

# Chapter 9

## Business environment—infrastructure

9.1 To develop and grow, an economy needs the support of key physical infrastructure—airports, roads, ports, electricity, water and telecommunications. The geographic isolation, small and dispersed populations and susceptibility to natural disasters makes the development and maintenance of infrastructure a major challenge for Pacific island countries.<sup>1</sup> Poor economies of scale mean that it is more difficult and expensive to provide facilities and services. Their weak fiscal situation, evident in their reliance on official development assistance, also makes it harder for Pacific island countries to devote resources to building necessary infrastructure.<sup>2</sup> This chapter examines the state of infrastructure in Pacific island countries and its role in economic development.

### State of infrastructure

9.2 In 2006, a World Bank study found that Pacific island countries 'demonstrate worse infrastructure performance than could be expected for their level of GDP'. It accepted that the costs of providing infrastructure services are naturally high in the Pacific but argued:

...in some Pacific countries infrastructure performance is worse than in comparator countries (such as Caribbean islands) with similar levels of income, and which share some 'disadvantages', such as small scale or vulnerability to natural disaster. Even within the Pacific region, some countries with greater inherent challenges demonstrate better performance in certain infrastructure sectors.<sup>3</sup>

9.3 In its view, 'the inherent disadvantages of scale and topography alone cannot explain poor performance in infrastructure...some underperformance is due to poor

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1 For example, the Department of Infrastructure, Transport, Regional Development and Local Government noted the geographic isolation, climatic extremes and 'massive infrastructure shortfalls that make transport a particularly challenging issue for the region'. *Committee Hansard*, 20 November 2008, p. 72.

2 See for example, World Bank, *The Pacific Infrastructure Challenge: A review of obstacles and opportunities for improving performance in the Pacific islands*, January 2006, p. 4, <http://siteresources.worldbank.org/INTPACIFICISLANDS/Resources/PacificReportFinal.pdf> (accessed 2 December 2008).

3 World Bank, *The Pacific Infrastructure Challenge: A review of obstacles and opportunities for improving performance in the Pacific islands*, January 2006, p. 4, <http://siteresources.worldbank.org/INTPACIFICISLANDS/Resources/PacificReportFinal.pdf> (accessed 2 December 2008).

institutional performance'.<sup>4</sup> The study concluded that 'better policies, institutions and management can help to improve the overall level of infrastructure performance in Pacific countries'.<sup>5</sup>

9.4 Evidence before the committee highlighted the poor state of economic infrastructure across the region.<sup>6</sup> Witnesses noted deficiencies in roads, bridges, the supply of energy, potable water, telecommunications, aviation and shipping facilities.<sup>7</sup>

### ***Infrastructure and economic performance***

9.5 Many reviews and surveys by international and regional bodies draw a direct connection between economic infrastructure and economic development and share the view that infrastructure throughout the region is a major barrier to economic development and investment.<sup>8</sup> The Australia Pacific Islands Business Council and the Australia Fiji Business Council noted the economic consequences that all countries in the region face because of deteriorating infrastructure. They argued:

Without good infrastructure no business, whether private or government, will thrive and remote communities especially will remain weak and be denied access into the mainstream economy.<sup>9</sup>

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4 World Bank, *The Pacific Infrastructure Challenge: A review of obstacles and opportunities for improving performance in the Pacific islands*, January 2006, p. 4, <http://siteresources.worldbank.org/INTPACIFICISLANDS/Resources/PacificReportFinal.pdf> (accessed 2 December 2008).

5 World Bank, *The Pacific Infrastructure Challenge: A review of obstacles and opportunities for improving performance in the Pacific islands*, January 2006, p. 5.

6 See for example, Mr John Millet, *Submission 21*, p. 6. A number of unions argued that many Island States have experienced 'a decrease in standards of infrastructure, often accompanied by a failure to keep pace with demand as populations increase and there is also a common drift to urban areas'. *Submission 10*, p. 6. See also Anis Chowdhury and Yogi Vidyattama, 'Macroeconomic Policies for Growth in Small Pacific Islands Economies', UN University, World Institute for Development Economics Research, Research Paper no. 2007/24, May 2007, p. 1.

7 *Submission 60*, p. 8 and *Submission 58*, p. 10. ANZ noted that 'Critical utilities for economic growth, including potable water, electricity and telecommunications, are not widely available in PNG, especially in rural areas'. *Submission 51*, p. 5. The Pacific Islands Forum Secretariat cited the failure to maintain water supply assets, except in Vanuatu and PNG, which 'accounted for approximately 20 to 30 [per cent] of loss through undetected leakages and illegal connections'. *Submission 69*, p. 15.

8 OECD, the Development Assistance and Investment Committees and the OECD's Development Co-operation Directorate and the Directorate for Financial and Enterprise Affairs. 'Mobilising Private Investment for Development: Policy Lessons on the Role of ODA', *The DAC Journal*, vol. 6, no. 2, 2005, pp. 14–15. AusAID, *Pacific 2020 Challenges and Opportunities for Growth*, May 2006, p. 57; IMF Executive Board Concludes 2007 Article IV Consultation with Papua New Guinea Public Information Notice (PIN) No. 08/32, 12 March 2008, <http://www.imf.org/external/np/sec/pn/2008/pn0832.htm> (accessed 9 October 2008); *Submission 68*, pp. 4 and 10; *Submission 69*, p. 15.

9 *Submission 60*, p. 8 and *Submission 58*, p. 10.

9.6 For example, a number of Pacific island countries have noted the lack of marketing facilities, including effective storage and processing facilities, as a major impediment to trade in agricultural products.<sup>10</sup>

9.7 Companies engaged in the Pacific have no doubt that the state of economic infrastructure influences business decisions. Gladstone Pacific Nickel Ltd noted that one of the major impediments to the progress of a major project to mine lateritic nickel ore in the Solomon Islands was a lack of infrastructure.<sup>11</sup> ANZ's operations in PNG are confined to those areas of the country where it has access to infrastructure and utilities that can reliably support its operations. In its view, 'infrastructure development and maintenance represents an ongoing barrier to PNG's economic growth and one which requires a comprehensive policy response'. ANZ argued:

Addressing some of PNG's infrastructure constraints, including poor road and telecommunication networks, would help connect rural areas with commercial hubs, enable farmers to get their produce to market, improve access to services (including banking services) and information and reduce the cost of doing business in PNG more broadly.<sup>12</sup>

9.8 A number of other witnesses similarly contended that providing roads may be one of the most efficient ways to stimulate economic growth in areas not served by roads.<sup>13</sup> Dr Hearn noted that quite often the production at the farm level is being achieved, but developing marketing systems that could get produce into the towns or export markets would be 'a tremendous breakthrough'.<sup>14</sup> He suggested that governments and/or aid donors could help by improving infrastructure—not necessarily double-laned highways—to enable people to get their produce to market.<sup>15</sup> Clearly, an improvement in physical infrastructure, including at a regional level, could pave the way for new or expanding industries.<sup>16</sup>

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10 See chapter 7, paragraphs 7.8–7.9 and also representations from Kiribati, Tonga, Vanuatu, *Report of the 3<sup>rd</sup> Regional Meeting of Heads of Agriculture and Forestry Services (HOAFS)*, 3–5 September 2008, pp. 25, 28 and 29. Fiji Government Online, J Cokanasiga, Minister for Primary Industry and Sugar, 'Remarks at the Fiji College of Agriculture', 10 December 2008, [http://www.fiji.gov.fj/publish/printer\\_13707.shtml](http://www.fiji.gov.fj/publish/printer_13707.shtml)

11 Presentation Memorandum to the Australia Pacific Islands Business Council, attachment to *Submission 60*.

12 *Submission 51*, p. 5.

13 See chapter 7, paragraphs 7.8–7.9 and Asian Development Bank, *Tonga: Outer Islands Agriculture Development Project*, Performance Evaluation Report, July 2006, p. 22.

14 *Committee Hansard*, 20 November 2008, pp. 44–45.

15 *Committee Hansard*, 20 November 2008, pp. 44–45.

16 OECD, The Development Assistance and Investment Committees and the OECD's Development Co-operation Directorate and the Directorate for Financial and Enterprise Affairs. 'Mobilising Private Investment for Development: Policy Lessons on the Role of ODA', *The DAC Journal*, vol. 6, no. 2, 2005, p. 28.



*Deteriorating infrastructure is a major barrier to economic development in many Pacific island countries. Australia's aid program targets infrastructure for example through the Regravelling and Sealing Project, one of Australia's biggest aid projects in PNG in recent years (image courtesy of AusAID).*

### *Funding*

9.9 Adequate funding is needed for developing and maintaining necessary infrastructure to support business.<sup>17</sup> But a recent study by the ADB noted that funding for rural development had fallen short in many Pacific islands countries. It cited Solomon Islands where, for example, '80 per cent of the national road network is not maintained and is out of service as a result, and 68 per cent of villages have no road access at all due to historic underinvestment'. It reported further that under-funding had extended to 'irrigation systems, wharves, coastal shipping, and health and

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17 See for example, Australia Fiji Business Council, *Submission 58*, p. 10; *Submission 60*, p. 8.

education services critical to raising the productivity of agriculture, livestock activities and fishing'.<sup>18</sup>

9.10 The Pacific Islands Forum Secretariat advised the committee that overburdened governments with no or limited funding for road maintenance 'is a serious and chronic issue in the Pacific'.<sup>19</sup> Indeed, a 2006 World Bank study found that improving access to and the quality of infrastructure in the Pacific would require considerable investment:

If total investment levels were to be maintained at their current levels, a significant re-allocation of resources would be required. For example, Fiji, which has enjoyed relatively high levels of total investment due to its strong tourism and manufacturing sectors, would need to devote about 25 per cent of those investments to the infrastructure sectors. At the other extreme, Solomon Islands would need to allocate almost their entire current investment spending to infrastructure.<sup>20</sup>

9.11 Even so, evidence suggested that a lack of capital investment is only one factor contributing to the state of economic infrastructure in Pacific island countries. A number of witnesses attributed the deficiencies in the region's infrastructure to both a lack of capital investment and poor planning.<sup>21</sup> They also drew attention to the skills and expertise needed to operate or support physical infrastructure.

#### *State-owned enterprises*

9.12 For a number of years, international studies have pointed to the dominance of state-owned enterprises in public and semi-public utilities in the region and their failure to provide incentives for the construction and maintenance of infrastructure. The operation of these state-owned monopolies tend to lack effective planning and oversight, stifle competition and provide little motivation for efficiency and innovation in the infrastructure sector. In effect, this public ownership structure

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18 Asian Development Bank, *Living with High Prices*, policy brief, 2008, p. 26. The IMF Public Information Notice No. 08/139 stated that Solomon Islands 'remains beset with poor infrastructure, landownership issues, a shortage of skilled labour and unreliable and costly services'. IMF Executive Board Concludes 2008 Article IV Consultation with the Solomon Islands, Public Information Notice (PIN) No. 08/139, October 2008, p. 2; IMF Executive Board Concludes 2007 Article IV Consultation with Papua New Guinea Public Information Notice (PIN) No. 08/32, 12 March 2008, <http://www.imf.org/external/np/sec/pn/2008/pn0832.htm> (accessed 9 October 2008).

19 *Submission 69*, p. 15.

20 World Bank, *The Pacific Infrastructure Challenge: A review of obstacles and opportunities for improving performance in the Pacific islands*, January 2006, p. 7, <http://siteresources.worldbank.org/INTPACIFICISLANDS/Resources/PacificReportFinal.pdf> (accessed 2 December 2008).

21 See for example, Pacific Islands Forum Secretariat, *Submission 69*, p. 15; Australia Fiji Business Council, *Submission 58*, p. 10 and ANZ, *Submission 51*, p. 5.

discourages and may even block private sector participation.<sup>22</sup> For example, the Pacific Islands Forum Secretariat noted that economic infrastructure in the region, with the exceptions of a few Pacific island countries, is 'inappropriately regulated and provided by monopoly usually government entities'. It stated further that prices 'are set on a political rather than economic criterion'.<sup>23</sup> ESCAP noted that 'to make the utilities more efficient, international donors and development agencies have often proposed privatization or international private participation, but such measures have yet to be introduced in most countries'.<sup>24</sup>

9.13 Indeed, a recent comprehensive report on infrastructure services in the Pacific argued that international best practice suggested that liberalisation and competition where possible is the best way forward for the infrastructure sector. It indicated that unbundling monopolistic enterprises, developing open access regimes, or reducing barriers to entry would be a step in the right direction. It recognised the need for 'a new strategy for promoting and maintaining infrastructure, away from the highly political investment processes of the past' and for encouraging partnerships with the private sector.<sup>25</sup>

9.14 The report drew particular attention to Samoa which, in its view, stands out as a Pacific island country that, through 'aggressive market liberalization reforms with greatly strengthened regulatory capacity', has achieved notable success particularly in the telecommunications and air transport sectors.<sup>26</sup>

### *Human capacity*

9.15 Mr Andrew Tongue, Department of Infrastructure, Transport, Regional Development and Local Government, highlighted the importance of considering 'soft'

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22 See for example, World Bank, *The Pacific Infrastructure Challenge: A review of obstacles and opportunities for improving performance in the Pacific islands*, January 2006, p. 6, <http://siteresources.worldbank.org/INTPACIFICISLANDS/Resources/PacificReportFinal.pdf> (accessed 2 December 2008); UN Economic and Social Commission for Asia and the Pacific, *Economic and Social Survey of Asia and the Pacific 2008: Sustaining Growth and Sharing Prosperity*, [http://www.unescap.org/survey2008/download/01\\_Survey\\_2008.pdf](http://www.unescap.org/survey2008/download/01_Survey_2008.pdf) (accessed 1 October 2008), p. 73 and Philip C. Erquiaga, Director General, Pacific Department, Asian Development Bank, Speech Pacific 2020 Conference, Sydney, 11 May 2006.

23 *Submission 69*, p. 13.

24 UN Economic and Social Commission for Asia and the Pacific, *Economic and Social Survey of Asia and the Pacific 2008: Sustaining Growth and Sharing Prosperity*, [http://www.unescap.org/survey2008/download/01\\_Survey\\_2008.pdf](http://www.unescap.org/survey2008/download/01_Survey_2008.pdf) (accessed 1 October 2008), p. 73.

25 Asian Development Bank, Technical Assistance Consultant's Report, *REG: Improving the Delivery of Infrastructure Services in the Pacific*, Project Number 38633, December 2007, vol I, Executive Summary, p. 10.

26 Asian Development Bank, Technical Assistance Consultant's Report, *REG: Improving the Delivery of Infrastructure Services in the Pacific*, Project Number 38633, December 2007, vol I, Executive Summary, p. 8.

as well as hard infrastructure. Thus, while recognising the pressing need for improved physical infrastructure, he noted that 'part of sustainability in the region is about the people who manage ports and shipping lines and who are able to grasp commercial opportunities'. He acknowledged that the process of building capacity is slow and requires a long-term commitment, but observed that investment in people 'seems to generate opportunity for the countries involved'.<sup>27</sup> The Pacific Islands Forum Secretariat similarly noted that many entities do not have the training facilities, skilled staff and expertise to undertake operations and maintenance of economic infrastructure.<sup>28</sup> This lack of capacity cuts across a broad range of skills, including lack of analytical and technical skills and expertise at both policy and delivery phases.<sup>29</sup>

9.16 These observations about inadequate capital investment in infrastructure, poor planning and oversight, absence of competition, and lack of human capacity have relevance for both Pacific island countries and donor countries in the way in which they identify and prioritise infrastructure projects and then allocate funds.

9.17 The committee now examines the telecommunications and aviation industries to illustrate the importance of implementing reforms to make the infrastructure sector more efficient and competitive. It also highlights the concern that, if Pacific island countries sit on the sidelines during this period of growth in technology, they risk being left further behind.<sup>30</sup>

## Telecommunications

9.18 Information and communication technologies (ICT) are critical to economic growth: they connect customers and suppliers and could be the pathway that ends the 'tyranny of distance' for Pacific island countries.<sup>31</sup> The Prime Minister of Samoa highlighted the importance of ICT to the success of business in Pacific island countries. He gave the example of a tourist operator at Lalomanu who relies on mobile phones and internet connections to sell beach accommodation and place orders for supplies. Similarly, he stated:

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27 *Committee Hansard*, 20 November 2008, p. 81.

28 *Submission 69*, p. 16. Mr Motteram, Treasury, referred to road construction in PNG as a key infrastructure need but noted the scarcity of skilled labour which may be going to the mining sector because of the mining boom. See *Committee Hansard*, 20 November 2008, pp. 9–10.

29 *Submission 69*, p. 13.

30 United Nations Economic and Social Commission for Asia and the Pacific, *Enhancing Pacific Connectivity*, United Nations, 2008, p. 56, <http://www.unescap.org/icstd/research/pacific-connectivity/Enhancing-Pacific-Connectivity.pdf> (accessed 1 December 2008).

31 See Pacific Islands Forum Secretariat, *The Pacific Plan for Strengthening Regional Cooperation and Integration, Pacific Regional Digital Strategy*, p. 1 and Mr Oliver's explanation about the mobile phone producing economic benefits in terms of better communications between suppliers and marketers, *Committee Hansard*, 20 November 2008, p. 31.

A planter at Falealupo not only needs to access information and advice from the extension services of the Ministry of Agriculture but also needs to get an idea of local and international market prices of the produce using mobile phone and internet connections and having access to radio and television services.<sup>32</sup>

9.19 Despite the recognised need to have appropriate and efficient communication systems, a number of witnesses raised concerns about the quality and costs of the service. Mr Tunstall, ANZ, informed the committee that the poor standard of telecommunications services in Pacific island countries is a major difficulty for commercial business. He explained that ANZ has its branch telecommunications networks down on a regular basis due to infrastructure breakdowns, towers being pulled down or out of order and solar panelling not working.<sup>33</sup> An ESCAP study also indicated that costs for internet and mobile telephone access tended to be higher in Pacific island nations compared to those in peer small island economies elsewhere, even when adjusted for income status.<sup>34</sup>

9.20 It suggested that removing constraints on telecommunications innovation should put millions of dollars into the pockets of telecom customers in the Pacific and provide funds for new infrastructure which in turn would attract more business and investment.<sup>35</sup> Another recent review of telecommunications in the Asia–Pacific region reached similar conclusions about the benefits to be gained from reform. It observed:

Theoretically, in a deregulated market, and using the technologies available, the sky is the limit. However, the current situation resembles a technological communications straitjacket.<sup>36</sup>

9.21 Commentators generally refer to the closed nature of the sector as a major impediment. For example, Mr Lawrence Oliver, Department of Infrastructure, noted that although each country is different, a telephone company was typically 'a utility'. He stated:

There was no regulator separate from the operator, and that is still the case in a number of countries. All of these are quite important barriers to

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32 Hon Tuilaepa Lupesoliai Sailele Malielegaoi, Prime Minister, Government of Samoa, Keynote Statement, Pacific Telecommunications Conference, Pacific Economic Bulletin, vol 23, no. 3, 2008, p. 67, [http://peb.anu.edu.au/pdf/PEB23\\_3%20-%20SAMOA%20PM%20ADDRESS\\_WEB1.pdf](http://peb.anu.edu.au/pdf/PEB23_3%20-%20SAMOA%20PM%20ADDRESS_WEB1.pdf) (accessed 1 December 2008).

33 *Committee Hansard*, 24 March 2009, p. 55.

34 UN Economic and Social Commission for Asia and the Pacific, *Enhancing Pacific Connectivity*, 2008, p. 2, <http://www.unescap.org/icstd/research/pacific-connectivity/Enhancing-Pacific-Connectivity.pdf> (accessed 1 December 2008).

35 UN Economic and Social Commission for Asia and the Pacific, *Enhancing Pacific Connectivity*, 2008, p. 2, <http://www.unescap.org/icstd/research/pacific-connectivity/Enhancing-Pacific-Connectivity.pdf> (accessed 1 December 2008).

36 Esther Batiri Williams, 'Pacific Island States', in *Digital Review of Asia Pacific 2007–2008*, ORBICOM and the International Development Research Centre, pp. 252–262.



overcome when trying to expand telecommunications penetration, which generally requires bringing in private sector investment from elsewhere.<sup>37</sup>

9.22 Although the dominance of monopolies in Pacific island countries has frustrated the development of their ICT sector, these structures are being dismantled in several countries with impressive results. DFAT referred to the liberalisation of the mobile phone market in PNG which 'has expanded coverage and reduced consumer prices significantly, providing a boost to small business'.<sup>38</sup> Professor Duncan cited Samoa which now:

...has several Internet service providers and has opened its mobile phone sector. As a result, Internet and mobile phone use has expanded rapidly.<sup>39</sup>

9.23 Mr Jim Redden referred to the success in Vanuatu which had recently opened up its telecommunications to foreign competition, resulting in lower costs for, and increased access to, telecommunications in rural areas and for the disadvantaged.<sup>40</sup> Mr Oliver noted the critical connection between competition and the rapid increase in mobile penetration and cited one company in particular, Digicel, which is making significant inroads in Papua New Guinea, Fiji, Tonga and Samoa.<sup>41</sup>

9.24 Digicel is an Irish-owned company that gained experience in the Caribbean with building mobile markets in small island countries where there had been an incumbent operator. Benefiting from this experience, the company has since successfully broadened its operation to Pacific island countries. Mr Oliver noted some 'extraordinary developments', for example, in Samoa where the number of mobile numbers tripled within a matter of weeks of Digicel commencing business.<sup>42</sup> By December 2007, Digicel had 60,000 subscribers in Samoa using 'some 42 base stations providing 95 per cent coverage of the two main islands plus Apolima and Manono'.<sup>43</sup>

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37 *Committee Hansard*, 20 November 2008, p. 31.

38 *Submission 68*, pp. 6–7. See also Asian Development Bank, *Asian Development Outlook 2008*, p. 254, <http://www.adb.org/Documents/Books/ADO/2008/SAM.asp> (accessed 14 October 2008). It noted the 'liberalization of the mobile telephone market in 2006, when a new entrant slashed the costs of international mobile phone calls by about 50 per cent'.

39 Professor Ron Duncan, *Pacific Trade Issues*, Pacific Institute of Advanced Studies in Development and Governance, University of the South Pacific, Suva, Fiji, *ADB Pacific Studies Series*, 2008, p. 20.

40 *Committee Hansard*, 25 March 2009, p. 30.

41 *Committee Hansard*, 20 November 2008, p. 30.

42 *Committee Hansard*, 20 November 2008, p. 30.

43 Asian Development Bank, Technical Assistance Consultant's Report, *REG: Improving the Delivery of Infrastructure Services in the Pacific*, Project Number 38633, December 2007, Vol. II, Part 2f: National Strategy: Samoa, p. 29.

9.25 A recent review reported that Digicel's entry into the Pacific had been characterised by 'speed, technical quality and coverage'.<sup>44</sup> Indeed, Australia's High Commissioner to PNG, His Excellency Chris Moraitis, was of the view that the introduction of mobile phone competition in PNG has brought about a great social and economic revolution in that country. When he arrived in PNG in late 2006, mobile phones were 'a monopoly and not very reliable'. With the arrival of Digicel and its quite aggressive campaign, telecommunications underwent dramatic change. According to Mr Moraitis, GDP grew by about 1.82 per cent. He noted:

There was an attempt to roll back the liberalisation once the monopoly provider realised that they were going to be clobbered. Unfortunately for them, but fortunately for the people, it was too late...you could not roll back the situation.<sup>45</sup>

9.26 The High Commissioner informed the committee that the people were reluctant to give up the service. Previously, a producer wanting to sell coffee would travel by bus or truck to gain information on the market. He explained that today the producer would use his mobile phone to obtain this information thereby saving 'a lot of money'.<sup>46</sup> It should also be noted that, according to a recent review, Digicel appoints nearly 100 per cent local staff in each country supported by a roving management team of approximately.<sup>10</sup>

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44 Asian Development Bank, Technical Assistance Consultant's Report, *REG: Improving the Delivery of Infrastructure Services in the Pacific*, Project Number 38633, December 2007, Vol. II, Part 2e: National Strategy: Papua New Guinea, p. 38.

45 *Committee Hansard*, 19 March 2009, p. 15.

46 *Committee Hansard*, 19 March 2009, p. 15.



*The introduction of affordable mobile phone services around the Pacific, including PNG, has produced great economic benefits for both individuals and businesses (image courtesy of Digicel Pacific).*

9.27 Despite recent improvements in the availability of telecommunications services in Pacific island countries, the use of technology, particularly the internet, still lags behind even those countries of comparable size and income. Those with access to computers, for example, experience difficulties.

### ***More reforms needed***

9.28 Despite clear evidence of the economic benefits that flow from better telecommunications services, more needs to be done. A recent UN report concluded that laws and policies have not kept pace with developments in the internet, mobile telephony and broadband. It referred to data indicating that the regulatory and ownership status in many Pacific island economies remains uncompetitive. Although there have been moves toward increased competition in some Pacific economies, it noted:

In some cases, governments and/or operators continue to pursue policies or practices that hinder progress in connectivity infrastructure, services, and pricing—to considerable social cost. Others, such as Samoa, are making considerable progress in these arenas, to considerable social benefit.<sup>47</sup>

9.29 For example, the Australia Pacific Islands Business Council noted that while the recent start of an independent mobile telephone operator in a number of countries was positive:

...international telecommunications, internet access, and domestic land line service provision still requires reform in virtually every country if they are to have a world standard service.<sup>48</sup>

9.30 Along similar lines, the Australia Fiji Business Council indicated that if Fiji is to have a world standard service, its telecommunication services require further reforms.<sup>49</sup> A number of other witnesses also referred to the regulatory environment in Pacific island countries which, although changes were taking place, still posed a major impediment to developing a vibrant ICT sector. Mr Oliver observed:

My sense is that the larger ones among them, those that have introduced competition, recognise the need for particular skills, expertise and resources in this area. But it still remains the case—and this is more so in the smaller countries—that the telecommunications operator is the only expert source of advice on communications policy issues to the government. That can be a problem at times in the sense that there is likely to be some protection of exclusive privileges in that situation.<sup>50</sup>

9.31 With regard to the much smaller islands, Mr Oliver noted that they would struggle to establish the necessary underpinnings of a competitive telecommunications market—providing for interconnection, an independent regulator, and a transparent and a non-discriminatory universal access regime. Even though small island countries may not be expected to have a vigorous competitive market, in his view, they should not have an exclusive arrangement.<sup>51</sup>

### ***Committee view***

9.32 Without doubt, improved telecommunications offer Pacific island countries enormous opportunities to develop their economies and to increase productivity. Reforms to the sector have already demonstrated the potential to lower transaction costs, to open up and expand markets and, through exchange of information, improve

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47 UN Economic and Social Commission for Asia and the Pacific, *Enhancing Pacific Connectivity*, 2008, pp. 2–3, <http://www.unescap.org/icstd/research/pacific-connectivity/Enhancing-Pacific-Connectivity.pdf> (accessed 1 December 2008).

48 *Submission 60*, p. 8 and *Submission 58*, p. 10.

49 *Submission 58*, p. 10.

50 *Committee Hansard*, 20 November 2008, p. 33.

51 *Committee Hansard*, 20 November 2008, p. 36.

products or services and increase productivity through greater efficiencies.<sup>52</sup> More needs to be done both to consolidate achievements and to build on them. The Australian Government should seize opportunities to encourage Pacific island countries to liberalise their telecommunications markets.

## Aviation

9.33 Air transport similarly demonstrates the link between infrastructure and economic development. The Department of Infrastructure, Transport, Regional Development and Local Government noted that a lack of funding, infrastructure and equipment was a challenge for the aviation industry in Pacific island countries.<sup>53</sup> Qantas informed the committee that regional travel is expensive in local terms with 'schedules infrequent and often unreliable'.<sup>54</sup> As noted in chapter 3, this situation was due:

...in part to thin passenger and cargo traffic volumes which restrict demand for air travel in any one State (with the exception of PNG) and in part to inadequate tourist infrastructure and trained personnel.<sup>55</sup>

9.34 As an example of the economic consequences of poor aviation services, Qantas cited the withdrawal of the larger oil companies from some of the smaller markets, including Kiribati and Tuvalu, because 'the volumes required are too small to sustain operations and the costs of shipping imported fuel too high'.<sup>56</sup>

9.35 Aviation safety, in particular, is a continuing challenge for Pacific island countries. Mr David Callaghan, Qantas, informed the committee that his company was deeply concerned about the 'relatively poor state' of aviation infrastructure in these countries.<sup>57</sup> Qantas described a situation where the majority of runways have poor surface markings and are often unfenced; navigation aids are intermittent; aircraft handling equipment is limited; and terminal facilities do not meet current safety and security requirements.<sup>58</sup> Mr Callaghan added:

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52 See for example, Leonard Waverman, Meloria Meschi and Melvyn Fuss, *The Impact of Telecoms on Economic Growth in Developing Countries*, p. 2, noted the substantial positive boost that mobile telephony has on economic growth.

<http://web.si.umich.edu/tprc/papers/2005/450/L%20Waverman-%20Telecoms%20Growth%20in%20Dev.%20Countries.pdf>

53 *Submission 43*, p. 2.

54 *Submission 41*, p. 4.

55 *Submission 41*, p. 4.

56 *Submission 41*, p. 5.

57 *Committee Hansard*, 24 March 2009, p. 73.

58 *Submission 41*, p. 5.

There is virtually no night-flying in any of these places because runway lights and facilities are so bad that you cannot do it.<sup>59</sup>

9.36 According to Qantas, this limitation greatly restricts connectivity and the viability of airline schedules. Mr Andrew Tongue, Department of Infrastructure, Transport, Regional Development and Local Government, used PNG to convey the extent of the infrastructure challenge. He informed the committee that in PNG:

...there are around 22 major airstrips, but because of the climate conditions those airstrips basically need a reseal every three years. That imposes a significant burden on the government to find the money, in the order of 7 to 10 million kina a year, just to maintain their stock of infrastructure let alone expand it.<sup>60</sup>

9.37 According to Mr Tongue, safety standards vary depending on the size of the nation and its economic capacity, with possibly 'Fiji towards one end and some of the smaller nations towards the other end'. As an example, he cited Nauru which needed assistance to buy fire engines to meet even basic aviation safety standards.<sup>61</sup>

9.38 There is also difficulty keeping pace with advances in technology. With regard to air traffic control, Mr Tongue observed that while the infrastructure is in place, it is fairly basic and, looking forward, new technologies for managing airspace will start to become common globally. He noted the importance of the region moving with other countries such as the US and Australia as they adopt new technology. To meet these changes, some Pacific island countries will need to make future investments.<sup>62</sup>

### ***Trained personnel***

9.39 Air transport also highlights the importance of having not only the physical infrastructure but also appropriately qualified and trained personnel to use, maintain and repair it. Pilots, engineers, security, customs and quarantine personnel using sophisticated equipment are needed. The Department of Infrastructure, Transport, Regional Development and Local Government noted, however, that the paucity of appropriately trained people at all levels is a challenge for the aviation industry in Pacific islands countries.<sup>63</sup> For example, Mr Tongue drew attention to the limited capacity to manage airspace, provide basic safety services and to run regulatory

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59 *Committee Hansard*, 24 March 2009, p. 73.

60 *Committee Hansard*, 20 November 2008, p. 74.

61 *Committee Hansard*, 20 November 2008, p. 74.

62 *Committee Hansard*, 20 November 2008, p. 79.

63 *Submission 43*, p. 2.

systems to ensure that private operators meet basic safety standards.<sup>64</sup> Qantas made a similar observation particularly about the lack of trained personnel. It noted:

...the limited capability of the smaller island states to absorb or maintain technological development—in particular due to their lack of skilled indigenous manpower and technical training facilities—has made the aviation sector dependent upon donor funds and technical resources of the larger Pacific rim countries and beyond. There is no indication that this is likely to change—Fiji and the French territories excepted.<sup>65</sup>

9.40 Mr Callaghan explained that the great number of safety problems from the regulatory point of view together with the lack of oversight and of trained personnel in these countries, 'make it very, very difficult for us to consider going back into many of these markets'.<sup>66</sup> The matter of brain drain adds to this problem of having appropriately trained and skilled technicians. He pointed out that people can be trained in the Pacific but they leave as soon as they have internationally recognised qualifications.<sup>67</sup>

### *Other impediments*

9.41 The handicaps to expanding and further developing the aviation industry mirror those holding back advances in infrastructure in other sectors—small markets, absence of competition, inadequate investment and lack of trained personnel. The committee has noted the dominance of state-owned enterprises in providing essential services in Pacific island countries with the concomitant problems of inefficiencies and poor delivery of service. This tendency is evident in the aviation industry. Mr Tongue noted:

...the extent to which national governments will prop airlines up because of that national pride issue of having their logo on the tail and having a brand in the global market.<sup>68</sup>

9.42 In his view, this type of ownership had 'possibly inhibited the development of a deep market in the region such that you could book a ticket from, say, Brisbane to Fiji and then climb on a relatively clean, modern jet to another part of the region and then get on a smaller plane to do a hop to a small island'.<sup>69</sup>

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64 *Committee Hansard*, 20 November 2008, p. 74. Mr Callaghan concluded that countries such as Australia and New Zealand find it difficult to operate in the Pacific without appropriate regulation and trained personnel to maintain the facilities in the region. *Committee Hansard*, 24 March 2009, p. 75.

65 *Submission 41*, p. 4.

66 *Committee Hansard*, 24 March 2009, p. 73.

67 *Committee Hansard*, 24 March 2009, p. 75.

68 *Committee Hansard*, 20 November 2008, p. 82.

69 *Committee Hansard*, 20 November 2008, p. 77.

9.43 As with telecommunications, some Pacific island countries have made definite moves to remove barriers to entry and to develop more open access regimes. Samoa in particular demonstrates the economic benefits and improved economic prospects that flow from the liberalisation of its telecommunications and aviation services. In the assessment of a recent ADB study, 'the country's economy and opportunities for productive private investment have been palpably transformed'.<sup>70</sup> In its *Development Outlook 2008*, the bank observed:

The merits of reform and of stimulating competition have been demonstrated by a reduction in airfares since the introduction in late 2005 of Polynesian Blue Airlines—a joint venture between Virgin Blue and government-owned Polynesian Airlines...<sup>71</sup>

9.44 The IMF also commented on this re-structuring of Polynesian Airlines into a joint venture with a foreign airline indicating that this move 'helped to reduce airfares to Samoa by around half, resulting in a significant increase in tourist arrivals'.<sup>72</sup> Mr Tongue noted, however, that some countries still rely on limited services and that growth would be constrained unless the routes could be 'thickened up' to the point where there is a daily service.<sup>73</sup> He suggested that with economic growth and as the market grows, for example with the advent of the Chinese market, 'the routes will start to get denser and the pressure to try and open the region up as a tourism product by air will grow'. This situation should in turn 'start to force some of these changes'. Nonetheless, he could not pin point the timing for that development but indicated that it would be 'some years away'.<sup>74</sup> The Department of Infrastructure, Transport, Regional Development and Local Government noted the recent entry of low-cost carriers but observed that:

...the sector continues to face challenges typical of remote and regional services, including servicing a number of non-commercially viable routes to smaller states. It is becoming increasingly difficult for small and government-owned regional carriers to remain viable in the current market conditions.<sup>75</sup>

9.45 With regard to freight, Mr Tongue informed the committee it had been growing in the general region at the rate of about seven per cent but was also 'sensitive

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70 Asian Development Bank, Technical Assistance Consultant's Report, *REG: Improving the Delivery of Infrastructure Services in the Pacific*, Project Number 38633, December 2007, Vol II, Part 2f: National Strategy: Samoa, p. 31.

71 Asian Development Bank, *Asian Development Outlook 2008*, p. 254, <http://www.adb.org/Documents/Books/ADO/2008/SAM.asp> (accessed 14 October 2008).

72 IMF, 'IMF Executive Board Concludes 2007 Article IV Consultation with Samoa', Public Information Notice (PIN) No. 07/62, 1 June 2007.

73 *Committee Hansard*, 20 November 2008, p. 76.

74 *Committee Hansard*, 20 November 2008, p. 77.

75 *Submission 43*, p. 2.



to whether the services are dailies or less'. He explained that freight is expensive in Pacific island countries but:

If you can get dailies, you can start to build freight dependent enterprises because you have got that continuity of supply, but at less than dailies it is expensive...Once the market is thick enough and you can get the wider-body aircraft in, then you have got more capacity for freight and freight rates drop, so there are some inherent disadvantages in the size of the market.<sup>76</sup>

9.46 Mr Tongue explained further that there had been some attempts to develop multilateral arrangements that would 'free up the market so that you would start to see the emergence of some dominant carriers who could develop the region, and products in the region, to offer movement around the region'. In his view, however:

Nations in the region see a degree of national pride in having their own carrier and, whilst there have been various studies by the ADB and others about how to free the market up, progress is slow.<sup>77</sup>

### ***Shipping***

9.47 The problems with shipping infrastructure reflect those of other sectors. According to AusAID's 2009 economic review of the Pacific, ports in the region are 'inefficient, expensive and slow', which 'makes it hard to export perishable goods and it degrades the quality of goods reaching markets'.<sup>78</sup> For example, Dr Lake, AusAID, referred to a statement by the Prime Minister of Vanuatu that 'the ineffective operation of their ports facilities, which are some of the slowest and most expensive in the region, is a major constraint to Vanuatu's exporting to other parts of the world'.<sup>79</sup> Mr Tongue explained that shipping costs are quite high in the region for reasons similar to aviation cargo, particularly its 'fairly concentrated ownership structure'.<sup>80</sup> The Pacific Islands Forum Secretariat noted also that as with aviation, 'safety of shipping in the region is a major concern'.<sup>81</sup>

### ***Summary***

9.48 The committee has identified infrastructure in Pacific island countries as a major impediment to economic development. It found that poor economic infrastructure especially in transport, storage and processing facilities creates problems for producers in getting their produce to market. The committee also noted

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76 *Committee Hansard*, 20 November 2008, p. 76.

77 *Committee Hansard*, 20 November 2008, p. 77.

78 Commonwealth of Australia, *09 Pacific Economic Survey: engaging with the world*, AusAID, Canberra, September 2009, p. 103.

79 *Committee Hansard*, 19 June 2009, p. 60.

80 *Committee Hansard*, 20 November 2008, p. 80.

81 *Submission 69*, p. 15.

the enormous benefits to business that have already been achieved through reforms to the telecommunications sector. Experience, especially in telecommunications, shows the advances that can be made through increased private sector engagement.

### **Australia's assistance**

9.49 A number of witnesses suggested that Australia could work with Pacific island countries 'to identify, prioritize and support the building and rebuilding of essential infrastructure which would require extensive funding, training and monitoring standards'.<sup>82</sup>

9.50 In this regard, the Australian Government recognises that because of their small size, many Pacific island countries have difficulty generating sufficient internal revenue to finance the construction and maintenance of important economic infrastructure.<sup>83</sup> Improving this infrastructure, particularly with regard to transport, is already a high priority for the Australian Government which has a record of supporting infrastructure projects by providing practical funding. For example, AusAID's 2008 Annual Report recorded that it funded:

- the maintenance of approximately 2000 kilometres of road in nine PNG provinces, which included regravelling and resealing 404 kilometres of roads;
- the maintenance of 340 kilometres of the Highlands Highway—a key economic lifeline for PNG which, according to AusAID, delivered 'significant improvements in mobility and access for PNG people and reduced the travel time between Lae and Goroka from five to four hours';<sup>84</sup> and
- the rehabilitation and enhancement of existing infrastructure in Solomon Islands, including 75 kilometres of roads and bridges in Guadalcanal and Malaita.<sup>85</sup>

9.51 Funding infrastructure also goes to small but necessary projects such as the purchase of two vehicles for Nauru that meet international aerodrome fire fighting standards. Australia's Civil Aviation Safety Authority (CASA) is providing technical assistance for this project.<sup>86</sup>

9.52 In addition, the 2008 Budget Statement announced that a new Pacific Regional Infrastructure Facility was to be established to improve basic infrastructure services in the Pacific. It would involve Australia, multilateral development banks and

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82 *Submission 10*, p. 6.

83 The Hon Stephen Smith MP, Minister for Foreign Affairs, and the Hon Bob McMullan MP, Parliamentary Secretary for International Development Assistance, Budget Statement 2008–09: Australia's International Development Assistance Program, 13 May 2008, p. 28.

84 AusAID, *Annual Report 2007–08*, p. 45.

85 AusAID, *Annual Report 2007–08*, p. 64.

86 *Submission 43*, paragraph 13.

'potentially, other donor partners'.<sup>87</sup> Australia would 'invest \$127 million over four years, with \$5.5 million in 2008-09'. According to the Budget Statement, support would be 'country specific, targeted to address local constraints to growth and challenges to nation building and stability'.<sup>88</sup>

9.53 On 19 August 2008, Australia, New Zealand, the World Bank and the Asian Development Bank launched the Pacific Region Infrastructure Facility to coordinate major donor support for improvements in basic infrastructure services. Under this initiative, funding of up to \$200 million over four years would be available to assist Pacific island countries develop and maintain critical economic and other infrastructure. Initially, Kiribati, Samoa, Solomon Islands, Tonga, Tuvalu and Vanuatu were to be the main beneficiaries. Transport was identified as a priority, though water sanitation, energy, telecommunications and utility reform were also included.<sup>89</sup> The European Union recently indicated its keen interest in joining this facility and its willingness to contribute substantial funds to the initiative.<sup>90</sup>

9.54 The committee welcomes this initiative as it addresses a longstanding concern about the lack of coordination among donor countries in the region.

9.55 Information provided by AusAID shows that Australian funding for infrastructure increased to the region from \$81,181,145 for 2006–07 to \$114,342,299 for 2007–08. These figures represent 10.6 per cent and 13 per cent respectively of Australia's total ODA to PNG and the Pacific.<sup>91</sup>

9.56 The Pacific Partnerships for Development provide some detail on the infrastructure assistance that Australia intends to provide to individual Pacific Island countries. The partnership with PNG places transport infrastructure as priority outcome 1. Its objectives are to achieve 100 per cent of the 16 NDP priority national roads in good condition by 2015; 22 regional airports meeting safety certification standard by 2015; and improved port operations. The partnership with Vanuatu and Solomon Islands identified the development of essential infrastructure to support economic growth and service delivery as a priority. In Vanuatu, assistance would be provided to rehabilitate and improve maintenance of roads, expand access and reduce

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87 The Hon Stephen Smith MP, Minister for Foreign Affairs, and the Hon Bob McMullan MP, Parliamentary Secretary for International Development Assistance, Budget Statement 2008–09: Australia's International Development Assistance Program, 13 May 2008, p. 28.

88 The Hon Stephen Smith MP, Minister for Foreign Affairs, and the Hon Bob McMullan MP, Parliamentary Secretary for International Development Assistance, Budget Statement 2008–09: Australia's International Development Assistance Program, 13 May 2008, p. 28.

89 Pacific Islands Forum Secretariat, *Forum Communiqué*, Thirty-ninth Pacific Islands Forum, Niue, 19–20 August 2008, paragraph 25.

90 Delegation of the European Commission to Australia and New Zealand, 'The EU at the Pacific Islands Forum: 4–7 August 2009', Media release, <https://promo-manager.server-secure.com/em/message/email/view.php?id=113737&du=1002559> (accessed 17 July 2009).

91 AusAID, answer to written question on notice. See Table 18.1.

costs of telecommunications and power services and for reforms to improve maritime and aviation transport. Importantly, the plan anticipated that local employment and private sector development would result from road maintenance activities. In Solomon Islands, the emphasis was on increasing the proportion of the rural population with reliable access to markets and services; reliable and affordable access to energy; and affordable access to telecommunications. Improved economic infrastructure was also recognised as a priority in the PPDs with Samoa, Nauru and Tonga.<sup>92</sup>

### ***Human capacity***

9.57 As noted earlier, the problem with inadequate economic infrastructure extends to what one witness termed 'soft infrastructure'—the trained and skilled people required to operate and maintain the hardware. Mr Tongue saw 'the people side as being a necessary adjunct to any hard, physical infrastructure' and was of the view that Australia 'is well placed to offer that assistance'.<sup>93</sup>

9.58 The Department of Infrastructure, Transport, Regional Development and Local Government stated in its submission that it provides aviation security support in PNG and the Pacific through staff exchanges and aviation security training and the provision of equipment.<sup>94</sup> It noted that in 2004 the then-Department of Transport and Regional Services placed Australian officials in the position of Deputy Chief Executive Officer and Aviation Security Adviser in the PNG Civil Aviation Authority. According to the department, significant improvements have been made since then.<sup>95</sup>

9.59 The department has also been involved in 'a whole range of training activities to do with port security [and] port management, such as how to manage a port and make it turn a dollar, the basics of billing systems and all those sorts of things that underpin activity in the area'.<sup>96</sup> Mr Tongue explained that there are a range of approaches to building technical capacity in maritime security, from short courses delivered in country to secondment into Australian organisations to experience how Australia performs these tasks and to gain higher level knowledge. He cited people from Papua New Guinea undertaking a university-level course at the Australian Maritime College as an example of the sorts of programs that are on offer.

9.60 Skills shortages in the region are not confined to economic infrastructure. Indeed, one of the themes dominating the report so far is the lack of human capacity

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92 Partnerships for Developments between Australia and the relevant Governments, see AusAID's website, <http://www.aisaid.gov.au/country/partnership.cfm> (accessed 20 July 2009). See also, The Hon Stephen Smith MP, Minister for Foreign Affairs, and the Hon Bob McMullan MP, Parliamentary Secretary for International Development Assistance, Budget Statement 2009–10: Australia's International Development Assistance Program, 12 May 2009, pp. 45–47.

93 *Committee Hansard*, 20 November 2008, p. 82.

94 *Submission 43*, paragraph 6.

95 *Submission 43*, paragraph 10.

96 *Committee Hansard*, 20 November 2008, p. 82.

across all economic sectors. The committee has mentioned skill shortages in areas such as resource management, marketing, trade negotiations, activities associated with mining and in business management to name just a few. In the following chapters, the committee considers in detail the education and training available to Pacific islanders.

