phase 1 training programs to reduce disparities in OAG institutional capacities, it foresees these persisting even after a convergence of operational environments has been achieved. Phase 2, therefore, would continue with the secondment arrangements, either under the Federation option or by strengthening SPASAI. Whichever option is chosen, the costs of Phase 1 would continue, and need to be added to the costs of the extra functions envisaged for Phase 2 as shown in Table 5.2.

Table 5.1: Estimated Annual Costs of SPASAI Phase 1 Functions (F\$'000)

Item	Estimated Cost per Annum
Operating a small secretariat to manage its enlarged level of activities	1,316
Operating a wider training function	840
Secondments between offices, to provide assistance and facilitate an exchange of expertise ^a	156
Total	2,348

SPASAI = South Pacific Association of Supreme Audit Institutions.

a The practical reality is that most of these secondments would need to come from more developed countries like Australia and New Zealand.

Source: White 2005.

Table 5.2: Estimated Annual Costs of SPASAI Phase 2 Functions (F\$'000)

Item	Estimated Cost per Annum
Operations to be established in Phase 1	2,350
Minimum operations of national offices within the federation (with a maximum costing of about F\$37 million)	26,075
Additional costs of expanded federation office	180
Total	29,000

SPASAI = South Pacific Association of Supreme Audit Institutions.

Source: White 2005.

The second item in Table 5.2 represents the estimated minimum required to enable the national OAG functions in each FIC to achieve a suitable level of operational capacity. The estimate is benchmarked on the New South Wales State OAG in Australia, with some adjustments.¹⁰ These figures include existing budget provisions already made for the individual FICs for their national OAGs.

Phase 3: Create Regional Panel of Public-Sector Auditors. Creating a regional panel of auditors with at least some of the functions of national OAGs would have some clear advantages.

- **Independence from Executive Governments:** The Regional Panel of Auditors, provided its funding is assured, would be independent of potentially untoward influence by national governments.
- **Capacity to Audit FIC Regional Bodies:** The Regional Panel of Auditors would be a suitable body to audit regional institutions that develop in the Pacific.

The establishment of a regional panel of auditors should be seen as a medium- to long-term objective that would require a total budget of about F\$40 million per annum. This figure is relatively larger than for other governance initiatives, but it includes FICs' current aggregate expenditures on public sector auditing. Only the Phase 1 costs are additional to FICs' current expenditures.

Regional Ombudsman Office

Overview

An ombudsman is defined as “an official who investigates citizens’ complaints against the government or its servants.”¹¹ Over 100 countries throughout the world have ombudsman offices, each with the fundamental role of promoting the principles of administrative justice and good governance. These include several Pacific countries, such as PNG, Samoa, and Vanuatu.

Ombudsman functions often include the following three elements, such as in New Zealand.

- Assess the merits of citizens’ complaints about administrative acts and decisions of government agencies—at central, regional, and local levels—and recommend appropriate remedial action by the department or agency concerned.
- Review government decisions to not release official information requested under legislation designed to make it easily accessible to the public—unless there is a strong case that its release would not be in the public interest—and recommend appropriate action.
- Guide and inform employees who have made, or are considering making, a protected disclosure (i.e., whistle blowing).

In carrying out such functions, ombudsmen typically are not empowered to coerce a government department or agency to accept their advice or recommendations. But their advice is often followed. The desired outcomes from these functions are that they

- resolve grievances occurring in the process of public administration;
- improve the accountability of the public sector for its administrative actions and decisions;
- enhance public confidence in public sector administration; and
- promote “open” government by ensuring that official information is released to the public unless it can be demonstrated that the release of specific official information would not be in the public interest (with the onus on government to demonstrate this).

Case for a Pacific Regional Ombudsman

While a few FICs do have a national ombudsman, the majority do not. Creating a small Pacific regional ombudsman office would provide an opportunity for citizens of FICs with no national ombudsman to air their grievances about government administrative acts and decisions. It would also allow the possible constructive resolution of these citizen grievances via the intermediation of the regional ombudsman. It could, in other words, partly fill a gap in current public sector institutions in these countries.

The regional ombudsman office could be quite small (e.g., one resident ombudsman), but still be effective by being able to coopt the services of national ombudsmen for short periods to help the regional ombudsman office carry out its role. Based on estimates for the customs unit (see above), the annual salary costs for the regional ombudsman would be approximately F\$200,000 (including administrative support). If the ombudsman undertook a limited number of reports annually, the additional cost of country visits and hiring of short-term experts (if needed) should not exceed F\$300,000, bringing total annual costs to F\$500,000.

Like national ombudsmen elsewhere, the regional ombudsman would have powers only to investigate, advise, and recommend, with no power to force government departments or agencies to adopt advice given. Even with this limited power of “moral suasion,” however, the reports of the ombudsman’s office, given a high regional profile, would undoubtedly generate interest and debate within the region and the country in question.

In practice, without specific legislation governing accessibility of official information, a regional ombudsman's role may be limited to dealing with grievances. But even this relatively limited focus would be another factor helping encourage sound public sector management processes and decisions, and good governance.

An issue to be resolved is how best to ensure that a regional ombudsman can operate independently and impartially. This is a vital requirement that is universally recognized as essential for an ombudsman. What this means is nicely explained in the web site of the Republic of Ireland ombudsman office.

Impartiality requires independence and independence, in turn, requires statutory or legal underpinning, security against arbitrary removal, the power to issue and publish reports with the protection of legal privilege and, finally, adequate resources to do the job.

In most countries the office of national ombudsman is underpinned by specific legislation, and usually reports to the legislature. Both of these features help ensure its independence. To enable a regional ombudsman to operate effectively may require a treaty between FICs backed up by enabling national legislation. This issue requires further study.

Economic Growth

As discussed in Chapter 2, constraints to economic growth in the Pacific arise from a combination of weak governance, limited skilled human capacity, and natural constraints (smallness, remoteness, a narrow resource base). Some priority regional governance responses have been outlined above. This section outlines some possible initiatives that can help address the other constraints to economic growth: limited skilled human capacity and natural constraints. All of the following initiatives include measures to address skilled human capacity constraints by pooling scarce and expensive skills into a shared regional institution.

Three proposed initiatives aim to help FICs generate better returns from two of their key resources—fisheries (through further harmonization of access arrangements), and a young and dynamic but undertrained and underemployed labor force (through the liberalization of regional labor markets and the creation of a regional nurse training facility). Three further proposals seek to minimize the high costs and weak provision of services in two sectors that are vital for small and remote countries—transport (the Pacific Aviation Safety Office (PASO) and joint procurement of petroleum products are proposed) and communications (liberalization of telecommunications markets is proposed).

Any further work undertaken on regional initiatives to address economic growth should carefully consider the ongoing analysis of the likely economic impact and service opportunities offered by the Pacific Islands Air Services Agreement (PIASA). PIASA is a regional market integration agreement signed at the Auckland Meeting. Its aims are to progressively liberalize market access in the FIC airline sector and relax restrictions on national ownership of airlines. PIASA is potentially further reaching than the proposed Pacific Aviation Safety Office in terms of regulatory liberalization, national sovereignty, and economic benefits.

Liberalizing Labor Mobility in the Pacific

Overview

Pacific countries have long experienced permanent migration of their citizens to larger, more developed host countries such as Australia and New Zealand (ANZ) in search of better education, public services, and employment opportunities. To date, immigration policies of these two countries have favored the permanent migration of skilled workers, severely restricting access of unskilled workers. Research commissioned for this report indicates that both the migrants (skilled and unskilled) and their host countries benefit significantly from this type of migration. The research also suggests that current ANZ immigration policy, however, probably represents the worst-case scenario for residents of Pacific island countries because of its detrimental impact on their welfare resulting from the loss of skilled workers. This conclusion appears to hold true even after allowing for the mitigating effect of remittances home.

Summarized below is an analysis in a study carried out by T.L. Walmsley, S.A. Ahmed, and C. Parsons¹² examining whether a more mutually beneficial scenario for host and home countries might be to allow more Pacific islanders to work in ANZ on a temporary basis—e.g., a fixed term of 3 to 5 years. After the fixed term, such temporary workers would be required to leave the host country. Other Pacific islanders would be allowed to take their place so long as the total number at any time does not exceed the increased quotas. The analysis here raises some important issues for consideration of all Forum member countries.

Labor-Mobility Liberalization Options Examined

The study modelled the impact of ANZ increasing their quotas for temporary movement of persons by an amount equal to 1% of their respective labor forces, with the quotas filled entirely by an influx of Pacific island

labor on a temporary basis. Outcomes of the policy changes would be achieved in the short-medium timeframe, or approximately 3 years. Scenarios modeled included, notably

- 1% increase in quotas for both skilled and unskilled labor met entirely by a further influx of Pacific island labor,
- 1% increase in quotas for unskilled labor only (met similarly), and
- 1% increase in quotas for skilled labor only (met similarly).

Such a development would be broadly in line with “mode 4” temporary movement of labor between countries envisaged under the General Agreement on Trade on Services (GATS).¹³

Benefits and Costs of the Different Options

Increasing the movement of both skilled and unskilled labor from FICs to ANZ. As shown in Table 5.3, Pacific islanders—both migrants and those remaining in FICs—would experience a net welfare increase of a massive US\$1.1 billion in the short-medium term (col. 6, row 3). Pacific islanders working in ANZ would gain the most, nearly US\$1.4 billion (col. 2, row 3) and US\$168,000 (col. 3, row 3), respectively. But this beneficial impact is offset partly by a welfare loss of almost US\$490 million (col. 4, row 3) borne by those remaining at home in the Pacific islands. The loss arises mainly because a 1% rise in temporary migrant-labor quotas for skilled and unskilled workers would reduce FICs’ already-stretched skilled workforce by 21%—with consequential effects on productivity and tax revenue—but would reduce their far more plentiful unskilled workforce by only 2%.

Table 5.3: Bilateral Welfare Changes for 1% Rise in Unskilled and Skilled Labor Quotas (US\$ million)

Home Region (1)	Host Region				Total Welfare of Home Region (6)
	Australia (2)	New Zealand (3)	Pacific Islands (4)	Other (5)	
Australia	302.61	-0.85	1.77	0.00	303.53
New Zealand	-6.88	26.55	0.94	0.00	20.61
Pacific Islands	1,386.10	168.07	-488.02	0.00	1,066.14
Rest of the World	-75.55	-11.31	33.12	-33.10	-86.84
Total Welfare of Host Region	1,606.28	182.46	-452.19	-33.10	1,303.44

Source: Walmsley et al. 2005

Table 5.3 also shows that ANZ residents (other than temporary migrant workers from the Pacific islands) would also benefit under this scenario of labor-movement liberalization. For example, the welfare of Australians living in Australia would rise by about US\$300 million (col. 2, row 1), and the welfare of New Zealanders living in New Zealand by about US\$26 million (col. 3, row 2). But labor from all other countries (the rest of the world) resident in the two host countries would experience welfare losses of some US\$86 million (cols. 3 & 4, row 4).

Increasing the movement of unskilled labor only from FICs to ANZ.

This scenario, as shown in Table 5.4, would still yield large short-medium term welfare benefits for temporary migrants from FICs (almost US\$880 million), while also benefiting Australians and New Zealanders living in their own countries, but with no welfare losses to those remaining in FICs.

Increasing the movement of skilled labor only from FICs to ANZ.

This scenario, shown in Table 5.5, would still yield significant welfare benefits in the short-medium term for the temporary migrants from FICs (over US\$610 million), but would impose severe welfare losses on those remaining in FICs (over US\$510 million), and yield significantly less welfare benefits for Australians and New Zealanders living in their own countries. This would arguably be the worst scenario. It would exacerbate the welfare loss to the remaining Pacific island residents, but with relatively little offsetting welfare gains.

These results do not allow for the likelihood of increased productivity of Pacific islanders returning home after temporarily working in ANZ. They are at least broadly indicative of the detrimental welfare impact on FICs of the current situation of permanent migration of skilled labor.¹⁴

When the researchers allowed for the expected increase in productivity of returning temporary workers under the first scenario, it was found that the higher productivity of returning skilled and unskilled temporary labor would more than offset the welfare losses of Pacific island residents. This would yield a net welfare benefit of about US\$18 million. While the higher productivity of returning skilled labor would yield positive welfare gains (about US\$124 million), these would be insufficient to offset the above welfare losses from the temporary outflow of skilled labor. In contrast, the higher productivity of returning unskilled labor would yield much larger positive welfare gains (nearly US\$400 million).

Table 5.4: Bilateral Welfare Changes for 1% Rise in Unskilled Labor Quotas (US\$ million)

Home Region (1)	Host Region				Total Welfare of Home Region (6)
	Australia (2)	New Zealand (3)	Pacific Islands (4)	Other (5)	
Australia	199.84	-0.38	0.07	0.00	199.53
New Zealand	-4.88	17.90	0.04	0.00	13.07
Pacific Islands	775.05	104.13	22.03	0.00	901.21
Rest of the World	-58.62	-6.98	1.88	-19.06	-82.79
Total Welfare of Host Region	911.39	114.67	24.02	-19.06	1,031.02

Source: Walmsley et al. 2005

Table 5.5: Bilateral Welfare Changes for 1% Rise in Skilled Labor Quotas (US\$ million)

Home Region (1)	Host Region				Total Welfare of Home Region (6)
	Australia (2)	New Zealand (3)	Pacific Islands (4)	Other (5)	
Australia	102.87	-0.47	1.70	0.00	103.99
New Zealand	-2.00	8.64	0.90	0.00	7.54
Pacific Islands	611.05	63.94	-510.06	0.00	164.93
Rest of the World	-16.94	-4.32	31.25	-14.04	-4.04
Total Welfare of Host Region	694.88	67.79	-476.21	-14.04	272.42

Source: Walmsley et al.

Possible Regional Action Suggested by the Research Results

These results suggest that leaders of Pacific Forum countries should examine the possibility of permitting increased quotas of unskilled workers from FICs to work in Australia and New Zealand on a temporary basis for, say, 3–5 years. After this period, they would be required to depart ANZ and be replaced by other unskilled FIC workers. This may be a cost-effective way of assisting FICs to enhance their economic development.

The results also raise the question of whether action to encourage a larger pool of skilled workers in FICs would be another way to mitigate the detrimental welfare impacts from the migration of their skilled workers. One possible measure to consider would be improved training opportunities. One of a number of specific initiatives that would meet this objective, a regional approach to nurse training, has been examined as an example of this approach and is discussed next.

Creation of Pacific Regional Nurse Training Facility

Overview

Nursing is explored to illustrate the potential costs and benefits of a sector-specific temporary labor scheme. There has been a rapid increase in the number of nurses emigrating from developing countries to work for short or long periods in high-income countries. This trend has also been evident in the Pacific region in recent years. Many concerns have been raised about the impact of this trend on the source countries, not least a decline in the quality and volume of health services. But perceived benefits also stem from this international flow of services, most importantly the reverse flow of remittances. The question arises as to whether prospective benefits would be large enough to justify a Pacific island government, or governments, creating a training facility to train nurses to work overseas, as has happened in other countries.

A recent initial study by Professor Ron Duncan assesses both the arguments for—and potential benefits and costs from—creating a publicly-funded regional nurse training facility geared primarily to training nurses to standards that would enable them to work offshore—e.g., in developed countries like ANZ where nurses are in short supply.¹⁵ The main findings of this study are summarized here. It is important to note that the Duncan (2005c) and Walmsley et al. (2005) studies utilized different methodologies and bases, and the resulting estimates cannot be aggregated.

Should Governments Intervene to Create a Regional Nurse Training Facility?

The report notes that in the Philippines—the country with the largest international flow of nurses—the private sector primarily trains nurses to work overseas. Why not similarly leave it to the private sector to decide whether to create such a facility in the Pacific region, guided by market forces and its own assessment of viability? Are there “market failures” and resulting external social benefits that could justify a Pacific island

government (or a number of such governments, jointly) either subsidizing a private facility, or establishing and operating such a facility?

Entry Barrier. The Duncan (2005c) study finds that a new private nurse training facility in the Pacific islands would likely have difficulty establishing its credentials and successfully placing its graduates in high-income countries because of the lack of a track record.¹⁶ This situation was seen as a major obstacle to setting up a private export-oriented nurse training facility in the Pacific islands.

In these circumstances, a major argument for a Pacific-wide regional nurse training facility is that the Pacific island governments together could use their collective political bargaining power to negotiate with intended destination governments. They could, for example, create a uniform set of regulations under which nurses would be hired. They could also help ensure the Pacific regional nurse-training facility is accredited with the destination countries, so that its graduates would be recognized.

Such negotiations on the part of Pacific island governments appear to be the only way to overcome this market failure. Otherwise, nurses from Pacific island countries will continue to experience difficulties finding nursing jobs, instead taking on so-called “caregiver” jobs, which are less well paid.

External Benefits Not Reflected in Market Prices. Another possible market failure is that setting up a high-quality nurse training facility to meet the standards of destination countries—assumed to be higher than those in source countries—could have beneficial impacts on the nursing services and health facilities in Pacific countries. Not all nurses trained in the facility would necessarily emigrate. After being trained to higher, international standards, nurses newly trained but not emigrating could well lift health standards in Pacific countries. Further, nurses returning to the Pacific after substantial experience abroad would also help lift Pacific standards of nursing. To the extent facility benefits are not captured by the nurses as higher salaries, the resulting social benefits could justify government subsidies of the training facility.

Regional Provision to Obtain Benefits from Economies of Scale and Scope

There clearly are economies of size and scope in the training of nurses, given the different kinds of nursing functions. To harness these economies, it would make sense to set up a regional facility that would accept

enrollments from all Pacific countries. One means of both creating a training facility of sufficient size and scope, and meeting destination countries' certification requirements, would be for a training facility operating in one of the destination countries to establish a facility in a Pacific country. It is not clear, however, if such a facility would need any government subsidy, or one only during an initial establishment period.

Approach to Benefit-Cost Analysis of a Regional Nurse Training Facility

Assessment of the net benefits likely to result from creation of a Pacific regional nurse training facility requires that both private and social benefits and costs be taken into account. Social benefits and costs are those not captured by the nurses' increased income, and by the training costs. Private benefits and costs are the benefits the nurses and their families derive from the training, less the private costs of the training. The government would also participate in private benefits, receiving taxes and perhaps training fees paid by the nurses. Additional training costs may be paid by government.

Whose costs and benefits should be counted and to what extent? Most, if not all, nurses graduating from the training facility would be expected to go overseas to work for a period. Should such overseas workers be regarded as part of the Pacific region's economy and, therefore, their entire net increase in income counted in the analysis as private benefits arising from the training facility? Or should only the remittances back to the region from this income be counted as additional private benefits from creating the facility? The study calculates the net benefits under both approaches.

Assumptions about Benefits: The study makes a series of assumptions about the benefits and costs involved. These include, for example, assumptions about the following aspects of private benefits: (i) the likely increase in wages earned by the emigrating nurses as a result of the training, (ii) how long they would earn the higher wage overseas, and (iii) what is the amount that emigrant nurses are likely to remit annually. In calculating net private benefits, allowance is made for their basic living costs overseas.

Assumptions about Costs: Assumptions about the training costs of a Pacific regional nurse training facility are based on the tuition fees in a similar kind of training organization with no government subsidies.

The analysis assumes that there is a large pool of unemployed or underemployed labor, so that the opportunity cost of an untrained person

who remains in a Pacific country is probably close to basic living or subsistence costs. The Fiji Island data were used for estimation.

To allow for the difference in basic living costs between the Pacific region and the overseas host country, the study assumes these are equivalent to the basic unemployment benefits paid a single person in the Fiji Islands and Australia, respectively. The difference between the unemployment benefits and what it actually costs the nurses to live in Australia is assumed to reflect the higher standard of living experienced by the nurses, and therefore is counted as a private benefit received by the nurses.

Counterfactual Scenario: The analysis assumes that, without government intervention to obtain accreditation for a nurse training facility in the Pacific, nurses from the region would find it difficult to obtain overseas employment as nurses. The number of people thus able to gain employment abroad as nurses will be considerably less than if such a training facility existed.

Results of Benefit-Cost Analysis

Based on study assumptions, Table 5.6 shows the results per nurse graduate.

Table 5.6: Benefits and Costs of a Pacific Regional Nurse Training Facility^a (F\$)

Item	Costs	Benefits
Australian nurse's salary (earned over 10 years)		536,800
Less opportunity cost of Fiji Islands employment (over 10 years)	49,700	
Less living expenses in Australia (over 10 years)	229,300	
Net increase in income due to training (undiscounted)		257,800
Net increase in income discounted at 3% per annum		200,000
Net increase in income discounted at 8% per annum		131,200
Tuition fees discounted at 3% per annum	33,100	
Tuition fees discounted at 8% per annum	30,300	

a Assumes emigrants remain part of the Pacific economy.
Source: Duncan 2005.

Counting the entire increase as a benefit arising from the regional facility results in the following.

- The net present value (NPV) of a Pacific island nurse graduate's increased income due to training at the proposed Pacific regional facility and employment overseas as a nurse for 10 years is estimated at about F\$200,000, using a discount rate of 3% per annum.¹⁷
- In contrast, the corresponding NPV of the total cost of tuition fees per nurse graduate is estimated at F\$33,100.
- The resultant benefit-cost ratio is 6.0 (i.e., F\$200,000/F\$33,100).

The corresponding NPV figures per nurse graduate using an 8% per annum discount rate are a net benefit of F\$131,000, total tuition fee of F\$30,300, and benefit-cost ratio of 4.3.

The study also calculated net benefits considering that only the value of a graduate nurse's remittances from abroad count as benefits from the graduate training facility. It estimated the value of such remittances over a 10-year period, using plausible assumptions based on available evidence, as F\$66,700. At annual discount rates of 3%, the total NPV of benefits from these remittances would be F\$51,900 (or F\$35,400 if discounted at 8%). The resultant benefit-cost ratio at 3% discount rate is 1.6 (or 1.2 at a discount rate of 8%).

Other Impacts and Issues

External Benefits and Costs: It will likely be necessary that trainees of the regional nurse training facility receive practical experience in a hospital. If this is unpaid work, the value of the work can be considered as an external benefit of the project. If, say, third-year nurses are required to undertake 20 hours per week for 50 weeks, and this work is valued at F\$2.50 per hour, the total worth of their contribution would be F\$2,500 (as compared to the starting salary in the Fiji Islands of F\$11,600 for a registered nurse).

It is assumed that nurses trained at the regional training facility would be additional to the number of nurses already being trained. Thus social costs in the form of a decline in the quality of health services due to nurses emigrating should not be claimed against such a facility.

Government Budgets: As far as Pacific government budgets are concerned, to what extent would tax revenues accruing from the additional remittances received from additional nurses working abroad offset the

expenditure incurred in establishing and operating a Pacific regional nurse training facility?

The governments would benefit directly to the extent remittances were spent on consumption, and value-added tax (VAT) and/or import duties were in place. If governments meet the tuition costs of the students, per-student total cost over the 3-year period (allowing for dropouts) would be F\$34,000. If the governments pay the living expenses of students as well as the training fees, total government financial commitment for each student would be around F\$50,000 over the 3-year period.

Minimum size: Economies of size and scope mean that the facility should be of a certain minimum size if it is to provide the necessary breadth and quality of training needed to satisfy accreditation requirements in destination countries. The larger the intake of students, the lower will be the individual costs of training. A facility capable of enrolling 150–200 students appears to be about the minimum viable size. To have a major impact in creating overseas employment opportunities for the large number of young people presently unable to find local jobs, and to be a significant contributor to remittances, the facility would have to be many times larger than this—possibly 10 times this size.

Further Harmonization of Fisheries Access Arrangements

Overview

The focus of an initiative to strengthen fisheries access agreements is on four potential priorities for regional interventions addressing fisheries issues. Three of these priorities concern regional cooperation in negotiating and implementing policies affecting fisheries, notably the interrelated issues of

- harmonization of access arrangements,
- accountability and transparency in all such arrangements, and
- creation and allocation of new property rights for fisheries access.

The fourth priority concerns the institutional arrangements needed to enable continued, or new, effective regional provision of services that address fisheries issues—notably the issue of FFA's future role in relation to the newly created Western Central Pacific Tuna Commission (WCPTC).

Harmonization of Tuna Fisheries Access Arrangements

Fisheries access fees are, at present, usually negotiated as part of bilateral agreements with fishing fleets of individual distant water fishing nations (DWFN). Typically these fees are based on either the current, or last year's catch volume or value, and are understood to entail significant variations in the rates of fees applied to these bases. It also is understood that there are significant variations in total access fee payments received. It is difficult to assess the extent of such variations, or the reasons for them, however, because of a lack of adequate, publicly available information about the majority of fisheries access agreements. Details of these agreements—especially access fee rates and any related development assistance—are not publicly reported. In contrast, fisheries access arrangements under FICs' sole multilateral arrangement, the US Multilateral Treaty on Fisheries, incorporate payment of a fixed fee entitling up to a set number of vessels to fish, and the details are publicly available.

A mix of some or all of the following factors may account for variations in access fee rates, notably differences in.

- DWFN's willingness to pay for access to fish in different EEZs, linked to their estimates of likely economic benefits;
- the history of tuna resource concentrations in each EEZ;
- the negotiating prowess of different FICs, which may allow DWFN's to avoid revealing the full extent of their willingness to pay for access;
- a conditional linkage of bilateral development assistance—maybe informally and secretly—to the outcome of fisheries access agreements;
- FIC domestic fishery development goals—e.g., the desire to establish onshore fish processing and generate employment—that may lead an FIC to accept a lower fisheries access fee rate in return for DWFN help with FIC objectives; and
- possible corrupt practices, including catch underreporting.

Harmonization of fisheries access fees is commonly perceived as a panacea for increased net returns by FICs for access to the highly migratory tuna that FICs temporarily “own” while they are in their EEZs. The grounds for this view is that FIC cooperation in adopting a united negotiating stance with DWFNs would both increase their leverage to negotiate the highest feasible access fee rates, and reinforce this advantage by increasing the contestability of access fees among DWFNs. It is also argued to be an

effective way to reduce fiscal risk by reducing the scope for individual discretion, thereby reducing the scope for corrupt practices.

Is harmonizing access fee arrangements the most effective way to improve economic benefits FIC coastal states receive from their EEZ fishery resources, and at the same time reduce potential fiscal risks? This is a fair question that should be systematically and dispassionately addressed as a matter of priority. In so doing, attention must be given to the extent blanket harmonization of access fees would be seen as fairly reflecting often large differences in the value of fisheries access to different EEZs.

But even if such harmonization is found to help reduce fiscal risks associated with fisheries access agreements, a closer look at the potential sources of these risks suggests that it would not be a complete solution. For example, as van Santen and Muller have explained, setting bilateral access fees on a “harmonized” basis exposes FIC governments to fiscal risks from fraudulent behavior.¹⁸

[This] basis offers the best potential for cheating. The system requires extensive data, which are difficult and sometimes impossible to verify; there are strong incentives for sustained mis- or under-reporting [by fishers]. Monitoring costs are relatively high.

Transparency and Accountability in Fisheries Transactions

The secrecy currently surrounding FIC government fisheries access agreements exacerbates the fiscal risk, and is inconsistent with the Pacific Islands Forum's Eight Principles of Accountability,¹⁹ which have been endorsed by FIC governments.

Secrecy, together with system features noted above, increases the opportunity and scope for corrupt behavior by those involved in access agreements on behalf of governments.

It would therefore be prudent that FICs ensure that their negotiating practices are consistent with the principles of good governance and sound public sector management. This also would allow more informed negotiations and settlements between FICs and DWFNs.

As a matter of priority, it would be desirable for FICs to cooperate and mandate the FFA to compile and maintain a comprehensive database of

bilateral fisheries access agreements—including details of access fee rates and payments. FICs should also mandate FFA to confirm the accuracy of the information by independent professional audits, and make this information publicly available. The outcome of this approach would be the creation of a compulsory, open registry of all FIC bilateral fisheries access agreements, including fee provisions, and effective measures to ensure compliance with the registration requirements.

Long-Term Sustainability of Existing Fisheries Access Fee Arrangements

The present typical fisheries access fee arrangement described above²⁰ is fraught with risk, as it tends to encourage overfishing and overinvestment in fishing. This risks the biological and economic sustainability of the fishery.

A more suitable arrangement might include, say, a fixed option-value component and a variable economic-rent component that depended on the fishers profitability—in conjunction with more certain, defined property rights.²¹ Such arrangements could encourage more sustainable harvesting of fisheries to the benefit of the coastal states and fishers. Rights could be allocated by carefully managed auction. At present, however, such an approach is understood to be not yet feasible for the region due to the risk of collusion among the small number of DWFNs, and the apparent lack of agreement between DWFNs and coastal states on such changes in property rights. Additionally, there is at present no expert auction infrastructure in the region.

This subject is one that member countries will need to start addressing systematically and objectively in the near future. It is already an issue, in the sense that the pending work of the WCPTC is scheduled to address fisheries management issues that touch on this subject.

Future Role of FFA

As a matter of high priority, FICs should review the role of FFA to see what, if any, changes in its focus and organizational arrangements may be required for it to serve member countries most effectively. Three key points need to be kept in mind in considering FFA's future role.

- Given the huge economic disparity between DWFNs and individual FICs, a regional fisheries body (such as FFA) is needed to provide expert advice to all Forum member countries to enable them to negotiate—collectively or individually—on a more equitable basis with DWFNs.

- FFA will need to take more account of the interests of DWFNs in member countries' EEZs, and the need to ensure that future fisheries arrangements are likely to be sustainable—economically and biologically—for both the fishers and the coastal states.
- In order to achieve economically and biologically sustainable fishing arrangements, FFA eventually will likely have to help FICs move toward some sort of Total Allowable Catch (TAC) or equivalent fisheries rights. TACs could be allocated via an auction system once institutional arrangements are developed to minimize the risk of collusion between potential bidders.

Liberalization of the Telecommunications Market

Overview

In a region with highly dispersed populations, remote from major world markets, regular access to cost-effective telecommunications infrastructure and services is a vital requirement for future economic development. Telecommunications service providers currently are mainly state-owned monopolies with exclusive licenses. Access costs typically are high, partly reflecting the relatively low teledensities and high operating costs in the region. International experience shows that liberalizing the market for telecommunications service can be expected to yield significant benefits in the region in terms of lower costs, more efficient services, and service quality improvements.

Market deregulation is not necessarily regional market integration. The former is often done at the national level, on a sector-by-sector basis. However, the benefits of market deregulation among all Forum members would be analogous to an integrated regional market for telecommunications. To manage this integration, a regional regulatory service provider is proposed. In this way, a telecommunications liberalization initiative would encompass more than one type of regionalism: both integration and regional provision of (regulatory) services.

The main findings and recommendations of report on telecommunications deregulation in the region prepared by Professor James McMaster of USP for the Pacific Islands Forum Secretariat are outlined below.²²

Main Findings

There are major benefits from opening monopoly markets to private sector competition. International case studies of telecommunications deregulation undertaken by the International Telecommunications Union (ITU) and other researchers clearly show the substantial economic benefits that result from opening government-dominated telecommunications monopoly markets to private sector competition by licensing new providers. These benefits take the form of lower prices, improved service quality, a higher level of investment in new infrastructure, more rapid adoption of new technology, increased bandwidth, and improved productivity and efficiency in the use of resources.

All consumers stand to gain and the costs of regulation are tiny. Competitive telecommunications markets will generate sizable net economic benefits to all consumer groups in the Pacific Islands, including urban and rural residential subscribers, private sector business firms, schools and universities, public enterprises, and government departments and agencies.

The value of economic benefits to consumers is sizable. The estimated total value of economic benefits to all consumers in FICs almost all stems from a sharp reduction in international telephone call rates, peak mobile phone rates, and Internet charges. This benefit is what economists term a consumers' surplus, with an estimated annual value of US\$66 million,²³ and total value over a 5-year period of US\$285.9 million (using a 5% discount rate—US\$250.9 million using a 10% discount rate).

The estimates, shown in Table 5.7, are based on FIC revenue data from the *ITU Database 2005* edition, and on total telecommunications revenue for Pacific Island ITU member countries. The estimates also incorporate a set of assumptions about the likely level of reduction of call charges resulting from competition, the response of telecommunications companies to the threat of competition in contestable markets, the profitability of different market segments, and price elasticity of demand for telecommunications services.

It is important to note that these calculations of the level of consumer surplus are based on the limited amount of revenue data. More precise estimates of the economic benefits from competition could be made if the Pacific telecommunications authorities made available detailed historical information on their sources of revenue from different services, and their revenue and cost projections for the next 5 years.

Table 5.7: Benefits to Consumers from Deregulation of Telecommunications (US\$ million)

	Consumer Surplus for 1Year	Consumer Surplus for 5 Years Discounted at 5%	Consumer Surplus for 5 Years Discounted at 10%
Cook Islands	0.32	1.39	1.21
Fiji Islands	26.25	113.60	99.50
Kiribati	0.95	4.11	3.60
Marshall Islands	1.43	6.19	5.42
Micronesia, Federated States of	2.61	11.30	9.89
Nauru	0.32	1.39	1.21
Palau	1.74	7.53	6.60
Papua New Guinea	25.20	109.10	96.18
Samoa	1.39	6.02	5.27
Solomon Islands	2.51	10.87	9.51
Tonga	0.00	0.00	0.00
Tuvalu	0.32	1.39	1.21
Vanuatu	2.98	12.90	11.30
Total	66.07	285.80	250.90

Source: Mc Master 2005.

The types of economic costs and benefits to the main stakeholder groups expected from information and communication technology (ICT) deregulation in the Pacific islands are outlined in Table 5.8.

Introducing competition also will lead to improved service quality and a more rapid increase in bandwidth. While the study did not estimate the monetary value of benefits from quality improvements—as gauged by consumers’ willingness to pay—it is likely to be substantial. For example, New Zealand’s experience with telecommunications deregulation showed that benefits from quality improvements may exceed those from lower call rates.²⁴

The longer-term dynamic impacts of deregulation and the development of competitive telecommunications markets will be most beneficial for private-sector development, trade, and investment promotion. They are expected to support the generation of an estimated 20,000 new jobs in ICT-enabled businesses, such as call centers and back-office services.

Table 5.8 Economic Benefits and Costs of Information and Communication Technology Deregulation in the Pacific

Group	Cost	Benefit
Urban Residential Consumers		<ul style="list-style-type: none"> • Reduced tariffs • Increased consumer surplus • Improvement in ICT service quality • Choice of providers
Rural Consumers	Slower expansion out of fixed-line network to isolated locations that are uneconomic	<ul style="list-style-type: none"> • Reduced cost of some ICT services • Improved quality of services • Introduction of new wireless services
Private Businesses		<ul style="list-style-type: none"> • Reduced business ICT costs • Businesses more competitive globally • Expanded use of Internet for business functions • Opportunities for new business process outsourcing contracts
Government and Other Public Utilities		<ul style="list-style-type: none"> • Reduced cost of ICT services for government departments and public enterprises • Improved Internet services and more rapid introduction of e-government • Increased government revenue from a more rapid growth of ICT total revenue
Regulator for ICT	Need to strengthen regulation to ensure strong competition on a level playing field	
Monopoly ICT Provider	<ul style="list-style-type: none"> • Loss of monopoly market power • Loss of opportunity to make supernormal profits • Pressure to reduce costs and excess staff • Lower incentive to invest in long-term capital infrastructure • Reduced capacity to repay loans for previous capital investment • Reduced market share • Strong price competition from new competitors • Need to improve productivity 	
New ICT Providers		<ul style="list-style-type: none"> • Opportunity to enter new profitable market • Opportunity to test new technology in small markets
Educational Institutions		<ul style="list-style-type: none"> • Reduced cost of Internet for e-learning

Source: Mc Master 2005.

ICT = information and communication technology

Regulatory Concerns and Costs

The good news is that international case studies show that a high standard of telecommunications market regulation can be achieved at minimal cost—usually less than 1% of total industry revenue—after introducing competition.

International experience also shows that there is no need to maintain a public telecommunications monopoly in order to cross-subsidize the supply of telecommunications services to rural areas and remote island communities.²⁵ Instead, universal service goals (of expanding services to rural areas) can be achieved by establishing a universal service fund to finance them. All telecommunications providers are required to contribute to it; the proceeds are used to finance contracting out the supply of universal service obligations to private sector providers.

The study indicates that there are likely to be substantial cost savings and economic benefits for the region if all FICs were to enact a common set of e-commerce laws. Most governments have recognized the need for new laws to support national ICT policy and ICT development plans. Cook Islands, Fiji Islands, and Tonga have made good progress in drafting a set of modern e-commerce laws benchmarked on international best practice.

One potentially significant cost would arise from modifying existing monopoly contracts. A number of FICs have recently renewed long-term monopoly contracts with major telecommunications providers. The economic costs and legal ramifications of modifying or breaking these contracts are not addressed in the study, but merit further examination.

Creating a Pacific regional telecommunications authority could result in significant benefits for the region.²⁶ Such a regional authority would promote liberalization and fair competition, harmonization of regulations and policies, universal service, fair pricing, access to advanced services, and overall sector development across the region. The benefits would stem from substantial economies of scale and other technical advantages from adopting a regional approach to industry regulation, especially as smaller FICs may be unable to attract professionally skilled ICT regulatory specialists to lead their national regulatory authorities.

Creation of Joint-Procurement of Petroleum Products

Overview

Most Pacific economies are heavily dependent on petroleum imports, which makes them particularly vulnerable to petroleum supply disruptions and price rises resulting from global and regional market conditions.

Although the size of this regional market is significant—about US\$100 million per annum at freight-on-board prices, it is not managed in a consolidated manner. The fragmented market, numerous players, and poor economies of scale have resulted in inefficiencies in the supply chain, asset redundancy, and underutilization of distribution vessels. This translates into high costs to end consumers.

In many of these countries, consumer protection mechanisms are in force, with price regulation (in the form of profit and price caps and petroleum pricing templates) attempting to mimic the presence of true competition and maintain fair and equitable prices. While this minimizes the price to consumers and avoids price gouging, it does not address costly flaws and inefficiencies in the supply chain.

The preliminary study by Jared Morris assessed the feasibility of regional and subregional initiatives designed to enable small island member countries to procure their vital petroleum needs more cost-effectively.²⁷ To this end, two basic options for intervention are examined qualitatively and quantitatively, and compared to the status quo.

1. **Regional Regulatory Agency.** Create a regional regulatory agency to:
 - Set regulations covering petroleum supply, storage, distribution, and usage in the entire region, including market failure, environmental, and health and safety issues for the industry; and
 - Implement and enforce these regulations.
2. **State-Owned enterprise (SOE) Operation of Petroleum Handling, Bulk Storage, and Local Distribution Assets:** An SOE would own and operate petroleum handling, bulk storage, and local distribution assets in each country, as a means to enable long-term, subregional cluster contracts for petroleum supply to be negotiated on more favorable terms. The key components of this option (compared with the status quo) are
 - creation of a regional regulatory agency to carry out the same role as

under option 1.

- secure public ownership and operation of petroleum terminal handling, bulk storage, and local distribution facilities in each small island member country as a prerequisite to the next component; and
- secure beneficial subregional petroleum supply arrangements for three subregional clusters of member countries, by creating a regional business advisory unit with the capacity to implement this strategy.

Practically, the unit would need to be part of the regulatory agency, but would require suitable governance arrangements to manage potential conflicts of interest.

The entrenched market dominance of a petroleum supplier in each small island country, and the absence of effective industry regulation, mean that establishing and enforcing an effective regulatory framework for the industry is a prerequisite to implementing this option.

Option 2 is relatively ambitious, but it sets the upper bounds of a range of possible variants.²⁸ While option 2 is likely to yield higher benefits, it would also entail higher risks. Chapter 4 case studies pointed out the risk of regional bodies undertaking market activities, and the need for clear commercial objectives and governance arrangements that keep costs at a minimum.

Rationale for Regional Intervention

Many small island states in the region face critical cost and supply constraints for petroleum products, due to both

- market failure in the procurement and supply of petroleum products, with a lack of effective competition for petroleum supplies—usually one dominant petroleum supplier in each country is able to extract a degree of monopoly rents—and a fragmented, inefficient supply chain; and
- regulatory failure, as a result of no effective regulation of this market to moderate the impact of market dominance, reflecting a lack of skilled, experienced regulators and inadequate regulatory frameworks.

Comparative analysis of the different options for intervention follows. The status quo is the counterfactual for this analysis.

1. **Regional Regulatory Agency.** Market failure justifies government intervention. But to counteract it effectively on a national basis requires more staff with a high level of skills and experience in regulatory policy and implementation than most small island states can individually provide. Creating a regional regulatory agency would enable all states to benefit collectively from economies of scale and scope in providing petroleum industry regulatory services for the entire region. This also would have the advantage of harmonizing the regulatory framework for the industry and ensuring greater consistency in applying and enforcing regulations.
2. **SOE Ownership and Operation of Bulk Terminal Facilities.** SOE ownership and operation of petroleum handling and storage facilities in individual countries is designed to ensure the contestability of long-run supply agreements, which is not feasible when a potential supplier also owns these assets. Operating the facilities could be part of a long-run petroleum supply contract, rather than carried out by an SOE.

Subregional petroleum supply agreements. Securing integrated, subregional petroleum agreement for clusters of countries has the potential to improve the purchasing power, shipping logistics, and supplier management framework.

A regional business advisory unit would be created as a separate but associated group within the regional regulatory body. The unit would formulate, negotiate, monitor, and implement appropriate long-run petroleum supply arrangements for subregional clusters of countries.

Nature of Benefits and Costs

The main benefits include avoided costs—such as supplier onshore costs—and financial price risks by adopting suitable hedging strategies. Savings would also comprise bulk procurement discounts, local tanker efficiency, and more effective price control.

The main costs associated with the options are

- construction of bulk terminal facilities;
- personnel costs for analysis of networks and clusters, and for brokerage;
- risk assurance process, including economic, safety, and environmental risks;
- price control and market monitoring support;

- terminal operating and maintenance; and
- supplier margins.

Qualitative Assessment of Intervention Options

Option 1, creating a regional regulatory agency, is expected to result in some price benefits because of improved regulatory performance from a better resourced, integrated approach to regulating market dominant suppliers. But it would not address the problem of unnecessarily high supply costs due to inefficiencies in the fragmented supply chain.

Option 2, particularly an integrated, subregional petroleum agreement for clusters of countries, is expected to result in some significant net benefits. In particular, it would enable contestability in letting long-run petroleum supply contracts and more efficient supply chains—both expected to result in lower-than-otherwise prices to petroleum end users. This, in turn, would generate a wider flow of subsequent benefits, including enhancing prospects for economic development in the region.

But option 2, by virtue of SOE ownership and operation of petroleum terminal facilities, also involves some high risks—i.e., undercapitalized, underfunded, or poorly managed SOEs—that need to be managed.

Quantitative Assessment of Options

Costs and benefits have been valued in real terms over 15 years, and the results are summarized in Table 5.9.²⁹ The streams of costs and benefits have then been discounted by a real discount rate of 7%, with sensitivity testing using discount rates of 4% and 10%.

Conclusions

The above results indicate that the status quo would incur opportunity costs over a 15-year period with an estimated NPV of about US\$27 million. The results for option 1 indicate a very small net benefit overall, with an NPV of about US\$0.1 million, as reflected in the estimated benefit-cost ratio (BCR) of only 1.01. In contrast, results for option 2 indicate sizable net benefits, with an NPV of about US\$104 million overall for the countries assessed, and an estimated BCR of 2.12.

While these results are preliminary and indicative only, they lead the report to recommend that the Forum Secretariat investigate further the possibilities and requirements for developing subregional bulk purchasing arrangements for clusters of countries.

Table 5.9: Net Benefits of Regional and Subregional Interventions: Petroleum Supply

STATUS QUO

Southern Cluster		Net Present Value	PV of Capital Costs	PV Total Costs	NPV Total Benefits	BCR
	Cook Islands	\$ (974,321)	\$ -	\$ (974,321)	\$ -	0.00
	Niue	\$ (622,483)	\$ -	\$ (622,483)	\$ -	0.00
	Cluster Summary	\$ (1,596,805)	\$ -	\$ (1,596,805)	\$ -	0.0
Northern Cluster		Net Present Value	PV of Capital Costs	PV Total Costs	NPV Total Benefits	BCR
	Federated States of Micronesia	\$ (18,693,083)	\$ -	\$ (18,693,083)	\$ -	0.00
	Palau	\$ (1,869,308)	\$ -	\$ (1,869,308)	\$ -	0.00
	Republic of Marshall Islands	\$ (2,868,294)	\$ -	\$ (2,868,294)	\$ -	0.00
	Nauru	\$ (124,497)	\$ -	\$ (124,497)	\$ -	0.00
	Cluster Summary	\$ (23,555,182)	\$ -	\$ (23,555,182)	\$ -	0.00
Central Cluster		Net Present Value	PV of Capital Costs	PV Total Costs	NPV Total Benefits	BCR
	Kiribati	\$ (1,522,946)	\$ -	\$ (1,522,946)	\$ -	0.00
	Tuvalu	\$ (121,790)	\$ -	\$ (121,790)	\$ -	0.00
	Cluster Summary	\$ (1,644,736)	\$ -	\$ (1,644,736)	\$ -	0.00
TOTAL (Status Quo)		\$ (26,796,722)	\$ -	\$ (26,796,722)	\$ -	0.00

REGIONAL REGULATORY FRAMEWORK - PRIVATE SECTOR

Southern Cluster		Net Present Value	PV of Capital Costs	PV Total Costs	NPV Total Benefits	BCR
	Cook Islands	\$ 145,461	\$ (46,729)	\$ (707,071)	\$ 852,531	1.21
	Niue	\$ 145,885	\$ -	\$ (34,237)	\$ 180,121	5.26
	Cluster Summary	\$ 291,346	\$ (46,729)	\$ (741,307)	\$ 1,032,653	1.4
Northern Cluster		Net Present Value	PV of Capital Costs	PV Total Costs	NPV Total Benefits	BCR
	Federated States of Micronesia	\$ (182,892)	\$ -	\$ (2,519,527)	\$ 2,336,635	0.93
	Palau	\$ (349,449)	\$ -	\$ (2,519,527)	\$ 2,170,078	0.86
	Republic of Marshall Islands	\$ (102,857)	\$ -	\$ (805,589)	\$ 702,732	0.87
	Nauru	\$ 210,895	\$ -	\$ (93,723)	\$ 304,618	3.25
	Cluster Summary	\$ (424,302)	\$ -	\$ (5,938,366)	\$ 5,514,063	0.93
Central Cluster		Net Present Value	PV of Capital Costs	PV Total Costs	NPV Total Benefits	BCR
	Kiribati	\$ 207,504	\$ (635,649)	\$ (635,649)	\$ 843,153	1.33
	Tuvalu	\$ 24,873	\$ -	\$ (54,406)	\$ 79,280	1.46
	Cluster Summary	\$ 232,377	\$ (635,649)	\$ (690,056)	\$ 922,433	1.34
TOTAL (Intervention Option 1)		\$ 99,420	\$ (682,378)	\$ (7,369,729)	\$ 7,469,149	1.01

REGIONAL REGULATORY FRAMEWORK - PUBLIC SECTOR

Southern Cluster		Net Present Value	PV of Capital Costs	PV Total Costs	NPV Total Benefits	BCR
	Cook Islands	Not Assessed	Not Assessed	Not Assessed	Not Assessed	-
	Niue	Not Assessed	Not Assessed	Not Assessed	Not Assessed	-
	Cluster Summary	\$ -	\$ -	\$ -	\$ -	-
Northern Cluster		Net Present Value	PV of Capital Costs	PV Total Costs	NPV Total Benefits	BCR
	Federated States of Micronesia	\$ 78,852,009	\$ (7,639,207)	\$ (58,217,229)	\$ 137,069,238	2.35
	Palau	Not Assessed	Not Assessed	Not Assessed	Not Assessed	-
	Republic of Marshall Islands	\$ 23,703,153	\$ (5,841,380)	\$ (17,643,682)	\$ 41,346,835	2.34
	Nauru	Not Assessed	Not Assessed	Not Assessed	Not Assessed	-
	Cluster Summary	\$ 102,555,161	\$ (13,480,587)	\$ (75,860,911)	\$ 178,416,072	2.35
Central Cluster		Net Present Value	PV of Capital Costs	PV Total Costs	NPV Total Benefits	BCR
	Kiribati	\$ 1,356,492	\$ (3,181,020)	\$ (10,533,172)	\$ 11,889,664	1.13
	Tuvalu	\$ 499,968	\$ (2,040,990)	\$ (6,589,841)	\$ 7,089,809	1.08
	Cluster Summary	\$ 1,856,461	\$ (5,222,011)	\$ (17,123,013)	\$ 18,979,474	1.11
TOTAL (Intervention Option 2)		\$ 104,411,622	\$ (18,702,598)	\$ (92,983,924)	\$ 197,395,546	2.12

BCR = benefit-cost ratio, NPV = net present value, PV = present value.

Creation of Pacific Aviation Security Office (PASO)

Overview

Aviation safety and security are vital public goods, especially for Pacific countries that consist of thousands of islands covering 30 million square kilometres of ocean. Modern air transport is essential for tourism and trade in the region, which enable economic growth and alleviation of poverty.

Even though the region's air transport systems are small, all aspects of their operations must meet international standards of aviation safety and security. These safety and security standards cover four separate but inter-dependent aspects: (i) flying operations, (ii) airworthiness, (iii) airports, and (iv) security. National civil aviation authorities are responsible for monitoring and certifying compliance by their airlines and/or airports with domestic and International Civil Aviation Organization standards and recommended practices.

Pacific countries, however, generally find it difficult to fulfill the required regulation and oversight nationally, due to diseconomies arising from their small size and the fragmented nature of the aviation industry in the region. All face severe financial limits and shortages of skilled personnel to perform these essential functions, and as a result have often failed to meet requirements. Noncompliance places safety and security at risk, and potentially jeopardizes continued international services.

Creating a regional organization to supply aviation security oversight functions for individual Pacific countries would allow them to take advantage of economies of scale and scope in securing the necessary level and quality of services for them to meet international standards. With technical support and policy advice from ADB, a group of these countries has already taken steps to create and implement a regional agency to provide aviation security services for the region—PASO. These countries are Fiji Islands, Kiribati, PNG, Samoa, Solomon Islands, and Vanuatu.

Case for Regional Provision of Aviation Security Services³⁰

All Pacific countries' systems for assuring and regulating aviation security need to be improved to ensure the ongoing viability of aviation in the region. The following are options to achieve the needed improvements:

1. **upgrading individual national capacities:** Full development of each national civil aviation authority (CAA) to provide sufficient capacity to meet standards fully;

2. **outsourcing:** Contracting most functions from independent service providers from more developed countries; and
3. **regional provision:** Development of a cooperative regional service capacity.

Comparative analysis of these options clearly shows why regional provision of aviation security services would benefit the region most.

1. **Upgrading Individual National Capacities:** Relying on individual country resources to meet minimum international standards would require each FIC to employ qualified inspectors in four specialized disciplines—flight operations, airworthiness, airports, and security—and upgrade the diverse legislative, regulatory, and institutional frameworks. While this may be achievable, the small scale of individual country operations would not require full-time employment of these specialists. The result would be excess national capacities and duplication of effort, with high operational costs.

2. **Upgrading Services by Contracting Out:** Relying on outsourcing to the extent needed to increase the level and quality of CAAs would cost far more than the present levels of national expenditures on outsourcing, which experience indicates are inadequate.

3. **Shared Regional Capacity:** By contrast, creation of a regional aviation security agency, such as PASO, would enable development of a shared regional capacity that can become self-sufficient and reduce the unit costs of service provision. The lower unit costs arise from reducing duplication, creating economies of scale and scope, harmonizing regulatory systems, and sharing scarce specialist personnel. For example, a total of five such specialists could provide the necessary services for all the countries that need them in the region.

Over time, a cooperative regional approach to aviation security is expected to be the most effective way to improve air transport safety and security in the region, rather than simply maintaining the status quo. Developing a critical mass of expertise in a regional aviation security body would allow a proactive, more robust approach to planning for the dynamic future needs of the aviation industry and its regulation.³¹ A proactive approach means systematically identifying and assessing potential future risks to the industry, and planning how best to avoid them or otherwise deal

with them. At present, CAAs typically have little choice but to react to problems as they arise.

Another benefit of a regional agency is that it could supply useful policy and operational advice to governments, as an adjunct to providing technical services. But if such advice is provided, care needs to be exercised to manage potential conflicts of interest that might arise through mixing regulatory execution and policy advice. Protocols can be established and regulate any such concerns.

Pacific Aviation Security Office

PASO now legally exists as a non-profit intergovernmental organization, but is yet to become fully operational. Its legal basis is the Pacific Islands Aviation Safety and Security Treaty. This treaty delegates national authority of national CAAs to PASO, and provides for supervision of its operations by the Intergovernmental Council of Directors, made up of representatives from each member country. The role of the Council of Directors is to set PASO's policies and monitor its implementation and enforcement of technical findings. In effect, PASO will become the technical branch of each national CAA, although implementation of PASO recommendations in each country will remain a national responsibility.

Analysis of Benefits and Costs

PASO is expected to result in the Pacific aviation sector meeting all international standards for civil aviation safety and security regulation and oversight. Creating a single regional organization that replaces and updates the current system of fragmented national authorities is expected to result in economies of scale and scope that will allow PASO to become self-financing and to lower costs and improve service quality.

PASO is expected to become self-financing within 5 years of becoming fully operational. Moreover, it is expected to do so while charging lower service fees than is possible on an equivalent basis via ad hoc outsourcing.

Those expected to benefit directly from PASO include

- governments of PASO member countries, which will be able to rationalize their CAA administrations and thereby lower public sector costs;

- the 43 commercial air transport companies operating a total of some 266 aircraft and employing nearly 4,000 licensed staff, through lower regulatory compliance costs and more responsive CAA services; and
- all users of air transport who will benefit from higher safety and security standards.

Indirect beneficiaries include stakeholders in the tourism industry and related earners, due to the lower risk of a serious aviation safety or security incident, with its attendant very high costs and potentially serious impact on tourism.

It is difficult to quantify the economic benefits of improved safety and security regulation and oversight, since the impact of the project is to reduce the probability of serious incidents of unknown frequency and magnitude. However, some indications of the potential impacts of noncompliance are provided by comparable experiences. Major international air disasters cause approximately a 10% decline in aviation for about a year in ADB developing member countries. Since tourism is responsible for about 20% of the Fiji Islands' GDP, for example, this could be equivalent to a loss of 2.5% of gross domestic product (GDP) per year. Denial of international services (if, for example, flights from Australia and New Zealand were prohibited due to noncompliance with regulations) could have an even greater impact. Given that tourism employs large numbers of low-skilled workers, including a high proportion of women, the potential negative social impacts would be even higher and more widespread.

ADB estimated that cost saving and quality increases associated with PASO, as compared with ad hoc outsourcing, would have resulted in an economic internal rate of return of 27% with Tonga included as a member of PASO.³² Following the liquidation of its airline, Tonga withdrew from PASO membership, with impacts on the project that are as yet unclear. While it can be expected to reduce PASO's variable costs, it will mean that the main overhead costs will be spread over fewer members, thereby increasing the costs per member. Even so, PASO is still expected to yield a significant internal rate of return.

Sustainable Development

Sustainable development is a broad field covering human development, culture, society, and sustainable natural resource management, among other areas. Within the wide range of possible initiatives, this study highlights two that can help promote Pacific regional identity—a regional sports institute, and a regional intellectual property rights office. A strategic initiative is also highlighted that underpins work toward all human development objectives, including the Millennium Development Goals—a regional statistics office.

Creation of Regional Sports Institute

Overview

Sports can play an important role in fostering economic development and social well-being in FICs, as recognized in the current Pacific Plan. At a social level, encouraging widespread, active community participation in sports can improve health outcomes (both physical and psychological), enhance productiveness, reduce antisocial behavior, and generally foster social cohesion. At an elite and professional level, sports can generate economic benefits stemming from individual or team participation in professional sports in developed countries or top-level international sports events.

Frequent sports interaction and competition between individuals and teams, together with suitable sports facilities and expert training, can significantly enhance the potential development and benefits achievable from sports activities. The ability of many FICs to realize this potential, however, is currently severely limited. Their populations are small and widely dispersed. Additionally, most have limited sports facilities and coaching expertise, and few opportunities for sports interaction with people from other islands.

Creation of the Regional Sports Institute is proposed as a means whereby FICs, by acting together, could help realize the potential economic, social, and health benefits to the region from sports. Possible benefits and costs to the region of creating such a facility have been broadly canvassed in a preliminary study commissioned for this report from the Secretariat of the Oceania National Olympic Committees (ONOC).³³

The Role of the Regional Sports Institute

The primary role of the Regional Sports Institute would be to support

existing regional sports training centers, and similar facilities at the national level. Logistically, it would seem sensible to establish the regional institute as an integral part of the University of the South Pacific network.

As envisaged in the ONOC study, a regional sports institute would focus primarily on developing elite sportsmen and sportswomen as well as their coaches and administrators. It would evolve specialist centers of excellence, and make use of the facilities, talent, and expertise as and where they are already in place. Initial emphasis would likely be on a limited number of sports, probably those with the most popular appeal to young people, current athletes, spectators, sponsors, and broadcasters.

The study emphasizes that before a comprehensive assessment of the likely net benefits of creating such a facility can be undertaken, the following issues would need to be resolved:

- the exact role of the regional sports institute,
- its location, and
- the extent to which its functions should be decentralized.

Qualitative and Quantitative Assessment of Benefits

The study's discussion of the likely benefits and costs of creating a regional sports institute is very general and, at this stage, lacks substantive empirical support. This reflects a general lack of such evidence about the impacts of sports, or sports institutes, on the economic and social well-being of FICs or other developing countries.

While the study envisages the regional sports institute would focus on achieving top-level sporting performances, it cautions that a large base of participation is vital for achieving real success in sports, in terms of the economic and social benefits to the community that make investment in sport truly worthwhile. Achieving this will be a challenge for FICs. To illustrate the kind of positive benefits a regional sports institute could yield in terms of economic production, the study mentions a September 2004 report by the Western Australia Government, which found that “every dollar invested by the State in its Community and Sporting Recreation Fund generated A\$2.36 in direct activity and A\$6.51 in total activity.”

The study implies that creating the proposed Pacific island regional sports institute would help improve public health outcomes by providing incentives for FIC residents to participate actively in sports activities and,

thereby, reduce the risk of health problems well known to arise from physical inactivity. As an indication of potentially "large" health-related economic benefits from such a facility, the study estimates roughly that it could generate "an economic benefit to the region well in excess of US\$10 million."³⁴ The study notes US research in 1999 estimating that every "US\$1.00 spent on physical activity results in a US\$3.20 saving in medical costs."

Qualitative and Quantitative Assessment of Costs

The main costs would comprise substantial funding for incremental and extra capital works for venues, accommodation, and transport, and a "generous" budget for operational purposes for the first 5 years of business. An annual budget of US\$30–\$50 million is suggested as an approximate estimate of the amount required. The study suggests that this amount is on a par with the current economic benefits thought to be already flowing into the region annually as a direct result of FICs' involvement in sports.

Conclusion

To advance the idea of creating a Pacific island regional sports institute for FICs will require further consideration of several crucial issues, including the underlying objectives for the facility, the scope and prime focus of its role, where it would be located, and the extent to which its functions would best be decentralized (and where). Resolving such issues would enable a fuller, more rigorous assessment of the case for creating a facility. These decisions will also allow for a more systematic analysis of its potential benefits.

Creation of a Regional Statistical Office

Overview

Relevant, reliable, and timely statistical information is an essential element in informed decision making by FIC governments. Such data provide government policy makers and advisors an objective basis to assess social and economic developments. Statistics also help to indicate the need for policy intervention, and the impact of existing interventions. Persons in business and private sector investors often use statistics to help them assess the merits of potential business or investment opportunities. For example, statistics can be used to derive plausible assumptions to underpin analysis of a business opportunity.

Typically, however, FICs find it difficult to attract and retain staff with the necessary skills and experience for compiling and updating the range of statistics needed.

Two possible options are reviewed for creating a regional statistical office to complement those provided nationally by FICs.³⁵ The discussion is based on a recent preliminary study commissioned for this report from Michael Andrews.³⁶ Links to the Regional Economic and Statistical TA Facility proposal discussed earlier in this chapter are acknowledged. The scope of statistical tasks discussed here is significantly broader than for that proposal. Nevertheless, the relationship between the two proposals would need to be kept under careful review.

Options for Creating a Regional Statistical Office

Comprehensive Regional Statistical Office. This office would undertake all aspects of statistical functions, such as: (i) collecting base data, like carrying out censuses and other surveys; (ii) compiling “middle level” statistics, such as on migration, employment, external trade, and a consumer price index; (iii) compiling economic statistics required by the IMF; and (iv) compiling social statistics required for poverty studies and the measurement of progress toward the Millennium Development Goals.

Specialist Regional Statistical Office. This office would specialize in a narrower range of functions, such as compiling (i) high-level analytical economic and social statistics, like national accounts and balance-of-payments data, price indexes, and productivity measures; and (ii) major social and economic surveys and data indicators, such as data needed for the Millennium Development Goals presentations. In addition, the office could advise national statistical offices on basic data collection methodology, including development of censuses and household or industry surveys. If adequately funded, the office could take over some statistical activities, particularly balance-of-payments data, now handled by central banks.

By far the preeminent provider (apart from donors) of statistics for the region is the SPC, which both maintains a regional online database Pacific Regional Information System (PRISM) and provides technical assistance to member countries. SPC thus essentially fulfills a number of tasks outlined above. Upgrading SPC's capacity to fulfill a wider range of functions may be an option for a regional statistical body.

Qualitative and Quantitative Assessment of Benefits and Costs

The preliminary study identifies the following potential benefits of implementing either of the above two options for a regional statistical office:

- **greater comparability of statistics** between countries in the region, resulting from opportunities for the office to apply consistent methodologies, classifications, legislation, revisions policy, etc.;
- **more reliable, timely, and accessible statistics:** The publication of such data on a common website may raise the quality (accuracy, consistency, timeliness) and dissemination of major economic and social statistics to national policy makers and the general public, thus improving the economic and social debate in the Pacific region;
- **enhanced management of statistical functions:** The standard of administration of statistical organizations in the Pacific region may be improved by greater attention to priorities, staff recruitment, and training and career paths of national statisticians; and
- **focus to attract development assistance:** The organization would also provide donors with an obvious mechanism for the focus of coordinated assistance to statistics development in the Pacific.

As an indication of the potential value of these benefits, if it is assumed that improved statistical data contributed to better decision making, which, in turn, increased GDP by only 0.1%, the annual flow of benefits to FICs would amount to about US\$7 million.

Of the two options, the specialist regional office is favored for several reasons. First, and most importantly, it would be likely to achieve quality improvements in economic and social statistics more quickly. Second, it may be more practicable in view of the difficulty of coordinating all data collections for FICs. As a result, the specialist option is seen as likely to be the more realistic, at least in the near term.

The total annual cost of FICs' existing statistical services is estimated to be in the range of US\$7.5–10 million, of which about 60% is funded by FICs.

The comprehensive regional statistical office is estimated to entail an extra cost of about US\$4–5 million annually, in addition to the aggregate cost of FICs' existing statistical services, for a total annual cost of US\$13–15 million. Simply pooling existing resources in the region thus would not be

sufficient to meet the full costs of providing effective statistical services for FICs in the region.

Table 5.10 indicates that a specialist regional statistical office would involve an estimated total annual cost of about US\$5.5 million.

Issues

Establishment of either a specialist or comprehensive regional organization would require attention to a number of issues, many of which relate to the national and regional structure of responsibilities that would need to be resolved.

- **Legislation and Management Issues.** These are confidentiality, compulsory supply of data, ownership of source and output data, regional vs. national priorities, coordination with donors and TA providers, and solutions to statistical problems involving organizations other than national statistical offices (NSOs).

Table 5.10: Estimated Total Cost of Specialist Regional Statistical Office (US\$'000)

Cost Item	Number of Staff	Costs
Supervisor and Deputy	2	150
Managerial Advisors (statistics, law, planning, advocacy, etc.)	2	80
Source Data Specialists (e.g., survey design, processing systems development, supervision of survey staff, logistics, survey validation and analysis, etc.)	10	400
National Accounts Specialists	3	150
Balance-of-Payments/IIP Specialists	3	150
Publications and Publicity Specialists	1	40
Social Statistics Specialists	5	250
Support Staff	4	80
Steering Committee		50
Communications		4
Travel		200
Other		6
Subtotal	30	1,560
External Advisors		4,000
Total		5,560

Source: Andrews 2005.

- **Diversity of FICs and Existing Statistical Operations:** FICs' differing size, physical characteristics, etc., and the differing size and capabilities of statistics operations, spread across different organizations, etc. Diversity may necessitate varied solutions.
- **Staffing:** Qualified staff are scarce and in high demand, and higher salaries are available in other agencies. Staffing a regional statistics office with existing NSO staff would have serious implications for the remaining functions of NSOs.
- **Existing TA Providers:** These have a strong affinity with SPC, with regional statisticians recently requesting that SPC create more economic statistics positions. Also, the proposed upgrade of Pacific Financial Technical Assistance Centre (PFTAC) would undoubtedly play a complementary role in the provision of data and analysis outputs. Overlaps in their functions must be avoided.

Creation of Regional Office to Protect Intellectual Property Rights

Overview

Protecting intellectual property rights (IPRs) may not, at first glance, seem an important issue for small Pacific countries, in contrast to industrialized countries. But the issue is relevant for FICs, due to the Trade Related Aspects of Intellectual Property Rights (TRIPS) agreement reached during the Uruguay round of the GATT. This international agreement calls for the standardization of IPR protection among all members of the WTO and potential new entrants. It effectively requires all developing countries that are WTO members to raise their intellectual property protection level to the standard in force in industrialized countries at the time of negotiation. The requirement is thus a condition of WTO membership.

Fiji Islands, PNG, and Solomon Islands are already WTO members, and Samoa and Tonga have WTO observer status—a precursor to possible future membership. These five countries clearly have an interest in meeting the TRIPS international standard in the most cost-effective way. Each currently has national laws and systems in place to protect IPRs, although they do not yet comply fully with international standards.

For these five FICs at least—and in time others—it is worthwhile assessing the likely net benefits of creating a regional office to provide IP services more cost-effectively in the region. The aim would be to avoid duplication of services and take advantage of potential economies of scale

and scope in order to reduce service and compliance costs in the region by harmonizing IP standards and procedures.

In a study commissioned for this report,³⁷ Susan Farquhar reviewed IPR systems in place in four of the above-mentioned five FICs (Fiji Islands, PNG, Samoa, and Tonga), and assessed the likely financial impact of several options for creating a regional IP facility. The main findings of her cost-benefit analysis are summarized below.

Main Components of IPR Protection

IPR elements include copyright, patents, trademarks, industrial designs, circuit layouts, geographical indications, protection of undisclosed information, and control of anticompetitive practices in contractual licenses. The most important of these for the four FICs reviewed are copyright and trademarks.³⁸ Systems to protect these IPRs are essentially as follows.

- **Copyright** is generally protected as an automatic right, requiring no application process leading to registration.
- **Trademarks** (along with patents and industrial design), on the other hand, are granted on the basis of an application and examination process, consisting of at least an assessment of compliance with formality requirements and usually also an assessment of compliance with substantive requirements for registration.

The main focus for a regional IP office should therefore be the administration of trademark applications and registrations, with the capacity for their examination as to formality and substantive requirements, and only formal examination of what patent applications might be received.

Current State of IP Operations in Fiji Islands, Samoa, Tonga, and PNG

The IP operations of three of the four countries studied (Fiji Islands, Samoa, and Tonga) may be characterized as having limited resources in both staff and operational equipment, lacking modern administration systems and record management, and largely lacking in relevant personnel skills and training.

PNG differs from the other three in that it has an agency with sole responsibility for IP, and does not have dual responsibility for other registration systems, such as company and business names. The PNG IP office is adequately resourced and is meeting its national requirements efficiently and effectively. It has a modern computerized system for administering

trademark applications and registrations and for monitoring the time frames and deadlines associated with their processing. Its staff has high entry-level qualifications and receive adequate training in IP operations.

Options for Creating a Regional IP Office

The preliminary study examined four options for creating a regional IP facility. The options differ in terms of (i) partial or full devolution of national functions (except for enforcement) to the regional office; and (ii) whether the regional office is created from scratch as a new entity, or by transforming an existing national IP office that is already well developed.

The options analyzed relative to the status quo (Option 1) are

- **Option 2: Partial devolution** of national IP functions to an existing agency mandated to act for FICs regionally—i.e., receive and process IP applications up to the point of granting registration, but with national agencies still deciding whether to grant registration;
- **Option 3: Partial devolution** of these national IP functions, as in Option 2, but to a new regional facility created to act for FICs regionally;
- **Option 4: Full devolution** of national IP functions, including registration decisions, to an existing agency mandated to act for FIC regionally; and
- **Option 5: Full devolution** of national IP functions, including registration decisions—as in Option 4—but to a new regional facility created to act for FICs regionally. National agencies would be disbanded.

Qualitative Assessment of Options

Partially devolving national IP functions to a regional office (options 2 and 3) would yield similar benefits in terms of reducing duplication of work in national offices, reducing costs to applicants, harmonizing standards, and optimizing IP skills and resources. The main difference between them is that the setup cost of creating a new office from scratch would be considerably greater. If an existing IP office were to be mandated to act regionally for FICs, as envisaged in Option 2, PNG's dedicated national office (Intellectual Property Office of PNG) would be well placed to take on the role of a regional office.

Fully devolving national IP functions to a regional office (options 4 and 5) would be the most complex and costly to establish, but once established would provide the most efficient and effective regional administration of IPRs, with greatest benefits to users of the system. A single application

would have effect throughout the region, with consequential simplification and cost reduction of registration, renewal, assignment, and other procedural actions.

For local users of the IP system some form of regional processing of IP applications (whether option 2, 3, or 4) will bring benefits in the form of simpler application procedures. Ideally this would be a single application for the relevant IPR, which would be examined centrally and then, if eligible for registration, could result in protection throughout the region, instead of multiple applications with often varying standards of registrability for the same IPR. The fourth option would bring the additional benefits for IPR owners of single granting and renewal processes instead of the multiple processes required for nationally granted and maintained IPRs.

Quantitative Assessment of Options

The preliminary study undertook an analysis of the changes—compared with the status quo—in financial flows estimated for each of the above four options for providing IP services on a regional basis on behalf of Fiji Islands, PNG, Samoa, and Tonga. The analysis is based on a detailed series of plausible assumptions about the likely changes in staff and costs under the options relative to the status quo.

Based on estimated costs, the study estimates the cost recovery period (in nominal dollar terms) for each of the options as shown in Table 5.11. The income from the collective management of the rights in musical and literary works, as well as that of related rights, would start in the region of half a million US dollars, rising to US\$1 million per annum. There would be benefits in the form of annual costs savings, starting at US\$24,000 (partial devolution, with an existing IPR agency) and rising to US\$61,000 (full devolution, with a new IPR agency).

Wider Economic Benefits

The study was unable to address the wider, much-debated, but difficult issue of how effective protection of IPRs would contribute to FICs' economic well being. For example, there is a long-running international debate about whether industrialized countries are the main economic beneficiaries of IPRs at the expense of consumers in developing countries.³⁹ One of the major issues in the debate is whether the costs of IPRs for consumers in developing countries is more than offset by direct foreign investments in such countries which is encouraged by IPR protection.

Table 5.11: Cost Recovery Period for Regional International Property Rights Office Options (years)

Option	Cost Recovery Period
Status Quo	
Partial Devolution, with Existing Agency	2
Partial Devolution, with New Agency	15
Full Devolution, with Existing Agency	2
Full Devolution, with New Agency	4

Source: Farquhar 2005.

But regardless of the answer to this wider question, the fact remains that FICs that wish to gain the benefits of WTO membership will need to bring their IPR protection systems up to international (TRIPS) standards. Finding the most cost-effective, acceptable way of doing so—e.g., one of the above four regional options—should be of more than a passing interest to these countries.

Security

The protection of personal safety, freedom of speech, the upholding of fundamental human rights, liberty to travel without undue restriction, and protection of legitimate property rights, affect the economic and social well-being of FICs. The maintenance of law and order is one important contributor to producing national and regional security outcomes, which are true “public goods” (as discussed earlier). As with all such public goods, public financing of their provision is required as it is impracticable to charge beneficiaries for their enjoyment of such security.

Examined below is the potential for FICs to intervene collectively to create a regional training facility to supply services that would contribute directly to achieving international security, with potential spillover benefits for countries in the region.

Creation of Police Training Facility for External Peacekeeping

Overview

One possible area where regional intervention may be able to enhance the economic and social well-being of FICs is in pooling resources to create a regional training facility to supply civilian police training for international peacekeeping. While the prime beneficiaries of deploying these police in

peacekeeping operations overseas would be the residents of the host country, FICs could also benefit directly from the supply of more skilled and widely experienced police in FICs when these peacekeepers return home. The increased level of FIC peacekeepers deployed would also yield private benefits such as extra income for peacekeepers and their families during deployments and secondary effects on the economy, including collection of extra taxes.

The Pacific Islands Chiefs of Police (PICP) Secretariat was commissioned for this report to study the benefits and costs to the region of creating such a regional training facility.⁴⁰

Envisaged Regional Police Training

This potential regional intervention entails creating a police-peacekeeper training facility to equip existing FIC police officers with the skills necessary to fulfill international peacekeeping duties.⁴¹ The essential idea is to create within the ranks of FICs' national police forces a pool of officers who have been trained and attained the requisite skills for police-peacekeeping duties as part of an international peacekeeping deployment group. While officers from this regional pool were deployed overseas, their positions in the national police forces would be filled by other police officers. When officers return home at the end of a peacekeeping tour of duty (assumed to be 1 year), they would be reabsorbed into their respective police forces.

This pool of trained police peacekeepers would provide a potential regional response capability from which to draw upon as required internationally, subject to the requirements of national policing. The pool would not be a special "standing police force" group.

Key Assumptions for Assessment Purposes

For the purposes of assessing the costs and benefits of this potential regional intervention, the PICP study used the following assumptions.

- **Location of Training Facility:** A regional police-peacekeeper training center would be established in a FIC, most likely the Fiji Islands given its size, infrastructure, support services, and status as an international air transport hub.⁴² As discussed below, facilities could be shared with other regional police or legal training programs.
- **Eligibility Criteria:** Nominees for this training would be accepted only if they clearly already have sufficient skills that training would be expected to enhance to meet United Nations (UN) standards

for police-peacekeeping deployment, including language as well as basic police skills.

- **Training Capacity.** The regional facility would run one training course at a time, with a duration of 4 weeks and catering to up to 50 trainees.
- **Target Response-Capability Pool.** The target outcome of the intervention would be to enable the region to develop and maintain a total police-peacekeeping response capability of 250 civilian police members who would be available for deployment at any one time.

Qualitative and Quantitative Assessment of Benefits and Costs

The study identifies three beneficial outcomes arising from the proposal.

1. **Improved Social and Economic Well-Being for Overseas Trouble Spots:** Law and order and peace would be restored in other areas of the world where peace is fragile, thereby helping provide a climate in which improved social and economic well-being is possible for residents of those areas.
2. **Extra Income for FICs:** The deployment of civilian police-peacekeepers from FICs would result in extra private income by those deployed in international peacekeeping missions, benefiting them and their families at home via remittances, and yielding additional tax income for FIC governments.
3. **Increased National Police Capabilities for FICs:** Both the training and actual international-peacekeeping experience would enhance the ability of the pool of police-peacekeeping graduates to serve their own communities as police officers when not overseas on a peacekeeping mission.

While the first set of benefits are important, from a regional perspective they should be excluded from consideration, except to the extent that contributing to peace abroad also contributes indirectly to peace in the Pacific region. Measuring the value of the latter contribution would be very difficult.

The study suggests that a Pacific peacekeeping force of 250 officers has the potential to yield about US\$3 million per annum in extra private income as remittances home by these officers and savings from salary. It sees this extra income entering FIC economies and leading to wider economic benefits to local communities, including extra tax revenue.

The study notes that creating a regional civilian police-peacekeeping training facility in an FIC would also provide an opportunity to make

broader use of the facility for general police training in FICs. Additionally, the practical benefits of common training would be further enhanced through delivery to multiple agencies, and multiple disciplines, in a multi-agency environment, such as a regional law enforcement training center. The study was unable to estimate the likely value of such benefits, however.

Costs

The study identifies two main sets of costs arising from this potential regional intervention:

- training facility setup and operating costs, or the direct costs of establishing and operating the training facility, including intraregional travel to and from the facility, and living costs during training; and
- backfill costs—the costs of “backfilling” police positions vacated by members of the pool while deployed on international peacekeeping missions.

Table 5.12 shows estimates of these costs.

A major issue for individual FICs initially would be to recruit and train enough new police officers to backfill personnel deployed on peacekeeping missions.

Another issue that could arise is that staff in the police-peacekeeping pool, in light of their exposure to opportunities overseas, may be interested and able to exit from policing in the region and seek what they see as more lucrative opportunities elsewhere. This is a risk that would need to be managed by national police administrations.

Who pays?

The income generated through deployment in overseas civilian police peacekeeping missions would not be sufficient to recover the costs. This is mainly because the funds generated in payments to officers on peacekeeping missions would be paid to the officers themselves, not to the government of the country providing them. The study states that even if a percentage of the payment were deducted to offset development and operating costs of the facility, this is unlikely to be sufficient to achieve cost recovery within a reasonable time frame.

Table 5.12: Cost of Establishing and Operating a Regional Police-Peacekeeping Training Facility (US\$ million)

Activity	Initial Cost	Ongoing Costs
Construct self-contained training facility	10.00	1.5
Salary/backfill costs @ US\$6,000 per person per annum	1.50	1.5
Airfares (return economy) @ US\$1,500 per person	0.225	0.225
Meals/incidental costs @ US\$30 per person per day	2.80	2.80
Uniform and equipment @ US\$500 per person	0.125	0.125
Training costs (including training staff) @ US\$500 per day x 200 days	1.00	1.00
Training Center personnel costs (excluding training staff) x 10 persons @ US\$35,000 per annum	0.350	0.350
Vehicle leasing costs	0.150	0.150
Computer leasing costs	0.125	0.125
Predeployment costs—Selection Criteria (6 x PIC) @ US\$5,000	0.030	0.030
Deployment costs (airfares return economy) @ US\$2,000 per person	0.50	0.50
Total Costs	16.805	8.305

PIC = Pacific country.

Donor funding, therefore, would be required, both to establish the regional training center and also to finance its ongoing operational costs. In reaching this conclusion, the study presumes that no individual FIC would consider a long-term, ongoing financial commitment to support this potential intervention. The study envisages that once the training facility is operating, the UN might fund its recurrent costs, although no approach has been made to the UN.

The study concludes that without initial and ongoing direct financial support, the envisaged regional police-peacekeeper training facility would not be financially sustainable. In light of the study's findings, the likely net benefit to FICs of exporting civilian police-peacekeeping services is uncertain, and intervention feasibility would be dependent on financing by other parties.

Summary of Indicative Costs and Benefits of Potential Regional Interventions

	Regional Intervention	Expected Costs (Indicative)	Expected Benefits (Indicative)
1	GOOD GOVERNANCE		
1.1	<i>Regional Economics and Statistical TA Facility:</i> Merger of currently dispersed economics and statistical TA resources into one regional TA facility to bolster national capacities	An indicative estimate of the cost of such a merger is about F\$8 million per annum.	While there is <i>no panacea</i> for good governance, these four potential regional interventions—both individually and together—could help encourage open and accountable public-sector management practice.
1.2	<i>Regional Customs Facility:</i> An <i>independent</i> regional customs inspection team to complement national agency roles by providing on-the-spot inspections of customs practices and related training, and by sharing information	An indicative estimate of cost of independent inspection team based in 1 FIC & visiting others for on-the-spot inspections and training calculated to be about F\$1million per annum.	Strengthening public-sector governance in this way could be expected to lead to more effective public-sector action and public-expenditure outcomes.
1.3	<i>Regional Panel of Auditors:</i> Strengthen phased in a manner of FIC national public-sector audit capabilities via: (i) training and common standards ; (ii) creating an OAG federation and funding regional training through it; and (iii) perhaps then creating a regional panel of auditors that could audit regional agencies	An indicative estimate of strengthening phases is calculated be Phase 1 = about F\$2.3 million Phase 1–2 = about F\$29.0 million Phases 1–3 = about F\$40.0 million.	These interventions could help FICs avoid the potential high economic costs of poor governance—in terms of future GDP foregone—estimated to potentially total some US\$13 billion over 10 years for 3 FICs alone (i.e. PNG, Fiji Islands, and Solomon Islands). These particular cases were studied in view of their past governance failure.
1.4	<i>Regional Ombudsman Office:</i> Create an <i>independent</i> regional ombudsman office to hear citizens' complaints about public-sector actions and decisions in FICs with no such office, and to recommend how to resolve them	Salary costs at F\$200,000 (including administrative support) for a single resident ombudsman. Additional costs of country visits and hiring of short-term experts (if needed) should not exceed F\$300,000, for total annual costs of F\$500,000.	

	Regional Intervention	Expected Costs (Indicative)	Expected Benefits (Indicative)
2	ECONOMIC GROWTH		
2.1	<i>Liberalize regional labor markets.</i> Increase quotas of unskilled workers from FICs to work in Australia and New Zealand on a temporary basis. Promote sector-specific arrangements for skilled and semiskilled labor.	Cost for regional skills development in FICs would be significant initially (see 2.2), but would return net economic benefits over time. Welfare losses for FICs due to lost skills of US\$490 million over 3 years.	Total welfare benefits of US\$1.1 billion over 3 years. Private benefits for Pacific Islanders of US\$1.5 billion over 3 years. Welfare benefits to Australia and New Zealand of US\$326 million
2.2	<i>Pacific Regional Nurse training Facility:</i> Create a publicly funded regional nurse training facility primarily to train nurses to standards that would enable them to work offshore where nurses are in short supply.	Estimated total cost of tuition fees per nurse graduate at the proposed Pacific island regional facility would have an NPV of about F\$33,100 (@ a 3% discount rate).	By contrast, a nurse graduate's extra income due to training at this regional facility and 10 years employment overseas as a nurse is estimated to have an NPV of about F\$200,000.
2.3	<i>Further Harmonization of Fisheries Access Arrangements:</i> (i) Review whether more harmonization of fisheries access fees would create more value for FICs jointly; (ii) Adopt open, audited register of all bilateral fisheries access arrangements (including fees); and (iii) Review longer-term sustainability of FICs' current basis for access fees charged.	Analysis of reviews of existing fisheries access arrangements and the development of the WCPTC—which includes coastal FIC states and DWFNs—raises questions about the <i>opportunity cost</i> of the status quo continuing and, indeed, its <i>sustainability</i> over the longer term.	The suggested reviews —and the creation of an open, audited register of bilateral fisheries access arrangements of all FICs—are expected to enable answers to these questions, and enable informed proactive action to improve public economic benefits from fisheries.
2.4	<i>Liberalization of Telecommunications Market:</i> Create a regional telecommunications authority to promote in FICs telecom market liberalization, fair competition, harmonized regulations and policies, universal service, and fair pricing.	Study suggests that the costs of regulatory changes envisaged would be quite small.	Market liberalization as envisaged would benefit FIC consumers over a 5-year period by an estimated US\$285 million (@ 5% discount rate).

	Regional Intervention	Expected Costs (Indicative)	Expected Benefits (Indicative)
2.5	<i>Joint Procurement of Petroleum Products:</i> Create: (i) a regional regulatory agency to regulate private petroleum suppliers; and (ii) SOE ownership and operation in FICs of petroleum terminal facilities, and subregional bulk petroleum supply arrangements.	If the status quo petroleum supply situation for all FICs continues over the next 15 years, <i>total opportunity cost</i> for them estimated to be about US\$27 million in NPV.	Creating the regional regulatory agency alone is estimated to yield a very small total net benefit, with an NPV of about US\$0.1 million. But implementing both stages, would yield a sizable total net benefit, with an NPV of about US\$104 million for the countries assessed.
2.6	<i>Pacific Aviation Security Office (PASO):</i> Create and operate PASO—a regional agency to provide aviation security services for the region, encompassing airworthiness, flight operations, security and aerodromes.	Estimated total cost of the PASO operations with 6 member countries is estimated to be about US\$800,000 per annum (initially about US\$900,000 per annum, before the withdrawal of 1 member).	PASO is a more cost-effective solution to the need for better safety and security regulation in FICs. It was estimated to yield cost savings of 10% yearly with 7 members, and total savings with an NPV of about US\$458,000 over 20 years, for an internal rate of return of 27%. With 1 less member, cost savings will be smaller, but sizeable positive net benefit.

	Regional Intervention	Expected Costs (Indicative)	Expected Benefits (Indicative)
3	SUSTAINABLE DEVELOPMENT		
3.1	<i>Regional Sports Institute:</i> Create a regional sports institute to support (i) <i>sports-specific regional training centres;</i> and (ii) <i>national sport-development units</i> in FICs.	Study suggests that US\$30–50 million yearly would be needed to fund extra <i>costs of capital works</i> for venues, <i>accommodation,</i> and <i>transport</i> and <i>other operational expenses</i> for the first 5 years of sports institute's operations.	Study estimated that the regional sports institute could generate health-related economic benefits to the region well in excess of US\$10 million. Study also suggested that the estimated costs of the institute would be similar in amount the economic benefits already believed to be flowing into the region annually as a direct result of FICs sports involvement.
3.2	<i>Regional Statistical Office:</i> Create: (i) a comprehensive regional statistical office including all aspects of statistical functions; or (ii) specialist regional statistical office with a narrower, more specialized range of functions to complement national statistical services.	Total cost of these two regional statistical office options estimated at comprehensive office = between US\$13million and US\$15 million per annum, specialist office = about US\$5.5 million per annum.	Either intervention's main benefits would be: (i) greater comparability of statistics between FICs; (ii) more reliable, timely, and accessible statistics; (iii) better management of statistical functions; and (iv) a focus to attract development assistance. These results would be expected to lead to better public-sector management decisions in FICs and, thereby, better economic and social outcomes.
3.3	<i>Regional Office for Intellectual Property Rights (IPR):</i> Create Pacific island regional IPR office with partial or full devolution of national functions, in conjunction with an existing IPR agency or as a new one.	Estimated <i>range</i> of costs of these regional IPR office options would be: Partial devolution, with an existing IPR agency: initial <i>extra one-time</i> cost of about US\$80,000. Full devolution, with a new IPR agency: Initial <i>extra one-time</i> cost of about US\$410,000.	Corresponding to the extra one-time cost, estimated benefits in the form of ongoing costs saving, viz: Partial devolution, with existing IPR agency: <i>ongoing cost savings</i> of US\$24,000 per annum. Full devolution, with a new IPR agency: <i>ongoing cost savings</i> of US\$61,000 per annum.

	Regional Intervention	Expected Costs (Indicative)	Expected Benefits (Indicative)
4	SECURITY		
4.1	<i>Regional Training Facility for Police Peacekeepers:</i> Pool resources to create a regional training facility to provide a response capability of 250 civilian-police for international peacekeeping duties.	<i>Initial one-time cost</i> of this facility would be about US\$17 million, and have an <i>ongoing cost</i> of about US\$8 million per annum.	<i>Private benefits</i> in the form of remittances home total an estimated US\$3 million per annum. Without external funding, the benefits did not cover costs.

FIC = Forum island country, F\$ = Fijian dollars, GDP = gross domestic product, IPR = intellectual property rights, NPV = net present value, OAG = Office of the Auditor General, PNG = Papua New Guinea, SOE = state-owned enterprise, TA = technical assistance, US\$ = United States dollar, WCPIC = Western Central Pacific Tuna Commission, @ = at, & = and.

ENDNOTES

- 1 The independent studies, or working papers, are listed at Appendix 1 and can be viewed on the web site of the Asian Development Bank (ADB) (www.adb.org/publications) or at www.pacificplan.org.
- 2 Adapted from Boardman, A.E., D.H. Greenberg, A.R. Vining, and D.L. Weimer. 1996. *Cost-Benefit Analysis: Concepts and Practice*. Prentice Hall: Upper Saddle River, New Jersey.
- 3 This section is based on analysis and findings in a study Professor Ron Duncan undertook for the Pacific Islands Forum Secretariat (PFIS). See Appendix 1.
- 4 The Pacific Financial Technical Assistance Centre (PFTAC) was created in 1993 with funding from the United Nations Development Programme (UNDP), International Monetary Fund (IMF), ADB, Australia, New Zealand, and Japan. It is managed on behalf of donors and Forum Island Countries (FICs) by the IMF.
- 5 For example, the head office in Suva could service Vanuatu and New Caledonia as well as Fiji Islands. Subregional offices could be set up in Port Moresby, Apia, and Majuro.
- 6 This section is based on analysis and findings in a study Professor Ron Duncan undertook for the PIFS. See Appendix 1.
- 7 This finding is based on an analysis of import and export statistics using *standard international trade classification* (SITC) codes at the one-digit level.
- 8 This section is based on analysis and findings in a study Professor Michael White undertook for the PIFS. See Appendix.
- 9 The South Pacific Association of Supreme Audit Institutions is an embryonic federation of the regions' offices of auditor generals (OAGs).
- 10 While the Fiji Islands OAG is well developed, it still does not have the capacity to undertake all desirable audit functions.

- 11 HarperCollins. 1995. *Collins Concise Dictionary*. Third Edition. City: HarperCollins Publishers.
- 12 Walmsley et al. 2005.
- 13 In December 1988, members of the World Trade Organization (WTO) decided to include labor mobility in the Uruguay round of the General Agreement on Trade on Services. In particular, they discussed the idea of enabling *temporary* movement of natural persons ("mode 4") between member states.
- 14 The model does not distinguish between permanent migration and temporary labor movement.
- 15 Duncan, Ron. 2005. Benefit-Cost Analysis of a Regional Nurse Training Facility. See Appendix 1.
- 16 By contrast, countries like the Philippines, with a reasonably long history of their nurses working overseas, have been able to establish a reputation for their nurses, and therefore new immigrants find a well-established route for gaining employment as a nurse.
- 17 This is the extra income *less* the opportunity cost of employment in the Fiji Islands and less the difference in basic living costs between Australia and the Fiji Islands.
- 18 van Santen and Muller 2000.
- 19 For example, Principle 4 regarding contracts states that "All government and public sector contracts [are] to be openly advertised, competitively awarded, administered and publicly reported."
- 20 I.e. with the fee expressed as a percentage of reported value of landed catch.
- 21 E.g. a total allowable catch quota for a defined period of years.
- 22 McMaster, James. 2005. *Costs and Benefits of Deregulating Telecommunication Markets in the Pacific*. Prepared for PIFS. The study makes use of the tariff and revenue data available in the April 2005 edition of the International Telecommunications Union Data Base, the *Asia-Pacific Telecommunity 2004 Yearbook*, and many research publications and case studies from websites.
- 23 This estimate assumes that (i) the telecommunications markets are fully competitive with strong price competition among the providers operating on a level playing field; and (ii) the regulator will ensure that new entrants have access to the fixed line network owned by the former monopoly provider at fair access rental rates.
- 24 The benefits to New Zealand consumers were improved service availability, in terms of access to new services, fault service response, and new service installation times.
- 25 Typically such services are subsidized from profits on international calls.
- 26 The experience of the Eastern Caribbean Telecommunications Authority, which has such a role, supports this view.
- 27 Morris 2005.
- 28 It assumes public ownership of such assets would be achieved by building or buying new assets, whereas an obvious lower cost option would be to buy existing privately owned assets. Similarly, the assets owned by state-owned enterprises could be privately operated under a suitable long-term contract (e.g., lease and manage contract).
- 29 The costs and benefits are expressed in constant dollar terms and do not include nominal increases due to inflation.
- 30 This section is based on ADB staff analysis and reports on the proposal. See Guild and Costello 2004.
- 31 This is not feasible for individual civil aviation authorities reliant on outsourcing simply to supply core services.
- 32 The internal rate of return is the discount rate which if applied to the stream of financial flows of benefits and costs over the project life of the Pacific Aviation Security Office, would result in a net present value (NPV) of zero. In other words, applying any lower discount rates (such as those applied in other studies reported on in this chapter) would still produce a positive NPV.

- 33 See Appendix 1.
- 34 This is based on gross domestic product (GDP) per capita data and an assumption that increased participation in sports would on average increase life span by 5 years.
- 35 Unlike the Regional Economics and Statistical Technical Assistance Facility discussed earlier in the chapter, this statistical body would be focused primarily on compiling and publishing statistics, not providing technical support.
- 36 See Appendix 1.
- 37 See Appendix 1.
- 38 The Fiji Islands and Papua New Guinea each receives in excess of 600 trademark applications per year, most being filed by foreign applicants. Anecdotal evidence suggests many filings are common to the four countries.
- 39 See Naghavi 2005.
- 40 See Appendix 1.
- 41 Experience suggests that such duties would mostly be carried out under the auspices of the United Nations (UN).
- 42 Indeed the UN has recently announced the Fiji Islands will host one of three regional peacekeeper training centers.