Establishment of Harmonized Policies for the ICT Market in the ACP Countries

Universal Access and Service: Knowledge-based Report

ICB4PAC
Capacity Building and ICT Policy, Regulatory and Legislative Frameworks for Pacific Island Countries

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Foreword

Information and communication technologies (ICTs) are serving as the most important driving force behind the Pacific Islands’ economic and social integration into the wider global community.

In light of the huge changes that are taking place and mindful of the need to shape them in ways that best reflect the aspirations of the individual islands societies -- each with their unique heritage -- 15 Pacific countries in the Group of African, Caribbean and Pacific States (ACP) have come together to develop and promote the use of harmonised ICT policies, legislation and regulatory frameworks.

This cooperation has taken the form of a project entitled “Capacity Building and ICT Policy, Regulatory and Legislative Frameworks Support for Pacific Island countries” (ICB4PAC). Executed by the International Telecommunication Union (ITU), the project has been undertaken in close collaboration with the Pacific Islands Forum Secretariat (PIFS), Secretariat of the Pacific Community (SPC), Pacific Islands Telecommunication Authority (PITA), and the Pacific ICT Regional Regulatory Centre (PIRRC), with the support of the University of the South Pacific (USP). A global steering committee composed of the representatives of the ACP Secretariat and the Development and Cooperation - EuropeAid (DEVCO, European Commission) oversees the overall implementation of the project.

This project is taking place within the framework of the ACP Information and Telecommunication Technologies (@CP-ICT) programme and is funded under the 9th European Development Fund (EDF), which is the main instrument for providing European aid for development cooperation in the ACP States, and co-financed by the ITU. The @CP-ICT aims to support ACP governments and institutions in the harmonization of their ICT policies in the sector by providing high-quality, globally-benchmarked but locally-relevant policy advice, training and related capacity building.

All projects that bring together multiple stakeholders face the dual challenge of creating a sense of shared ownership and ensuring optimum outcomes for all parties. ICB4PAC has given special consideration to this issue from the very beginning of this project in November 2009. Having agreed upon shared priorities, stakeholders reviewed the methodology and governance for implementing the project. The specific needs of the region were then identified and likewise potentially successful regional practices; these were then benchmarked against practices and standards established elsewhere.

These detailed assessments (knowledge-based reports), which reflect country-specific particularities, served as the basis for the model policies and legislative texts that offer the prospect of a legislative landscape for which the whole region can be proud. The project is certain to become an example for other regions to follow as they too seek to harness the catalytic force of ICTs to accelerate economic integration and social and economic development.

I take this opportunity to thank the European Commission and ACP Secretariat for their financial contribution. I also thank the Pacific Islands Forum Secretariat (PIFS) and the Secretariat of the Pacific Community (SPC) for their contribution to this work. Without political will on the part of beneficiary countries, not much would have been achieved. For that, I express my profound thanks to all the ACP governments for their political will which has made this project a resounding success.

Brahima Sanou
BDT, Director
Acknowledgements

This report documents the achievements of the regional activities carried out under the ICB4PAC project Capacity Building and ICT Policies, Regulations and Legislative Frameworks for Pacific Island countries, officially launched in Fiji in November 2009.

In response to both the challenges and the opportunities from information and communication technologies’ (ICTs) contribution to political, social, economic and environmental development, the International Telecommunication Union (ITU) and the European Commission (EC) joined forces and signed an agreement aimed at providing “Support for the Establishment of Harmonized Policies for the ICT market in the ACP”, as a component of the programme “ACP-Information and Communication Technologies (@CP-ICT)” within the framework of the 9th European Development Fund (EDF), i.e., ITU-EC-ACP project.

This global ITU-EC-ACP project is being implemented through three separate sub-projects customized to the specific needs of each region: Pacific island countries (ICB4PAC), the Caribbean (HIPCAR) and sub-Saharan Africa (HIPSSA).

The ICB4PAC focal points and the project coordinator provided guidance and support to the consultant, Mr Malcolm Webb. The draft document was then reviewed, discussed and adopted by broad consensus by participants at the first workshop to discuss and validate the findings of the assessment (Cook Islands, August 2010).

ITU would like especially to thank the workshop delegates from the Pacific Island ICT and telecommunication ministries, regulators, academia, civil society, operators, and regional organizations for their hard work and commitment in producing the contents of this report. These include the Pacific Island Forum Secretariat (PIFS), University of the South Pacific (USP), Secretariat of the Pacific Communities (SPC), Pacific Island Telecommunications Association (PITA), and the Pacific ICT Regulatory Resource Centre (PIRRC). This broad base of public sector participation representing different sectors allowed the project to benefit from a cross-section of views and interests.

Without the active involvement of all of these stakeholders, it would have been impossible to produce a report such as this, reflecting the overall requirements and conditions of the Pacific island region while also representing international best practice.

The activities have been implemented by Ms Gisa Fuatai Purcell, responsible for the coordination of the activities in the Pacific (ICB4PAC Project Coordinator), and Mr Sandro Bazzanella, responsible for the management of the whole project covering sub-Saharan Africa, Caribbean and the Pacific (ITU-EC-ACP Project Manager) with the overall support of Ms Reshmi Prasad, ICB4PAC Project Assistant, and of Ms Silvia Villar, ITU-EC-ACP Project Assistant. The work was carried out under the overall direction of Mr Cosmas Zavazava, Chief, Project Support and Knowledge Management (PKM) Department. The document has further benefited from comments of the ITU Telecommunication Development Bureau’s (BDT) ICT Applications and Regulatory Monitoring and Evaluation Division (RME). Support was provided by Mrs Eun-Ju Kim, Regional Director for Asia and the Pacific. The team at ITU’s Publication Composition Service was responsible for its publication.
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Executive Summary

The study that forms the basis of this report was conducted as an action of the project for Pacific Island countries jointly funded by the European Commission (EC) and the International Telecommunication Union (ITU). The project is Capacity Building and ICT policies, Regulatory and Legislative Frameworks for the Pacific Island Countries (ICB4PAC). The recipient countries are the Cook Islands, Fiji, Kiribati, the Marshall Islands, Micronesia, Niue, Nauru, Palau, Papua New Guinea, Samoa, the Solomon Islands, Timor-Leste, Tonga, Tuvalu, and Vanuatu. The launch of ICB4PAC was held in Nadi, Fiji in November, 2009. At this launch, priority topics for the project were discussed and agreed by participants. Universal access and services was identified as a priority topic.

In the survey of Pacific Island countries for the purposes of this study into universal service and access, it was found that a number of countries have sound and effective universal service regimes, as shown in Table 1.

Three of the countries, Papua New Guinea, the Solomon Islands and Vanuatu, are at or near international best practice. There are a number of key features that these three countries have in common:

- modern legislative environments, which provide for the development of specific universal service policies by government;
- the implementation of universal service policy by an independent regulator (in some cases supervised by other independent bodies), with an appropriate balance of responsibilities between minister and regulator;
- the funding of universal service from a range of sources, including operator levies – the ring-fencing of this funding ensures it is applied only for universal service purposes;
- the award of universal service obligations and related subsidies through transparent tender processes;
- the creation of enforceable duties on the successful operator to comply with its service obligations.

The Solomon Islands has the preferred model in that the universal service regime is simple and effective, with clear guidance and rules for all parties involved to operate under. Its model is likely to be suitable for most Pacific Island countries that have liberalized their telecommunication sector, without the complexity of, say, Papua New Guinea (although we acknowledge Papua New Guinea has a very good universal service regime).

It is considered that Samoa and Fiji were close to international best practice, but have some shortcomings that mean that they did not get onto the preferred list. Countries that have not reached international best practice are generally those that have not yet liberalized their telecommunication sector and operate under older-style legislation, which had little emphasis on universal service. A lack of competition in a market is a critical roadblock to achieving international best practice. However, it is worth acknowledging that it is possible to achieve strong and effective obligations on a monopoly service provider to provide universal service.

It should also be noted that, of all the countries studied, only Vanuatu has taken advanced steps to implement its universal service regime. At the time of this study, Vanuatu had already advertised tenders for various projects identified in its (Universal Access and Services (UAS) policy. Table 1 summarises the situations in each of the Pacific Island countries analysed in this report.
Table 1: Comparison of UAS development in the Pacific Island countries

<table>
<thead>
<tr>
<th>Country</th>
<th>Modern legislative environment, which provide for the development of specific universal service policies by government</th>
<th>Implementation of universal service policy by an independent regulator or other independent body, with an appropriate balance of responsibilities between minister and regulator</th>
<th>The funding of universal service from a range of sources, including operator levies</th>
<th>Ring-fencing of this funding to ensure that it is applied only for universal service purposes</th>
<th>Award of universal service obligations and related subsidies through transparent tender processes</th>
<th>Creation of enforceable duties on the successful operator to comply with its service obligations</th>
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<td>Palau</td>
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<td>Tuvalu</td>
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<td>×</td>
<td>×</td>
</tr>
<tr>
<td>Vanuatu</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
</tbody>
</table>

Note: a large tick indicates full or almost full satisfaction of the criteria referred to. A small tick indicates partial satisfaction of the criteria. A cross indicates substantial non-satisfaction of the criteria. Please refer to chapter 1 for a complete description of the findings.

Terminology

In this report, the terms ‘universal service’, ‘universal access’ and ‘UAS’ have been used interchangeably. The terms all refer to making telecommunication services available on a widespread basis including in not-served or underserved areas of a country. Somewhat misleadingly, universal service rarely means 100 per cent population coverage, since it is generally impractical to provide telecommunication services to an
Executive Summary

entire population. However, the terms normally mean the availability of telecommunication services throughout a defined geographic area including those areas which are beyond the coverage area of any existing operator, but it is worth acknowledging that the terms can be used in relation to underserved areas. The provision of universal service can sometimes be recompensed by a subsidy to an operator to assist them in providing coverage in areas where there is no full coverage.

This study found that the Pacific Island countries are generally split into two groups:

- those that have liberalized their telecommunication sector and introduced modern legislative environments;
- those that have not.

Based on these two categories, this report makes the following recommendations for those countries that do not yet have a liberalized telecommunication and ICT market.

1) They should introduce modern legislation environments that provide for UAS. The legislation will deal with the establishment of UAS funds, the means of funding the provision, the award of UAS obligations and the means of enforcing them. There are several fine examples of modern legislation in the Pacific region.

2) The legislation should include the creation of an independent regulator for the newly competitive sector. The regulator should play an important role in de-politicising universal service. They should be able to bring expertise in sorting out the various issues that arise in administering UAS projects.

For those countries that have liberalized their telecommunication and ICT markets, and introduced modern legislative environments, the recommendations for improvements are generally relatively minor, although they may require legislative change. These include:

1) investigating if operator levies should be capped, to provide commercial certainty for operators;
2) making sure there is sufficient ring-fencing of UAS funds;
3) limiting excessive opportunities in legislation for operators to challenge UAS projects, or their contributions towards subsidies through levies;
4) setting out in some detail the types of services that may be subject to a UAS regime, being careful to be technology-neutral or that the rules should neither require nor assume a particular technology where possible;
5) investigating if the UAS provider should be required to offer access to its services on the network (regulated facilities access) used to provide the UAS even though this may cool investment incentives for the UAS provider;
6) looking to see if the balance is right between the roles of the regulator and minister in terms of determining the amount of the contribution from licensees and the disbursement processes;
7) investigating if further legislative guidance should be provided to the regulator for administrating the UAS regime;
8) investigating if a more formal monitoring and evaluation mechanism should be provided in legislation.

The study was carried out using the results of a data collection form which was sent to all focal points in each of the recipient countries, as well as a desk study. The form is in Annex A.

The draft of this report was discussed in depth at a regional meeting (Samoa, October 2010) and the participants are listed in Annex B.
Chapter 1: Assessment and analysis of universal access and services in the Pacific Island countries

1.1 Cook Islands

1.1.1 Outline of the institutional framework for UAS

The Cook Islands has only one operator, Telecom Cook Islands (TCI), which is 60 per cent owned by Telecom New Zealand (the incumbent operator in New Zealand) and 40 per cent owned by the Cook Islands government.

It appears there is not a UAS policy, although the CEO of TCI said in the data collection form:

"Under a Joint Venture Agreement between the shareholders of [TCI]...Telecom must apply common pricing to all islands in the Cooks group, must not raise prices by more than the rate of inflation (without government approval), must maintain certain levels of service and must invest a minimum amount of money in upgrading/maintaining service to the Outer Islands each year."

There is no further information on the terms of the joint venture agreement.

TCI has referred to various new network investments made by the company, including in more remote areas. It refers to mobile penetration being 85 per cent of the population and broadband penetration being 90 per cent, although these figures have not been verified. Table 2 analyses the strengths and weaknesses of the joint venture agreement.

Table 2: an analysis of the Cook Islands’ joint venture agreement

<table>
<thead>
<tr>
<th>Strengths</th>
<th>A strong licence or joint venture agreement with a single operator can potentially deliver UAS objectives and may be the simplest approach.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weaknesses</td>
<td>The joint venture agreement has not been seen, and it is assumed that the obligation on TCI to extend and maintain network coverage to unprofitable areas is relatively limited.</td>
</tr>
<tr>
<td></td>
<td>There is no mention in the response of any subsidy that may be available to TCI. Therefore, the extent to which TCI invests in extending and maintaining network coverage to unprofitable areas, will be through cross subsidising from more profitable areas or services. This is inefficient.</td>
</tr>
<tr>
<td></td>
<td>It will be difficult for the Cook Islands to reach the level of regional or international best practice if competition is not introduced into the market. Two or more operators would establish a competitive tension for any UAS subsidy that may be awarded. There would also be another source for funding the subsidy through operator levies.</td>
</tr>
</tbody>
</table>

1.2 Fiji

1.2.1 Outline of the institutional framework for UAS

The Telecommunications Promulgation 2008 (the Promulgation) came into effect on 1 August 2008. Part 3, Division 4 establishes the key entities involved in the universal service scheme in Fiji:
1. The Universal Service Advisory Committee advises the Telecommunications Authority of Fiji (the Authority) on matters relating to the universal service scheme, goals and implementation strategies.

2. The Authority establishes and administers the universal service scheme as well as carrying out more general regulatory responsibilities.

3. The minister has responsibility for identifying geographic areas that are eligible for universal service obligation benefits as well as directing the Authority to levy licensees.

1.2.2 Scope of the UAS policy

The Authority is responsible for creating the universal service scheme in Fiji (section 48(1) of the Promulgation):

‘The Authority shall, after consulting the Minister, devise an economically reasonable and technically feasible universal service scheme having the ultimate objective of enabling all people in Fiji, wherever they reside or carry on business, reasonable access on an equitable and affordable basis to services including –

(a) basic dial tone telephone services using either fixed or mobile or any other technology;

(b) public call offices and shared phones;

(c) the Internet; and

(d) such other services as the Minister may, on the recommendation of the Authority, specify.’

The Authority has yet to devise a universal service scheme under the Promulgation.

In a relatively novel provision in the Pacific region, the minister and the Authority are instructed when setting the universal service goals and implementation strategies: ‘To ensure that any burden on any provider of universal service, persons who are required to contribute to the universal service levy or consumers of specified services are to be fair and reasonable’ (section 48(2) of the Promulgation).

1.2.3 Role of the regulator and other stakeholders in implementing UAS

1.2.3.1 Universal Service Advisory Committee

The Promulgation establishes the committee (section 47) and members are appointed by the Authority. They include chief executives from various government agencies (the Authority, the minister responsible for the Promulgation, the Commerce Commission, the ministry responsible for provincial development, and the ministry responsible for national planning). Up to three other members representing licensees can be appointed.

1.2.3.2 The minister

The criteria the minister applies to identify the geographical areas eligible for benefits are similar to those in other Pacific Island countries (section 49(2) of the Promulgation).

‘(a) The level of current service is non-existent or considerably poorer than that in the more advanced areas of the country; or

(b) The cost of providing services in the declared areas prevents the provision of the services identified pursuant to section 48 on a reasonable commercial basis.’
1.2.4 Review

The Promulgation requires the Authority to review existing universal service obligations every three years to determine whether each obligation is required to maintain universal service objectives.

1.2.5 Funding for UAS

The Promulgation establishes the Universal Service Fund, which is administered by the Ministry of Finance. Management and administration costs are to be paid from the Authority’s annual budget.

1.2.5.1 Means of funding UAS

The fund will receive:

- any money appropriated by Parliament for the purposes;
- any grant, contribution or loans from any international organization or donors;
- all levies payable by licensees under the Promulgation.

On the direction of the minister, the Authority is required to levy charges for universal services up to a maximum percentage of the licensee’s gross revenues, net of settlement charges to other licensees paying levies (section 52(1)).

However, the Authority can grant exemptions ‘in respect of certain services where it reasonably considers that such exemptions are consistent with the universal service objective in section 48’.

1.2.5.2 Distribution of funding

Money from the fund may only be spent on installing networks, providing services and operating costs in the eligible universal service area under that part of the Promulgation (section 53(3)).

An innovation in Fiji is the rights that are available to the licensee subject to a universal service obligation (section 51(1)):

‘A licensee subject to a universal service obligation is entitled to one or more of the universal service benefits –

(a) funding from the Fund;
(b) charging of higher interconnection rates for terminating services in the eligible geographic area to reflect identified costs that are not otherwise recoverable;
(c) adjustments to regulated retail prices applying within and outside the eligible universal service area to the extent this would permit the licensee to recover identified costs that are not otherwise recoverable; and
(d) such other means, including market-based means, as may be determined by the Authority in consultation with the Commerce Commission and the industry.’

The first of these rights (or benefits as they are known in the Promulgation) is conventional or confirming to the usual UAS best practice; however, the other rights are not in that they are not explicitly dealt with in the legislation dealing with universal service.

Before the Authority proposes any of these rights, it must first consult with the Commerce Commission.

---

1 Government of Fiji (2008)
1.2.6 Delivery of UAS

1.2.6.1 UAS providers

At this point, a service provider is not charged with providing UAS.

Somewhat differently to other Pacific Island countries, Fiji offers two alternatives for a service provider to be subject to a universal service obligation (section 50(1)):

‘(a) the licensee assumes a universal service obligation pursuant to a tender for universal service funding under this section; or

(b) the licensee has a substantial degree of power in a market for access to telecommunications services and the Authority determines that it shall bear a reasonable universal service obligation.’

The first of these alternatives is commonplace and would be regarded as best practice. The second is more unusual because it takes into account the licensee of market power. That means the licensee should be obligated to provide access using its own funding rather than UAS funding.

1.2.6.2 Awarding UAS projects

As noted above, the Promulgation envisages either a tender award, or a licensee having a universal service obligation imposed on them by the Authority.

1.2.7 The strengths and weaknesses of Fiji’s approach

Table 3 analyses the strengths and weaknesses of Fiji’s UAS scheme.

<table>
<thead>
<tr>
<th>General comments</th>
<th>Fiji has one of the more developed UAS regimes amongst the Pacific Island countries through its legislation, although it has yet to use the UAS regime. It is one of the better models for the Pacific region, although it does have some shortcomings.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strengths</td>
<td>The scope of the UAS (as expressed in section 48(1) of the Promulgation) is appropriate. It is technology-neutral and covers both basic voice and Internet services. It provides the minister with flexibility to extend the range of services subject to the UAS obligations.</td>
</tr>
<tr>
<td></td>
<td>The inclusion of a Universal Service Advisory Committee is positive. It allows the regulator to draw on senior officials in the development and implementation of UAS. This could be enhanced through user-representation on the committee.</td>
</tr>
<tr>
<td></td>
<td>The involvement of the minister in the UAS regime is adequate. The major decisions on UAS should be in the hands of the regulator, with policy direction and some critical decisions (such as geographic coverage) in the hands of the minister.</td>
</tr>
<tr>
<td></td>
<td>The means of funding UAS are appropriate, including contemplating operator levies.</td>
</tr>
<tr>
<td></td>
<td>The limitations on the use of UAS funding are appropriate (section 53(3)). The ability to review existing UAS obligations periodically is generally positive, although may lead to uncertainty.</td>
</tr>
<tr>
<td></td>
<td>The overall process does not seem particularly bureaucratic.</td>
</tr>
</tbody>
</table>
### Weaknesses

There are potential issues with operators challenging UAS projects, or their contributions towards subsidies through levies, on the basis of section 48(2). This may lead to uncertainty on the part of the regulator and the minister, which may result in further negotiation with operators to resolve uncertainty. Although it is appropriate to consult with operators in relation to the development and implementation of UAS, they may have too strong a role in the process through their involvement in the Universal Service Advisory Committee.

There is uncertainty for operators in having the minister decide the level of levies that may be imposed on them. It is preferable to see a cap on operator levies, by reference to some measure of operator revenues.

The universal service benefits in section 51(1) can be seen as a weakness, on balance. The retail and interconnection rates should be consistent with levels in urban areas, with the subsidy dealing with any losses incurred by the operator through being limited in their ability to raise retail and interconnection charges to reflect costs. However, there are controls in this provision, including the requirement on the regulator to consult with the Commerce Commission.

The ability to impose a UAS obligation on an operator with a substantial degree of market power is uncertain. However, this is not consistent with regional or international best practice. The legislation also contemplates a tender, which will be the primary means of awarding UAS obligations.

### 1.3 Kiribati

#### 1.3.1 Outline of the institutional framework for UAS

Kiribati’s Telecommunications Act 2004 is modern and high level. However, unlike a number of other Pacific Island countries that have passed telecommunication legislation in recent years, the act does not contain specific provisions relating to universal service.

Even so, universal service is contemplated in the purposes of the act and it contemplates that licences can address universal service issues, including contributions by licensees to losses incurred by other operators in complying with universal service obligations.

The purposes of the act include (section 3(2)):

‘(b) providing basic telecommunication services to as many people as practicable in Kiribati at affordable prices.’

It also includes creating a regulatory environment that will ensure the achievement of the purposes in section 3(2).

The act says a licence may include conditions relating to (section 16(2)):

‘(a) the provision of services to rural or sparsely populated areas or other specified areas;

(b) the provision of services to disadvantaged persons [...];

(d) the payment by the operator of a contribution toward any loss incurred by another operator or operators as a result of such other operator’s or operators’ obligation imposed by the Authority regarding the provision of uneconomic telecommunication service in pursuance of the objectives contained in section 3.’

Currently, there is only one operator in Kiribati (Telecom Services Kiribati Limited), which is a state-owned company.
1.3.2 Scope of the UAS policy

There is not a UAS policy in Kiribati, although the act provides the legislative context for the creation of universal service obligations.

1.3.3 Role of the regulator and other stakeholders in implementing UAS

The Telecommunication Authority of Fiji (TAF) or the Regulator has the powers to create universal service obligations through the licence conditions via the granting of telecommunication licences.

1.3.4 Funding for UAS

The Authority, in its reply to the data collection form, referred to its ability to levy operators for contributions towards USO losses, but also comments:

‘The regulator has undertaken that should it realise considerable surplus in its operations a major portion should be transferred to the fund. The Ministry is also currently considering setting aside the Kiribati domain name fees as part of the fund.’

A record of this undertaking by the regulator has not been seen, however, the Authority says:

‘The proceeds from the sale of domain names under dot ki (.ki) is used to fund the establishment of the telecentres on all the remaining islands of Kiribati that have no access to basic telephony. The project is ongoing now. The total number of islands to be covered under this fund is eight.’

The Authority also says, in reference to the question about who administers the USO fund:

‘Under the Telecommunications Act it should be the regulator, though the Minister is also considering setting aside the UAS as a special fund, and if it succeeds it may end up administering the fund.’

1.3.5 Delivery of UAS

The Authority also said in the data collection form that UAS will be delivered by a competitive process.

1.3.6 Analysis of the situation in Kiribati

Table 4 analyses the strengths and weaknesses of the approach taken in Kiribati.

Table 4: The strengths and weaknesses of Kiribati’s approach

| Strengths | The governing legislation envisages UAS, including the payment of operator levies. The use of the proceeds from the sale of domain names is an innovative means of funding universal service, although there are doubts whether this will be sufficient to meet the costs of a meaningful universal service programme. |
Chapter 1

Weaknesses

<table>
<thead>
<tr>
<th>Weaknesses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Generally, the legislation is too high level to be at or near regional or international best practice.</td>
</tr>
<tr>
<td>With only one operator, the opportunities to benefit from best practice in terms of tendering the award of subsidies are limited.</td>
</tr>
<tr>
<td>The regulator’s reference to surplus funds being applied to subsidies is a weakness. It may create perverse incentives, such as leading the regulator to look to save money on its normal day-to-day functions, in order to provide funding for UAS subsidies.</td>
</tr>
<tr>
<td>If the minister does end up administering the UAS Fund, this will be a weakness. Regional and international best practice would require independent administration of such funds. The minister’s powers to administer the UAS Fund are also uncertain.</td>
</tr>
</tbody>
</table>

1.3.7 Relevant sources


[81]


1.4 Marshall Islands

1.4.1 Outline of the institutional framework for UAS

The Marshall Islands National Telecommunications Authority Act 1990 is the relevant legislation.

Under the act, the functions of the National Telecommunications Authority (the Authority) are to: ‘plan, establish, manage, operate, and maintain domestic and international telecommunication services for the Republic consistent with the objectives set forth in Section 105 of this Chapter’ (section 106). In other words, in the Marshall Islands, the Authority is the operator. The government is the majority shareholder in the authority.

The Authority’s objectives in the act (section 105) are relevant to universal service:

‘(c) to the extent that it is reasonable and practicable, to provide telecommunication services to the widest practical number of users.’

The act also says (section 107(2)(e)) that the Authority’s profits over a certain level may be used to expand coverage:

‘Annual net profits earned in excess of twenty per cent (20%) of annual gross revenues shall within the next fiscal year be used by the Authority either to maintain or expand its system or provide rebates to its customers.’
1.4.2 Funding for UAS

From the Authority’s website,\(^2\) it appears that it has been able to access funding from a US Government aid program to extend its network:

‘As our young country continues to develop at a rapid pace, NTA has been charged with the responsibility of providing a first class, state of the art telecommunications system for the people of the Marshall Islands. Faced with this tremendous challenge and knowing that NTA was eligible for loan financing from the United States Department of Agriculture, Rural Utilities Service (RUS), NTA submitted an application for a loan from RUS to replace and expand the existing telecommunications infrastructure throughout the Marshall Islands. To date two loans have been approved totalling $22,799,000. From this amount over $21,000,000 has already been expended and drawn down to upgrade telephone service in the Marshall Islands. As of June 30, 2000, all of the original RUS/NTA telephone project was completed. The remaining loan funds could be used for additional RUS approved projects if necessary.’

1.4.3 Analysis of the situation in the Marshall Islands

Table 5 outlines the strengths and weaknesses of the Marshall Islands’ approach.

<table>
<thead>
<tr>
<th>Strengths</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>The legislation does create an objective for the Authority (the operator) to provide a UAS.</td>
<td></td>
</tr>
<tr>
<td>The funding from US Government sources, referred to on the Authority’s website, is potentially positive. However, this depends on the strength of the obligations on the Authority to use those loan proceeds towards meeting UAS objectives – this is uncertain.</td>
<td></td>
</tr>
<tr>
<td>The requirement on the Authority to divert a proportion of profits to maintaining or developing its system is positive. However, the vagueness of this provision means it is uncertain whether or not there is a meaningful obligation on the Authority to provide UAS to unprofitable areas.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Weaknesses</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>It is likely that the Authority considers providing UAS to unprofitable areas is not reasonable or practicable, and, therefore, not within the scope of its objectives. There is very limited scope to impose a UAS obligation on the Authority.</td>
<td></td>
</tr>
<tr>
<td>As with other countries with only one operator, it will be difficult for the Marshall Islands to reach a level of regional or international best practice without competition in the market.</td>
<td></td>
</tr>
</tbody>
</table>

1.4.4 Relevant sources


\(^2\) minta (2012)
Chapter 1


1.5 MICRONESIA

1.5.1 Outline of the institutional framework for UAS

The Federated States of Micronesia Telecommunications Corporation Act 1981 is the relevant legislation. Under the act, the Telecommunications Corporation of the Federated States of Micronesia (the Corporation) is established. The Corporation is the sole provider of all telecommunication services, except radio and television broadcasting, within Micronesia.

One of the powers and responsibilities of the Corporation under the act is:

‘To the extent practicable, to expand telecommunications services to areas and communities in the Federated States of Micronesia that are presently not served or poorly served and to improve the quality, reliability, and variety of services available to all users in a manner consistent with commercial reasonableness and with promoting economic development, the advancement of education and health care, and the preservation of the cultural identity of the people of the Federated States of Micronesia.’

The government has said that the Corporation undertook a pilot service (Internet and cell phones via a very small aperture technology (V-Sat) in one of the remote island communities. However, the result, from the Corporation’s point of view, was that it was too costly (US$700,000). Consequently, the Corporation has requested funding from the government for its rural and remote communities access.

1.5.2 Funding for UAS

The Corporation is also required ‘to invest all surplus revenues of the Corporation in the expansion and improvement of telecommunications facilities and services.’ Section 203 (4)

1.5.3 Analysis of the situation in Micronesia

Table 6 is an analysis of the strengths and weaknesses of situation in Micronesia.

---

3 Government of Micronesia, 1981
Table 6: The strengths and weaknesses of Micronesia’s approach

<table>
<thead>
<tr>
<th>Strengths</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>The Corporation’s obligations to provide universal service, as set out</td>
<td>The Corporation’s obligations to provide universal service, as</td>
</tr>
<tr>
<td>in the act, are reasonably clear and succinct. The statutory obligations</td>
<td>set out in the act, are reasonably clear and succinct. The statutory</td>
</tr>
<tr>
<td>provide a good reference point for the Corporation in its activities.</td>
<td>obligations provide a good reference point for the Corporation</td>
</tr>
<tr>
<td></td>
<td>in its activities.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Weaknesses</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>However, these obligations are significantly qualified (‘to the extent</td>
<td>However, these obligations are significantly qualified (‘to the</td>
</tr>
<tr>
<td>practicable’). As a result of this qualifier, the Corporation may not</td>
<td>extent practicable’). As a result of this qualifier, the</td>
</tr>
<tr>
<td>feel compelled to provide services in uneconomical areas, or have an</td>
<td>Corporation may not feel compelled to provide services in</td>
</tr>
<tr>
<td>incentive to find low-cost means of serving customers in these areas.</td>
<td>uneconomical areas, or have an incentive to find low-cost</td>
</tr>
<tr>
<td></td>
<td>means of serving customers in these areas.</td>
</tr>
<tr>
<td></td>
<td>The absence of competition in the market is not conducive to</td>
</tr>
<tr>
<td></td>
<td>developing a best-practice regime for universal service.</td>
</tr>
</tbody>
</table>

1.5.4 Relevant sources


1.6 NAURU

1.6.1 Outline of the institutional framework for UAS

Nauru has one of the least specific legislative environments for universal service amongst the Pacific Island countries.

The Telecommunications Act 2002 is the relevant legislation. It provides for Rontel (Nauru’s telecommunication provider) to have the exclusive right to provide, control and use telecommunication systems and services within, to and from the country.

Under section 2, which sets out the general objectives of the act, there are some very general references to universal service-type objectives:

‘to provide for the establishment, maintenance, operation and regulation of telecommunications services in, to and from Nauru [...]’

‘(c) so as to achieve optimal rates of expansion and moderation for the telecommunications infrastructure and services.’

In 2009, Digicel Nauru was awarded a licence to provide mobile services. The licence contained a coverage obligation, which may provide an element of universal service coverage. However, this licence could not be viewed.

1.6.2 Funding for UAS

Under section 24 of the act, there is a reference to establishing a ‘development and capital works fund’ into which 40 per cent of any end of financial year surplus by Rontel is to be paid into. There is very little other reference in the act to this fund, or what the funds are to be used for.

1.6.3 Analysis of the situation in Nauru

Table 7 is an analysis of the situation in Nauru.
Table 7: Strengths and weaknesses of Nauru’s approach

<table>
<thead>
<tr>
<th>Strengths</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>The establishment of a specific fund into which a fixed proportion of Rontel’s surplus is to be paid is a strength.</td>
<td></td>
</tr>
<tr>
<td>In principle, Rontel’s ownership by the state should allow the government to direct the company to achieve universal service objectives.</td>
<td></td>
</tr>
<tr>
<td>It may be that the coverage obligation in Digicel’s licence provides some universal service obligation, although it has not been viewed.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Weaknesses</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>The universal service aspects of the act are too general and the use the specific fund is vague, with the potential to be applied towards non-universal service objectives.</td>
<td></td>
</tr>
<tr>
<td>Generally, Nauru is a long way from being at international or regional best-practice standard for universal service.</td>
<td></td>
</tr>
</tbody>
</table>

1.7 NIUE

1.7.1 Outline of the institutional framework for UAS

The legislation relating to telecommunications is the Communications Act 1989.

Section 2 of the act sets out the cabinet and the director of the telecommunication department’s objectives with regard to administering the part of the act dealing with telecommunications. These include:

‘(d) providing the people of Niue with a reliable and efficient telephone service at a reasonable cost,’

This is the only reference to universal service, and this is only in the broadest terms. Replies to the data collection form did not reveal any other relevant laws.

Telecom Niue is the exclusive supplier of telecommunication services in Niue.

1.7.2 Analysis of the situation in Niue

Table 8 is an analysis of the situation in Niue.

Table 8: Strengths and weaknesses of Niue’s approach

<table>
<thead>
<tr>
<th>Strengths</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>The legislation does create an objective for the government in relation to UAS. However, the reference is very high level.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Weaknesses</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>The legislation is generally inadequate for the purposes of ensuring an effective UAS regime. It may be that the terms of the licence with Telecom Niue provide obligations on the operator to provide UAS coverage, but this is uncertain.</td>
<td></td>
</tr>
</tbody>
</table>

1.7.3 Relevant sources


1.8 PALAU

1.8.1 Outline of the institutional framework for UAS

Little relevant information about Palau could be found. The data collection form suggested that a universal service policy is not in place.

1.8.2 Analysis of the situation in Palau

Table 8 is an analysis of the situation in Palau.

<table>
<thead>
<tr>
<th>Strengths</th>
<th>Palau will be strengthened once there is legislation available that allows Palau to leapfrog to proven UAS regimes.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weaknesses</td>
<td>However, the UAS regime is not at or near international best practice.</td>
</tr>
</tbody>
</table>

1.9 PAPUA NEW GUINEA

1.9.1 Outline of the institutional framework for UAS

The National Information and Communications Technology (NICT) Act was enacted in 2009. The act established the National Information and Communications Technology Authority (NICTA).

The act came into force in stages. It came into force in its entirety on 30 September 2010.

Papua New Guinea has one of the most sophisticated UAS institutional frameworks in the Pacific region. It is also the most prescriptive. Part V of the act deals with UAS and contains 34 sections over 15 pages of legislation.

Part V introduces a number of key institutional features.

1. The UAS Board: established to identify, develop and cost UAS projects to give effect to government policy; and recommend proposals to the minister in a UAS project report. The Minister accepts or rejects the UAS project.

2. The Universal Access and Service Fund (the UAS Fund): established to promote the long-term economic and social development of Papua New Guinea by funding UAS projects; it is to be sourced from government contributions, industry levies and other grants and loans. The UAS Fund is to be held in trust.

3. NICTA implements UAS projects that have been accepted by the minister, including putting in place competitive processes and project agreements, administering compliance and directing the release of funds upon satisfactory completion. NICTA is also required to establish a UAS secretariat.
Chapter 1

1.9.2 Scope of the UAS policy

1.9.2.1 Definition and services included in the UAS policy

The regulator has said that the government’s UAS policy is contained in the National ICT Policy, which was approved in March 2009. The policy provides for the establishment of the UAS regime and associated fund.

The regulator pointed out the objectives and targets of the Papua New Guinea UAS policy during his presentation at the Samoa workshop (Aug 2010) as follow:

‘The proposed UAS includes three sets of targets, following a nationwide study on the potential strategy and implementation roadmap for rural telecommunications in Papua New Guinea:

(a) Target 1. Access to voice services in the 229 areas covered by the mandatory roll out obligations. This target is expected to be achieved in 2012.

(b) Target 2. Access to voice services outside the mandatory roll out obligations and access to Internet services in all areas where provision is commercially viable yet sustainable.4

(c) Target 3. Proponent-initiated development projects: subject to standard selection criteria related to development relevance, likely impact, financial and technical capacity of proponents, competitive neutrality.

Target 2 objectives have been identified as follows:

(a) One public telecommunications point of presenceª that is 5km or less away from every “village group”ª with a population of 500 inhabitants or less;

(b) At least one public telecommunications point of presence per 500 inhabitants in every village group that contains a population of 500 or greater;

(c) Telecommunications service coverage in at least the largest census unit (village) in every 5 x 5 km village group containing a population of 1,500 or greater; and

(d) Internet public access points in all district centers with a population over 500.

Target 3 projects. These projects will be proposed by stakeholders to the UAS Secretariat in NICTA and subjected to a rigorous, standardized evaluation process. Financing of these projects would be on the same principle of competitive “least-cost” subsidy, and disbursements would also be triggered by demonstrated delivery of pre-defined “outputs”.

---

4 Sustainable in this context is defined as the existence of long-term commercial incentives for operators – once located in the areas and with ongoing operations – to continue offering services without additional transfers from the government.

5 There are no restrictions on the business model for public access points (payphones, ‘village phone’ arrangements etc.) as long as they offer the required service.

6 Village groups are clusters of villages within a 5x5km area.
Section 90 of the act sets out the objectives of the UAS Fund:

1.9.3 Process for developing UAS policy

The act contemplates that government policy will set out the government’s priorities for using the UAS Fund to achieve the section 90 objective.

The UAS Board has a role in advising the minister on the formulation of this government policy.

1.9.4 Role of the regulator and other stakeholders in implementing UAS

1.9.4.1 UAS Secretariat

The UAS Secretariat is a dedicated secretariat within NICTA. Its role is to undertake most of the administrative tasks that NICTA is to perform under the act and under any regulations.

These include:

- designing and implementing a competitive tender process;
- determining the payment of monies from the UAS Fund in accordance with project agreements;
- negotiating and executing project agreements, as well as monitoring and enforcing their performance;
- undertaking the role of fund manager;
- commissioning independent evaluations or audits of any UAS projects financed by the UAS Fund.

1.9.4.2 The UAS Board

The UAS Board is an independent institution with a key role in developing UAS policy and creating UAS projects.

The board has five members, mainly senior government officials. The chairman of NICTA is the board’s chair. The other members are the departmental heads of the departments responsible for communications and information, national planning and financial planning; and the fifth member is drawn from the private sector and appointed by the head of state.

There are a number of rules in the legislation that are designed to ensure the board members’ independence.

The board must carry out any government policy that sets out the government’s priorities for using the UAS Fund to achieve the section 90 objective.

Its role includes consulting widely on the UAS Fund. It is required to consult on and research matters affecting the implementation of the objectives.

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7 “The objective of the Universal Access and Service Fund is to promote the long-term economic and social development of Papua New Guinea by funding approved UAS Projects that will encourage the development of ICT infrastructure and improve the availability of ICT services within Papua New Guinea, including in rural communities”.. Government of Papua New Guinea (2009), section 90.
1.9.5 Reporting

Each year, NICTA has to submit an annual report to the UAS Board and the minister on the financial situation and performance of the UAS Fund and the UAS Fund Trust Account, and the board’s activities. The report will be tabled before parliament at the first opportunity.

NICTA has to also establish a UAS Fund website, detailing its activities.

1.9.6 Funding for UAS

1.9.6.1 Means of funding UAS

The act envisages a variety of sources for the financing of the UAS Fund:

- monies appropriated for the purposes of the UAS Fund;
- monies received from the UAS levy paid by operator licensees;
- monies paid pursuant to section 32(2)(a) and 36(2)(b)(i);
- monies paid by any person for the purposes of the UAS Fund;
- amounts appropriated as government contribution to a project which is partly funded by an international agency, whether by loan or grant.

NICTA is entitled to levy charges on operator licensees for the UAS Fund. The levy is set as a percentage of net revenues of each operator licensee. The percentage is to be determined annually in order to achieve the desired level of funding for the UAS Fund, as advised to NICTA by the UAS Board, and shall not exceed a maximum percentage prescribed by regulation. The act also prescribes that no levy may be charged prior to 1 January 2011.

Immediately upon receipt, these funds will be paid to the credit of the UAS Trust Account.

1.9.6.2 Distribution of funding

A UAS Fund Trust is also established under the act. The trust consists of three trustees: the NICTA chair and the departmental heads for communications and information, and finance.

The trust establishes the trust account. NICTA administers the trust as the fund manager appointed under the act. NICTA’s administration is to be in compliance with the direction of the trustees.

Monies can only be paid out of the trust account if:

- the payment is for the purpose of the UAS Fund, and NICTA has given a direction to the trustees under the act;
- the payment is in accordance with written authorisation signed by each of the trustees;
- sufficient credit is available.

Money in the UAS Fund shall be used exclusively for the payment of subsidies relating to UAS projects. However, NICTA is entitled to recover from the fund a reasonable contribution towards its costs directly associated with fulfilling its obligations under the UAS part of the act.

NICTA, as fund manager, is also tasked with, in collaboration with the UAS Board, calculating the levy to be imposed on operators.

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8 Subject to Subsection (2)(b), NICTA shall pay that surplus into the UAS Fund.
9 NICTA shall pay all remaining proceeds of the relevant allocation process as follows (i) 50% into the UAS Fund. 50% to the consolidated revenue fund
The fund manager is entitled to establish reserves from surpluses resulting from the levy or other sources of funding, for the purpose of funding UAS projects in future years.

1.9.7 Delivery of UAS

1.9.7.1 UAS providers

Under the terms of their licences, licensed mobile operators are required to provide services in 229 areas throughout Papua New Guinea.

At this point, there is no service provider charged with providing UAS.

The first stage in delivering UAS is the development of a UAS project.

The board shall engage NICTA to identify and develop UAS projects and their indicative costing. In reporting its recommendations to the board, NICTA has to rank the UAS projects in terms of affordability within the proposed budget and the prescribed criteria.

In terms of the prescribed criteria, the act (section 108(4)) provides that:

‘In assessing the ranking of UAS Projects, NICTA and the UAS Board shall have regard to the following factors:

Whether the proposed UAS Project would promote the objectives of the Universal Access and Service Fund; and

The net benefits of the UAS Project to Papua New Guinea, taking into account any costs and detriments to any person; and

Whether the UAS Project is sustainable with a one-time capital subsidy; and

Whether the UAS Project would not otherwise occur but for a subsidy payment under this Part; and

The likely efficiency and effectiveness of the proposed UAS Project and whether it is financially and technically feasible; and

Any other information the UAS Board considers relevant; and

Shall ensure that:

Any UAS Project does not include services under a mandatory coverage obligation; and

Any UAS Project is not otherwise provided by a pre-existing UAS Project.’

It is then up to the minister to decide which UAS projects from the list will be implemented.

1.9.7.2 Awarding UAS projects

NICTA is to develop and carry out a competitive selection process, to select a successful bidder for each UAS project determined by the minister. The tender must be publicised and NICTA may issue a request for proposal (RFP) that specifies the details of the UAS project and the related selection process.
The act specifies the minimum qualification criteria (section 112):

‘NICTA shall include in the qualification criteria, at a minimum, that the bidder demonstrates that:

It has the financial capacity sufficient to complete the UAS Project; and

It has the operational experience and technical capacity to implement the UAS Project; and

It has a quality network design, deployment plan, maintenance plan and business plan (as applicable); and

The subsidy amount required is justified in order to make the UAS Project sustainable; and

It complies with section 48; and

It is in compliance with any existing ICT licence that it holds under this Act and any other obligations relating to that operator licence, including payment of the Universal Access and Service Levy.’

NICTA may require a bidder to include a bid bond, which must be either a stand-by letter of credit, or similar, required by NICTA. NICTA has discretion as to the amount of the bid bond and the events that would trigger forfeiture of it. In any case, the bid bond must be released no later than 30 days following execution of a project agreement and issuance of an operator licence to the successful bidder.

1.9.7.3 Means of UAS commitment

The successful bidder is required to execute a project agreement with NICTA.

The act includes minimum requirements for project agreements (section 115):

‘NICTA shall include in the Project Agreement, at a minimum, the following:

Methods for settling disputes regarding the Project Agreement and ensuring that the Project Agreement counterparty has an adequate system in place to handle complaints from consumers or others regarding the UAS Project; and

Identifiable, quantitative and time bound performance benchmarks sufficient to allow the progress of implementation to be monitored; and

To the extent that the UAS Project involves the construction of any facility, an acknowledgement of the statutory obligation in section 131(1)(b) to provide facilities access services in relation to that facility; and

Such other matters as determined by NICTA.’

NICTA must monitor and assess compliance with the project agreement. If it considers the counterparty has not complied with the terms of the project agreement, NICTA has powers under the act (section 116 (3)(a)(b)(c)(d)(e)) to:
Chapter 1

‘order compliance by the Project Agreement counterparty on terms and conditions as set out by NICTA; or

Order payment of any liquidated damages provided in the Project Agreement; or

Adjust the disbursement schedule or other forms of disbursement of funds from the Universal Access and Service Fund; or

Require repayment to the Universal Access and Service Fund of some or all of the amounts disbursed to date; or

Make other arrangements to complete unfinished work.’

The project agreement may include a requirement for a performance bond. Again, NICTA has discretion as to the amount of the bond and the events triggering forfeiture of it.

1.9.8 Analysis of the situation in Papua New Guinea

Table 9 is an analysis of the situation in Papua New Guinea.

<table>
<thead>
<tr>
<th>General comments</th>
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<tbody>
<tr>
<td>Papua New Guinea had the most sophisticated and detailed UAS regime in the course of this study of the Pacific Island countries. This may be appropriate for a country of Papua New Guinea’s size and resources. However, this may not be an appropriate model for other Pacific Island countries. Nevertheless, it is close to international best practice in this area. It should be noted that the UAS regime has yet to be implemented in Papua New Guinea.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Strengths</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Papua New Guinea has a comprehensive and high-quality legislative framework for UAS. The involvement of an independent and high-powered UAS Board to advise the minister and create UAS projects is a positive. Its requirement to consult widely, and the inclusion of a degree of private-sector representation, is a strength, and should provide the basis for neutral and quality advice. The formal reporting obligations on the UAS Board and the regulator are appropriate and should assist in ensuring transparency and good process. The funding of UAS is close to best practice. It includes operator levies, but does not cap the percentage, which is a weakness (leading to operator uncertainty of the extent of their exposure). The UAS Fund is administered by a trust, which is close to best practice in terms of protecting the funds and preserving them for the purpose for which they are intended. The process for selecting UAS projects appears robust, with the involvement of the UAS Board to propose projects to the minister for approval. This represents a satisfactory balance between the independence of the board and the regulator, and the political interests of the minister. The criteria to be applied by the regulator in the selection process are appropriate. This includes requiring a bidder to provide a performance bond, although it is less certain that a bid bond is needed in the process. The means of ensuring UAS commitment through a project agreement with the regulator is at or near best practice.</td>
<td></td>
</tr>
</tbody>
</table>
Chapter 1

Weaknesses

<table>
<thead>
<tr>
<th>Weaknesses</th>
</tr>
</thead>
<tbody>
<tr>
<td>The degree of flexibility in terms of the section 90 objective may be too great. This could be compared to a country like Uganda, where projects must be for geographical areas and services that are in definite need of assistance, and where service provision is not feasible or unlikely to be provided by operators within the next one or two years without subsidy.</td>
</tr>
<tr>
<td>There is no particular detail on the types of services that may be subject to the UAS regime. This can be compared to other countries that are more specific on this point.</td>
</tr>
<tr>
<td>There is no apparent formula for determining the award of the subsidy. Again, this can be compared to Uganda, where the maximum allowable subsidy is a calculated amount that fills the gap between the potential loss for the operator over a ten-year cash flow (the length of the licence) and the amount that would be needed to achieve a normal commercial rate of return, based on conservative assumptions.</td>
</tr>
<tr>
<td>There is uncertainty whether the requirement on the UAS provider to offer regulated facilities access is the best approach. It could deter operators from becoming UAS providers if they fear that their investment may be undermined. It may increase their already high risks through potential free-loading by competitors. It may be that an ‘access holiday’ is appropriate in these circumstances, at least for a reasonable length of time to allow the operator to recover most of its investment.</td>
</tr>
<tr>
<td>There are elements of the regime that may be overly bureaucratic, such as the secretariat. Potentially, legislation’s requirements concerning implementation of UAS projects may be too prescriptive, but this is not a major criticism.</td>
</tr>
</tbody>
</table>

1.9.9 Relevant sources


1.10 SAMOA

1.10.1 Outline of the institutional framework for UAS

Part 4 of the Telecommunications Act 2005 deals with universal service.

The act provides for the establishment of a universal access policy by the regulator, for approval by the minister. It is one of the simpler universal service regimes in the Pacific Island countries.

Once the universal access policy is established, the minister may establish a Universal Access Fund to subsidise the net costs of providing universal access. The regulator administers this fund.

1.10.2 Scope of the UAS policy

1.10.2.1 Definition and services included in the UAS policy
Chapter 1

The act envisages that the regulator may propose, for approval by the minister: ‘A policy setting out specific objectives and related principles and service obligations relating to the provision of universal access to telecommunication services in Samoa’ (section 20(1)).

In preparing this universal access policy, the regulator is required to consider:

- the objectives for the development of universal access;
- the basic telecommunication services to be included in universal access obligations;
- the geographical areas in which specified levels of universal access should be achieved;
- the costs of the universal access service obligations.

Although a universal access policy has not yet been finalised, a draft policy is available for public comment.\(^{10}\) The policy section 6 describes its critical elements:

‘The critical element for the Policy is advancing universal access to community groups who because of their specific characteristics are inadvertently underserved, and in recognition that there are limits to how well the market can or will function to extending service to marginalized groups. Access to telecommunications being a right of every citizen, this public welfare argument for state-intervention, is sufficiently important to provide policy intervention to address market failures to disadvantaged groups.’

The draft policy also sets out the proposed scope of the policy section 3 as reproduced below:

‘I. National – programs are prioritized and geographically spread for national presence and benefit.

II. Community-oriented such as for a village or a special interest cluster, e.g. learning institutions, schools, libraries, and institutions for the disadvantaged

III. Services – telecom services are defined as access to Voice, Data, Internet and Broadband

IV. Technology-neutral – to be future-proof, technology has to be operational (surpassed its experimental phase); Supported by other vendors (currently sustainable); “Integrateable” (mutually co-exist with existing networks); and “Scaleable” (expandable for later capacity increase).

These four elements will determine the criteria to be used in determining the manner of any intervention for the achievement of Universal Access for telecommunication services in Samoa.’

---

\(^{10}\) Government of Samoa (2010).
The draft policy is notable in the Pacific for specifically referring to broadband, which is defined in section 2 as:

‘An ‘always-on’ data connection that is able to support interactive services including Internet access and has the capability of the minimum upload speed of 256 kilo bits per second (KBPS) to an individual subscriber from the Point of Presence (POP) of the service provider intending to provide Broadband services where multiple users such as individual Broadband connections are aggregated and the subscriber is able to access these interactive services will exclude any services which a separate license is specifically required, for example, real-time transmission, except to the extent that it is presently permitted under ISP license with Internet Telephony.’

In response to the data collection form, the regulator said: ‘Broadband is the relevant choice for high-speed connectivity to deliver societal applications such as tele-education, tele-medicine, e-governance, and rural employment generation, for sustainable intervention to address market failure and promote equitable access to telecom services.’

The draft policy section 7 says: ‘The objective is to avoid duplication between new programs and existing projects while addressing market gaps with activities that would eventually become commercially viable and in the long term no longer require UA Fund support. The Policy will endeavor to coordinate and harmonize ICT Projects and utilize a Universal Access Fund to achieve universal access’ section

The draft policy section 8 sets out some priorities for universal access:

‘The following statements provide guidance for full realization and wide availability of benefits:

Principle 1: Maximizing Benefit – the targeted interventions will be applied efficiently to enable the greatest benefit to the greatest number of people at the earliest time.

Principle 2: National Presence – the Policy is expected to translate into a national program with geographical dispersion to provide for national rather than cluster benefits.’

1.10.3 Process for developing UAS policy

The regulator has to consult with interested parties before proposing the universal access policy.

1.10.3.1 Role of the regulator and other stakeholders in implementing UAS

Under section 20(3) of the act, the regulator also has to ensure that:

‘Any universal access obligations of service providers:

• are administered in a transparent, non-discriminatory and competitively neutral manner; and
• are not more burdensome than necessary for the universal access objectives to be achieved.’
1.10.4 Funding for UAS

Once the policy has been approved, the minister may ‘establish a Universal Access Fund to be used to subsidize the net costs of providing universal access’ (section 21(1)). Note that this is not expressed as a requirement on the minister, but it would be expected that the minister would establish such a fund.

The regulator is to administer the fund in accordance with any financial and administrative directions issued in writing by the chief executive officer of the Ministry of Finance. The fund shall also be operated out of a separate account from the ministry or the operational accounts of the regulator.

Once the fund is established, the minister may:

- require individual licensees to contribute to the fund;
- determine the contribution made by individual licensees;
- determine the disbursement procedures of that fund, which should be competitively neutral and market-oriented.

In relation to funding from licensees and fund administration, the draft policy section 7.3 states:

‘This is likely to be determined based on best practice as a certain levy on gross revenue per year. Due to the anticipated amounts, it is envisaged the fund management will involve transparent and consultative processes, with oversight by an advisory committee consisting of industry representation, and subject to annual audit of resultant activities.’

1.10.5 Analysis of the situation in Samoa

Table 10 is an analysis of the situation in Samoa.

<table>
<thead>
<tr>
<th>General comments:</th>
<th>Samoa has a simple and quite elegant UAS regime and, with some tweaks, is one of the favoured models for further application through the Pacific Island countries.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strengths:</td>
<td>The regulator’s reasonably high level of independence establishing the UAS policy for approval by the minister is considered a strength. The criteria to be applied by the regulator are appropriate.</td>
</tr>
<tr>
<td></td>
<td>The administration of the UAS fund is adequate, with direction from the CEO of the Ministry of Finance and operated out of a separate account. However, best practice would provide for additional ring-fencing of the fund with very limited potential for access for other purposes.</td>
</tr>
<tr>
<td>Weaknesses:</td>
<td>It is noticed that, once the UAS policy is established, the minister ‘may’ but does not have to establish a UAS fund. This discretion is curious and a weakness. This degree of discretion is as appropriate.</td>
</tr>
<tr>
<td></td>
<td>If the minister is not responsible for determining the amount of contributions from licensees and the disbursement processes, the minister is open to political lobbying by operators – a role more suited to the regulator.</td>
</tr>
<tr>
<td></td>
<td>Although a relatively high level of regulatory independence is favoured, there is a potential for too much discretion on the part of the regulator when administering the UAS regime. The legislation may benefit from some further guidance for the regulator (consider Papua New Guinea’s guidance in this area, for example).</td>
</tr>
</tbody>
</table>
1.11  SOLOMON ISLANDS

1.11.1 Outline of the institutional framework for UAS

There are two main entities involved in the institutional framework for UAS in the Solomon Islands:

- the Telecommunications Commission, who is the regulator and has most of the responsibilities and authority;
- the Universal Access Advisory Committee (the Committee).

The Telecommunications Commission’s main roles are to:

- develop the Universal Access Plan (UAP);
- implement the Universal Access Special Fund, including identification of eligible geographic areas for universal service, tendering for universal service obligations and administering the Universal Access Special Fund.

The Committee’s main role is to give advice to the Telecommunications Commission in the development of the UAP.

In giving its advice to the Telecommunications Commission, the Committee must consult with representatives of the ministries responsible for rural development, education, health and other areas affected by telecommunications, as well as others as it considers appropriate.

The Committee is to consist of:

- the commissioner, as chair;
- a representative from the ministry;
- a representative from a recognised service provider association or, if there is not a recognised service provider association, a representative of service providers generally;
- others invited in writing by the Committee, as it considers useful and appropriate.

1.11.2 Scope of the UAS policy

The development of policy for universal access is largely in the hands of the Telecommunications Commission, who has considerable independent authority compared to other countries.

The Telecommunication Act 2009 provides for the adoption of a UAP by the Telecommunications Commission (section 47(1)):

‘The Telecommunications Commission may by determination adopt and shall thereafter review annually a plan called the “Universal Access Plan” for the development of universal access to telecommunications services throughout Solomon Islands in accordance with subsection (2).’

The Telecommunications Commission must consider the advice of the Committee when preparing the UAP.

The basic components of the UAP are set out at a high level in the act (section 47(2)):

‘The Universal Access Plan shall set forth —

11  Government of the Solomon Islands (2009)
• the objectives for the development of universal access;
• the telecommunication services to be included in universal access obligations; and
• the method of selection of service providers to whom universal access obligations shall apply.’

The act also goes into some detail describing the types of services that are to be subject to the UAP (section 47(3)):

‘The Universal Access Plan shall promote the availability of at least the following services —

(a) telephone service, whether fixed or mobile;

(b) emergency service with priority routing, enabling any member of the public to contact the police, fire brigade, ambulance and marine division services;

(c) reasonable disaster relief services;

(d) operator assistance service, enabling any user to obtain assistance regarding, amongst other things, accessing services, setting up calls and remedying faults; and

(e) such other services as may reasonably be determined by the Telecommunications Commission.’

Further, the act provides that the UAP shall establish the level of quality of service requirements (section 47(4)):

‘The Universal Access Plan shall promote the provision of the telecommunications services referred to in subsection (3) —

(a) twenty-four hours a day, seven days a week;

(b) at a reasonable level of quality as such may reasonably be determined by the Telecommunications Commission;

(c) in a manner that to the extent feasible minimises discrimination among users; and

(d) in the case of the services under subsection 3(b) and (c), free of charge to the user.’

1.11.3 Role of the regulator and other stakeholders in implementing UAS

Once the UAP has been created, the next important step is for the Commission to compile (and annually update) a list of geographic areas that are to be eligible for the application of universal access obligations and funding under the universal access policy.

To be included in this list, a geographic area must meet either of the following criteria:

• the level of provision of telecommunication services is non-existent or considerably poorer than that in the more advanced areas of the country;

• the cost of providing telecommunication services in such areas apparently prevents their provision on a reasonable commercial basis.
The Commission should consult with service providers in determining the list of universal access areas.

This then leads to a universal access obligation, which under the Act is an obligation on a service provider to provide the telecommunication services defined in the UAP in one of these eligible geographic areas.

1.11.4 Funding for UAS

UAS is funded through the Universal Access Fund. The Universal Access Fund is a special fund, established in accordance with section 100 of the constitution. The chief significance of this is that:

> ‘In accordance with section 100(3) of the Constitution, the receipts, earnings and accruals of each special fund established pursuant to subsection (1) and the balance of such fund at the close of each financial year shall not be paid into the Consolidated Fund but shall be retained in the relevant special fund for the purposes of such special fund in its following financial year’.

In other words, the Universal Access Fund is ring-fenced, through the constitution, from general government funding.

All moneys in the Universal Access Fund shall be at the sole disposal of the Commission for the sole purpose of funding universal access. The accounts of the Universal Service Fund are to be audited each year.

1.11.4.1 Means of funding UAS

The act provides for three sources of funding:

- universal access levies imposed by the Commission;
- any grants or donations made to or for the benefit of the Universal Access Fund;
- any monies appropriated by parliament from the consolidated fund.

Also, annual fees for use of certain radio spectrum will be paid into the Universal Access Fund.

In terms of levies on operators, the act provides that:

> ‘shall be set as a percentage of a service provider’s gross revenues in the most recent financial year, up to a maximum of two per cent of such gross revenues (section 20(1));

> shall be adjusted each year to take into account any balance retained in the Universal Access Special Fund at the close of the previous financial year pursuant to section 17(8) and as reflected in the audited and approved Universal Access Special Fund accounts (section 20(4))’;

and

> shall not be levied for a period of at least five years following the new entrant launch date and only then upon a determination of the Telecommunications Commission that the Universal Access Plan requires such funding’ (section 51(2)(c)).

12 Government of the Solomon Islands (1978)
1.11.4.2 Distribution of funding

The act provides that the Commission may only disburse moneys from the Universal Access Special Fund to a service provider, or a person that intends to be a service provider, that is subject to a universal access obligation. The funding is to be used to fund the cost of establishing and operating telecommunication networks and providing telecommunication services in eligible geographic areas.

However, the act also provides (section 50(2)) that:

‘No service provider is entitled to funding under Universal Access Fund for the provision of telecommunications services in a geographic area, and any entitlement previously established shall cease, where a substantial level of access to reasonably substitutable telecommunications services is already available from another service provider without such funding.’

The Commission has a reasonable amount of discretion when disbursing funds from the Universal Access Special Fund, in accordance with the Universal Access Plan. This includes:

- disbursing funds as they become available, or periodically, or after accumulating funds over a period of time;
- disbursing funds for existing or future projects or to reimburse prior aid agency contributions to projects which were contributed in accordance with the Universal Access Plan applicable at such time and on condition of such reimbursement.

However, in some cases, the consent of the minister responsible for the act, and the minister responsible for Finance is required (section 52(10)).

1.11.5 Delivery of UAS

1.11.5.1 UAS providers

Currently, there are not any providers delivering UAS under the act.

1.11.5.2 Awarding UAS projects

The Commission will conduct a tender for universal service funding, unless ‘there is a reasonable prospect of more than one person wishing to be considered for funding under the Universal Access Fund’ (section 52(3)).

The Commission has a reasonable degree of discretion when setting the tender terms.

1.11.5.3 Means of UAS commitment

A service provider may become subject to a universal access obligation if it assumes a universal access obligation pursuant to a tender for universal service funding.

1.11.6 Analysis of the situation in the Solomon Islands

Table 11 is an analysis of the situation in the Solomon Islands.
Table 11: Strengths and weaknesses of the Solomon Islands’ approach

| General comments | The Solomon Islands has probably the preferred UAS regime for the Pacific Island countries. It has similarities to the Fiji regime, without some of the weaknesses that have been identified there. The UAS regime has not yet been implemented. |
| Strengths | The role of the regulator in developing the UAS policy is positive, as well as the role of the Committee in advising the regulator. The minimum list of services to be subject to the UAS regime is largely acceptable, although we would prefer to see a specific reference to Internet access. The criteria for an eligible geographic area are appropriate and sufficiently specific. The ring-fencing of the UAS Fund appears appropriate, as well as the limits on how the regulator applies the fund. The cap on operator levies is a strength that provides certainty for operators. The specific reference to the situation where a reasonably substitutable service is already available is a strength. It avoids the need to continue UAS funding in an area where other competitors have entered. This reduces the risks associated with identifying eligible geographic areas and whether or not they are actually suitable for UAS. However, there are risks for the UAS provider, which may deter investment. |
| Weaknesses | The Committee could perhaps be improved by having broader representation from senior officials from other parts of government, although representatives can be added, and the Committee does have to consult widely. The five-year period in which there cannot be any operator levies is a weakness. It means that any funding for UAS projects will need to come from donors or government revenue (although this is less likely). However, it does provide additional incentives for new entrants to come into the market. A more formal monitoring and evaluation mechanism may improve the UAS regime. It would be preferable to see specific references to the sanctions available to the regulator in the case of a UAS provider failing to comply with its obligations. |

1.12 TIMOR-LESTE

1.12.1 Outline of the institutional framework for UAS

The following legislation are relevant to universal service:

- The 2nd Act (Establishing the Bases for the Telecommunication Sector 11/2003)\textsuperscript{13}, which establishes the compensation fund, the protection of competition and includes the management and operation of telecommunication infrastructure;

- The 3rd Act (Establishing the Communications and Regulatory Authority and Approving the statutes thereof 12/2003)\textsuperscript{14}, which establishes the Communications Regulatory Authority, ARCOM.

\textsuperscript{13} Government of Timor-Leste (2003)a
\textsuperscript{14} Government of Timor-Leste (2003)b
The response to the data collection form suggests that there is a further act and potentially regulations with more relevant provisions relating to universal service. It refers to the following law relating to the establishment of a universal service regime:

‘The Minister is to establish the Universal Telecommunications Fund (UTF) for Rural Telecommunications in the Democratic Republic of Timor Leste. The objectives for which the TUSF is established are:

To promote the equitable rural telecommunications coverage facilitating the population’s access to telecommunication service at affordable prices for economic, social and household uses

1.12.2 Scope of the UAS policy

1.12.2.1 Definition and services included in the UAS policy

The response to the data collection form defines universal service as:

‘The widespread accessibility (in terms of availability, convenience of use and price) of reasonably equivalent basic telecommunication services to meet the population’s communications needs with regard to social and economic activities in the national territory taking into account harmonious and balanced economic and social development.’

1.12.3 Role of the regulator and stakeholders in implementing UAS

Under the 2nd Act, section 2.1 sets out certain objectives of the legal regime under the present decree-law:

‘Ensure the satisfaction of the basic requirements for providing telecommunications services to the populations and public and private entities from the various activity sectors, through the creation of conditions conducive to the development and diversification of services of this nature.’

Section 2.2 then describes two relevant principles, to which the section 2.1 objective must conform:

‘(a) Ensure the existence and availability of a universal service, consisting of a minimum range of telecommunications services provided within the national territory, on a permanent basis, with adequate quality conditions and at prices that can be afforded by all users;

(b) Ensure the financial and economic feasibility of the universal service through the granting of exclusivity in the provision of certain telecommunications services and the establishment of a compensation fund.’

Section 4.2 further emphasises the importance of universal service in describing the state’s responsibilities on matters of regulation, supervision and monitoring of telecommunications:

‘(f) Ensuring a universal telecommunications service.’

The state’s responsibilities are to be fulfilled by ARCOM.
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The data collection form refers to a law directing ARCOM in relation to the establishment of universal service regime:

**System of universal service provision**

*The Minister may direct ARCOM to determine a system to promote the widespread availability and usage of network services and/or applications services throughout Timor Leste by encouraging the installation of network facilities and the provision for network services and/or applications services in underserved areas or for underserved groups within the community.*

**Universal Service Provision**

*For the purposes of this Act, a fund to be known as the "Universal Telecommunications Service Fund" ("UTS Fund") is established and it shall be controlled and operated by ARCOM.*

ARCOM may make regulations regarding contributions by licensees, under this Act, to the UTF Fund and any other matters related to or incidental to the establishment and operation of the UTS Fund.‘

### 1.12.4 Funding for UAS

#### 1.12.4.1 Means of funding UAS

The data collection form refers to what may be regulations relating to the establishment of the Universal Telecommunications Fund (UTF):

‘The Minister is to arrange for funds to be placed into the UTF account. Initial funds shall be from sources presently accessible such as, but not limited to:

- Government allocations, which shall have the characteristics of being regular and sufficiently important, in order to fulfil the government rural telecommunication policy and targets,

- Donations and grants from international development agencies whose source and terms shall be acceptable to the Ministry of Postal and Telecommunication and to the Ministry of Economy and Finance, and

- Donations and grants from other entities whose source and terms shall be acceptable to the Ministry of Postal and Telecommunication and to the Ministry of Economy and Finance

The Minister is to develop proposals for additional sources of funds for the UTF for the consideration of the Council of Ministers. Sources may be, but are not limited to:

- a Universal Service Obligation component from the license share of revenues
- a part share of revenues from increased radio communications license revenues
- a new charge for access to and use of telephone numbers
- auction of a franchise for provision of services or class of services to a locality
- a new charge on interconnect or mobile termination revenues.’
1.12.4.2 Distribution of funding

The data collection form refers to:

‘The Minister is to make disbursements from this fund on the recommendations of the Universal Telecommunications Committee which convenes for forming such recommendations.’

1.12.5 Delivery of UAS

The data collection form refers to the potential for alternatives to the use of the UTF Fund:

‘In addition to the formation and use of a Universal Telecommunications Fund for the expansion of telecommunications services, the Minister is to consider, and where appropriate use, alternative approaches to encourage telecommunications services growth in rural and other uneconomic areas. Such approaches may include but are not limited to:

Concessions (with or without supplementary funding) to operators to provide services as the sole provider in a locality for a defined period

Advantageous arrangements for interconnection to the national backbone network for back haul of traffic

General education and assistance programs in Communes and Districts to encourage market development and use of installed services.’

1.12.6 Analysis of the situation in Timor-Leste

Table 12 is an analysis of the situation in Timor-Leste.

<table>
<thead>
<tr>
<th>General comments</th>
<th>Observations concerning Timor-Leste are somewhat limited by an inability to access some of the relevant source material referred to in the data collection form.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strengths</td>
<td>Generally, the objectives of the UAS Fund seem appropriate for its purposes.</td>
</tr>
<tr>
<td>Weaknesses</td>
<td>There is not an agreement with any grant of exclusivity in relation to universal service, although the wording in section 2.2 of the 2nd Act may relate to the general requirements in the legislation to provide exclusivity to Timor Telecom. The minister has discretion to allow additional funds for a UAS service, including operator levies. However, this risks lobbying by operators and as such, may be a matter better dealt with by the regulator. It is believed that UAS Fund’s disbursements should be made by the regulator rather than the minister.</td>
</tr>
</tbody>
</table>
1.13 TONGA

1.13.1 Outline of the institutional framework for UAS

The relevant legislation is the Communications Act 2000. Section 4(2) sets out the national communication sector’s policy objectives, which include ‘to maximise the availability of communications infrastructure.’

Tonga has a competitive telecommunication market, with two licensees, Tonga Communications Corporations and Digicel.

1.13.2 Role of the regulator and stakeholders in implementing UAS

Division 4 of Part VI of the act deals with universal service.

Under section 50, the minister may ‘direct the Department to determine a system, to be known as the universal service system, to promote the widespread availability of services provided under licences issued under this Act’. This universal service system shall be subject to approval by the minister.

Section 51 sets out a range of matters that may be addressed in a universal service system. These include:

‘(a) needs of underserved areas within the Kingdom;

(b) needs of underserved groups within the community;

(c) measures to encourage the installation of network facilities and the provision of network services or applications services to serve such underserved areas and underserved groups;

(d) affordability of such services;

(e) costs of providing such services;

(f) equitable sharing of the costs of such service throughout the community; and

(g) any other matter as may be required by the Minister.’

The response to the data collection form indicates that there is a draft universal service system policy in existence, which has been widely consulted on. This has not been seen as part of this study.

1.13.3 Delivery of UAS

Once approved by the minister, the department has wide powers to direct licensees to comply with matters determined under the universal service system.

1.13.4 Analysis of the situation in Tonga

Table 13 is an analysis of the situation in Tonga.
Table 13: Strengths and weaknesses of Tonga’s approach

<table>
<thead>
<tr>
<th>Strengths</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>The act is modern legislation, which makes specific reference to a universal</td>
<td>The objectives that relate to universal service are clearly</td>
</tr>
<tr>
<td>service regime. The objectives that relate to universal service are clearly</td>
<td>expressed: ‘to maximise the availability of communications</td>
</tr>
<tr>
<td>expressed: ‘to maximise the availability of communications infrastructure’.</td>
<td>infrastructure’.</td>
</tr>
<tr>
<td>The department is delegated responsibility to develop a universal service</td>
<td>The department is given a good level of guidance in the legislation.</td>
</tr>
<tr>
<td>policy and is given a good level of guidance in the legislation.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Weaknesses</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>The legislative regime is too high level to be considered regional or</td>
<td></td>
</tr>
<tr>
<td>international best practice.</td>
<td></td>
</tr>
<tr>
<td>Although section 51 does require the department to consider such matters</td>
<td>These broad powers lead to operators being at risk of being</td>
</tr>
<tr>
<td>as costs and equitable sharing of costs, the powers of the department in</td>
<td>forced to provide service in uneconomic areas, or being required</td>
</tr>
<tr>
<td>implementing the universal service system are too broad.</td>
<td>to fund the provision of these services, on uncertain terms. This</td>
</tr>
<tr>
<td>These broad powers lead to operators being at risk of being forced to</td>
<td>uncertainty may result in underinvestment by operators in other</td>
</tr>
<tr>
<td>provide service in uneconomic areas, or being required to fund the</td>
<td>parts of the country, which will be to the detriment of end-users.</td>
</tr>
<tr>
<td>provision of these services, on uncertain terms. This uncertainty may</td>
<td>There is also little or no legislative direction over how universal</td>
</tr>
<tr>
<td>result in underinvestment by operators in other parts of the country,</td>
<td>funding is to occur and how funds are to be applied.</td>
</tr>
<tr>
<td>which will be to the detriment of end-users.</td>
<td></td>
</tr>
<tr>
<td>There is also little or no legislative direction over how universal funding</td>
<td></td>
</tr>
<tr>
<td>is to occur and how funds are to be applied.</td>
<td></td>
</tr>
</tbody>
</table>

1.14  TUVALU

1.14.1 Outline of the institutional framework for UAS

The relevant legislation is Tuvalu Telecommunications Corporation Act 1993. It establishes the Tuvalu Telecommunications Corporation as the exclusive provider of telecommunications in Tuvalu.

Section 31 is the most relevant part of the act insofar as universal service is concerned:

‘The Corporation may request the Government to make subsidy grants, loans or to agree to a subsidy scheme for the purposes of:

- establishing, developing, working and maintaining any telecommunication systems in the outer islands of Tuvalu and in areas where the provision of such service would be uneconomical; and
- defraying or contributing towards any expenses or losses incurred by the Corporation in matters covered under the preceding paragraph.’

There is no evidence whether the corporation has made such a request to the government.

The act also provides (section 6(2)) that a licence may be granted to another operator to provide services outside the coverage area of the corporation:
‘(2) Where the Corporation is for any reasons unable to supply or provide a telecommunication service to any person in any part of Tuvalu or to establish and develop an appropriate telecommunication system for that person, it may in accordance with the regulations made by the Minister under this Act, licence a person as it may consider fit and suitable to supply or provide the service at a cost to be paid for by the person requiring the service and upon such other conditions as may be prescribed by regulations and contained in the licence.’

1.14.2 Analysis of the situation in Tuvalu

Table 14 is an analysis of the situation in Tuvalu.

Table 14: Strengths and weaknesses of Tuvalu’s approach

<table>
<thead>
<tr>
<th>Strengths</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Although the legislation and regulatory environment was designed primarily for the provision of telecommunication services in a monopoly environment, the legislation does envisage a subsidy scheme for dealing with universal service issues.</td>
<td>It is positive that the legislation allows for a back-stop in the case where the incumbent is unable to provide service in particular areas through the issuance of new licences to provide service in those areas.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Weaknesses</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Generally, the legislation is too high level to be at or near international or regional best practice. Although the act provides for the potential for subsidies and new licences to be issued, and therefore some of the tools of universal service, the government would need to be very determined to rely on and make use of these tools to pressure a reluctant corporation to provide universal service.</td>
<td>Appendix 3: Strengths and weaknesses of Tuvalu’s approach</td>
</tr>
</tbody>
</table>
Chapter 1

The Government has made a decision and agreed on its policy and priorities for the application of the UAP Fund over the next two years.

The Government has determined that its priority for the use of the fund is to subsidise the extension of the mobile telephone service in areas where the mobile operators Telecommunication of Vanuatu Limited (TVL) and Digicel have indicated that they do not intend to provide services on a normal commercial basis.

The Government has decided that as a first priority in 2009 (funds and bid levels permitting) service should be provided in the following seven locations: Aneityum, Futuna, Gaua, North Maewo, Pentecost East, Santo North West and Vanua Lava.

The second priority is for East Erromango, South East Tanna and the Torres Group. If funds do not permit the second priority sites to be covered in 2009 then the Government intends that they will be covered in 2010.’

1.15.3 Process for developing UAS policy

It is the minister’s role to ‘develop a policy for improving access to telecommunication service for locations which are not or not adequately served by existing services’ (section 17(1)). The policy must be approved by the Council of Ministers.

In developing the UAP, the minister is required to consult with the regulator, and hold consultations with interested parties.

1.15.4 Role of the regulator and other stakeholders in implementing UAS

The regulator administers the UAS regime. There are relatively few restraints on the regulator when conducting its role.

The regulator, on behalf of the government, is to conclude contracts for the payment of subsidies in consideration of the provision of telecommunication services in accordance with the UAP.

1.15.5 Funding for UAS

The minister has to establish a trust fund for the purposes of the UAS. This UAS Fund is to be administered by the regulator.

If the UAS Fund is not fully allocated in the year to which it relates, then the unallocated amount is to stand to the credit of the subsequent year’s estimate.

The UAS Fund is to be audited each year.

1.15.5.1 Means of funding UAS

The Telecommunication and Radiocommunications Act 2009 contemplates that ‘any person may voluntarily contribute towards the UAS Fund and such person may specify that such contribution be applied in a specific manner’ (section 19(4)).
Licensed service providers are required to pay an annual levy to the UAS Fund. The regulator estimates the amount necessary for the allocations of the UAS Fund in respect of the next year. The regulator calculates the amount of the levy by ‘apportioning this estimate among each licensed service provider according to the proportion represented by their net revenue for the preceding year...as against the net revenue of all service providers’ (section 18(6)).

Net revenue is defined under the act and comprises gross revenues for the service provider, less certain amounts such as interconnection payments made to other service providers and international out-payments.

There is a cap on the levy, which is limited to four per cent of its net revenue for the relevant period. No service provider can be required to pay greater than 80 per cent of the amount necessary for the allocations of the UAS Fund for the following year.

1.15.5.2 Distribution of funding

In order of priority, the UAS Fund is to be applied to:

- compensation payable to TVL relating to TVL loss-making customers pursuant to the settlement agreement;
- subsidies to service providers for providing UAS services.

1.15.6 Delivery of UAS

1.15.6.1 UAS providers

There are currently not any providers delivering UAS services under the act. However TVL is required by the terms of its licence (clause 8.1) to continue providing services to all the areas that it was serving at the time the licence was issued, unless the regulator agrees otherwise in respect of each customer or group of customers.

1.15.6.2 Awarding UAS projects

Vanuatu is the only country in the Pacific region that this study is aware of that has actually conducted a UAS tender. By going into the process in some detail as a result of this, it is instructive and at or near international best practice. The process is not yet complete, but is substantially advanced.

The government issued a tender in October 2009 to subsidise the delivery of mobile telecommunication services to selected remote areas in Vanuatu (UAS areas). The ten areas were split into two groups for the purposes of the tender: Group B was all ten UAS areas and Group A was the superset of group B consisting of seven UAS areas.

Tenderers (UAS service providers) were required to provide separate tenders for Groups A and B. The government retained the discretion to choose whether to award the tender in respect of either Group A or Group B. An individual tenderer could only be awarded the tender for one of the two groups. The terms of the arrangement were for 14 years.

The government’s tenders board and the regulator were responsible for carrying out the tender. The tender was conducted through the competitive tendering procedures set out in the Government Contracts and Tenders Act 1998 and the Tenders Regulations Orders No. 40 of 1999.

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17 See link in Footnote 16.
The tender stated that the contract would be awarded to the UAS service providers that could construct a network, and provide mobile telecommunication services in accordance with the contract and achieve the following goals:

- value for money;
- broad coverage across the UAS areas;
- high-quality service delivery.

Tenders were evaluated on the following criteria and the contract awarded to the tenderer that best achieved the UAS access obligations.

**Table 15: Vanuatu’s UAS access obligations**

<table>
<thead>
<tr>
<th>Qualifications</th>
<th>Maximum points</th>
<th>Weighting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subsidy per person</td>
<td>10</td>
<td>25%</td>
</tr>
<tr>
<td>Total persons covered</td>
<td>10</td>
<td>55%</td>
</tr>
<tr>
<td>Quality of proposal (including robustness of technical proposal, interoperability with existing networks, compliance with key service delivery requirements such as key performance indicators and construction timeline, compliance with contractual terms and conditions)</td>
<td>10</td>
<td>20%</td>
</tr>
<tr>
<td>Total</td>
<td>30</td>
<td>100%</td>
</tr>
</tbody>
</table>

The tenderers had to pass the first qualification stage (dealing with financial and operational capability) before being considered for further evaluation. Having passed this stage, their tenders were considered objectively in terms of the size of the subsidy sought and the number of customers. There was also a more subjective consideration of the proposal’s quality.

The weighting used in the criteria is interesting. Clearly, significant importance was placed on coverage. A higher subsidy per person could still win the tender if the coverage was superior to that in a competing tender. This is emphasized by the fact that the subsidy was expressed in terms of subsidy per person rather than in absolute terms.

When considering the total number of people covered, the tender rules required the tenderer to insert a tick next to each village it will cover in a table of villages. This table included the forecast population of each village based on the most recent census and any up-to-date data (such as growth rates identified by the Department of Statistics). In order for a village to be counted as covered, a UAS service provider had to guarantee reliable coverage within that village. Each checked village was then treated as covered for the purposes of the ‘total persons covered’ evaluation criteria, and referred to as the mandatory service areas.
Tenderers needed to be either a current licensee in Vanuatu or have submitted an application for a licence. The tender rules explicitly said that if a successful tenderer was not one of the two current telecommunication operators, then it would be responsible for organising and paying for the necessary interconnection and working arrangements with one or both of these operators to enable interoperability.

The timetable for completing the tender was approximately two months from the publication of the notice of invitation to the closing date for submission. The tenders board then had a period to consider the submissions and make a recommendation to the Council of Ministers. The intention was to award the tender three months after the closing date.

**1.15.6.3 Means for ensuring UAS commitment**

A contract with a successful tenderer was intended to ensure a commitment to providing UAS.

The contract was included in the tender documents. Tenderers had to indicate in their submission if they would comply with each clause. If they indicated they would only comply with a particular clause subject if certain conditions were met, these had to be explained. The tender rules stated that any significant or substantive variation or departure from the form of the contract would not be viewed favourably.

Tenderers could make changes that relaxed the service or quality, or extended the timetable for a network’s construction or payment schedule. However, this would not be viewed favourably, and the submission would be marked down accordingly in the evaluation process.

Tenderers’ degree of compliance with the contract was considered as a part of the ‘quality of proposal’ criteria.

The documentation in the tender set out the UAS services to be provided, the service’s availability, quality standards, the network to be constructed, and the subsidy payment schedule.

Mandatory services were:

**Private voice telephony and messaging services**

The following services had to be provided throughout the mandatory service areas as identified as Group A and B:

- incoming and outgoing local direct dial calling
- national and international direct dial long distance calling
- local and international SMS messaging

The services had to be effectively advertised to the public and the UAS service provider that may be awarded a contract had to publish its service plan and tariffs.

Consumer contracts for these services had to be of a standard form and approved in advance by the regulator.

**Operator and national emergency services**

The service availability and quality standards are outlined in Table 16.
Table 16: Key performance indicators in Vanuatu’s UAS tender relating to service availability and quality standards

<table>
<thead>
<tr>
<th>Specification</th>
<th>Key performance indicators</th>
</tr>
</thead>
<tbody>
<tr>
<td>Availability</td>
<td>In normal operations, the access network must ensure that the probability of a successful call (limited by the access network) will be greater than 98 per cent during peak hours. Probability of call blocking elsewhere in the network must be less than three per cent at any time. Availability of the access network must be greater than 99 per cent where availability is expressed as the time that the access network is available in any year (less any time where the network is unavailable due to a force majeure event) divided by the number of minutes in a year (less any time where the access network is unavailable due to a force majeure event).</td>
</tr>
<tr>
<td>Dropped calls</td>
<td>The percentage of dropped calls in any hour must be less than three per cent.</td>
</tr>
<tr>
<td>Voice quality</td>
<td>Networks designed to ensure an R score* better than 60 for 95 per cent of calls originating and terminating in Vanuatu (excluding calls requiring satellite links).</td>
</tr>
</tbody>
</table>

*As defined by ITU-T Recommendation G.107 which is a standard that ensures the room noise is limited when talking on the phone.

The contract also set out the amount of the subsidy in vatu. The subsidy would be payable by the regulator to the successful tenderer on achievement of particular milestones, which had to be achieved within a certain timeframe.

Table 17: Completion and payment milestones

<table>
<thead>
<tr>
<th>Milestone</th>
<th>Due date</th>
<th>Milestone</th>
<th>Tranche payable</th>
<th>Cumulative total paid (percentage of UAS subsidy)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Within 6 months from date of this agreement</td>
<td>When all sites are commissioned (i.e. switched on).</td>
<td>30%</td>
<td>60%</td>
</tr>
<tr>
<td>2</td>
<td>Within 6 months of milestone 1 being satisfactorily completed.</td>
<td>When the coverage requirements are achieved, and service is available to all mandatory service areas.</td>
<td>60%</td>
<td>90%</td>
</tr>
<tr>
<td>3</td>
<td>Within 6 months of milestone 2 being satisfactorily completed.</td>
<td>When service availability and quality standards are met in all mandatory service areas, and compliance is verified.</td>
<td>10%</td>
<td>100%</td>
</tr>
</tbody>
</table>

Failure to meet these milestones would have serious consequences. It could result in the loss of eligibility for all or part of the UAS subsidy. If either milestones 1 or 2 were not met within the timeframe specified, then the percentage of the subsidy payable would reduce by five per cent each month. However, there would be a corresponding increase in the proportion available for completion of the next milestone, to give the service provider an incentive to catch up.
Further, if the milestones were not met, the regulator could call on a performance guarantee. The first performance guarantee was for 100 million vatu or US$1.96 million and could be cancelled on following a failure to meet any of the milestones. Eventually, if milestones 1 or 2 were not met within three months, this would be a material breach entitling the regulator to terminate the agreement.

The regulator also appointed a technical auditor to determine if the milestones were met by auditing the service availability and quality standards on an annual basis. If they were not met, this would be a material breach, entitling the regulator to terminate the agreement.

From a pricing perspective, it is important to note that the tariffs charged for the mandatory services had to be comparable to the tariffs that apply to the same or similar services available elsewhere in Vanuatu. The term ‘tariff’ meant the effective tariff after taking into account any applicable special offers, promotions or deals.

If the service provider became bankrupt or breached the contract, ownership of the UAS network would vest immediately in the government. The objective was to ensure that the government could put another operator in place to continue to provide the services.

The situation was slightly different in terms of the normal expiry of a term of a contract. If the service provider did not have a licence after that date, or notified the regulator that it no longer wished to operate the UAS network, then the service provider had to give another operator or entity nominated by the regulator access to the network. This access had to be provided on fair and reasonable terms and charges set by the regulator.

If the UAS network is not functioning or no longer being operated by the service provider, then the government has the option to purchase the network at a commercially reasonable price.

As well as a right to terminate, if there is a reasonable likelihood of the contract being breached and consumers will be adversely affected, the regulator has the right to provide itself, or employ a third party to provide, the affected UAS services. The service provider is required to give its full cooperation to this process and is liable to pay any actual costs incurred by the regulator as a result of exercising this right. The regulator could call on a second performance guarantee of 5 million vatu (US$54,000), to cover or contribute to these costs.
1.15.7 Analysis of the situation in Vanuatu

Table 18 is an analysis of the approach taken in Vanuatu.

**Table 18: Analysis of Vanuatu’s approach**

<table>
<thead>
<tr>
<th>Strengths</th>
<th>Vanuatu has a simple and effective universal service regime.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>There is an appropriate balance between the roles and responsibilities of the minister and the regulator, with the minister developing the policy and the regulator administering it.</td>
</tr>
<tr>
<td></td>
<td>The regime is more pared-back than the relatively complex one in Papua New Guinea, which may be appropriate in a smaller country such as Vanuatu. For example, there are no UAS boards or secretariats involved in the process.</td>
</tr>
<tr>
<td></td>
<td>Vanuatu is also the first Pacific Island country to take steps to implement a tender process for the awarding of universal services, making it a regional pioneer in this area. The process itself is at or near international best practice in terms of its obligations and allocation of subsidies.</td>
</tr>
<tr>
<td></td>
<td>Funding may be received from donors and through the regulator imposing a levy on licensed telecommunication operators. The process for levying operators is transparent and the extent of the levy is capped, which provides a reasonably high degree of certainty for operators.</td>
</tr>
<tr>
<td></td>
<td>The establishment of a trust fund for the purposes of the UAS should provide an effective ring-fencing of funds to ensure they are applied only for universal service purposes.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Weaknesses</th>
<th>There are very few weaknesses in the Vanuatu regime.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>A downside of its simplicity is that the regulator may have too much discretion in its performance, and may benefit from limitations or guidance in the legislation. Vanuatu’s tender was mobile specific, which is realistic, but does not meet the best practice objectives of being technology-neutral.</td>
</tr>
<tr>
<td></td>
<td>The continuing payment to be made to TVL in relation to its loss-making fixed-line customers is a weakness, as these customers may already be within the coverage area of another operator. However, it should be acknowledged that this obligation arose in the context of settlement terms for the relinquishment of TVL’s exclusive licence.</td>
</tr>
<tr>
<td></td>
<td>The fact that a service provider cannot be required to pay greater than 80 per cent of the amount necessary for the allocations of the UAS fund for the following year may mean that the government or donors will need to contribute towards the fund if one operator has over 80 per cent market share.</td>
</tr>
</tbody>
</table>
Chapter 2: National and regional best practices

2.1 Establishment of policy

There are different ways of establishing universal service policy in the Pacific Island countries. In most, the minister determines the policy to be followed.

For example, in Vanuatu, it is the minister’s role to ‘develop a policy for improving access to telecommunication service for locations which are not or not adequately served by existing services’ section 17(1). The policy must be approved by the Council of Ministers. In developing the policy, the minister is required to consult with the regulator, and hold consultations with interested parties.

In Papua New Guinea, the UAS Board has the role of advising the minister on the formulation of government policy. Similarly, in Samoa, the regulator proposes the policy for approval by the minister. The regulator has to consult with interested parties before proposing the policy.

2.2 Establishing projects

2.2.1 Establishing UAS projects

The leading countries have a stage in the process where an independent body identifies, develops and costs out UAS projects to give effect to government policy. Papua New Guinea has a specific body to perform this function (the UAS Board). Other countries delegate this role to the independent regulator.

Papua New Guinea has one of the most prescriptive criteria for selection of UAS projects. The criteria (section 108(4)) include:

‘Whether the proposed UAS Project would promote the objectives of the Universal Access and Service Fund; and

The net benefits of the UAS Project to Papua New Guinea, taking into account any costs and detriments to any person; and

Whether the UAS Project is sustainable with a one-time capital subsidy; and

Whether the UAS Project would not otherwise occur but for a subsidy payment under this Part; and

The likely efficiency and effectiveness of the proposed UAS Project and whether it is financially and technically feasible.’

In the case of Papua New Guinea, the UAS Board also recommends proposals to the minister, who can either accept or reject the UAS project.

In Fiji, the Telecommunications Promulgation 2008 states that the regulator is responsible for creating the universal service scheme:

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Chapter 2

2.3 Geographic reach

The preferred approach is to identify the islands and villages where UAS coverage is required. A pragmatic approach is recommended and coverage must be available in at least one location in each village where coverage is to be provided.

Clearly the decision on which villages and islands will receive universal service coverage will require some reasonably accurate data in terms of village size. Ideally, there will be fairly up-to-date census information, combined with accurate maps, available to the government or regulators to identify the villages to receive coverage. Local knowledge may also be tapped into to cross check information, particularly where census information may be out of date.

2.3.1 Country examples

In the Solomon Islands, the regulator develops a list of geographic areas to be subject to UAS. To be included in this list, a geographic area must meet either of the following criteria:

- the level of provision of telecommunication services is non-existent or considerably poorer than that in the more advanced areas of the country; or
- the cost of providing telecommunication services in such areas apparently prevents their provision on a reasonable commercial basis.

In contrast, in Fiji, the minister has the responsibility of identifying geographic areas that are eligible for the application of UAS benefits.

(a) the level of current service is non-existent or considerably poorer than that in the more advanced areas of the country; or

(b) the cost of providing services in the declared areas prevents the provision of the services identified pursuant to section 48 on a reasonable commercial basis.'
2.4 Service definition

2.4.1 Basic voice and messaging

At a minimum, it can be expected that a universal service will provide for basic voice telephony. Messaging is usually also included since it is an inherent feature in the most likely technology to be deployed, GSM, and is a cost-effective means of communication where voice services can be expensive to use regularly.

It is expected that basic voice and messaging are not the only services available in universal service coverage areas. Rather, the service would also include national and international inbound and outbound calls and messaging.

2.4.2 Internet

Best practice requires that Internet access be included as a part of a universal service obligation. Countries such as Fiji have specifically mentioned Internet access as a part of the universal services provided.

Samoa has gone further, in its draft policy, by requiring a basic broadband service as a part of its UAS.

2.4.3 Domestic roaming

A universal service obligation may include a consumer’s ability to make a calls or send a message when they are in another part of a country, outside of the universal service provider’s coverage, although the list of countries with this requirement is not available. This would require a domestic roaming arrangement to be put in place with operators in other parts of the country.

2.4.4 Operator services and national emergency services

The universal service provider should also enable access to operator services and national emergency services (see, for example, the Solomon Islands). Operator services would deal with issues relating to service provision. National emergency services should enable connection to national emergency services organizations, such as the police, ambulance and fire service. However, these emergency services may not be available in the relevant area.

2.4.5 Technology neutrality

International best practice suggests that it is best to adopt a technology-neutral approach when defining the means of delivering universal service. However, it is very unlikely that the most efficient means of providing universal service would be using fixed-wire technology. The capex and opex costs of establishing a fixed-wire network to serve sparse rural areas, as compared to wireless technology, make it prohibitive.

Nevertheless, we cannot predict the future, and so adopting a technology neutral approach to defining the means of delivery is recommended.

This means that the ideal approach is to focus on the service quality standards that must be met by the universal service provider. In practice, however, countries in the region have struggled to retain a strict technology neutral approach when defining service quality standards.
2.4.6 Country examples

The Solomon Islands goes into some detail regarding the types of UAS services in a technology-neutral (section (47)(3))

manner:

‘The Universal Access Plan shall promote the availability of at least the following services —

(a) telephone service, whether fixed or mobile;

(b) emergency service with priority routing, enabling any member of the public to contact the police, fire brigade, ambulance and marine division services;

(c) reasonable disaster relief services;

(d) operator assistance service, enabling any user to obtain assistance regarding, amongst other things, accessing services, setting up calls and remedying faults; and

(e) such other services as may reasonably be determined by the Telecommunications Commission.’

In Vanuatu, the tender documents specifically provide for a private voice telephony and messaging service, which includes incoming and outgoing local direct dial calling, national and international direct dial long distance calling, and local and international SMS messaging. The tender documents also require the provision of operator and national emergency services.

2.5 Funding for UAS

The leading countries envisage a range of sources for funding UAS projects. These include government appropriations, donor funding and industry levies.

2.5.1 Operator levies

In Papua New Guinea, the regulator is entitled to levy charges on operator licensees for the UAS Fund. The levy is set as a percentage of each operator’s net revenues. The percentage is to be determined annually and shall not exceed a maximum percentage prescribed by regulation.

In the Solomon Islands, the operator levy is capped at a maximum of two per cent of a service provider’s gross revenues in the most recent financial year. Levies shall be adjusted each year to take into account any balance retained in the UAS Fund at the close of the previous financial year (section (51)(3)(b)).

In Vanuatu, the regulator estimates the amount necessary for allocating the UAS Fund for the following year. The regulator calculates the amount of the levy by ‘apportioning this estimate among each licensed service provider according to the proportion represented by their net revenue for the preceding year […] as against the net revenue of all service providers’

In Vanuatu, the cap is limited to four per cent of its net revenue for the relevant period.

In Fiji, the minister’s direction is required before the regulator can levy operators. This degree of ministerial discretion is not regarded as regional best practice.

2.5.2 UAS Fund

The leading countries in the Pacific Islands have attempted to ring-fence funds that have been contributed for UAS purposes.

In Papua New Guinea, the UAS Fund is held in trust. Immediately upon receipt, these funds will be paid into the UAS trust account.

In Samoa, the regulator will administer the fund, in accordance with any financial and administrative directions issued in writing by the Chief Executive Officer of the Ministry of Finance. The fund will operated out of a separate account from the ministry or the regulator’s operational accounts.

In the Solomon Islands, the fund takes the form of a ‘special fund’ established under the constitution. The effect of this is that it is ring-fenced through the constitution from general government funding.

In Vanuatu, the minister has to establish a trust fund. This will be administered by the regulator and audited each year.

In Fiji, the UAS Fund is administered by the Ministry of Finance.

2.6 Distribution of UAS funds

The leading countries have tight controls over the distribution of UAS funds.

Papua New Guinea has one of the tightest regimes. It requires that monies only be paid out of the trust account if the payment is for the purpose of the UAS Fund, the regulator has given a direction to the trustees, and the payment is in accordance with written authorisation signed by each of the trustees.

One of the innovations in the Solomon Islands is that:24

‘No service provider is entitled to funding under Universal Access Fund for the provision of telecommunications services in a geographic area, and any entitlement previously established shall cease, where a substantial level of access to reasonably substitutable telecommunications services is already available from another service provider without such funding.’

In Papua New Guinea, the fund manager is entitled to establish reserves from surpluses resulting from the operator levy or other sources of funding, for the purpose of funding UAS projects in future years. In Vanuatu, if the UAS Fund is not fully allocated in the year to which it relates, the unallocated amount will be retained for the following year’s UAS project.

2.7 Consultation

There was a range of different types of consultations in the leading countries when they developed their policies and formulated UAS projects.

In Papua New Guinea, the UAS Board’s role included consulting widely on the UAS Fund. It is required to consult on and research matters affecting the implementation of objectives.

Similarly, in the Solomon Islands, in giving its advice to the regulator, the committee must consult with representatives of the ministries responsible for rural development, education, health and other areas affected by telecommunications, as well as any other sectors or organisations it considers appropriate.

2.8 Awarding of the UAS obligation

Before the introduction of competition, universal service was usually a vaguely defined obligation or duty on the incumbent, if it existed at all. In such cases, it was sometimes referred to in licences and expressed in such a broad and meaningless way that it was often not observed. Usually, there were not any adequate enforcement mechanisms.

Often, it was political pressure that increased coverage, or the impetus might have been the incumbent having a sense of community duty. To be fair, until such time as an incumbent faces competition, the incentive to deploy efficient network technology is weak. Internationally, the award of a universal service obligation is sometimes given to the incumbent, as was the case in, for example, New Zealand and Australia.

2.8.1 Use of competitive tender processes

An alternative to giving the incumbent the contract, is putting the universal service obligation out to tender. Clearly, for this to be effective, there has to be competition in the market. Alternatively, where there is no competition, there has to be at least the ability for the government or the regulator to grant a licence to another operator for providing services outside of the incumbent’s areas.

The tender approach can be either:

- a ‘beauty parade’ of potential service providers; or
- an auction, with the service provider putting in the lowest subsidy bid being preferred.

In practice, it may be appropriate to apply both models.

For example, there may be a pre-qualification phase, in the form of a beauty parade. For example, the government or the regulator may request that bidders put forward information relating to their financial strength and their experience in operating networks in similar circumstances. Vanuatu has gone down this path.

In this phase, the government or regulator is looking to screen out potential bidders that may be too small or inexperienced to handle the type of commitment that goes with a universal service obligation.

If there is a pre-qualification phase, it is necessary to ensure that it is used carefully. It may be that smaller or less-experienced service providers offer the most innovative solutions and have the skills and capabilities and entrepreneurial flair to offer the service. There are many examples, particularly in the technology sector, of small innovative companies not having the initial experience but going on to produce innovation and market change.

2.8.2 Country examples

Papua New Guinea and Vanuatu stand out in terms of their specifications for selecting operators to provide UAS services.

Papua New Guinea has one of the most prescriptive requirements:

‘NICTA shall include in the qualification criteria, at a minimum, that the bidder demonstrates that:

- It has the financial capacity sufficient to complete the UAS Project; and

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Chapter 2

It has the operational experience and technical capacity to implement the UAS Project; and

It has a quality network design, deployment plan, maintenance plan and business plan (as applicable); and

The subsidy amount required is justified in order to make the UAS Project sustainable.’

In Vanuatu, the tender contract was awarded to the service provider that achieves:

- value for money;
- broad coverage across the UAS areas;
- high-quality service delivery.

2.9 Ensuring compliance

The leading countries have strict requirements to ensure compliance of UAS obligations by operators.

In Papua New Guinea, the relevant agreement may include a requirement for a performance bond. The regulator has discretion as to the amount of the bond and the events triggering its forfeiture.

In Vanuatu, the contract was attached to the tender documents. Some variations were envisaged, which would be dealt with through a negotiation process during the tender.

Failure to meet the milestones provided for in the Vanuatu contract had serious consequences. It could result in loss of eligibility for all or part of the UAS subsidy. Further, if the milestones were not met, the regulator could call on a performance guarantee. Eventually, if the first two milestones were not met within three months, the contract would be terminated.

2.10 Specific issues

2.10.1 Access to scarce resources

The universal service provider will require access to certain scarce resources to provide the universal service, namely numbering and radio spectrum.

If the service provider is already an operator, it is likely that it will have access to sufficient numbers and radio spectrum to provide the universal services. However, in the case where there are new entrants, they will need access to these resources or, at least, the capability to access them.

Without these resources, a new entrant will struggle to effectively participate in a universal service tender. This will weaken the value of the tender since the only realistic winners are the incumbent and any operators already in the market with sufficient access to these resources.

2.10.2 Pricing

The ultimate objective of a UAS policy is affordable services for all, including those in rural areas. However, in some countries with very high-cost areas, it has proved beneficial to allow operators to charge slightly above urban tariffs, as a reflection of their costs, for an interim period.
This approach is envisaged in Fiji. However, the view is that retail (and interconnection) rates should be consistent with levels in urban areas, with the subsidy dealing with any losses incurred by the operator because of a limited ability to raise charges to reflect costs.

It has also been noted that Uganda’s regulator allows rural call tariffs to be set up to 50 per cent higher than urban tariffs. Termination rates were also allowed to be asymmetric between rural and urban areas, with the higher termination rates incentivising the development of the incoming call market.

2.10.3 Interconnection

As mentioned earlier, it is expected that a universal service obligation includes providing voice telephony and messaging services. The sending and receiving of calls and messages would normally apply nationally and internationally.

Nationally, this will require interconnection arrangements with existing operators. For a new entrant, it may be possible to acquire interconnection from existing operators under the regulatory regime. For example, incumbent operators may need to provide interconnection on the basis of reference interconnection offers. The existence of such an offer will give a new entrant comfort that, should they win the tender for the universal service obligation, they will be able to perform the obligations that require the exchange of calls and messages with other domestic operators.

If interconnection is available to a new entrant, then it is likely that it will be at an interconnection handover point in the country’s capital. Other interconnection handover points may be available in other main centres, depending on the size of the country.

2.10.4 Timing

One of the most significant issues relates to the timing of an award.

Often it is one of the first steps that a government will wish to take following liberalization in a market. The immediate benefits of competition are so obvious that governments want to extend coverage to areas that are not served by existing operators.

What may happen is a type of ‘hold up’, where existing operators could profitably cover an area but choose not to do so in the knowledge that a universal service tender is coming which may allow them to extract a subsidy for covering that potentially profitable area.

In other words, the government or the regulator will be in a position of uncertainty, particularly with areas adjacent to existing networks. The issue is whether or not these areas are truly unprofitable, requiring a subsidy to encourage service, or is the government being played by the operators?

The government or regulator could ask the operators what their plans are for coverage, although they may not get a straight answer. The government or regulator could wait for a period to see how far the competitive process takes coverage, perhaps not telling operators when they intend to implement universal services. However, this period may be years and political pressure may be such that it is not possible to wait the necessary period to see how competition plays out.

So, the risk is that a universal service tender is for areas that operators may be prepared to cover anyway.

If there is an effective tender, then this should be less of an issue. Some operators submit lower subsidies for potentially profitable areas, which poses the questions whether operators had already planned to cover the so called UAS areas in the first place before the UAS fund was established.
If the tender is not as effective as it might be, then weak levels of competition (or worse, potential collusion) will mean the subsidy is higher than might have been necessary to achieve the same result.

### 2.10.5 Legacy fixed-wire networks

In two countries in the Pacific region that have recently been liberalized, Vanuatu and the Solomon Islands, a feature of the regulatory environment is that all or some of the incumbents’ losses in serving its legacy fixed-wire customers are paid by a universal service fund.

Strictly, this is a type of exception to the normal universal service obligation, which is for the deployment of coverage in areas where there is no existing service. However, it has been acknowledged that a universal service coverage area may overlap with areas where there are legacy fixed-wire networks. This may be appropriate where there is otherwise very little coverage in the surrounding area, and the legacy fixed-wire network only covers a fairly small proportion of the population in that area.

It should be borne in mind that both countries followed a negotiated process with the incumbent prior to relinquishing their exclusive licences.

The rationale is that the incumbent, prior to liberalization, cross subsidised its loss-making fixed-wire customers from the profits made in the urban areas. Following liberalization, those profits in urban areas would reduce, leaving less opportunity for cross-subsidisation of losses from serving legacy fixed-wire customers. The rationale continued that competitors, unburdened by serving legacy loss-making customers, would be at an advantage.
Chapter 3: International best practices

3.1 Service definition

Early UAS regimes, particularly in South America, did not set overly ambitious goals and focused on providing public-access telephony or payphone services to not served or underserved areas. However, it became apparent that wider coverage was available through the use of mobile telephony, particularly in very remote areas.

There are still a few UAS regimes, notably in India, Malaysia and the Russian Federation, which distribute the largest share of their universal service funds to fixed-line operators. However, this practice is now disappearing and a clear preference for mobile technologies has emerged. The Indian and Malaysian UAS regimes appear to be moving their focus onto mobile expansion.

It is often the case that the provision of universal service is tied to a wider policy of ICT development. Most UAS regimes today include Internet service as part of their development goals. For the early South American UAS regimes, this was a two-part process: after initial success with basic telephony services, objectives were reassessed to include Internet and broadband development. In Chile, for example, after the Fondo para el Desarrollo de las Telecomunicaciones (FDT) achieved its social telephony objectives, the government redefined the fund to support telecentre projects, Internet access for schools and broadband backbones for rural and remote areas.

Other UAS regimes recognised the future need for Internet services and included these goals in the initial establishment of their regimes. For example, in Uganda, universal telephony goals were coupled with financing for Internet points of presence (POPs) and exchange points (IXPs), telecentres and cybercafés, and school connectivity. However, the initial goals for Internet development were more modest than the universal access and service goals for voice services. Internet services focused on the delivery to districts with existing demand (district centres) with further deployment beyond their boundaries to be reviewed as demand and capacity became evident.

3.2 UAS fund

UAS funds differ in their management. While some funds (for example, Colombia) are administered by government ministries, others are administered by regulators (for example, Peru and Chile) or special agencies (for example, South Africa). Typical functions of the managing body are deciding on which projects to implement, overseeing their implementation through monitoring and evaluation, and managing the UAS fund.

The common perception is that funds administered by independent regulators and agencies are more likely to be transparent and open to scrutiny, and less likely to be influenced by government or political interests. For example, the Ugandan regulator ensures the separation of its UAS mandate from its normal mandate by instituting an independent UAS Board.

This independence is particularly important with regard to managing the UAS fund. Protection of funds is often guaranteed by creating a trust fund or, as in the case of Peru, financial management of the fund can be outsourced to a trust company.

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26 Some funds, notably India and Malaysia, initially used their funds as sources for distribution of access deficit awards to incumbent operators rather than a levy charged to operators.
3.2.1 Monitoring and evaluation

Most UAS projects are overseen or supervised by an administrator. This may be for the initial build and establishment of services phases and continue over the course of the project’s lifespan. Often a technical auditor will be appointed to conduct regular assessments of service standards and authorise subsidy distributions if the service provided meets the required standards.

Performance of standards will result in the subsidy being distributed. However, failure can lead to sanctions. Particular remedies are to amend the operator’s licence, apply a monetary penalty or revoke a licence without compensation.

3.2.2 Funding

At least 39 countries have already set operator levies as the main means of accumulating resources for their universal service fund.28 The levies range from less than one per cent of an operator’s revenues in South Africa, to five per cent in India and Colombia, and six per cent on certain revenues in Malaysia. Broad-based revenue collection mechanisms are preferable, due to the fact that they have less of a price distorting effect on the industry.

However, sources other than operator levies may also provide significant contributions for UAS funds. Other important sources include government budget allocations and international donations. For example, the Chilean Fondo de Desarrollo de las Telecomunicaciones (FDT) is funded entirely from the national budget. In Uganda, the World Bank contributed US$7 million as an initial ‘seed’ donation that allowed the UAS fund to implement its projects more quickly than would have been otherwise possible.

3.2.3 Distribution of UAS funds

In some of the best-practice countries outside of the Pacific Islands, operators are required to provide detailed proposals in order to qualify for UAS funds, demonstrating financial and technical capability. For example, operators in Uganda are required to demonstrate that they will be able to meet demand within three years without aid in order to qualify. Other requirements might include market and beneficiary assessments, operational and business plans and risk analyses.29

In terms of delivery, most UAS funds are distributed through output-based aid (OBA) mechanisms, linking payment to the performance of establishment- and service-related targets. The fund administrator or technical auditor monitors the achievement of these milestones. This process ensures that operators are adequately incentivised to provide the services in a timely and expeditious manner.

3.3 Award of the UAS obligation

International and Pacific Island countries’ best practice requires that the granting of UAS obligations be determined through competitive tender processes, which include ‘reverse auction’ or ‘lowest subsidy’ mechanisms. In awarding the tender, a general cost-benefit analysis may be required and other technical, financial and legal criteria satisfied.

29 ITU (2006), section 7.2.4.
Although internationally, most competitive tender processes are open to all parties, incumbent licensees and new entrants, tenders are increasingly being won by operators with existing licences. This is probably due to their greater financial and resource capacities, as well as economies of scale, to deliver services to the remote areas of a country. In some cases (for example, Nigeria), the tenders are open to international and national operators.

3.4 Ensuring compliance

Most UAS obligations are articulated in the form of detailed project agreements or contracts setting out the operator’s obligations. The licence underpinning these obligations is usually non-exclusive and granted for a defined number of years.

In order to ensure the effective implementation of projects, certain UAS regimes, such as the Nigerian Universal Service Provision Fund (USPF), require insurance or guarantees. Performance bonds that are forfeited upon non-performance of project obligations provide incentives for operators to adhere to an agreement’s terms and provide services fully and properly.

3.5 Case studies

In this section, the following case studies are considered:

- Uganda – Rural Communications Development Fund (RCDF)
- Nigeria – Universal Service Provision Fund (USPF)
- Chile – Fondo de Desarrollo de las Telecomunicaciones (FDT)
- Peru – Fondo de Inversión en Telecomunicaciones (FITEL)

3.5.1 UGANDA – Rural Communications Development Fund (RCDF)

3.5.1.1 Scope of the policy

Services targeted

The RCDF is a comprehensive scheme to provide for the development of both phone and Internet services. Its goals are universal access telephony, by both mobile and public access services, and improved Internet access. Specific policies include establishing Internet POPs and wireless access systems at district centres; a national IXP to facilitate inter-ISP traffic; and ‘Vanguard’ Internet access projects for schools, non-government organizations, small-scale commercial telecentres and Internet cafés at a sub-district level. The RCDF is also establishing pilot projects to create content in telephony and Internet areas for further development.

Geographic reach

The fund targets areas that are not served or underserved by the operators. The country was divided up into sub-counties with populations of more than 5,000 people. Following research, 154 sub-districts were identified as not being served by the major operators.

Internet services focused on the delivery to districts with existing demand. This means district centres and particular institutions. Further deployment beyond this scope was to be reviewed as demand and capacity became evident.
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Timeframe

The initial phase of the policy was to achieve the telephony objectives within three years, that is by 2005. Reviews and the setting of new objectives were to be conducted thereafter.

3.5.1.2 Funding

Sources of funds

The RCDF gets the majority of its funding through a one per cent levy on the gross annual revenues of all operators in the sector, including the postal service, couriers and ISPs.

The fund also benefited from significant ‘seed’ contributions from the World Bank of US$7 million. There may be other sources contributing to the funds.

Distribution of funds

Funds are distributed by means of ‘smart’ subsidies granted upon a project being established or milestones met. A project agreement contains the targets and standards, with funding not to be released until the fund administrator has accepted the performance. A smart subsidy is defined as a subsidy that is used to encourage commercial operators to enter a given market but not to create ongoing dependency on subsidies. The underlying principle of the subsidies is that at the end of the project period the operators are no longer reliant on the subsidy to provide telecommunication services to the targeted areas.

There might also be a start-up subsidy to allow initial implementation of a project.

Level of funding

Uganda has enjoyed ample funding both from industry and World Bank contributions. This has meant that the RCDF has not had the problem of reviewing subsidy levels in cases where the lowest bid is higher than the maximum allowed subsidy. It has also enabled faster than expected project implementation.

3.5.1.3 Licensing

Process

Project licences are granted through a competitive ‘reverse auction’ or tender process where the bid requiring the lowest subsidy wins.30

Projects are only developed for, and licences only available in, geographical areas and services that are in definite need of assistance. Service provision is not feasible or unlikely to be provided by operators within the next one to two years without subsidy. The competitions are also technology-neutral. Bids can be made to provide services in the targeted areas using any proven technology, provided they meet the technical standards.

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30 There are also other criteria that may be taken into account such as whether the bid is ‘substantially responsive’ to the bid requirements.
Eligibility

The tender process is open to all interested participants. The request for proposals (RFPs) was aimed at attracting both ISPs and telecommunication operators. However, only the incumbent telecom operators (MTN Uganda and UTL) actually participated in the bid processes. This is probably due to their greater financial and resource capacities, as well as their economies of scale, to deliver services in the more remote areas of the country.

UTL won most of the telephony and Internet POP subsidies, and the rest were won by the secondary incumbent, MTN.

Nature of licences

Licences come in the form of specific agreements or projects developed by the RCDF. These agreements are governed by contractual terms reflecting its objectives and the specific obligations on the provider. The agreements provide for a 10-year non-exclusive licence to provide mandated services. They may be granted either as an extension of an existing licence or as a new licence.31

A project agreement means that the project implementer (the operator who won the tender) owns the project assets. They enjoy all the direct benefits accruing from the project but also bear all its normal risks. At the end of the project period, the Uganda Communications Commission (UCC) hands over its interest to the project implementer.

Interconnection

Interconnection arrangements are negotiated with the incumbent major network and cellular operators with UCC intervening to impose an interconnection agreement if the operators fail to agree or if UCC determines that such agreement will promote fair competition.

It is envisaged that special interconnect arrangements will be used as a means of enhancing the sustainability of the rural communication projects.

3.5.1.4 Governance

Management

The RCDF is administered by the UCC at arms’ length. The UCC ensures the separation of this mandate from its mandate of regulating the communications sector by instituting an independent RCDF Board. The board is composed of members drawn from the UCC commissioners, and the public and private sectors. The interests of underserved communities are also represented on the board.

The board’s functions are to decide on the projects to be implemented each year under each policy action category, oversee implementation of RCDF, monitor and evaluate projects, and manage RCDF. The board is responsible to the UCC and must report periodically on its activities.
Monitoring and evaluation

The UCC also monitors and offers technical support to a project throughout its stipulated life span. It conducts regular evaluations to ensure a project’s objectives are met, including the mandatory service requirements, service availability and quality standards.

Performance of standards will result in distribution of subsidy. However, failure to meet agreement obligations and standards may lead to sanctions. The remedies available to the UCC are to amend the operator’s licence, monetary penalty, or revocation of the licence without compensation.

3.5.1.5 Specific issues

Pricing

The pricing of universal services enjoys a flexible regulatory framework. The underlying principle is to allow special tariffs to promote rural communications while preserving fair competition. Operators are allowed to charge higher tariffs for rural calls in order to recuperate costs. The UCC also allows asymmetric termination charges between urban and rural areas with the goal of incentivising the development of the incoming call market.

Spectrum allocation

The RCDF requires the UCC to anticipate the radio spectrum needs of rural areas and make the necessary reservations while taking into account latest developments in technology.

The UCC may also consider waiving, in part or fully, its normal frequency fees in the case of rural service providers.

3.5.2 Nigeria – Universal Service provision fund (USPF)

3.5.2.1 Scope of policy

Services targeted

The USPF targets basic telephony services and includes goals for Internet and broadband services.

The stated objectives are to facilitate community access to basic telephony, Internet and broadband services; facilitate minimum cost of entry (MCE); promote voice service to households; and facilitate increased Internet usage.

Geographic reach

The targets are defined by percentage of the population and in relation to average distance from access to telecommunication services.

The goals are for 80 per cent of population centres with populations greater than 5,000 to have at least one shared community phone and be covered by the signal of an operating cell phone or mobile network. In other words, every person should be within five kilometres of a shared community phone.

In terms of Internet access, the objective is for 80 per cent of all local government areas (LGAs) or regions with populations greater than 10,000 will have a community Internet access POP.
Timeframe

The initial phase was intended to take four years, from 2007 to 2011.

3.5.2.2 Funding

Sources of funds

The programme is funded from allocations from the national government budget and by a one per cent levy on the gross annual revenues paid by all licensees.

Distribution of funds

Funds are distributed through an OBA mechanism whereby payment is linked to the achievement of pre-defined build-out and service targets set out in the licence agreement.

3.5.2.3 Licensing process

Licences for projects are granted through a competitive ‘reverse auction’ or tender process where the bid requiring the lowest subsidy wins.32

Projects are only developed for, and licences only available for, geographical areas and services that are in definite need of assistance. The requirement is that the project has long-term commercial viability and does not require long-term ongoing subsidies. Without a ‘smart’ subsidy, the project would, in the short term, be either not profitable or have a very low rate of return and/or high level of risk.

Eligibility

The process is open to incumbent licensees and new entrants. Both national and international operators can apply, though in some cases, projects (generally smaller ones) will be open only to national firms or entities.

Nature of licences

Licences come in the form of specific agreements or projects developed by the USPF Board. These agreements are governed by contractual terms reflecting the board’s objectives and the specific obligations of the provider. A variety of licence types have been used, but the general approach is that the agreement provides a 15-year non-exclusive licence with a mandatory five-year minimum period to provide the mandated services in the agreement. They may be granted either as an extension of an existing licence or as new licence.

The licences also require the licensee to provide an advance payment guarantee (APG) or insurance bond. The APG or bond must be no less than 25 per cent of the total subsidy or 2 million naira US$12,700), whichever is higher.

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32 The Communication Act 2003 gives the Commission discretion to determine the procedure for awarding individual licences which may include auction, public tender invitation, competitive bidding or non-competitive selection process.
3.5.2.4 Interconnection

Interconnection between network services or facilities is mandatory under statute. The terms and conditions of interconnection agreements are primarily to be agreed upon among operators. However, the Nigeria Communications Commission (NCC) is empowered to intervene and make binding determinations at the request of either or both parties to interconnection negotiations or where the parties fail to agree; or on the NCC’s initiative in the public interest.

3.5.2.5 Governance

Management

The USPF is administered and managed by the independent USPF Board, established by the NCC. Board membership comprises the sector minister, commission members, representatives from the Ministry of Finance and National Planning Commission, and private-sector representatives.

The board’s functions are to receive applications for loans and grants from stakeholders; provide loan recipients and grantees with technical and managerial assistance; evaluate project performance and effecting such actions as may be necessary to ensure that loan recipients and grantees meet the objectives of the USPF; enforce standards for quality of service in rural and underserved areas set by the board; and facilitate collaboration between activities that are funded by the USPF and other infrastructure and development efforts.

3.5.2.6 Monitoring and evaluation

Part of the USPF’s role is to oversee project implementation. All projects are subject to mandatory service requirements and quality of service standards, and the USPF enforces these through regular monitoring and evaluation. This function is also necessary to authorise subsidy distribution upon the achievement of performance targets.

The board may also sanction operators; and the breach of an agreement may result in a monetary penalty or a licence being revoked without compensation.

3.6 Chile – Fondo de Desarrollo de las Telecomunicaciones (FDT)

3.6.1 Scope of Policy

3.6.1.1 Services targeted

FDT’s initial objective was to achieve universal access to public access telephony or payphone access. After the fund achieved most of its social telephony objectives, the government redefined its objectives to support telecentre projects, Internet access for schools, and broadband access and backbones for rural and remote areas.

3.6.1.2 Geographic reach

The regulator determined specific geographic targets upon receiving sector stakeholders’ submissions. Broadly focusing on rural and low-income urban areas with low teledensity, 33 requests for payphones were collected then grouped into projects. Each request typically consisted of 20-50 localities and took into account geographical and technical considerations.

33 ITU (2004a).
Cost-benefit analysis was conducted for each project. Those projects with a positive social net present value (NPV), but with a negative private NPV, were added to the pool of eligible projects. The projects under consideration were then ranked by social NPV per unit of maximum subsidy and the most beneficial were developed.

3.6.1.3 Timeframe

The initial phase of the policy took place over a four-year period from 1995 to 1999. Subsequent phases are ongoing.

3.6.2 Funding

3.6.2.1 Sources of funds

The fund is financed entirely from the Chilean national government budget. However, other sources can contribute should they wish to do so.

3.6.2.2 Disbursement of funds

Subsidies are distributed in one-off payments upon the establishment of service or other specified milestones. Projects are implemented in stages and receive funding at the completion of each stage.

3.6.3 Licensing

3.6.3.1 Process

Licenses are granted through a competitive tender process or ‘reverse auction’ whereby the lowest subsidy bid wins. Other criteria include financial and technical solvency and the quality of service to be supplied.

3.6.3.2 Eligibility

Tenders are open to incumbent licensees, regional or provincial authorities, municipalities, universities, non-governmental organizations, neighbourhood associations and third parties.

3.6.3.3 Nature of licences

Licences come in the form of specific agreements or projects developed by the regulator SUBTEL upon the request of stakeholders. These agreements are governed by contractual terms reflecting the objectives of FDT and the specific obligations of the provider. The agreement provides a 30-year non-exclusive licence with a mandatory 10-year minimum period to provide the mandated services in the agreement. They may be granted either as an extension of an existing licence or as a new licence.

Bidders can propose additional services that are then included in the licences. However, they are not considered in the bid evaluation process nor are they eligible for subsidy.

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34 Some sources suggest greater flexibility in this regard, for example, further payment may be made to ensure the continuation of services or start-up payments may be made.
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3.6.4 Governance

3.6.4.1 Management

The Council for Development of Telecommunications administers the fund. The council’s membership comprises the Minister of Transport and Telecommunications, the Secretary of Telecommunications, various other government ministers and sector representatives.

The council’s functions are to establish sponsored projects and priorities; allocate public tenders, projects and subsidies for their implementation; and prepare and disseminate the annual report of activities.  

3.6.5 Specific Issues

3.6.5.1 Pricing

Call charges within the primary calling area are regulated. However, licensees may set their own retail prices for services other than regional call charges from payphones.

The maximum charges possible are subject to a formula reflecting changes in wholesale prices, cost of labour, foreign exchange, and the corporate tax rate.

3.7 PERU – Fondo de Inversión en Telecomunicaciones (FITEL)

3.7.1 Scope of Policy

3.7.1.1 Services targeted

The initial phase of the fund focused on basic telephony services, including public access phones/payphones and mobile, mostly through very small aperture terminal (VSAT) technology.

From 2006, however, the scope of the policy was extended to include Internet access and broadband development.

3.7.1.2 Geographic reach

The policy’s specific targets are defined in relation to the distance to the nearest telephone and the percentage of the population with access to telecommunication services.

3.7.2 Funding

3.7.2.1 Sources of funds

The fund is financed by a one per cent levy of gross operating revenues on all telecommunication operators. Other sources can also contribute to the fund.

3.7.2.2 Distribution of funds

Funds are distributed through an OBA mechanism whereby payment is linked to the achievement of pre-defined build-out and service targets set out in the licence agreement.

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35 SUBTEL (2009).
36 ITU (2004a)
3.7.3 Licensing

3.7.3.1 Process
Licences are granted through a competitive tender process or ‘reverse auction’ whereby the lowest subsidy bid wins.

3.7.3.2 Eligibility
Incumbents and newcomers are eligible to apply. However, if the winning bidder is a new entrant to the sector, it must obtain a licence with the government.

The bidder must also meet certain technical, legal and financial requirements.

3.7.3.3 Nature of licences
Licences come in the form of specific agreements or projects developed by the council. These agreements are governed by contractual terms reflecting the objectives of FITEL and the specific obligations on the provider. The agreement provides a 20-year non-exclusive licence to provide the mandated services in the agreement. They may be granted either as an extension of an existing licence or as a new licence.

A significant difference in the project designs between the initial and subsequent FITEL projects was asset ownership. In the first project, the government was established as the owner of the network assets. However, in all other subsequent projects, the network assets are owned by the operators themselves.

3.7.4 Governance

3.7.4.1 Management
Until 2008, the national regulator, OSIPTEL, administered the fund. Before OSIPTEL administered the fund, the fund’s financial management was outsourced to a trust company. However, since 2008, the fund has reported directly to the Ministry of Transportation and Communications.

3.7.5 Specific Issues

3.7.5.1 Pricing
OSIPTEL regulates local call prices. Initially, however, the low local tariffs were financially unfeasible and did not allow the rural operator to recover its full costs even after subsidy payments. Moreover, the interconnection rates and procedures for rural operators were set at the same levels as those applied to the non-rural operators. This did not reflect the higher network, operation, and maintenance costs. Consequently, regulatory reform was required. The regulation of prices has become more flexible.

3.8 Tables showing UAS comparison between Uganda, Nigeria, Chile and Peru
Table 19 illustrates a comparison between the UAS policies of the countries discussed in this chapter. The comparison is done on the following:
- Sources of funding
- Services targeted
- Subsidies and licensing
- Management of the UAS fund and regulations
The comparison confirms that the main sources of funding for UAS implementation include levies on the operator revenues, national budget and donor funding, which are also the main sources of funding for UAS implementation in the Pacific Island countries.

The services targeted for UAS areas are basic telephony and Internet access in all the four countries, which are the same target services for UAS areas in the Pacific. However, while broadband access is one of the target services in Chile and Peru, this is not the case in Uganda, Nigeria and Samoa. The reasons for this finding need further study.

One difference in the licensing of UAS between the four countries is the number of non-exclusive licences. Uganda and Nigeria have between five and ten year licenses while Peru and Chile has between 20 and 30 years. The subsidies are payable per milestone except for Chile that pays the full lump sum payment upon the establishment of the service. This is not best practice.

The UAS funds in the four countries are all managed by either the regulator or council of regulators, a board or the Ministry, which is also the case in the Pacific Island countries.

Table 19: A comparison between the UAS policies of Uganda, Nigeria, Chile and Peru

<table>
<thead>
<tr>
<th>Country</th>
<th>Source of funding</th>
<th>Services targeted</th>
<th>Subsidies and licensing</th>
<th>Management and regulation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Uganda</td>
<td>1% levy on operator revenues + international donations (World Bank)</td>
<td>Universal telephony (mobile + public access) Internet POP + wireless access systems in district centres Internet exchange points Vanguard Internet institutions</td>
<td>Competitive ‘reverse auction’ Technologically neutral OBA payments upon milestones 10 year non-exclusive licence</td>
<td>Administered by national regulator Subject to mandatory service requirements and quality of service standards Flexible regulation of pricing: asymmetric termination charges to incentivise development of incoming call market; higher rural call tariff</td>
</tr>
<tr>
<td>Nigeria</td>
<td>1% levy on operator revenues + national budget allocations</td>
<td>Universal telephony (mobile + public access) Internet access systems in community communication centres</td>
<td>Competitive ‘reverse auction’ OBA payments upon milestones 5-year non-exclusive licence</td>
<td>Administered by independent board Subject to mandatory service requirements and quality of service standards All tariff rates subject to regulation</td>
</tr>
<tr>
<td>Chile</td>
<td>National budget</td>
<td>Initially public access telephony (payphones) then redefined to include Internet access Broadband backbone projects</td>
<td>Competitive ‘reverse auction’ 30-year non-exclusive licence for payphone services with 10-year minimum required service Full lump-sum payment upon establishment of service</td>
<td>Administered and managed by council and regulator Tariff caps for payphone service in initial years Asymmetric termination charges to incentivize development of incoming call market Higher rural call tariff</td>
</tr>
</tbody>
</table>
Chapter 3

Table 20 illustrates a comparison between the licences in the countries discussed in this chapter.

**Table 20: A comparison between the licences in Uganda, Nigeria, Chile and Peru**

<table>
<thead>
<tr>
<th>Country</th>
<th>Source of funding</th>
<th>Disbursement of funding</th>
<th>Nature of licence</th>
<th>Conditions of licence</th>
<th>Sanctions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Uganda</td>
<td>1% levy on operator revenues + international donations (World Bank)</td>
<td>OBA: payments upon achievement of established milestones Other criteria for disbursement may be found here</td>
<td>Non-exclusive 10-year period (renewable) For example, voice and data services</td>
<td>Subject to mandatory service requirements and quality of service standards Licensee must be capable of meeting demand without aid within 3 years</td>
<td>Subject to technical audit Licence may be amended at the licensor’s discretion Breach of agreement may result in monetary penalty or revocation of licence without compensation</td>
</tr>
<tr>
<td>Nigeria</td>
<td>1% levy on operator revenues + national budget allocations</td>
<td>25% advance payment upon successful application Subsequent payments upon achievement of services milestones (OBA)</td>
<td>Non-exclusive Minimum 5 years For example, community communicatio n centre services (Internet POP, cybercafé, public telephony)</td>
<td>Subject to mandatory service requirements and quality of service standards Licensee must provide APG or insurance bond APG or bond no less than 25% of total subsidy or 2 million naira, whichever is higher</td>
<td>Subject to technical audit Breach of agreement may result in monetary penalty or revocation of licence without compensation</td>
</tr>
<tr>
<td>Chile</td>
<td>National budget allocation</td>
<td>Full lump-sum payment upon establishment of service or by stage by arrangement 37</td>
<td>Non-exclusive 10-year period for payphone services</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Peru</td>
<td>1% levy on operator revenues</td>
<td></td>
<td>Non-exclusive 20-year licence for payphone service</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

37 Other sources suggest greater flexibility in this regard – Biblioteca Del Congreso Nacional de Chile, Lay Chile, Regulation of Fondo de Desarrollo de las Telecomunicaciones. [http://www.leychile.cl/Navegar?idNorma=193117](http://www.leychile.cl/Navegar?idNorma=193117)
Table 21 illustrates a comparison between the subsidies of the countries discussed in this chapter. It shows that only one country solely provides UAS funding through government local operator contributes 1% of operator revenue.

Table 21: A comparison between the UAS subsidies of Uganda, Nigeria, and Peru

<table>
<thead>
<tr>
<th>Country</th>
<th>Name</th>
<th>Source of finance</th>
<th>Period</th>
<th>Localities served</th>
<th>Maximum subsidy available (US$m)</th>
<th>Subsidy granted (US$m)</th>
<th>Subsidy per locality (US$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chile</td>
<td>Fondo de Desarrollo de las Telecomuniciones</td>
<td>Government budget</td>
<td>1995-1997</td>
<td>4,504</td>
<td>24.2</td>
<td>10.2</td>
<td>2,256</td>
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<td></td>
<td></td>
<td></td>
<td>1998-1999</td>
<td>1,412</td>
<td>14.4</td>
<td>9.8</td>
<td>6,919</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>2000</td>
<td>143</td>
<td>1.9</td>
<td>1.8</td>
<td>12,727</td>
</tr>
<tr>
<td>Peru</td>
<td>Fondo de Inversión en Telecomunicaciones (FITEL)</td>
<td>1% Operator levy</td>
<td>1998</td>
<td>213</td>
<td>4.0</td>
<td>1.7</td>
<td>18,800</td>
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<td></td>
<td></td>
<td></td>
<td>1999-2003</td>
<td>1,937</td>
<td>50.0</td>
<td>11.0</td>
<td>5,700</td>
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<td></td>
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<td></td>
<td>2002-2004</td>
<td>2,290</td>
<td>59.5</td>
<td>27.8</td>
<td>12,100</td>
</tr>
<tr>
<td>Uganda</td>
<td>Rural Communications Development Fund (RCDF)</td>
<td>1% Operator levy + World Bank contributions</td>
<td>2002 – 2005</td>
<td>154</td>
<td>11.7</td>
<td>5.2</td>
<td>33,766</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>32 (Internet POPs)</td>
<td>1.61</td>
<td>1.06</td>
<td>33,000</td>
</tr>
</tbody>
</table>

Source: Intelecon Research (2009)
Chapter 4: Recommendations for improvement

The Pacific Island countries are generally split into two groups:

- those that have liberalized their telecommunication sector and introduced modern legislative environments;
- those that have not.

For those countries that do not have liberalized telecommunication sectors and have not introduced modern legislative environments, the single most important step they could take towards improving universal service for the people of their country is to do this.

The liberalization of the sector will give rise to new market entries. This will stimulate competition and one of the battlegrounds for competition will be increasing network coverage and penetration. Services that were previously only available in main centres will become available in rural and smaller urban areas. Not all areas, however, which is where UAS policies and projects come in.

The introduction of a modern legislative environment demands an independent regulator for the newly competitive sector. The regulator plays an important role in de-politicising universal service. They also bring expertise in sorting out the various issues that arise when administering UAS projects.

Modern legislation should make specific provision for UAS. The legislation should deal with the establishment of UAS funds, the means of funding universal service, and the award of UAS obligations and the means of enforcing them. There are several fine examples of modern legislation in the Pacific region.

For those countries that have liberalized and introduced modern legislative environments, some relatively minor improvements are recommended that require legislative change.

These improvements include considering:

- if operator levies should be capped, to give operators commercial certainty;
- if there is sufficient ring-fencing of UAS funds to ensure they cannot be applied for purposes other than universal service;
- limiting excessive opportunities in legislation for operators to challenge UAS projects, or their contribution towards subsidies through levies;
- setting out in some detail the types of services that may be subject to the UAS regime, being careful to be technology-neutral where possible;
- if the UAS provider should be required to offer regulated facilities access on its network used to provide the UAS, which may cool investment incentives for the UAS provider;
- if the balance is right between the roles of the regulator and the minister in terms of determining the contribution collected from licensees and the disbursement processes;
- if further legislative guidance should be provided to the regulator for administering the UAS regime;
- if a more formal monitoring and evaluation mechanism is required in legislation.
Annex A
Country Data Collection Form

Country: ___________________________________

Website:
If there is a government or regulatory authority website(s) which contains any of the information being sought please identify it (or them): __________________________ (Please check that any website referred to is working and up to date before including the details in this reply.)

Institutional framework for UAS:
What policy is in place that sets out the key elements of UAS? Please identify the policy and where it may be accessed electronically. If it is not accessible electronically please send a fax or scanned copy of all relevant legislation to the Project Coordinator.

UAS definition
What is the definition of UAS in your policy?

UAS fund
Is there a provision to set up a fund?

Who are contributors?

Who administers the fund?

UAS services
Who are delivering UAS?

How is UAS delivered? Is it part of a licence or specific UAS obligations, competitive process, or through incentives and partnership models e.g. PPP?

Regulations
What regulations have been put into effect pursuant to relevant legislation that set out the requirements for UAS (establishing a UAS fund, the contributors, the beneficiaries, and type of access that can be funded by the UAS or other services) Please identify the regulations and where they may be accessed electronically. If they are not accessible electronically please send a fax or scanned copy of all relevant regulations to the Project Coordinator.
Annex A

Regulatory framework and guidelines:
What regulatory framework and guidelines have been published by the regulatory authority or other responsible government body setting out the requirements and procedures for UAS? Please identify the regulatory framework or guidelines and where they may be accessed electronically. If they are not accessible electronically please send a fax or scanned copy of all relevant documents to the Project Coordinator.

Role of stakeholders
What is the role of the regulator or other stakeholders involved in policy making and implementation?

Enforcement mechanism
Please explain the mechanism in place for enforcement of UAS.

Integration with broadband
Does your policy or regulation use the concept of broadband in the context of UAS?

If so what is the minimum data rate you consider as constituting broadband rate?

Does the policy address integrating with other national sector policies such as in the area of education, e-government, e-commerce etc.?

Future development
If you answer ‘No’ to question 11, is your Administration planning to develop a Broadband Universal Access?

Are there any plans for the installation in the country of a broadband system for end users either via direct connection or through telecentres?

Issues
Please explain any difficulties you encountered when developing your UAS policy, regulation or legislation.

Staff skills
How many staff were involved in developing the UAS policy?

Please explain if your staff working on UAS require further training.
What training is required for your UAS staff?

External experts
Have you used external experts for assistance in developing the UAS policy? If so please provide details.

Development activities
Please explain the steps you have taken to develop the UAS policy.

What consultations, if any, did you carry out? Who was the target audience and how long did you conduct these consultations?

How many consultations did you conduct and do you have any information available that you can share? E.g. PowerPoint presentations, reports etc.

Effective date
When did the UAS become effective? Please explain any gaps you have noticed already.

Contact
Please nominate the person who should be contacted to clarify the answers above or for further information.

Name:
Organization:
Phone:
Email:
# Annex B
## LIST OF PARTICIPANTS

<table>
<thead>
<tr>
<th>No</th>
<th>Name</th>
<th>Designation</th>
<th>Country</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Mrs Romatoa Kapoterenga</td>
<td>Regulator, Legal Counsel Kiribati</td>
<td>Kiribati</td>
</tr>
<tr>
<td>2</td>
<td>Mr Criden Appi</td>
<td>Regulator</td>
<td>Nauru</td>
</tr>
<tr>
<td>3</td>
<td>Mr John Crook</td>
<td>Interim Regulator</td>
<td>Vanuatu</td>
</tr>
<tr>
<td>4</td>
<td>Mr Jualino da Cruz</td>
<td>Deputy Regulator, ARCOM</td>
<td>Timor-Leste</td>
</tr>
<tr>
<td>5</td>
<td>Mr Kaneko Yoshi</td>
<td>MITCC Senior Engineer (Operator)</td>
<td>Marshall Islands</td>
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<tr>
<td>6</td>
<td>Mr Octavio Freitas</td>
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<tr>
<td>7</td>
<td>Mr Mark Oderio</td>
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<td>8</td>
<td>Mr Waiti Federick Tomewati</td>
<td>Office of the Prime Minister</td>
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<td>9</td>
<td>Mrs Pamela Joseph</td>
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<tr>
<td>10</td>
<td>Mr Takkon Chin</td>
<td>Chief, Department of Communications</td>
<td>Palau</td>
</tr>
<tr>
<td>11</td>
<td>Mrs Sala Ikutale</td>
<td>Director, Niue Post and telecommunications</td>
<td>Niue</td>
</tr>
<tr>
<td>12</td>
<td>Mr Simeti Lopati</td>
<td>General Manager, TTC</td>
<td>Tuvalu (Operator)</td>
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<tr>
<td>13</td>
<td>Mr Veari Iru</td>
<td>Senior Engineer PangTel</td>
<td>Papua New Guinea</td>
</tr>
<tr>
<td>14</td>
<td>Mr Jonati Tuiloma</td>
<td>Deputy CEO, Telecommunication Authority of Fiji</td>
<td>Fiji</td>
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<tr>
<td>15</td>
<td>Elvin Prasad</td>
<td>Senior Engineer, Ministry of Communications</td>
<td>Fiji</td>
</tr>
<tr>
<td>16</td>
<td>Mr Mac Mokoroa</td>
<td>Chief of Staff, Prime Minister’s Office</td>
<td>Cook Islands</td>
</tr>
<tr>
<td>17</td>
<td>Mrs Pua Hunter</td>
<td>Director of ICT</td>
<td>Cook Islands</td>
</tr>
<tr>
<td>18</td>
<td>Mr Baraniko Tonganibeia</td>
<td>CEO, TKSL</td>
<td>Kiribati (Operator)</td>
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<tr>
<td>19</td>
<td>Mrs Lizzie Taura</td>
<td>Legal Counsel</td>
<td>Vanuatu</td>
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<tr>
<td>20</td>
<td>Mr Deakin Temaki</td>
<td>ICT Officer</td>
<td>Nauru</td>
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<tr>
<td>21</td>
<td>Mr England Luta</td>
<td>Senior ICT Advisor</td>
<td>Kiribati</td>
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<td>22</td>
<td>Debra Williams</td>
<td>ICT Advisor, SPC</td>
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<td>Dan Aiafi</td>
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<td>24</td>
<td>Ian Thomson</td>
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<td>New Caledonia</td>
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<td>25</td>
<td>Gisa Fuatai Purcell</td>
<td>ITU Project Coordinator</td>
<td>Fiji</td>
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<td>26</td>
<td>Aisling Kelly</td>
<td>Digicel</td>
<td>Australia</td>
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<td>27</td>
<td>Soon Choon</td>
<td>ADB ICT Advisor</td>
<td>Manila</td>
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<td>Maureen</td>
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<td>29</td>
<td>Ellen Strictland</td>
<td>ICT Expert, Postgrad Student, University of Queensland</td>
<td>Australia</td>
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<tr>
<td>30</td>
<td>Marianne Berukilukilu</td>
<td>Telecom Engineer, Office of the Regulator</td>
<td>Vanuatu</td>
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<td>31</td>
<td>Lloyd Fikiasi</td>
<td>Legal Advisor, Office of the Regulator</td>
<td>Vanuatu</td>
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> Knowledge-Based Report
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<tr>
<td>31</td>
<td>Natasha</td>
<td>ICT Specialist, World Bank</td>
<td>World Bank</td>
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<tr>
<td>32</td>
<td>James</td>
<td>ICT Advisor, World Bank</td>
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<tr>
<td>33</td>
<td>Suella Hansen</td>
<td>Director, Network Strategies</td>
<td>ADB</td>
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<tr>
<td>34</td>
<td>Resina Katafono</td>
<td>MDG Advisor, Pacific Island Forum Secretariat</td>
<td>Fiji</td>
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<tr>
<td>35</td>
<td>Anju Mangal</td>
<td>Information Specialist, Secretariat of Pacific Communities</td>
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<tr>
<td>36</td>
<td>Maeva Betham Vaai</td>
<td>Senior Advisor, World Bank</td>
<td>Samoa</td>
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<td>37</td>
<td>Zinnia Dawidi</td>
<td>Legal Advisor, Ministry of Communications</td>
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<td>38</td>
<td>Christian Fruen</td>
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<td>Alex Abraham</td>
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<td>41</td>
<td>Dean Solofa</td>
<td>Manager, Rural services, Metrological Services</td>
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<tr>
<td>42</td>
<td>Dave Main</td>
<td>CEO, Computer Services Limited (CSL)</td>
<td>Samoa</td>
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<tr>
<td>43</td>
<td>Rita Eteuati</td>
<td>Marketing Manager, CSL</td>
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<tr>
<td>44</td>
<td>Esekiia Solofa</td>
<td>Project Manager, School Net Project, Ministry of Education, Sports and Culture</td>
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<tr>
<td>45</td>
<td>Muriel Lui</td>
<td>Legal counsel, Attorney General Office</td>
<td>Samoa</td>
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<tr>
<td>46</td>
<td>Sefo Ainuu</td>
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<td>47</td>
<td>Tua’imolo Asumu Ah Sam</td>
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<td>48</td>
<td>Tuloa Fetufou Aiono</td>
<td>ACEO Policy MCIT</td>
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<td>54</td>
<td>Ronny Aiolupotea</td>
<td>ACEO, IT office Ministry of Finance</td>
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<td>55</td>
<td>Neru Moala</td>
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<td>Jacob Philips</td>
<td>IT Director NUS</td>
<td>Samoa</td>
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<td>Tuloa Aniseko Ioane</td>
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<td>Talatalga Matau</td>
<td>ACEO, IT Office PSC</td>
<td>Samoa</td>
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<td>59</td>
<td>Mullitalo Fidow</td>
<td>Aerodrome Standard Officer Polynesian Airlines</td>
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<td>60</td>
<td>Donnie Defreitas</td>
<td>Regulator</td>
<td>Samoa</td>
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<td>61</td>
<td>Elisa Kohlhase</td>
<td>Legal Counsel – OoTR</td>
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<td>Eteuati Eteuati</td>
<td>Principal Technical Officer – OoTR</td>
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<td>63</td>
<td>Karen Komiti</td>
<td>Manager Regulatory – OoTR</td>
<td>Samoa</td>
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<td>64</td>
<td>Unutoa Fonoti</td>
<td>Manager Technical -OoTR</td>
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<td>65</td>
<td>Natasha Fabricius</td>
<td>Marketing Assistant Samoa Tel</td>
<td>Samoa</td>
</tr>
<tr>
<td>66</td>
<td>Ipiniu Filipo</td>
<td>Principle Regulatory Officer</td>
<td>Samoa</td>
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</table>


Pacific Telecom Service Providers. Available at www.bizconnections.com/pacific_telecom_service_provider.htm [accessed 7th May].


