



Skilling the Pacific

TECHNICAL AND VOCATIONAL EDUCATION
AND TRAINING IN THE PACIFIC

EXECUTIVE SUMMARY



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Contents

Acronyms and Abbreviations	iv
Glossary and Definitions	v
Preface	vi
Acknowledgments	viii
Introduction	1
Highlights	8
Summary	10
Recommendations from the Analysis	19

Acronyms and Abbreviations

ADB	Asian Development Bank
CBT	competency-based training
DMC	developing member country
FIT	Fiji Institute of Technology
FSM	Federated States of Micronesia
GNP	gross national product
ICT	information and communications technology
ILO	International Labour Organization
MOE	Ministry of Education
NATTB	National Apprenticeship and Trade Testing Board (PNG)
NGO	nongovernment organization
NQF	national qualification framework
NUSIOT	National University of Samoa, Institute of Technology
NZAID	New Zealand's Agency for International Development
PATVET	Pacific Association of Technical and Vocational Education and Training
PIC	Pacific island country
PIFS	Pacific Islands Forum Secretariat
PNG	Papua New Guinea
RMI	Republic of the Marshall Islands
SPC	Secretariat of the Pacific Community
TA	technical assistance
TPAF	Training and Productivity Authority of Fiji
TTI	Tarawa Technical Institute
TVET	technical and vocational education and training
USP	University of the South Pacific
VIT	Vanuatu Institute of Technology

Note:

In this publication, "\$" refers to US dollars.

Glossary and Definitions

Competency	Skill
Education	Acquiring knowledge
Formal training	Organized training as part of the formal system of education and training
Informal sector	Nonwage (or unregistered, nontax-paying enterprises)
Informal training	Acquisition of skills through ad hoc means, such as from parents, elders, or by observing and practicing on the job
Modern sector	Registered enterprises, wage paying
Nonformal training	Organized training outside the education and training system
Prevocational	Providing basic skills-oriented subjects as part of a general secondary curriculum
Skills development	Acquiring practical competencies, know how, and attitudes necessary to perform a trade or occupation in the labor market
Training	Preparing for an occupation
Training provider	One who delivers training
TVET	Technical and vocational education and training, i.e., training supply

Preface

Development of skills is an area of concern highlighted repeatedly by Pacific ministers of education. Leaders of the Pacific region are worried about the implications of burgeoning youth populations and lack of opportunities to earn livelihoods in many countries. Developing skills is a key element both for private sector development and for creating more income-earning opportunities for the poor, the latter of which is one central focus of the overall Pacific strategy of the Asian Development Bank. However, the international knowledge base in this area is much weaker than that for basic education.

In April 2004, the leaders of the Pacific Islands Forum endorsed in the Auckland Declaration the development of a Pacific plan for “deeper and broader” regional cooperation. The wide-ranging plan, which Pacific governments subsequently adopted in 2005, sets out four core areas: economic growth, sustainable development, good governance, and security. It emphasizes the importance of strengthening vocational and technical training and its links with the labor market. It also reinforces the earlier (2001) Forum Basic Education Action Plan in which the education ministers covered a broad range of areas in formal and informal education, including skills development. The Pacific plan has a specific mandate to investigate the potential for expanding regional technical and vocational education and training programs. This study, *Skilling the Pacific*, has answered this mandate. The study was designed to analyze issues of supply and demand for vocational skills, develop responsive and effective country and regional strategies for skills development, and identify investments necessary to implement these strategies. Given this context and the importance of skills development, the Pacific Islands Forum Secretariat was pleased to be the executing agency for this major study.

All countries provide technical and vocational education and training (TVET) in one form or another. Yet it has been a neglected area in terms of research, especially in the Pacific. This study helps fill that gap. It shows issues that need to be addressed of relevance, quality, equity, and organizational effectiveness in providing TVET.

All 13 countries covered by this study have skills shortages in different areas. Employers have noted that the skills gap is a huge constraint to the development of the private sector in the region.

TVET has significant political appeal and it is often regarded as something that will solve all youth and unemployment problems. It is clearly not that miracle solution, but it can offer opportunities for earning either a livelihood in the formal—or more important—informal sector of the Pacific economies. TVET is costly, so it is vital that it be delivered in a cost-effective manner that ensures the best possible outcomes.

This study has highlighted many good practices from around the region, which provide excellent case studies. Clearly, policy makers and others need to learn from each other what works and what does not in the Pacific context. It is crucial to avoid repeating the same costly mistakes.


This study does not provide a single model that will suit all countries, but it does provide a set of constructive strategies and recommendations for reform that, if acted on, could lead to significant improvements. We sincerely hope that the recommendations for projects, which could lead to the development partners providing support for TVET, would be implemented.

There was a high level of participation in this study from a wide range of people and organizations from the region, which has led to what is, we believe, a quality report.

We would like to thank the Government of Japan for funding this study through the Japan Special Fund. We are also grateful to the many people from the 13 countries who gave freely their time to make this an important document on which future policies and practices can be based.



Philip Erquiaga
Director General
Pacific Department



Greg Urwin
Secretary General
Pacific Islands Forum Secretariat

Acknowledgments

The title for this synthesis publication, *Skilling the Pacific*, had its inspiration from a program entitled *Skilling New Zealand*. The title was suggested at the initial consultative workshop held on 31 May–1 June 2006 that launched the work.

The publication is the result of collaboration among a number of consultants of the Asian Development Bank (ADB) under the direction of Kowsar P. Chowdhury, Education Specialist, Pacific Department. She was instrumental in launching it as one element in the implementation of ADB's *Better Learning, Better Future: Education and Training Strategy for the Pacific*, of which she was the principal author.

Richard Johanson is the main author of this publication, assisted by Paul Brady, Alex Gorham, and Carmen Voigt-Graf. Helen Tavola, Social Policy Adviser of the Pacific Islands Forum Secretariat—the executive agency for this study—supervised project operation, including providing technical support. Diane Barr, Project Manager, provided administrative support and coordinated the day-to-day activities of a large number of experts producing this study. Susan Francisco, Operations Officer, ADB, provided administrative and operational support from Manila. Tara Mehretab, Operations Assistant, ADB, provided administrative help during various phases of the implementation of this study and organized a web posting for comments.

The publication consolidates the findings of six in-depth country reports and seven background country reports, a literature review, and surveys of employers and employees, all produced under the regional technical assistance 6268 for the Implementation of the Pacific Education Strategy: Skills Development. The individual authors of the in-depth reports on technical and vocational education and training (TVET) are Paul Brady, Alex

Gorham, Richard Johanson, and Eci Naisele (Fiji Islands); Paul Brady, Temaia Ereata, and Alex Gorham (Kiribati); Beno Boeha, Paul Brady, Alex Gorham, and Richard Johanson (Papua New Guinea); (iv) Paul Brady, Alex Gorham, Ben Graham, and Richard Johanson (Republic of the Marshall Islands); (v) Richard Johanson and Valisi Tovia (Tuvalu); and (vi) Paul Brady, Alex Gorham, Richard Johanson, and Henry Vira (Vanuatu). Authors of the background country reports on TVET were Teresa Manarangi-Trott (Cook Islands); Augustina Takashy (Federated States of Micronesia); Bernard Grundler (Nauru); Augustina Takashy (Palau); Perive Tanuvasa Lene (Samoa); Louisa Fakaia (Solomon Islands); and Nonga-'i-Saione Soakai (Tonga). Carmen Voigt-Graf prepared the literature review, and the employer and employee surveys.

The publication benefited from the analytical work to support a plan on skills development in the Solomon Islands (World Bank 2007) with help from the European Union (EU) and the New Zealand's Agency for International Development (NZAID). The Australian Agency for International Development and NZAID also provided valuable comments.

Special thanks go to those who helped steer and provided advice on the project during implementation. These include the attendees at the initial consultative workshop organized to identify issues and concerns.¹ A steering committee comprised of TVET stakeholders based in the Fiji Islands also provided guidance for the execution of the project.²

The publication was reviewed and improved following a workshop in Nadi, Fiji Islands on 8–10 May 2007. The following TVET stakeholders were represented in the

workshop: manager, Department of Human Resources Development, Cook Islands; director, Federated States of Micronesia Association of Nongovernmental Organizations; deputy secretary, Ministry of Labour, Papua New Guinea; director, National Training Council, Republic of the Marshall Islands; president, Pacific Association of Technical and Vocational Education and Training, Samoa; director general, Ministry of Education, Vanuatu; chief executive officer, Training and Productivity Authority of Fiji, Fiji Islands; education officer, Ministry of Education, Fiji Islands; head, Community Education Training Center, secretariat for the Pacific community), Tonga; head, Institute of Education, University of the South Pacific, Solomon Islands; and head, Department of Education, University of the South Pacific, Fiji Islands.

ADB and the Pacific Islands Forum Secretariat thank the governments of the Pacific island countries, especially the stakeholders in TVET, for their generous cooperation and support throughout the implementation of this regional technical assistance project.

1 The attendees were: Pacific Association of Technical and Vocational Education and Training (PATVET) representative, Cook Islands; chief educational officer (Technical and Vocational Education and Training [TVET]), Fiji Ministry of Education; deputy chief of mission, Federated States of Micronesia (FSM) Embassy, Suva; former principal, Tarawa Institute of Technology, Kiribati; assistant director, Ministry of Education, Nauru; chief, Division of Labor, Palau; chief of labor and industrial relations, Republic of the Marshall Islands; head of school of engineering, National University of Samoa; project manager, European Union TVET project, Solomon Islands; acting principal, Institute of Science and Technology, Tonga; acting director, Ministry of Education and Sports, Tuvalu; director general, Ministry of Education, Vanuatu; education adviser, Pacific Regional Initiatives for the Delivery of Basic Education (PRIDE); and a representative from the New Zealand's Agency for International Development.

2 The steering committee members included the Community Education Training Center, secretariat for the Pacific Community; chief educational officer (TVET), Fiji Ministry of Education and PATVET; deputy director, Fiji Institute of Technology and PATVET, Fiji Islands; Fiji Chamber of Commerce; International Labour Organization (ILO), South Pacific Board of Educational Assessment, and University of the South Pacific.

Introduction

A nation's economy runs on the knowledge and skills of its people. The requirements for skills evolve and deepen with external investment, technological advances, and global linkages. People, in turn, need to acquire skills to be productive and to earn a living. A majority of the population in many Pacific island countries (PICs) live in rural areas and work in the informal sector. Education development in PICs, as in other developing countries, cannot be limited to basic education. As countries develop and the demand for people with more advanced skills expands, the returns from higher levels of education increase. Students who complete basic education seek opportunities for further learning and skills development. Many want to continue their general education in upper secondary schools. Others want to enter technical and vocational programs. All need to be prepared to pursue their education throughout their working life. Countries need to facilitate skills formation through various ways to raise productivity and incomes.

Skills development is becoming a priority for countries in the Pacific, particularly as they progress toward meeting the Millennium Development Goals for basic education. Increasing numbers of entrants to the labor market—i.e., the surging numbers of youth who have completed formal schooling yet lack practical skills that are useful in the labor market—fuel, in part, the concern for skills formation.

Skills formation has also become a priority in countries of the Pacific where skills shortages exist owing to job growth and emigration. Making technical and vocational education and training (TVET) work requires a realistic understanding of labor markets and the population to be trained, and the generation of new approaches.

Rationale for Skills Development

A starting point for this review is to address the question: What is the purpose of TVET and skills development? Are the aims mainly political and social, as some suggest—reducing youth unemployment, serving academically less able students or changing youth aspirations? Alternatively, is the purpose economic—that is, to enhance performance in the

workplace? This review starts from the view that economic and equity objectives are paramount. Training must serve wage employment or self-employment, including income generation and livelihood development. Experience shows that social objectives for training have generally not been cost effective.¹ Consequently, training is treated from an economic perspective throughout this review, with a focus on jobs for the wage economy or informal sector, with equity as a parallel concern. Political and social objectives of training may have their valid uses, but are not a primary focus of this review.

Why is skills development important from an economic perspective?² Several reasons are centered on productivity and incomes.

- **Productivity.** Skills enable individuals to be more productive and generate higher incomes. Workforce skills make enterprises more productive and profitable. Skills help national economies raise production and create wealth. When people acquire skills, they make themselves more productive, that is, able to produce more output for a given amount of time and effort. This applies both to wage employment and self employment in the informal sector.

- **Skills and poverty reduction.** Skills development for the informal sector should be at the center of pro-poor strategies,³ for reasons of economy and the environment. First, acquiring skills is crucial to raising productivity and incomes in the informal sector,⁴ where most new jobs in Pacific economies are being created. Training alone cannot guarantee employment or reduce poverty, but improved skills and knowledge are essential for the poor to access decent work or add value to existing subsistence employment. Second, evidence is mounting that skills training is essential for promoting sustainable livelihoods in the Pacific, where environments are fragile and informal economic activities often need suitable techniques and practices for resource management.⁵

- **Skills–physical capital complementarities.** Human capital (people’s skills and abilities) also help determine the amount of investment in physical capital in an economy. Skills and physical capital complement each other. A higher level of human capital enables plant and machinery to be used more efficiently, thereby raising the rate of return on investments. Similarly, insufficient investment in human capital skills leads to deficient investment in physical capital and hobbles economic growth.

- **Technological and structural change.** The acceleration of technological change requires higher-skilled workers. When people acquire skills, they generally also

1 Middleton, Ziderman, and Adams. 1993.

2 For details, see Johanson (2004) and ADB (2004).

3 For an early discussion of such strategies in the context of TVET reform, see Bennell (1999). For a more recent assessment of the role of skills development in poverty reduction, see King and Palmer (2006).

4 ILO. 2003.

5 Tyler. 2006. See also Pound et al. 2003. Perhaps the most extensive and up-to-date information resource on sustainable livelihoods is the livelihoods connect on-line forum of the Institute of Development Studies, University of Sussex, United Kingdom. Available: www.livelihoods.org.

make themselves more adaptable. New technologies are knowledge and skill intensive, and impose a need to train people. Countries with skills can adjust more effectively to the challenges of structural adjustment because enterprises are more flexible and better able to absorb new technologies.

- **Changes in work organization.** Demand for skills within enterprises depends on how work is organized. Enterprises traditionally organized work around assembly-line methods that broke each task into its most elementary components and minimized the skills and training required. However, increased competition and the introduction of information and communication technology (ICT) have prompted many firms to undertake fundamental changes in their internal organization and work practices, including changes in factory layout, flow of production, quality assurance, and use of inventory. High-performance work organizations typically use self-managed work teams, multiskill-ing, job rotation, and cross training with devolution of decision making. These changes can only work if employees acquire new technical skills.

- **Trade openness, competition, and foreign direct investment.** Globalization places a premium on skills. Economic openness causes a demand shift in skills through induced capital deepening and technological change. Globalization raises capital flows that, in turn, raise demand for skilled labor. Skills establish a pull factor for foreign direct investment. Alternately, lack of human capital may deter foreign investment. Thus, the skill level and quality of the workforce will increasingly provide the cutting edge for successful international competition.

- **Effect of skills shortages on productivity and wages.** Skills shortages add to the cost of employing skilled workers since a firm must wait longer than usual to fill its vacancies and loses productivity during that period. Firms may substitute unskilled for skilled labor, thereby reducing productivity. Additionally, skills shortages improve skilled workers' outside options, contributing to poaching, job turnover, and wage increases unrelated to productivity.

In view of the economic importance of skills, a central issue for countries is therefore how to improve training systems and raise skills.

Background

In 2001, the Pacific Islands Forum Education Ministers developed the Forum Basic Education Action Plan, which covered a broad range of areas in formal and informal education including skills development. The action plan refocused skills education to support the private sector's needs for trained workers. In April 2004, the leaders of the Pacific Islands Forum endorsed in their Auckland Declaration the development of a Pacific Plan for "deeper and broader" regional cooperation. The Pacific Plan emphasizes the importance

of strengthening vocational and technical training and its links with the labor market.⁶ Similarly, one strategic objective of the education and training sector strategy of the Asian Development Bank (ADB)⁷ is to formulate education strategies that are relevant and responsive to national development objectives and client needs. ADB identified the need for implementing a regional technical assistance (TA) project for its Pacific developing member countries (DMCs) in collaboration with the Pacific Islands Forum Secretariat (PIFS). The TA was approved by the ministers of education of the Pacific Islands Forum during a meeting on 23–24 May 2005, in Apia, Samoa, and was subsequently approved by the ADB Board in November 2005. This approved TA is for the implementation of the Pacific education strategy, which is skills development or less clumsily known as the regional technical assistance on skills development.

The study aims to achieve increased productivity and incomes through more effective public and private investment in skills development. The immediate outcome envisaged is strategies for skills development with equity that are responsive to the emerging demands of economies and local communities in both formal and informal sectors. Three broad outputs were planned for the study.

- An assessment of the relationship between skills development and economic development, labor market demand, and outward migration within the sample countries.
- Policy options for skills development that governments of Pacific DMCs may wish to consider based on an in-depth analysis of issues and alternatives.
- Based on the assessment and the options, identifying project concepts at the national and regional levels for skills improvement and income generation.

Scope, Audience, and Financing

The scope of the review technically covers all aspects of TVET below degree level and in all sectors except health.⁸ Geographically, the regional technical assistance on skills development covered all 13 Pacific DMCs that are PIFS members.⁹ The main audiences for the review are policy makers in Pacific governments and TVET practitioners. Development partners in the region constitute a secondary audience. The Japan Special Fund, funded by the Government of Japan, made a grant of \$975,000 for the implementation of the study.

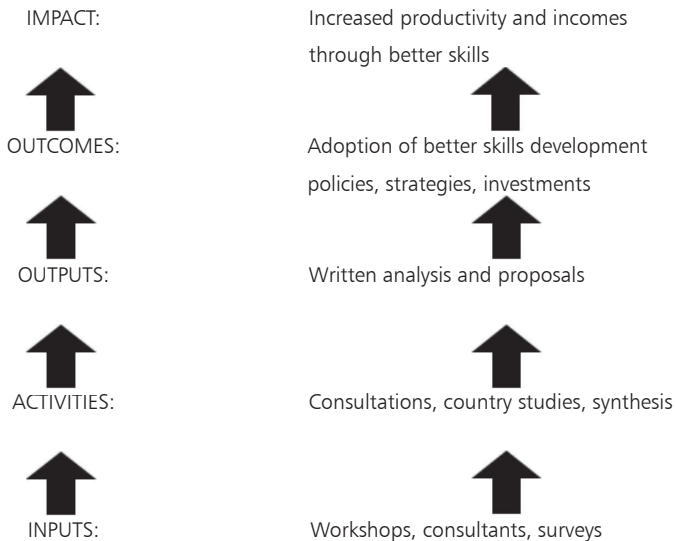
6 Pacific Islands Forum. 2004 and 2005. The Pacific Plan (2005) assigns importance to improved education and training. Under sustainable development, the plan calls for the following as an immediate priority: “Investigation of potential for expanding regional TVET programs to take advantage of opportunities in health care, seafaring, hospitality/tourism, peacekeeping, etc; for enhancing and standardizing regional training programs; and ensuring the portability of technical qualifications.”

7 ADB. 2005.

8 The Pacific Islands Forum Secretariat in this sector excluded health because of separate analytical work underway.

9 Cook Islands, Fiji Islands, Kiribati, FSM, Republic of the Marshall Islands (RMI), Nauru, Palau, Papua New Guinea, Samoa, Solomon Islands, Tonga, Tuvalu, and Vanuatu.

Figure 1: Purpose and Objective of the Study



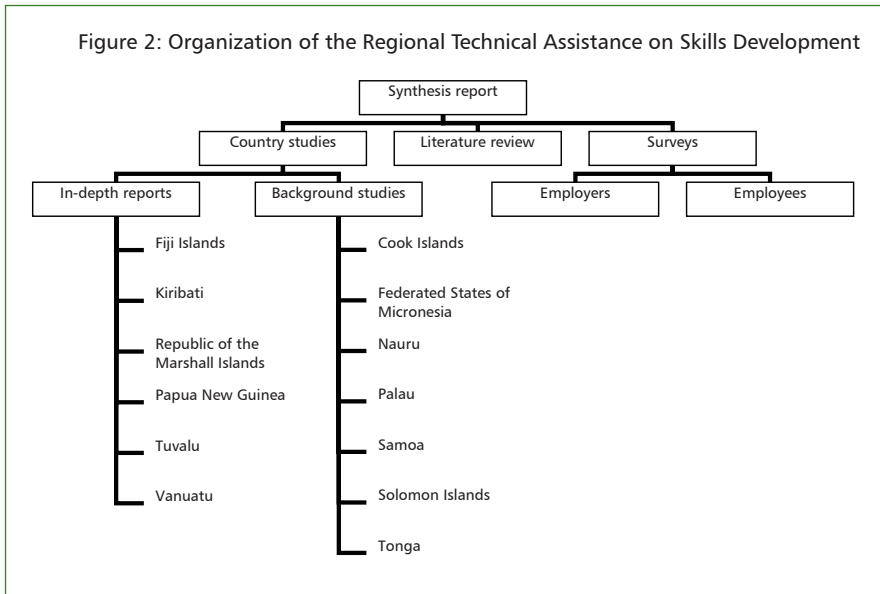
Organization of the Study

The regional TA comprises four main components—country studies (seven background reports and six in-depth reports); a literature review; surveys of employers and employees; and a synthesis of all the findings into one report, as presented in this publication. (References are listed in the bibliography at the end of the main text.) The following diagram shows the organization of the regional TA.

ADB implemented the project and PIFS was the executing agency. The work started with an initial workshop, held on 31 May–1 June 2006, attended by stakeholders, and was continued with guidance from periodic meetings of an advisory steering committee made up of representatives of international organizations based in Suva. A concluding review of the draft synthesis was made at a workshop attended in early May 2007 by 20 Pacific island country (PIC) representatives from 10 countries and regional organizations.

Uniqueness of the Review

This review has brought unique contributions to bear on skills development in the Pacific. It is the first systematic review of TVET systems in most of the countries; it carried out the first comprehensive literature review of skills development in the region; and it included



the first comprehensive survey of employers and employees on skills requirements in 12 Pacific countries. Finally, it makes the first synthesis of analysis and prescriptions of TVET in the region.

Limitations

The review marked the first time that TVET systems had been analyzed in several countries in the region. It also has the first comprehensive literature review and the first regional survey of employers and employees. In addition, in view of the regional knowledge base on TVET, the review represents the first comprehensive analysis and synthesis of TVET in the region. However, the study has limitations. It is “macro”—aimed at a broad-brush overview of TVET systems. It was not possible to carry out a “micro,” or detailed, review, e.g., of TVET curricula. The fieldwork for the six in-depth country reports was limited—lasting from one week (Tuvalu) to 17 days (PNG). Individual local experts in the countries produced the seven background country reports. The survey of enterprises by correspondence yielded a relatively low-response rate (15% overall), and not all countries took part (enterprises in Vanuatu, for example, did not respond).

Finally, data limitations were encountered throughout the work. The literature review found a paucity of information in three areas: labor market, the lack of reliable and comparable statistics made it difficult to compare and contrast the experiences of different PICs in employment and skills shortages; informal sector and nonformal training, the literature is thin in the entire region, and data were available only for the Fiji

Islands and Solomon Islands; and evaluation of TVET policies and systems at either the country or regional levels, there is essentially no literature.

Similarly, writing the background and in-depth country reports met obstacles, including a lack of information about the performance and operation of TVET systems, such as flow statistics (dropout/repetition), and expenditures and outputs (graduate performance on tests and in the labor market). These gaps underscore the importance and timeliness of the current review. Several examples of good practice were identified in the review, and these are presented in the text.

Key Questions

The review set out to answer the following questions:

1. What is the balance between supply and demand for skills in the labor market? Unmet demands can lead to bottlenecks that impede growth. Oversupply can lead to unemployment and waste of scarce resources.
2. How can economically relevant supply of skills be built?
3. Where should training be provided? What is the most effective mode of training?
4. How can training quality be improved?
5. Who should be trained, and are they being trained?
6. How should skills development be organized?
7. Who should pay for training and how can resources be used more efficiently?
8. What are the priorities for training by country group?
9. What interventions could make a broad impact on skills development at reasonable cost?

The answers to these questions are summarized in Chapter 6 of the main report.

Highlights

The informal sector is the dominant segment of the labor market in most Pacific island countries and is where most school-leavers will have to find work. Training for the informal sector has to become the top priority. This means sufficient new resources should be allocated for informal sector training, training strategies designed, and capacity built to support the rural and informal sectors, in part by boosting the technical expertise and delivery capacity of nongovernment organizations.

Many issues in technical and vocational education and training (TVET) derive from inappropriate and unclear organizational structures. Getting the structure right is, therefore, the first step to more effective TVET systems. Where possible, TVET systems should be governed by apex organizations such as national training authorities. These apex organizations should be based on partnerships among stakeholders and driven by employers, who represent demand for skills. Apex organizations should have the executive authority to link training supply with demand, based on labor market information; coordinate providers; set priorities, policies, and directions; and allocate resources.

Choices about where to invest in skills development should be based on evidence of achieving formal/informal employment with minimum resource outlay. Enterprise-based training should be expanded, e.g., apprenticeships and institutional training closely linked with the labor market. However, investing in “vocationalization of secondary education” is not supported by this review. It is expensive, difficult to do well, and it usually fails to confer better labor market outcomes on graduates. Instead, resources should be allocated to stand-alone training programs well grounded in the labor market and which target those who are in, or about to enter, the labor market.

Quality in skills development for both the formal and informal sectors requires three elements: occupational standards, sufficient inputs, and measurement of outputs against those standards. Developing occupational standards should be pursued by designing national qualification frameworks provided they focus on outputs (competencies)

rather than inputs (courses required), and avoid complexity. Minimum standards should be set for public TVET providers and they should be subject to accreditation and periodic quality audits. In addition, output indicators should be defined and measured against the standards. Information on the impact of training should be developed—e.g., tracer studies of graduates—and factored into training policies and resource allocations.

Current incentives in Pacific island countries' TVET systems result in inertia. Budgets are given year after year regardless of performance. This review recommends that incentives be changed for those managing skills development. Managers of training institutions should be given authority through devolution, along with accountability for results. Results should be compared against targets, and budgets should be allocated according to performance. At the same time, managers should be enabled to develop their capacities through in-service management development programs.

Tackling these five major reforms would justify substantially increased public and private investment in skills development.

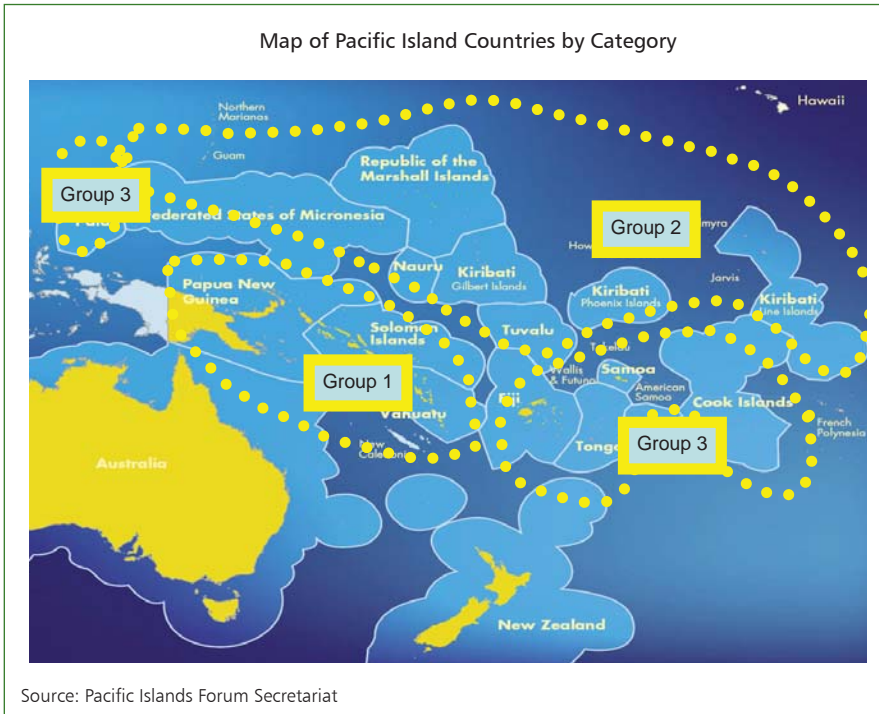
Summary

The regional technical assistance analyzes TVET in 13 Pacific island countries (PICs), proposes strategic options for reform, and identifies possible project investments at both country and regional levels. The study, carried out in April 2006–September 2007, was financed by the Japan Special Fund—implemented by ADB—and executed by the Pacific Islands Forum Secretariat (PIFS). This publication synthesizes the findings from various parts of the study, including six in-depth country reports, seven background reports on other PICs, a literature review, and a regional survey of employers and employees.

The diversity of the region and the different stages and prospects for development suggest grouping the countries for purposes of analysis. Three categories are presented: group 1: land-rich, low-income countries—Papua New Guinea (PNG), Solomon Islands, and Vanuatu; group 2: small, vulnerable island states—Kiribati, Republic of the Marshall Islands (RMI), Federated States of Micronesia (FSM), Nauru, and Tuvalu; and group 3: “advanced” island states—Cook Islands, Fiji Islands, Palau, Samoa, and Tonga. The countries in group 1 have low social and economic indexes, but positive agricultural potential. The vulnerable island states, group 2, face severe economic constraints, few economic prospects, and issues of sustainability. Countries in group 3 have relatively good prospects from tourism, remittances from abroad, and emigration.

Most PICs have limited jobs in the formal economy for their expanding populations. Growth of the labor market far exceeds growth in wage jobs. This means most new entrants will have to work in the informal sector. The informal sector in the Pacific is largely limited to the processing and merchandising of primary produce; providing services such as carpentry and mechanical repair, transport, and small-scale vending; and producing and selling handicraft and sewn materials. Skills gaps occur in all these activities. Small-scale fishing and other primary production provide the main opportunities in the vulnerable island states, and greater agricultural production in the land-rich states.

Ironically, formal sector jobs are limited, but pockets of skills shortages occur throughout the wage economies of the Pacific. Three main factors are responsible:



growth in the mining sector (PNG) and tourism (Cook Islands, Fiji Islands, Samoa, Tonga, and Vanuatu) have created a rising demand for skilled labor, especially in hospitality and construction. These countries lack sufficient people with the skills in management/supervision and trades occupations capable of working to international standards; emigration has positive aspects, including remittances to the source country and opening jobs locally. However, emigration exacerbates domestic skills shortages as many with skills leave for better-paying jobs elsewhere; and the supply chain of TVET is insufficient in key fields, and TVET graduates do not often have the level of knowledge and skills required for the job.

What patterns and structures are in place for skills development in the Pacific? Skills training generally cover only a fraction of students in PICs, but it is provided through a rich variety of sources. TVET consists of three distinct subsystems in the Pacific—school-based (part of the formal education system), including prevocational in secondary schools and postsecondary technical institutions; center-based trade training outside the formal school system; and enterprise-based training (e.g., apprenticeships). Almost all countries in the Pacific region have some skills courses in secondary schools, with Palau and Fiji Islands the most prominent. All countries—except the smallest (Cook Islands, Nauru, and

Tuvalu)— have postsecondary technical institutes. Similarly, outside the school system, almost all PICs have stand-alone trade training centers (except the RMI, Nauru, and Tuvalu). Enterprise-based training in the form of apprenticeships is practiced in half the countries. Private training providers are important sources of skills development in most countries in the region. This includes nonprofit institutions, usually church based, that provide extensive training infrastructure; and for-profit training providers (for example, 50 registered for-profit private training providers in the Fiji Islands and over 100 in PNG.) Rural training systems are extensive in group 1 countries. Almost all PICs (11 of 13) have maritime training institutions.

TVET organizational setup and management mirror the diversity of providing training. Ministries of education manage prevocational training in secondary schools and some postsecondary training. Postsecondary technical institutes are either semi-self-governing—Fiji Institute of Technology (FIT), Vanuatu Institute of Technology (VIT), National University of Samoa, Institute of Technology (NUSIOT), and the community colleges along the northern rim—or under separate ministries (Cook Islands and Tonga). Ministries of labor and commerce also play a key role in skills development in Kiribati, PNG, and Solomon Islands. In addition, three national training councils operate in the region (PNG, RMI, and Vanuatu). This organizational diversity makes coordination important and a challenge.

Another feature of skills development in the Pacific is the growing interest in national qualification frameworks (NQFs). NQFs are being developed or considered in most areas, except the northern tier. Three countries have or will have national qualification bodies (Samoa, Tonga, and Vanuatu), and NQFs are being considered in others (Fiji Islands and PNG).

Financing, as a provision of TVET, comes from multiple sources. Public financing constitutes the majority source through ministry budgets. In many cases, public funding is declining. Private financing through tuition charges and fees is important in about half the countries. Production activities partly finance the costs of some nonprofit training providers. Three levy systems exist, but only one, Fiji Islands, pumps much financing directly into training. Almost all countries depend on external financing for capital expenditures. Five countries, mainly along the northern rim, depend wholly on external financing for all expenditures.

What is working well in Pacific skills development and what needs to be improved? The review examines this question according to five criteria.

Economic Relevance. How well do the training systems produce graduates needed in the economy? Mismatches are common in the Pacific region. Most countries report shortages of skills—particularly in certain fields such as construction, tourism, and

Table 1: Financing of TVET in the Pacific

Countries	TVET as Share of GDP (%)	TVET as Share of MOE Expenditure (%)	MOE Expenditure as Share of Budget (%)	MOE Expenditure as Share of GDP (%)
Cook Islands	0.2	6	—	3
Fiji Islands	0.4 ^a	4	19	10
Kiribati	0.6 ^b	3	25	21
RMI	1.8 ^c	24 ^d	12 ^e	24
FSM	1.4	7	—	19
Palau	3.3 ^f	54 ^g	11	7
PNG	0.5 ^h	13	16	8
Solomon Islands ⁱ	3.5	40	25	9
Tonga	0.3	9	13	3
Tuvalu	—	—	23	—
Vanuatu	0.6	3 ^j	26	12

a If the training and productivity authority of Fiji is included, this increases to 0.68.

b Data for Tarawa Technical Institute only. If the Fisheries Training Center and the Marine Training Center are included, the figure rises to 2.0.

c Includes the National Training Council, National Vocational Training Institute, and the business studies/computing part of College of the Marshall Islands; however, if only the National Training Council is included, then the figure is 0.5%.

d Includes the National Training Council, National Vocational Training Institute, and the business studies/computing part of College of the Marshall Islands; however, if only the National Training Council is included, then the figure is 2%.

e Pertains to government funds only—excludes external funds.

f Palau Community College only, which also offers bachelor degree courses.

g Ministry of Education expenditure here also includes external funding through the Compact.

h Vocational centers and business and technical colleges only. Excludes the National Training Council.

i TVET reference is for all tertiary sectors so the actual TVET expenditure is much smaller.

j Vanuatu Institute of Technology only; 6% for all TVET-related activities.

Note: Data are not available for all countries in the study.

FSM = Federated States of Micronesia, PNG = Papua New Guinea, RMI = Republic of the Marshall Islands, TVET = technical and vocational education and training, — = data unavailable, % = percent.

Sources: In-depth and background reports; and World Bank, 2007.

mining—owing to growth and emigration. However, surplus labor in the informal sector is the main challenge. Economies cannot generate enough wage jobs for the number of new entrants to the labor market. Thus, an increasing number of youth either are unemployed or must work for themselves in the informal sector. Unfortunately, most skills training is geared toward wage employment, not productivity in the informal sector.

An economically relevant system of skills development requires three essential ingredients: information about job trends, close employer involvement in guiding the system, and a training supply chain that is flexible in responding to changes. Pacific TVET systems fall short on these three criteria. With some exceptions, little is known generally about skill demands or about the absorption of trainees into the labor market through tracer studies. The exceptions are labor market surveys in Solomon Islands and Vanuatu, and tracer studies in Palau, Solomon Islands, and Vanuatu. Second, employers need to

Table 2: Major Sources of Revenue for Pacific Island TVET Institutions

Country	Government	External	Student Fees	Training Levy
Cook Islands	x	x		
Fiji Islands	x		x	x
Kiribati ^a	x			
RMI	x	x		x ^b
FSM	x	x		
Nauru	x			
Palau	x	x	x	
PNG	x		x	x
Samoa	x			
Solomon Islands	x	x	x	
Tonga	x		x	
Tuvalu	x			
Vanuatu	x		x	

a Although there are no training levies, levies are collected from foreign fishing fleets. Revenue from this contributes to the funding of the Marine Training Center and the Fisheries Training Center.

b Levy on wages of foreign workers in the country.

FSM = Federated States of Micronesia, PNG = Papua New Guinea, RMI = Republic of the Marshall Islands, TVET = technical and vocational education and training.

Source: In-depth and Country Studies (2006–2007).

be more involved in helping steer TVET policy and supply in the right directions. This occurs in the Training and Productivity Authority of Fiji (TPAF) with good results. The Pacific region does well in making workplace attachments an integral part of training, particularly apprenticeships, which keep trainers and trainees in touch with job requirements and trends. However, as a rule, employers are not consulted sufficiently. Third, Pacific training systems have been challenged to make their programs flexible, up to date, and responsive to changing demands. The Tarawa Technical Institute (TTI) exemplifies how to blend short-term and outreach programs with long-term training but, for the most part, Pacific training is long term (2–3 years) and unchanging in content.

Quality of Skills Training. How effective are Pacific training systems in imparting necessary competencies? Quality training requires three essential elements: definition of standards based on occupational analysis; sufficient inputs in well-organized training content, qualified instructors, appropriate facilities, equipment, and consumable supplies; and measurement of outputs against standards. Several countries (e.g., the Fiji Islands, PNG, Samoa, Tonga, and Vanuatu) are introducing NQFs based on the generation and employer ratification of occupational standards. However, there may be overexpectations

and an underappreciation of the work involved. The relationship between national and international standards, as required for migration, is not yet developed. The proposed Australia–Pacific Technical College could help bridge the gap. Several countries have also introduced competency-based training (CBT), which breaks training objectives into modular content as an effective way to impart skills. At the VIT, the application of CBT has increased successful student completion dramatically. Several countries have offered technical teacher training (e.g., the Fiji Islands and PNG), although these tend to focus on pedagogical, rather than technical, skills.

Inadequate financing for equipment repair/replacement and for consumable materials constitutes a region-wide complaint. Inadequate financing compromises the practical parts of the curriculum. In terms of measuring outputs, several countries have established traditions of trade testing such as the Fiji Islands, Kiribati, and PNG, but most do only internal evaluations. For example, technical training institutes do not establish international or regional benchmarks. Nonformal training programs, in particular, lack feedback and evaluation measures.

The review calls attention to salient high-quality training in the region:

- Maritime training exemplifies high-quality training in most countries in the region. The Secretariat of the Pacific Community program ensures that international standards are met in terms of essential inputs (e.g., training content, qualified instructors) and output specifications.

- Postsecondary technical institutions are typically of good quality, e.g., FIT, VIT, NUSIOT, TTI, and Palau Community College, partly because they can concentrate resources in one location; the FSM is an exception. These are key institutions for quality improvement in teaching at lower levels. The FIT franchise program is an outstanding case of such beneficial influence.

- Church agency training is often excellent and provides a standard to which public institutions can aspire, such as Don Bosco and Montfort.

- Examples of high-quality training for the informal sector were found in PNG and Vanuatu, but they suffer generally from inappropriate methodologies, a lack of coordination among service providers, and weak links with local labor markets.

However, prevocational programs in secondary education—vocalizing secondary education—have decidedly mixed results. The program works well in Palau at the high school, but rarely succeeds in countries with multiple secondary schools. The reasons have to do with expense of equipment and facilities, shortage of trained instructors, and low status of practical courses in an otherwise academic environment. Little evidence was found that the labor market outcomes of these programs are cost effective.

Finally, several countries (e.g., the Fiji Islands and PNG) are attempting to apply minimum quality standards to for-profit private trainers, but this has proved difficult to

sustain. Sufficient resources have not been forthcoming to cover the costs of accreditation and monitoring.

Equity and Access. How well do Pacific training systems provide equitable access? In general, opportunities for developing technical and vocational skills are available only to a minority of those who enter the labor market, perhaps between 5% and 20% at most. Others are left to fend for themselves in unproductive and low-paying work. Training opportunities also tend to be concentrated in urban areas and available to those who can afford to pay. Nongovernment organizations (NGOs) play a key role in spreading opportunities for skills training in rural areas (including PNG, Solomon Islands, and Vanuatu). For traditional occupations, males tend to dominate skills training in the Pacific. Women typically make up only 20–30% of enrollments (PNG, Solomon Islands, and Vanuatu) and much less in some countries (the Fiji Islands' TPAF, or the Tonga Institute of Science and Technology). Men tend to monopolize technical and trades training, while women are found almost exclusively in home-oriented courses (e.g., sewing, cooking, and housekeeping). However, exceptions exist: VIT increased the share of female enrollment from 37–42% between 2004 and 2006. The church-agency vocational centers in PNG enroll thrice as many female students as do government institutions although they are outnumbered 73 to 56. Females comprise almost half of the vocational center enrollment in the Fiji Islands. Still, the overall pattern remains clear—i.e., the most disadvantaged in terms of access to TVET are women and girls.

Organizational and Management Effectiveness. How effective is the organization and management of Pacific skills development in achieving its objectives? Managing TVET is arguably the most difficult subsector in the spectrum of the education sector. It must address changing and often unknown labor market demands and heterogeneous target groups, provide varied types of training, and compete for resources against larger subsectors. The study identified strong management systems in various parts of the Pacific, including among leading postsecondary technical institutions, such as FIT, NUSIOT, Palau Community College, and VIT. The existence of three national training councils is an important step forward. These councils provide a venue for the main stakeholders to articulate demands, set priorities, and steer TVET in the direction of user demands and market changes. TVET plans have been prepared in PNG, Solomon Islands, and Vanuatu. New organizations are being set up to address skills development along the southern rim (Cook Islands, Samoa, and Tonga). Moreover, an organization of TVET professionals has been established, the Pacific Association of Technical and Vocational Education and Training (PATVET), which offers a forum for professional exchange and development throughout the region.

Major challenges were also identified for organizational and management improvements. Mandates of various supervisory organizations need to be clarified (the RMI

and PNG). Coordination needs to be established among the main providers (i.e., the Fiji Islands, FSM, PNG, and Solomon Islands). Fragmentation and lack of coordination need to be countered among informal sector trainers in the Fiji Islands and Vanuatu. Excessive centralization should be changed in PNG, where the Ministry of Education still controls directly the business and technical colleges. The apex training organizations in the RMI, PNG, and Vanuatu require more resources to carry out their functions properly. PNG, Solomon Islands, and Vanuatu need to prioritize their TVET plans, calculate the costs, and budget them properly. TVET plans are needed in the Fiji Islands, Kiribati, FSM, and Tuvalu. Standards for evaluating management performance need to be introduced throughout the region, and managers must be given opportunities for in-service professional development. Finally, lack of data and research on TVET, an almost universal handicap to progress, must be overcome.

Finance and Internal Efficiency. How do Pacific TVET systems mobilize resources well and use them efficiently for skills development? Examples abound of inefficient use of resources in TVET, including low teaching loads and low trainees per student in some institutions, fragmentation of spending (FSM), and courses that are excessively long for the skills imparted. Inefficiencies occur in part because training budgets are established based on historical levels, not performance. Little use is made of financial transfer mechanisms to improve the input–output ratios in TVET.

Positively, some institutions have accomplished major reductions in the cost per trainee. FIT, for example, raised the average number of students per teacher from 20–30 between 2001 and 2006, an indication of reduced spending per student. In part, this

Table 3: Fiji Islands—Prevocational Courses and Examination Levels

(proportion of students enrolled in vocational programs as a percentage of total secondary students enrolled, by subject and level)

Level	Agriculture	Computer Education	Office Technology	Home Economics		Industrial Arts
FJC (F4)	73	—	22	86		89
FSLC (F6)	62	59	14	C&T 15	FN 55	69
FSFE (F7)	23	40	—	A&D 2.5	FT 22	25

A&D = apparel and design, C&T = clothing and textile, F = form, FJC = Fiji Junior Certificate, FN = food and nutrition, FSFE = Fiji Seventh Form Examination, FSLC = Fiji School Leaving Certificate, FT = food and technology, MOE = Ministry of Education, TVET = technical and vocational education and training, — = data unavailable.

Note: Secondary schools offer 16 TVET subjects: agricultural science, computer education, office technology, home economics, clothing and textile, food and nutrition, apparel and design, food and technology, technical drawing, graphic arts, woodwork, food technology, engineering technology, metalwork, technical drawing and design, and introduction to technology.

Source: TVET section of MOE 2004, as presented in the Fiji Islands In-Depth Report, paragraph 3.4.

was out of necessity as the government froze its funding while student enrollments soared. Public expenditure on TVET throughout the region came under pressure because of constraints on public budgets as a whole. Spending on TVET decreased as a share of public spending in many countries, including the Fiji Islands, PNG, and Vanuatu. To compensate, FIT succeeded in increasing the proportion of student financing through tuition fees to half of total expenditures. Similarly, VIT increased the share of tuition fees and other user charges to a third of spending. The Compact of Free Association countries in the northern Pacific—the RMI, FSM, and Palau—in particular, face the challenge of weaning themselves off external financing. Private training providers, if they meet minimum quality criteria, can help enormously in generating needed skills without burdening public expenditures. Across the region, the challenge is to reduce the dependence on public or external financing by mobilizing nongovernment financing for TVET.

TVET priorities are identified by country groups. The top priority in land-rich, low-income (group 1) countries is training for the informal sector, which means rural agriculture and related occupations. The informal sector is also a priority for the small, vulnerable island countries (group 2), but with special emphasis on delivering services to remote places and outer islands. Financial sustainability is another major challenge for this group, i.e., making TVET systems affordable in some countries (Tuvalu) and reducing dependence on external financing in others such as Kiribati, RMI, and FSM. Where possible, people should be trained to enable them to migrate at higher wages than if they had received no training. The top priorities for the “advanced” island states are expanding training for the wage sector and filling of vacancies generated by emigration. Two areas have shared priorities across all groups—quality improvement and organizational development. Within quality improvement, the principal means is by establishing NQFs. These are specially important in countries that export skilled labor. Throughout the region, organizational development requires establishing or strengthening apex training organizations.

A guide for TVET decision makers is presented in Chapter 5, and is aimed at achieving economic relevance, quality improvement, better access and equity, organizational and management effectiveness, and internal efficiency.

Chapter 6 presents the main findings of the review, along with an extended set of recommendations.

Recommendations from the Analysis

The region is diverse and at different levels of development. This review's findings and recommendations, therefore, do not apply to all countries.

Following are the five top priority conclusions and recommendations flowing from the above analysis:

- The informal sector is the dominant segment of the labor market in most PICs and is where most school-leavers will have to find employment. Training for the informal sector has to become the top priority. This means sufficient new resources should be allocated for informal sector training, training strategies designed, and capacity built to support the rural and informal sectors, in part by boosting the technical expertise and delivery capacity of NGOs.

- Many issues in TVET derive from inappropriate and unclear organizational structures. Getting the structure right is, therefore, the first step to more effective TVET systems. Where possible, TVET systems should be governed by apex organizations such as national training authorities. These apex organizations should be based on partnerships among stakeholders and driven by those who represent demand for skills (i.e., employers). These apex organizations should have executive authority to link training supply with demand; to coordinate providers; to set priorities, policies, and directions; and to allocate resources.

- Choices about where to invest in skills development should be based on evidence of cost-effectiveness. Enterprise-based training should be expanded, e.g., apprenticeships, and institutional training needs to be closely linked with the labor market. However, rather than investing in integrating TVET into general secondary or primary schools—which is expensive, difficult to do well, and usually fails to confer better labor market outcomes on graduates—resources should be allocated to intensive training programs that are well grounded in the labor market and that target those who are in, or about to enter, the labor market.

- Quality in skills development requires three elements: occupational standards, sufficient inputs, and measurement of outputs against those standards. The development of occupational standards should be pursued through the design of NQFs, if the NQFs focus on outputs (competencies) rather than inputs (courses required), and avoid complexity. Minimum standards should be set for public TVET institutions and they should be subject to accreditation and periodic quality audits. In addition, output indicators should be defined and measured against the standards. Information on the impact of training should be developed, e.g., tracer studies of graduates, and factored into training policies and resource allocations.

- Current incentives in PIC TVET systems result in inertia. Budgets are given year after year regardless of performance. This review recommends that incentives be changed for those managing skills development. Managers of training institutions should be given authority through devolution, along with accountability for results. Results should be compared against targets and budgets should be allocated according to performance. At the same time, managers should be enabled to develop their capacities through in-service management development programs.

Tackling the reforms previously outlined would justify substantially increased public and private investment in skills development.

Relevance to Economic Requirements

TVET systems in the Pacific are relatively small in relation to enrollments in formal education, and make up relatively small proportions of the MOE budgets. However, TVET is increasingly important for national development because of the burgeoning number of youth who need training for the informal sector, because of skills needed for competitiveness in the global economy, and to fill skills shortages caused by economic growth and migration.

- In view of its importance for national development, TVET should be accorded a prominent place in national development strategies and programs.

The introduction to this publication posed a series of questions, the first of which was: What is the purpose of TVET and skills development? The purpose is preparing for work and providing a livelihood, either in the formal or informal sector, not preparing for further education. A mental shift is needed. TVET should not be viewed as synonymous with education. TVET is providing service and should be demand, not supply, oriented. Moreover, efforts at “articulation” between TVET and higher levels of education should be treated with caution. Financing students through a series of TVET levels, or using TVET as a stepping-stone to further education, is not cost effective in achieving preparation for employment.

- As a rule, it is more cost effective to defer skills development and specialization until the trainee is close to entry to, or already in, the labor market.

What is the balance between the supply and demand for skills in the Pacific? Demand–supply imbalances characterize the labor markets in many PICs and affect adversely the development of PIC economies. This takes two forms. First, shortages of skilled labor occur in the formal economies in several PICs. Second, surplus unskilled labor occurs in the formal sector of almost all countries in the region leading sometimes to significant youth unemployment. Consequently, more and more people have to work in the informal sector or emigrate, and need skills to do so productively.

The imbalances in the formal sector of the labor market are caused by (i) job creation from economic growth, (ii) inadequate supply chains, as in PNG; or (iii) emigration of skilled workers (as in the Cook Islands, Fiji Islands, RMI, and FSM). Emigration has advantages—it relieves unemployment, and in the southern rim countries contributes to substantial remittances. However, it also creates or exacerbates skills shortages.

- Build up training for the wage sector in countries with high emigration, and include training to international standards to support emigration in view of its benefits (i.e., remittances and reduced unemployment).

Imbalances in the informal sector are caused by (i) excess new entrants to the labor market in relation to the generation of wage jobs in the formal sector, and (ii) inadequate attention to the needs for skills in the informal sector. One main finding of this review is the relative neglect of training for the informal sector. Formal education and training systems in PICs are unable to meet the learning needs of a growing number of vulnerable and disadvantaged groups who lack the technical and entrepreneurial skills to find a job or launch a small business. School-leavers are the major group affected, but rural women, the unemployed and underemployed adults, people with disabilities, and the dispossessed all require access to alternative learning opportunities if they are to improve their livelihoods, preserve their fragile environments, and escape rural and urban poverty. Training is an important requirement for the informal sector, self-employment, and better livelihoods. However, this is being handled haphazardly and with insufficient funding.

- Training for the rural and informal sector must be placed at the top of the training agendas of most PICs. It must become a national spending priority to address the needs of the great majority of youth, women, and rural poor. Specifically, training plans should be prepared for the rural informal sector (e.g., Vanuatu), and the delivery capacity vastly improved. Target groups should be broadened, to cover not just school-leavers but also adults, especially women. Given the high incidence of subsistence farming, nonformal training for entrepreneurship and self-employment needs to be linked to the creation of value-added business in the agricultural economy. The delivery capacity

of NGOs and other providers needs to be greatly strengthened (see below).

How can economically relevant TVET systems be built or strengthened in PICs? Three essential requirements exist: (i) adequate information; (ii) close linkages with the labor market, particularly with employers; and (iii) a flexible, responsive system of TVET supply. Each requirement is addressed in sequence below.

Most TVET systems in the region tend to operate in the dark both on skills demand and on supply. They lack feedback from their markets, such as labor market studies and tracer studies on the destination and performance of graduates.

- Build national capacities to carry out labor market studies, tracer studies, and impact analyses, and factor this information into training policies.

The demand, or employer, side is underrepresented in the planning and direction of TVET systems. Similarly, communities tend not to be involved in identifying training needs for the informal sector. As a result, training operates in isolation and is supply driven. Engaging employers is not a simple matter for TVET systems. Employers' time carries a premium. Moreover, some employers have not thought through their skills requirements.

- Increase to parity or a majority, employer representation in national training organizations. However, the challenges in engaging employers should be recognized. Their involvement should be concentrated on strategic inputs, such as overall planning and direction of the TVET system, identifying skill requirements, and evaluating the quality of skills produced.

Training supply, inadequate in numbers in many countries, also tends to be overly rigid in response to changes. Public training almost by nature tends to be resistant to change, in part because of long-term teaching staff contracts that need to be honored, and expensive investments in facilities and equipment that need to be made. The incentives are to continue the same programs year in and year out.

- Make TVET more responsive to changes in the labor market by changing management incentives, introducing short-term contracts for instructors, replacing long-term training with modular programs, accommodating on-the-job training, and using CBT.² In places where the demand can be met quickly, such as rural and remote areas, mobile equipment may be considered, or training equipment can be lent to training institutions (it can be redeployed after saturation is reached).

Quality and Effectiveness of Training Provision

Where should training be provided? Training is mainly given in three places—schools, training centers, and enterprises. Most skills acquisition takes place on the job, not in

² Defined as training that focuses on occupational standards, with students assessed on the achievement of those standards.

training institutions. Training on the job may be the most effective means of delivery. Training in purpose-built centers can also be highly effective, as seen in TPAF in the Fiji Islands, if it is well linked to the requirements of employers. Integrating TVET into general secondary schools may be politically appealing, but it is difficult to put into effective practice for three reasons. First, trained instructors are in high demand but in short supply. Second, TVET is costly and budgets may be insufficient to cover the nationwide costs of equipment, maintenance, and consumable supplies for all schools. Third, the dominant ethos of secondary schools favors academic, examinable subjects rather than vocational pursuits. Moreover, TVET in secondary schools apparently does not confer advantages in the labor market on the recipient. Prevocational courses are delivered in most countries of the Pacific, but apart from Palau, this review found little evidence of effectiveness.

- Where possible, expand apprenticeships and support for on-the-job training. Expand successful institutional training that is linked closely to the labor market, i.e., for the formal sector links with employers through work attachments—PICs generally have good intentions here—and for the informal sector through links with communities. Rather than investing in integrating TVET in general secondary or especially primary schools that is bound to be costly and difficult to implement in multiple schools, allocate the resources to purpose-built training institutions targeting those who have finished school and are in, or about to enter, the labor market.

Standards, Outputs, and Monitoring

Developing standards is the first requirement for quality training. Customers and employers should play a major role in determining standards. Standards should be expressed in terms of competencies (output requirements), not inputs. NQFs are being developed in many countries of the region. However, there may be overexpectations and underappreciation of the work involved in establishing NQFs. The difficulties and dangers in NQF systems should be recognized: tendency to overcomplexity and heavy staffing burden in establishing and maintaining NQFs. The second requirement is to identify and measure outputs and outcomes. Quality is difficult to ascertain in much of Pacific TVET because feedback and evaluation are lacking to provide information about outputs and outcomes, except for PNG, NATTB; Fiji Islands, TPAF trade tests; and Vanuatu, VIT competency tests.

- NQFs should be designed to focus on outputs (competencies required), not inputs (courses). They should endeavor to avoid complexity.
- Output and outcome indicators should be developed and used as benchmarks to improving quality.

- Minimum standards should be set for public institutions. Public TVET systems should be subject to quality audits and accreditation, similar to that for private training providers (Fiji Islands, MOE; PNG, vocational centers).
- Postsecondary technical institutes should undergo periodic quality audits against regional and international benchmarks (e.g., Fiji Islands, FIT).
- The review endorses the work of PATVET and South Pacific Board for Educational Assessment in developing a regional qualifications register.

Postsecondary technical institutions are the key TVET institutions in the region. They have a special role to play in TVET reform, for example, FIT and its franchise program.

- Postsecondary technical institutes should be used to support quality improvement of TVET systems. In this context, the proposed Australia–Pacific Technical College could make a major contribution to raising standards, but direct assistance to technical training institutes is also likely to be necessary.

Equity

Who should be trained, and to what extent are they trained? The review found that access to TVET is distorted in the Pacific. The most disadvantaged are females, low-income groups, and those living in remote areas. The FIT franchise program has helped improve access in rural areas to postsecondary technical training. TVET also suffers from a stigma in secondary education as a second-class option. This attitude can be countered best by allowing possibilities for further training through TVET—as the FIT franchise program does—and by linking TVET to well-paying wage jobs.

- Countries should construct an “index of TVET opportunity” that compares annual intake into training (by gender, region, and income group) to the number of terminal school-leavers. Training opportunities for women should be broadened to promote their active participation in nontraditional trades and management-related subjects.

Training for the rural and informal sector in the Pacific suffers from low status in the eyes of parents, participants, and the community at large. This lack of esteem results, in part, from the lack of recognized qualifications associated with such training.

- Informal sector training programs should be incorporated into national qualification frameworks, as is being done in PNG and Vanuatu. This could create greater interest and support for these programs and provide a quality standard against which to measure performance.

NGOs and other grassroots organizations play an important role in providing nonformal education in the rural and informal sectors of PICs. However, their ability to identify needs and to design and deliver effective labor market-oriented programs, is often weak, and needs to be strengthened by introducing relevant training methodologies and staff development.

Organization and Management

TVET is arguably the most difficult subsector to organize and manage. TVET systems in the Pacific suffer from a variety of weaknesses. These include unclear mandates (RMI, PNG, Solomon Islands, and Tuvalu), lack of coordination (the Fiji Islands and PNG), overcentralization (PNG at postsecondary level) and fragmentation (the FSM and most rural training). Other issues include low accountability for results and lack of coordination between government and NGO providers in training for the informal sector. Most of these issues are structural. Getting the organizational structure right is the essential first step to more effective TVET systems.

How should TVET be organized? First, TVET should be directed by partnerships of those representing the demand and stakeholders. Second, TVET should be elevated above ministries and managed as a service in apex institutions. Several national training councils already exist in the region, but are dominated by the public sector and have inadequate employer representation.

- Where possible, TVET systems should be governed, planned, and guided by apex organizations such as national training authorities that are based on partnerships among stakeholders, particularly those representing demand (employers and communities). These apex organizations should link training demand with supply; coordinate training providers; set priorities, policies, and direction; and allocate resources. In short, they must have executive, not merely advisory, powers.

Part of the clarification needed is to differentiate the respective roles of government and the private sector. Just because the public sector needs to finance training does not also mean it must provide training—particularly if nongovernment institutions can provide needed skills at reasonable cost. The government cannot do everything and the private sector needs to help.

- The functions of the public sector should be to develop TVET policies, carry out regulatory functions and accreditation, train instructors, collect data on TVET, monitor and evaluate TVET, coordinate efforts, and finance training both for equity reasons and to narrow skills gaps. In particular, the governments' role in supporting rural and informal sector training in PICs is inadequate and poorly defined. Governments—both national and local—should focus on establishing policy guidelines for training providers, on creating an enabling environment for the successful application of acquired skills and knowledge, and on facilitating the participation of vulnerable and disadvantaged groups in appropriate programs.

The role of the private sector should be to articulate needs and demands for training (i.e., what kind, what competencies, and how many); help to set standards for training; to provide internships; give complementary financing; and help with quality assurance.

Changing Management Incentives

Public budgets tend to be transferred to training institutions according to last year's budget without targets or conditions for performance. Managers tend not to be accountable for results. Moreover, public TVET institutions are often unduly constrained in freedom to act, adapt curricula, hire staff, and manage budgets.

- Change management incentives. Establish performance targets based on outputs. Make budgets contingent on meeting performance targets based on outputs. Make managers more accountable for results, with incentives provided for good performance. Devolve authority to training institutions. Place postsecondary institutions under boards of stakeholders, devolve authority to training institutions so they can find their own markets, and mobilize resources (e.g., technical and business colleges in PNG). Devolution must be accompanied by accountability for results, workable financial accounting systems, and extensive management training.

TVET plans—where they exist such as in PNG, Solomon Islands, and Vanuatu—suffer from too many recommendations, lack of priorities, and lack of costing and budgeting. Little or no implementation ensues.

- Existing plans should be translated into priorities, actions, costs, and budgets (PNG, Solomon Islands, and Vanuatu). In particular, strategies and costed plans need to be prepared for expanding service to the informal sector. Comprehensive new plans are needed in other countries, e.g., the Cook Islands, Fiji Islands, Kiribati, and FSM.

The review found that registration/accreditation of private training providers is resource intensive and consequently difficult to implement. It requires sufficient staff with expertise and travel budgets. Available resources concentrate on initial approval. Maintenance of accreditation registers is neglected.

- Accrediting agencies should concentrate on accrediting the training institution for specific occupational training, not for individual programs or instructors as attempted in PNG). The resource-intensive nature of the activity should not only be recognized but must be budgeted accordingly (the Fiji Islands and Vanuatu).

PATVET is an embryonic organization that has considerable potential for strengthening TVET in the region.

- PATVET should be supported as a network through which training practitioners can share experiences. PATVET should also develop into a service organization to provide support to its members. Regional projects have been proposed to launch this service in organization and management support (regional project no. 1), and financial support (regional project no. 2).

Finance and Internal Efficiency

Who should pay for training? Clearly, the government has a major role in financing TVET, particularly for purposes of equity, and it has to overcome critical skills shortages that are unmet by the private sector. However, its role in financing training does not mean that the government should automatically provide training. Subsidizing nongovernment training providers may be a better solution than through government-owned institutions. Some of the best TVET institutions in the region are nongovernment institutions—often church agencies such as Don Bosco and Montfort. To the extent that these institutions can accommodate trainees at less than full cost to government, they provide essential services that save public resources.

- Where public money is limited, those who benefit—individuals who benefit through higher income and enterprises that benefit through raised productivity—should finance training increasingly. The Government should encourage the development of nongovernment and private training institutions that meet and exceed minimum standards of quality.

Overall, TVET systems appear to be underfinanced in most places in the Pacific. Available resources do not approach the needs. As a result, public TVET institutions tend to be chronically underfinanced in qualified staff, operable equipment, and consumable supplies, and consequently are unable to carry out their functions properly. This raises the question: Should TVET even be attempted, when budgets are insufficient to provide minimum standards? The answer may lie in mobilization of nonpublic resources.

- In addition to raising contributions already mentioned, create incentives for training institutions to mobilize resources (as done at FIT in the Fiji Islands). Specifically, allow training institutions to keep resources they raise through tuition, production, and other activities.

Prudent allocation must also be made of scarce existing resources in TVET. Unfortunately, the review found few examples of sustained TVET via distance teaching, except FIT's superb franchise program and USP, which uses ICT to deliver distance programs by traditional lecture methods.

- Internal efficiency should be improved, by (i) calculating and monitoring actual costs per trainee and per graduate, (ii) reducing the length of training, and (iii) making greater use of financial transfer mechanisms (i.e., placing performance conditions on recipients), such as through use of training funds.

As the issues are tackled, governments should be prepared to invest more in TVET, and invest more wisely in the strategic interventions outlined hereafter.

Priorities by Country Group

What are the priorities by country group? The top priority in land-rich, low-income countries is training for the informal sector, which means rural agriculture and related occupations. The informal sector is also priority for the small, vulnerable island group with special emphasis on delivering services to those in remote places such as the outer islands. Financial sustainability is also a major challenge for this group, making TVET systems affordable in some countries (Tuvalu) and reducing dependence on external financing in others (Kiribati, RMI, FSM, and Palau). Where possible, people should be trained to enable them to migrate at higher wages than if they had received no training. The top priorities for the “advanced” island states are expanding training for the wage sector and filling vacancies created through emigration.

Two areas have shared priority across all country groups—quality improvement and organizational development. Within the former, the principal means is establishing NQFs. These are especially important in countries that export skilled labor. The latter requires establishing or strengthening apex training organizations.

Strategic Interventions

What interventions would make a broad impact at reasonable cost? Governments and donor agencies should consider strategic targeting of investments, such as on the following interventions that promise impact on skills development at reasonable cost.

- Focus on the definition and measurement of outputs and outcomes, not merely inputs and processes, by developing standards, trade testing, and tracer studies.
- Collect and use labor market information on which to base policy development and adjustments in training supply.
- Establish or strengthen apex training agencies, such as national training agencies and councils to spearhead TVET reform. Such organizations need to be strengthened in the RMI, PNG, and Vanuatu and to be established in other countries, such as the Fiji Islands, Kiribati, and FSM.
- Concentrate on developing management systems and managers in TVET systems at both the central and institutional levels. Introduce targets and incentives for good performance based on measurement of outputs. This should include capacity building to increase financial sustainability.
- Change the way in which funds are transferred to training providers. Make the transfers contingent on performance and results, not last year’s budget. In particular, establish training funds to stimulate innovation and compensate for past neglect of capital development. Such funds are sparsely used in the Pacific.

- Strengthen NGO and government capacities to design and deliver community-based training for the informal sector, especially to remote and isolated areas and target groups.
 - Harness the potential of ICT and open and distance learning to expand service delivery at reasonable cost.

The proposed regional projects (Chapter 7) incorporate these strategic interventions.