Pacific Studies Series

OCEANIC VOYAGES

Aviation and Shipping in the Pacific

EXECUTIVE SUMMARY

Asian Development Bank

ADB

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A summary of the findings and recommendations of the study on the transport services of Pacific developing member countries

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2. Aviation and Shipping sectors

Preface

This report was prepared as part of the output of the Asian Development Bank (ADB) regional technical assistance project (TA 6166-REG): Pacific Regional Transport Analysis. The goal of the project is to enhance economic development in Pacific developing member countries (DMCs) of ADB by improving the efficiency and effectiveness of Pacific transport services. In order to achieve this, the report is expected to contribute to reform of public sector operations and policies in the transport sector, and to increased private sector participation in transport service provision. Such reform and participation will reduce the costs of trade and commerce and consumer goods, increase employment, and reduce poverty.

The report is published in three volumes. Volume 1 is the *Oceanic Voyages: Executive Summary*, which presents a summary of the findings and recommendations included in Volumes 2 and 3. Volume 2 presents *Oceanic Voyages: Aviation in the Pacific Region,* the full report of the results of detailed study and analysis of the Pacific aviation sector, including case studies of selected Pacific DMCs of ADB. Volume 3 presents *Oceanic Voyages: Shipping in the Pacific Region*, the full report of the results of detailed study and analysis of the Pacific shipping sector, including case studies of selected Pacific DMCs of ADB. Each sector volume examines international and regional trends, and regional characteristics and components, influencing sector development. Strategy and policy options available to Pacific island governments to facilitate change are assessed. Specific recommendations are provided for appropriate policies and strategies for improvement of sector efficiency and effectiveness.

Robert Guild directed the analyses and managed the regional technical assistance project on behalf of ADB. The Centre for Asia Pacific Aviation prepared the base reports for Volume 2. Meyrick and Associates prepared the base reports for Volume 3.

Foreword

Historically, the people of the Pacific islands were legendary voyagers. They had to be – living in archipelagic environments separated by vast expanses of ocean required them to be expert navigators and sailors to undertake trade, exploration, and social contacts. Long before modern charts, instruments, or vessels made long distance travel commonplace, Pacific people regularly traveled between thousands of islands and across millions of square kilometers of open water. From the margins of Asia to the coasts of South America their remarkable journeys defined a diverse Pacific region.

Oceanic voyages undertaken by international aviation and shipping services are even more important in the Pacific region today. The vast majority of trade is carried by international shipping with countries outside of the region. Some cargo is bound for Australia and New Zealand, and significant proportions are destined for Asia, Europe, and North America, while very little is between Pacific island countries themselves. Outbound access to international markets for agricultural and marine products opens up opportunities for rural producers to expand their businesses and provide local jobs.

In the other direction, improved inbound access provided by international aviation from every other region in the world to an increasing number of islands is opening new opportunities. Tourism contributes substantially to income and employment in many Pacific countries, usually in areas outside of the main urban centers, and enables air freight services for valuable but perishable commodities that would otherwise not be marketable.

Ensuring efficient transport services is therefore essential to the continued development of Pacific island countries. A region founded by voyagers is now more than ever dependent on international connectivity.

Some features of the Pacific region make provision of international services a challenge, however. Pacific island countries are typically small and isolated. Their economies are narrow in scope and thus reliant on a limited number of products and markets that are subject to wide seasonal variation.

Imports and exports are grossly imbalanced in many cases. Often the result is under-utilized capacity, low service frequencies, and high costs.

These challenges have sometimes led governments to intervene, with mixed results. Their interventions have generally taken two forms. Some have gone into direct service provision through investments in airlines and shipping companies, and some have attempted to manage market access to protect operators. The evidence is that neither approach has been very successful, but the experience gained has revealed other ways to facilitate services that do work.

Costly public-sector investments have been made in national flag carriers in a number of countries. A few have survived and evolved into successful commercial enterprises, but more often than not these investments have required large ongoing subsidies and even led to failures at considerable cost to fragile economies that can least afford them.

Governments also restrict access to routes in an effort to improve the sustainability of a limited number of operators, most often those owned by the government or its nationals. The result has been fewer services provided in a region that demands more of them, and weaker operators that are less able to compete effectively as services and markets are integrated.

There have also been some notable successes that offer key lessons for future development. Air Pacific and the Pacific Forum Line were founded as cooperative regional services in the 1970s as governments saw opportunities to pool resources and develop larger-scale operations. Both companies struggled initially, as narrow national interests clashed with market realities, before reforming along commercial lines and becoming market leaders. In Fiji and Vanuatu, more open access to air routes has led to dramatically increased services and decreased fares. In Samoa, an aviation joint venture has converted a loss making state-owned enterprise into a successful example of public-private partnership.

These successes, documented through detailed case studies, demonstrate the necessity and value of operating on commercial principles, attracting international and private-sector capital investment, assigning risk where it can best be managed, and liberalizing market access. In every case, the benefits have been clear.

Experience also suggests opportunities for national and regional action to improve transport services. An integrated regional market for transport services would improve the sustainability of operators. Regulatory environments with fewer restrictions based on national routes or ownership rules would facilitate a greater range of services at more competitive prices.

Where some routes are too thin to operate commercially, interventions can be designed to offer support for social services while maintaining private sector efficiency. Finally, sector development is most efficient when roles for policy, regulation, and provision are separated and assigned to the appropriate public and private sector actors.

Given the importance of international transport services to the region, and the large benefits derived when those services work well, such opportunities should be developed as fully and quickly as possible. Pacific island country governments have the ability to create effective operating environments. When they do so, experience shows that operators will respond with efficient service provision.

These volumes, which describe the experience of the past and offer recommendations for the future, give reason for confidence that the future of the Pacific region will remain intertwined with the efforts of its voyagers.

Philip C. Erquiaga
Director General
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Aviation in the Pacific

The island countries of the Pacific are scattered across an enormous area that makes up nearly one third of the globe. This huge region is nearly all ocean—about 30 million square kilometers of it. Only about a half million square kilometers comprise land, and some 88% of the total landmass of the region is accounted for by Papua New Guinea (PNG). Similarly, of the region's total population of slightly less than 9 million people, PNG accounts for nearly 6 million. Small populations and far-flung communities, thus, characterize the Pacific region, and probably no region is more dependent on air and sea transport for passengers and freight.

The Pacific Context

The Pacific aviation market is characterized by small and widely dispersed populations spread across many islands. The provision of air services is consequently fragmented, often involving long routes with thin traffic and freight levels. As a result, airlines face considerable constraints in profitably managing returns through a viable passenger and cargo mix, and achieving sufficiently high levels of aircraft utilization and revenue load factors.

In addition to small and widely dispersed populations, other realities of the operating environment for aviation in the Pacific adversely affect the development of efficient air services. The generally small and slowly growing economies of nearly all Pacific island countries (PICs) are a critical factor. These economies are typically based on a limited range of activities, and many are subject to the seasonal changes associated with the peaks and troughs of tourism. Political and social tensions and instability in some island states are detrimental to the maintenance of a consistent strategy and policy for air services.

Achieving viable, lasting structures for the provision of air services for passengers and freight has, thus, proved an elusive goal for many of the small island countries in the Pacific region. Narrow national policies and strategies have led to costly investments in national carrier services in a number of countries. More often than not, failure has come at considerable cost to fragile economies that can least afford it.

The introduction, in 2004, of the low-cost airlines (LCAs), such as Pacific Blue, Polynesian Blue, and Freedom Air, into seven Pacific routes from Australia and New Zealand produced dramatic passenger growth and substantial economic benefits. The Fiji Islands, Samoa, Tonga, and Vanuatu were the markets targeted by LCAs. Passenger traffic and visitor arrivals in all four countries increased dramatically as fare levels dropped. The overall impact on incumbent national airlines was relatively limited, however. National airlines in the targeted markets responded with reduced fares that were close, or equivalent, to the 30–40% fare reductions offered by LCAs thus, maintaining their traffic loads.

Coinciding with this increase in competition on some routes, there was a general improvement in air service provision and stability in the Pacific. A number of problem areas, notably Samoa, Tonga, and Niue, were resolved. Other areas, particularly the Central Pacific and Nauru, Solomon Islands, and Vanuatu, remain uncertain.

While passenger traffic has grown at robust rates to some destinations, the transport of airfreight in the Pacific is hampered by relatively high charges, low volumes, and increased use of narrow-bodied aircraft with limited freight capacity. Steep refueling costs on the islands and inadequate airport and freight-handling facilities also negatively impact airfreight services. Sharply increasing operating costs, particularly high aircraft fuel prices, remain an impediment to future growth of Pacific aviation in general.

Liberalization: Cornerstone of a Realistic Policy Approach

The policy challenge for Pacific island governments is to facilitate rather than impede the process of commercialization of air services. Focused but light-handed regulation is needed to enhance the operating freedom of carriers and, thereby, augment opportunities for resolution of service deficiencies.

Governments need to identify and prioritize their reform objectives. Broadly, their objectives should aim at ensuring long-term, stable, and robust provision of air services at reasonable prices and frequencies, with adequate freight capacity to meet import and export needs. Development of the tourism sector (where practicable), including expatriate travel, should also be addressed.

Globally, there have been moves to liberalize aviation markets, relax ownership-and-control regulations, and bridge national boundaries, particularly in Europe, Africa, and Asia. Airline privatization and market liberalization have been key factors in providing the impetus for these changes. Such developments have had little impact so far in the Pacific, where aviation liberalization has progressed at a slow pace.

The establishment of the proposed single air services market in the Pacific through the Pacific Islands Air Services Agreement (PIASA) is nearing realization. Implementation of PIASA would promote positive evolution of markets by liberalizing and increasing certainty of access. Concerns about possible negative affects of PIASA on national flag carriers were dispelled by a recent study that concluded PIASA would significantly benefit all 14 Pacific island member countries of the Pacific Islands Forum.[1]

Progress toward a more expansive partnership model involving multiple island governments was advanced with the establishment of a harmonized regulatory system through the formation in 2003 of the Pacific Aviation Safety Office. Partnerships between airlines, particularly between large and small airlines and between small airlines, are desirable. Privatizing the flag carrier is not a prerequisite to achieving a partnership arrangement with a foreign airline. It does, however, contribute to the potential for partnership success. In reality, however, few national airlines in the Pacific may qualify for privatization due to the poor state of their balance sheets and their weak financial performance.

Code sharing[2] between airlines is well established in the Pacific, and may be viewed as a "soft" option for countries wanting to progressively open

[1] The Pacific Islands Forum is an intergovernmental organization that aims to enhance cooperation between the independent countries of the Pacific and represent their interests.

[2] The practice where a flight operated by an airline is jointly marketed as a flight for one or more other airlines. Most major airlines have code-sharing partnerships with other airlines, and code sharing is a key feature of airline alliances. The term "code" refers to the identifier used in flight schedules, and under a code-sharing agreement participating airlines can present a common flight number.

their markets. Other forms of cooperation also occur through interlining[3] between international and domestic markets.

More recently, the Republic of Nauru's proposal to establish a joint venture with up to five other island states will rise or fall on the support of prospective government partners and the performance of the Our Airline operation. Nauru Air Corporation, the government entity previously holding Air Nauru (now Our Airline), would become the flag carrier and utilize the rights of each participating country. This is viewed by Nauru as a solution to ensure the sustainable, long-term provision of air services in the Central Pacific market, which has limited commercial value. The proposal is still under development and will depend on the assessment by potential partner governments of Our Airline's ability to profitably service these Central Pacific routes and generate satisfactory returns for shareholders.

The Polynesian Blue model in Samoa appears to represent a viable—indeed preferable—alternative to island governments owning and operating their own national airlines. In partnership with a larger airline group (Pacific Blue), Samoa effectively transferred the operational risk and responsibility for management and resourcing to the private sector, with the prospect of establishing commercially-based services capable of generating positive earnings for a sustained period.

The checkered history of national airlines throughout the Pacific emphasizes the importance of gaining the support of airlines with strong capital structures and expansive fleet resources to underpin local services. This clearly suggests that any solution to the pervasive problems besetting air services in the Pacific must involve partnership of some kind with a larger airline grouping. Previous experience has shown that this generally leads to better and more consistent service provision at more affordable prices, and with optimum benefits for consumers.

Strategy Options

It is essential that strategies adopted by Pacific island governments reflect the specific requirements of individual markets and routes—particularly whether routes are commercial or not. Growth prospects and potential for

3 When passengers, baggage, and freight are transferred from one carrier to another using only one ticket or one check-in procedure from departure point to destination.

future development must also be addressed. These issues will dictate the most appropriate model to effect improvements in air service sustainability. The primary role of government should be to facilitate outcomes that are either commercially driven or have a commercially-based structure.

For non-commercial routes, this goal could be achieved through direct or *indirect subsidies*, or through *underwriting arrangements*. Partnerships can be used. *Public–private partnerships* link governments with private operators in joint ventures or commercial partnerships. With *public–public partnerships*, joint provision of services by one airline can be arranged through agreement between two or more island governments. *Tendering*, either open or selective, provides a transparent process for governments to secure a contracted provider for domestic or interisland services. *Privatization* of national airlines enables governments to develop and manage a bid process with the objective of providing entry of an established operator as cornerstone shareholder, and the possibility of recapitalizing their national airlines. Through *liberalization*, governments can adopt a more liberal operating environment in order to provide an opportunity for service reform.

A number of other initiatives examined in the full report offer alternative options for service provision. These include the "virtual airline" structure previously utilized by Solomon Airlines, where direct exposure to international markets is limited by chartering aircraft operated by other airlines. Another form of this structure is being used by Air Kiribati, with a dedicated sales operation to purchase seats on other airlines serving Kiribati. A different approach is being explored by the private sector in Vanuatu, where a group of investors—mostly tourism interests—are moving to reestablish the Port Vila–Melbourne air service by setting up a new company to forward-sell seats on the service.

Policy Principles

In an environment where capital is scarce, strategic planning is imperative to ensure that capital is applied most effectively. Air services involve substantial financial commitments and, thus, pose a particular challenge in this regard. Experience in the Pacific has clearly demonstrated that air services can constitute a large and persistent drain on cash reserves when not heavily utilized, or when fares do not cover costs.

Like other commercial enterprises, airlines must not only cover costs, but also need to provide an acceptable return on capital. At the same time, air services form part of the indispensable infrastructure of the communities they serve and are essential for tourism development. In order that airline operators can fulfill these roles that—particularly in the Pacific—often conflict, it is recommended that governments develop policies for aviation that adhere to the certain principles.

Pacific island governments should remove or minimize their involvement in the ownership and operation of air services, and use their scarce capital for basic aviation infrastructure and safety regulation. Private sector participation in the provision of air services should be encouraged whenever practicable, either through joint ventures, tendering, privatization, or other ways. The aim should be the development of airline services on a commercial basis. If that is not possible, the goal should be provision of air services within a commercially-based, transparent structure.

Governments should separate the commercial and regulatory activities of aviation. They should establish a regulatory environment conducive to development and growth of air services, not one that impedes solutions for air service provision. Liberalization of air service agreements should be pursued where practicable.

Governments should participate with airlines and other governments in sharing skills and resources in the provision of safety and other regulatory services. The Pacific Aviation Safety Office is a prime example of value created by such sharing.

Governments should make every effort to ensure aviation infrastructure, including airports and regulatory systems, is capable of supporting service improvement and development. Assistance from the large, established airlines, including development of aviation infrastructure and training, should be pursued through commercial partnerships and support services.

Governments should develop and adopt tourism-specific strategies to drive aviation growth and development. For many PICs, tourism holds significant potential as an engine for economic growth and opportunity.

Recommendations

Consistent with the strategy options and policy principles discussed above, specific policy and strategy recommendations are provided for each of the four main types of routes in the Pacific.

Level 1 and Level 2 Routes

The domestic routes of the island nations (Level 1 routes), and the intra-regional, non-jet routes between them (Level 2 routes), are frequently non-commercial due to thin traffic. For these routes, governments may often face the need to facilitate air services in an environment where they would not normally be provided by commercial airlines. In these circumstances, it is recommended that governments explore targeted approaches that can stimulate interest by commercial airlines, and simulate commercial supply.

Recommendations for Levels 1 and 2 Routes

1. *Privatization of national carriers should be pursued where practicable. This should, preferably, involve a competitive bidding process, and an established operator securing a cornerstone shareholding.*
2. *If this is not workable, governments should seek tenders for domestic service provision incorporating contract performance targets and a subsidy component. Local carriers could be given the opportunity to participate in the tender, ensuring a competitive process. Alternatively, if this is not possible due to the depleted state of the local carrier, its operations could either be absorbed by the successful tenderer, or closed down.*
3. *Governments should seek to provide a regulatory environment conducive to the establishment of more sustainable domestic services. This may entail maintaining restrictions on market access as a means of providing greater control over the process of installing another operator (and ensuring certainty of return for any contracted provider). Alternatively, cabotage rights, which offer domestic access to foreign operators, may be provided. The latter, for example, may enable external operators already serving the country to extend services to domestic routes in an economic manner. It also may encourage the development of new regional services that, without domestic access, would not be viable. In deciding which policy option is more applicable, consideration should be given to (a) the future of the national carrier—whether it should close or continue on some routes; (b) the impact on subsidy arrangements; (c) the likelihood of entry by external operators; and (d) whether, if entry does occur, adequate coverage will be provided.*
4. *Regional markets should be liberalized to the greatest extent possible to optimize opportunities for prospective privatized operators.*

Level 3 and Level 4 Routes

The regional jet point-to-point routes (Level 3 routes) and international routes (Level 4 routes) are economic in their own right—such as those linking into and out of the major markets of Australia, New Zealand, Fiji Islands, and beyond. Level 3 routes are second-tier international routes that support competition and are subject to the usual pressures and opportunities of supply and demand. Level 4 international routes pass through the region and connect to long-haul international markets. They typically support the operation of wide-bodied jet aircraft and are critical to regional economic development because of their role in trade and tourism.

Recommendations for Levels 3 and 4 Routes

1. *Governments should explore the full range of options available for air service provision discussed in the full report. These include commercial arrangements between carriers, tendering of services, "virtual airline" operations, "milk run" structures, joint ventures, and other partnership opportunities.*

2. *Where possible, governments should seek the involvement of larger airlines in air service provision through one, or a combination of a*

    - *Request for Tenders or Request for Proposals process,*
    - *joint venture or public-private partnership,*
    - *commercial arrangement (e.g., code sharing), and/or*
    - *route-specific arrangement for provision, incorporating performance underwriting.*

    A partnership option with a local carrier is feasible only if the local carrier has potential to complement the service provision of the larger airline—for example, if the local carrier provides domestic services that can interlink with the other airline. If this is not the case, governments should consider closing the local operator.

3. *In the case of commercial routes offering the prospect of competitive entry, governments should negotiate either "open skies" or expanded access agreements. The PIASA is designed to do this on a multilateral basis. In preparation, governments should implement the principles on a bilateral basis to prepare for regional liberalization.*

4. *In the case of non-commercial routes, where a route-specific arrangement is in place, governments should manage access through bilateral agreements to ensure that contractual requirements are satisfied.*

5. *Levels 3 and 4 commercial routes generally require a high degree of deregulation to encourage development by commercial operators, including liberal market access and code sharing. Governments should adopt liberal approaches to rights provision on these routes.*

Shipping in the Pacific

The small island nations and territories in the Pacific region have much in common. Most important in this regard are their essentially maritime character, the small size of their economies, and their remoteness from major markets. This report focuses, to a large extent, on their common characteristics and challenges, and on generally applicable strategies to alleviate the problems that arise from them. Recommendations are offered on ways to improve the efficiency of Pacific maritime transport services that will lead to better pricing structures for exports and imports, improved conditions for private investment, greater employment generation, and poverty reduction. The report provides the foundation for improvements in public sector operations, in private sector participation, and in regional cooperation in the maritime transport sector.

International Shipping Services

The bulk of general cargo imports and exports handled by shipping services in the Pacific are carried in containers. The major shipping routes connecting Pacific island states can be generally categorized as

- Asia and around-the-world routes,
- North American routes,
- European routes, and
- Australia and New Zealand routes.

On most international routes to PICs, there is a high degree of concentration, with only one or two lines or consortia providing shipping services. However, because the market is reasonably contestable—i.e., no regulatory barriers to entry and sunk costs are involved in entering the trade are relatively modest—it is likely that any abuse of monopoly power would be transient.

Freight rates are relatively high by world standards. But economies of scale are important in shipping, and cargo volumes on the routes to, from, and within Pacific islands states are generally low. It is not evident that freight rates are any higher than the long voyages and low cargo densities would lead one to expect.

Several factors combine to make shipping services to Pacific island states relatively expensive. They have a significant effect on the logistics industry, raising the cost of goods generally and affecting the economic welfare of Pacific communities. The most significant of these are the long distances between ports, and the widely varying quality of port facilities. Low trade volumes and the often extreme imbalance in trade—with exports usually far outweighed by imports—also add significantly to costs because cost-reducing economies of scale cannot be employed.

Past direct intervention to encourage "improved" international services has taken two main forms, neither of which has been conspicuously successful. Direct government involvement in the provision of shipping services has, in general, been costly and failed to produce efficient and reliable services. The Pacific Forum Line (PFL) is a partial exception to this and has been a reasonably successful initiative by regional governments. But success came only after some painful lessons during the first two decades of operation. The later success of PFL was due in significant part to the restructuring of its operations along more commercial lines, focusing on a reduced range of services it could operate profitably.

Regulation of entry to limit competition and protect incumbent operators is another approach that has been utilized. The Micronesian Shipping Commission (MSC) is the primary example of this approach. Although MSC continues to enjoy the support of participating governments—the Federated States of Micronesia, Palau, and Marshall Islands—and participating shipping lines, it is not apparent that the range, quality, efficiency, or stability of shipping services offered to Micronesian countries is greater than it would be in the absence of MSC. However, the considerable effort expended by lines and associated interests to secure the right to operate a service in Micronesia suggests untapped potential for service innovation.

Structural Changes to International Shipping Systems

Changes currently taking place in the way international shipping services to the Pacific are structured make reconsideration of present regulatory arrangements particularly appropriate at this time. A tendency toward replacement of direct services by "hubbing"[4] through selected local

[4] A large port that attracts transshipment cargo to and from smaller ports is termed a "hub" port because it effectively acts as a hub in the shipping system. Hubbing refers to this process.

transshipment centers is one such change. The most important hubs at present are Auckland (for the South Pacific) and Guam (for Micronesia). Changes, such as these, are poorly understood at present by many key decision-makers and industry participants in the Pacific.

Recommendations

1. ***The present commercial focus of the Pacific Forum Line should be retained, allowing the Line to act as an important additional source of competition in the region without distorting regional markets.***
2. ***Remaining regulatory impediments to entry into the provision of international shipping services in the Pacific should be progressively removed.***

Domestic Shipping Services

In contrast to international shipping, domestic shipping operations in many Pacific island nations are in a parlous state. Ensuring the provision of adequate, efficient, and reliable domestic shipping services is one of the most difficult and perplexing challenges facing archipelagic countries. In many cases, services of the quality expected by residents of remote islands are not commercially viable. Nevertheless, delivery of these services is a political, social, and economic imperative.

Coastal and interisland shipping services are generally operated by government or by very small, independent shipping companies. Service schedules are frequently poorly maintained, and it is not uncommon for services to be suspended for many months. The ships employed are typically old, poorly maintained, in poor condition, and—frequently—unsuited for the purpose they are used.

Development Partner nations have offered ships free or at greatly reduced cost to Pacific island states. Such offers can constitute a very attractive proposition, but unless carefully managed, deployment of such vessels can undermine the development of commercial shipping markets and, in the long run, have a negative impact on service provision.

Recommendations

1. ***Pacific island governments are encouraged to continue the recent trend of privatization of domestic services, including the development of service franchise schemes to secure access of remote communities to shipping services.***
2. ***A forum for exchange of experiences in privatizing domestic shipping services should be established, and regional guidelines for chartering donated ships to private sector operators should be developed.***
3. ***Options for improving finance for domestic ship operators should be explored.***

National Transport Plans

Pacific island nations need clear national transport plans in order to ensure that decisions made on maritime sector policies and priorities are consistent and coherent. The Fiji Islands and Solomon Islands have already prepared such plans that can serve as models.

Recommendations

1. ***Pacific island states are encouraged to develop and document national transport objectives and national transport sector plans detailing how these objectives will be pursued.***
2. ***National transport sector plans should include a clear articulation of the role of the maritime sector.***
3. ***National transport sector plans should include a committed, long-term funding plan for maritime sector initiatives.***

Pacific island nations need clear national transport plans to ensure that decisions on maritime sector policies and priorities are made on a consistent and coherent basis. Fiji Islands and Solomon Islands have already prepared such plans that can serve as models.

Maritime Sector Subsidies

The provision of subsidies to transport services in pursuit of broader political, social, and economic objectives is commonplace not only in the Pacific, but also in major development partner nations, including the United States, the European Union, Japan, and Australia. Given the broad importance of maritime transport services, it is most unlikely that Pacific island nations will abandon public support for them in the foreseeable future.

Recommendations

1. ***Any subsidies to transport sector activities should have clearly defined objectives and be justified within the framework of a comprehensive and coherent transport sector policy.***
2. ***Subsidies should be transparent, their fiscal commitment clearly defined, and be subject to periodic review in the context of other demands on government resources.***
3. ***Wherever practical, subsidies should be allocated to service providers on the basis of open and competitive tenders of limited duration.***

Structuring the Maritime Sector

Creating a safe, efficient, and reliable maritime sector is difficult for most—perhaps all—Pacific island states. Their small scale makes it a constant challenge to maintain a competent maritime bureaucracy and retain skilled managers in commercialized government enterprises. With limited fiscal and skilled human resources, and the prevalence of intense rivalry between groups within these countries, the advantages of strong national control of the maritime sector are likely to far outweigh any risks.

In most Pacific island states, a branch of the public service has historically undertaken all the functions of government in the maritime sector. With encouragement and support from ADB and other development partners, structural reforms have seen port administration in many countries transferred to semiautonomous authorities or corporations, and the establishment of autonomous maritime safety administrations. In the smallest island countries, however, the establishment of a completely separate maritime safety administration may not be justified, illustrating that rigid application in the region of a standard model is unlikely to be the most productive way forward.

Recommendations

1. ***Where constitutional arrangements permit, policy, planning, and regulatory responsibility for maritime safety, international shipping, domestic shipping, and ports of national importance should be clearly allocated to national rather than provincial governments.***
2. ***Wherever economically and technically feasible, government responsibility for (a) maritime sector policy, (b) regulation of maritime safety, and (c) commercial operations, should be undertaken by legally distinct entities.***
3. ***Organizations responsible for maritime safety and commercial operations, as far as possible, should be operated on a self-funding basis with revenues derived from user charges.***

Ports

Each Pacific island country has a range of ports. Typically, only one or two ports in a country are involved in international liner trades. Secondary ports cater to domestic services. Ports range from basic wharves and hardstand, up to more sophisticated facilities with major cargo-handling capability. Although there are some privately-owned port facilities dedicated to specific bulk exports and imports, national or provincial governments generally hold ownership of port infrastructure. All but one Pacific island state met the July 2004 deadline for compliance with the International Ship and Port Facility Security (ISPS) Code.

Although a number of port authorities in PICs are formally corporatized or operate under separate statutes providing a high degree of independence, others remain essentially branches of the public service. The objectives for port organizations and the indicators used to measure port performance are not always clearly and appropriately defined. When indicators are defined, measurement and reporting of performance against these indicators are not always adequate.

Port Infrastructure

There does not appear to be a general problem with the capacity of infrastructure in Pacific ports. There are problems, however, with the operational performance of port infrastructure. Many Pacific port facilities were neither designed nor equipped to meet present-day shipping needs.

Chronic difficulties with maintenance are a pervasive problem with Pacific port infrastructure that is widely acknowledged and frequently reported in previous studies. Consequently, the service quality of port infrastructure assets is often below design quality. Additionally, assets often do not reach their design lives before needing extensive rehabilitation or replacement.

Port asset maintenance was identified as one of seven key issues during the inception phase of the ADB project, *Improving the Delivery of Infrastructure Services*. Practical ways of improving port asset maintenance practices in the Pacific are an expected outcome of the project. Specific recommendations on improvement of port asset management are expected as outputs of the ADB project.

Cargo Handling Performance

Arrangements for provision of stevedoring vary among ports, with a general movement toward private sector involvement and contestability. Many government-owned ports offer stevedoring, however, either directly or through subsidiaries or government corporations. Stevedoring charges vary substantially among Pacific islands. In absolute terms, however, container stevedoring charges in the Pacific are generally low by international standards.

Cargo handling productivity in the Pacific is low by international standards. Raw comparisons of cargo handling rates are likely to do Pacific island ports an injustice, however, due to factors that can influence and distort comparisons. Vessels on Pacific island schedules call at many ports, often resulting in stowage that incurs many more double moves, shifts-on-board, and hatch lid movements than would be the case with vessels serving fewer ports and larger cargo volumes. This can result in very slow handling rates even if operations are efficient.

Recommendations

1. ***Clear financial and service objectives should be established for all port corporations.***
2. ***A common set of Key Performance Indicators for port administration should be developed and adopted.***
3. ***Prompt reporting requirements should be established and enforced.***
4. ***Those port organizations that are still involved in cargo-handling operations should develop and implement plans for transferring these activities to the private sector.***
5. ***Stevedoring licenses should be issued to all stevedoring firms having the requisite skills and knowledge to operate safely and competently within the port.***
6. ***Port corporations should purchase heavy lifting equipment and make it available for hire to all stevedoring companies if by doing so they can facilitate entry or reduce the risk of undercapitalization of cargo-handling operations.***
7. ***Exclusive leases of critical port land should be avoided unless it is essential to the efficient operation of the port.***
8. ***The outcome of the work on asset maintenance practices currently being undertaken by the ADB project, Improving the Delivery of Infrastructure Services, when it becomes available, should be used as the foundation for the development of specific programs to improve asset management in the maritime sector.***

Human Resources

Seafarer Training

The training of seafarers to international standards is becoming increasingly sophisticated and expensive. The level of training available among the wide range of maritime training institutions in the Pacific remains fairly restricted. There appears, however, to be a hierarchy emerging, with marked differences in the highest level of certification available at each institution. Only the Papua New Guinea Maritime College has the equipment and qualified staff to provide training to the level required of a master or chief engineer on an international vessel. However, much work on harmonization and mutual recognition among these institutions has been accomplished through the Regional Maritime Programme (RMP), and by the Pacific Islands Maritime

Association and its predecessor organization. The next step is to develop and formalize a regional plan for training development.

Private Sector Training and Development

One of the important lessons learned from a decade of experimentation with service franchise schemes is that the supply side of the market for domestic shipping services will require as much attention and development as the demand side. In most Pacific island states, there are few private sector operators with the skills, experience, and financial capacity to provide shipping services of acceptable quality. In many, there are none.

Port Management

The maritime sector in the Pacific region is characterized by a lack of expertise in business and financial management. This shortage is particularly acute in government trading enterprises.

Recommendations

1. ***A regional plan for the development of maritime training institutions should be prepared, possibly under the guidance of the Pacific Islands Maritime Association.***
2. ***Regional assistance programs should be extended from their current coverage of shipping to cover both technical and commercial aspects of ports and maritime administration, possibly coordinated by the Regional Maritime Programme.***
3. ***External support for implementation of the Forum Principles on Regional Transport Services should include development and implementation of training programs on commercial and operational aspects of shipping line management for private sector service providers in Pacific island countries.***

Information Issues

During the conduct of the study for this report, the difficulty of obtaining even the most basic data on the maritime sector in Pacific island nations was striking. In part, this was because even fundamental information is sometimes not collected. It was also due to the comparatively little use made of modern means of storing and sharing this information, such as internet sites. Improved data collection, storage, and sharing could make an important contribution to mutual learning in PICs. For each such country, the primary need is for information that relates to its own jurisdiction. But a regional approach to the collection and dissemination of data can enhance the utility of information from a number of perspectives.

Recommendation

A regional agreement on the collection and sharing of key maritime sector data should be negotiated and implemented.

Strengthening Regional Cooperation

The general framework of regional cooperation in the Pacific is currently under review. The time is opportune to assess the architecture for regional cooperation in maritime matters.

Few Pacific island states individually have the financial and human resources required to meet the challenges of advances in technology in international shipping, the regulatory environment in which it operates, and the training needs of international seafarers. By pooling resources and expertise, PICs can greatly increase their ability to deal with an increasingly demanding environment. The need for cooperation is well recognized by the countries themselves, and by the Pacific community at large.

There is widespread agreement that RMP, which is based at the Secretariat of the Pacific Community, is making an increasingly important contribution to regional cooperation. An effective program of regional cooperation in maritime matters can be built around RMP. However, the architecture of regional cooperation may need to be clarified with an effective mechanism for elucidating the maritime sector priorities of regional governments, and for using these priorities to guide and direct the activities of RMP.

Recommendations

1. ***The role of the Regional Maritime Programme as the key source of advice and technical support in maritime matters should be strengthened.***
2. ***Existing mutually supportive relationships between the Regional Maritime Programme and other regional maritime bodies should be further developed.***
3. ***In addition to these relationships, a new high-level advisory group, with a clearer mandate from participating governments to provide advice and guidance to the Regional Maritime Programme, should be considered.***

About Oceanic Voyages: Aviation and Shipping in the Pacific—Executive Summary

International aviation and shipping services are crucial to trade, growth, and development in the Pacific region. Tourism and access to international markets for agricultural and marine products contribute substantially to income and employment in many Pacific countries, usually in areas outside of the main urban centers, and enable air freight services for valuable but perishable commodities that would otherwise not be marketable. Although some features of the Pacific region make provision of international services a challenge, there have also been some notable successes that offer key lessons for future development. Case studies of national aviation and shipping sector experience show the value of operating on commercial principles, attracting international and private-sector capital investment, assigning risk where it can best be managed, and liberalizing market access. Integration of the regional market for transport services, combined with harmonized but less restrictive regulations, would facilitate a greater range of services at more competitive prices. Pacific island country governments have the ability to create effective operating environments. When they do so, experience shows that operators will respond with efficient service provision.

About the Asian Development Bank

ADB aims to improve the welfare of the people in the Asia and Pacific region, particularly the nearly 1.9 billion who live on less than $2 a day. Despite many success stories, the region remains home to two thirds of the world's poor. ADB is a multilateral development finance institution owned by 67 members, 48 from the region and 19 from other parts of the globe. ADB's vision is a region free of poverty. Its mission is to help its developing member countries reduce poverty and improve their quality of life.

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