

TRANSPORT: SECTOR ASSESSMENT

A. Sector Road Map

1. Sector Performance, Problems, and Opportunities

1. The national transport network's weak condition is often cited as a major constraint on economic growth and improved social service provision in Papua New Guinea. ADB's transport program attempts to improve performance in the country's land, water and air transport sectors.

2. **Road Transport:** The land transport system comprises the national road system (8,762 km), provincial (approximately 8,100 km), and perhaps another eight thousand district, local and other roads, and eight hundred bridges. The national road include 3,335 km of designated "roads of national importance," often called "priority roads," and the focus of most maintenance and improvement efforts. There are 2,647 km sealed roads, almost all in the national system. Geographic features, most noticeably several very large rivers, divide the road system into several distinct networks.

3. The road system's length has not increased since 2000. The government's current policy is to improve the existing road network, rather than expand it (expansion would deny maintenance funds to existing roads and result in a net system loss. Landslides, floods and other natural disasters are frequent, necessitating repeated emergency works.

4. Roads conditions are generally not good, but the Department of Works (DOW) has made considerable progress in maintaining, rehabilitating and upgrading national roads. The length of national roads classified in "Good" condition (according to the DOW's RAMS database) rose from 17% in 2004 to 32% in 2010. Today, 48% of the priority roads are in good condition.

5. There are no reliable up-to-date traffic counts.

6. **Water Transport:** Approximately 60% of the population reside on the coast, rivers, and swamps suitable for water navigation. The state-owned enterprise, PNG Ports Corporation Limited (PNGPCL), operates 16 large ports, 14 of which support both foreign and coastal shipping. Lae is the largest port, followed by Port Moresby. PNGPCL provides services on a commercial basis, but only two or three of the largest port recover operating costs. Mining, construction, shipping and other private companies operate 11 or more additional ports. There may be as many as 400 additional community-owned and operated piers, jetties and landings supporting small craft use in remote communities.

7. PNGPCL insists on the confidentiality of its port traffic indicators.

8. PNGPCL's primary port, Lae, suffers from insufficient wharf space, limited storage capacity, and the absence of large-scale container handling equipment, while the country's many loss-making ports have excess capacity. PNGPCL has expanded and improved Lae's wharves (and ADB and Independent Public Business Corporation (IPBC) are funding further expansion of that port to include a tidal basin providing sufficient capacity to from 2018 onwards), but otherwise it has made limited investments in port capacity improvements since 2005.

9. **Air Transport:** 21 large-scale national airports managed by the National Airports Corporation (NAC) provide regular service for jet and large turboprop aircraft; 20 secondary airports are owned by provincial governments, and another 450 or more small-scale aerodromes are the responsibility of local communities, church missions, and businesses.

10. The navigation equipment at most of the 21 national airports is old, unreliable and deteriorating. Rescue and fire-fighting services are only available at seven airports. Large aircraft introduced in recent years threaten to damage tarmac runway surfaces and endanger safety. Most national airports make financial losses on their operations. Losses from airport operations and a lack of national government funding have precluded investment in the air transport sector, although assistance from AusAID and ADB's large Civil Aviation Development Investment Program (CADIP) MFF project is available.

11. The recent reorganization of the Civil Aviation Authority, previously responsible for all aspects of national airports, places NAC in charge of on-ground airport operations and maintenance, while PNG Air Services Limited (PNGASL) is in control of communications and navigation. The Civil Aviation Safety Authority (CASA) regulates air safety.

12. The nation's two regularly scheduled airlines focus on passenger service, carrying 1.57 million passengers to the 21 NAC airports in 2008. The flag carrier, Air Niugini, replaced smaller craft with F-100, Boeing 757s and 767s. While aircraft movements only grew 2% per annum 2005–2008, passenger traffic rose 7.5% per year. Airport safety, security, tarmac conditions, navigation equipment and communications failures often cause flight cancellations, raising airline operating costs and passenger fares.

13. The poor condition of Papua New Guinea's transport infrastructure inhibits mobility and makes basic services inaccessible to many households. A nation's productivity and competitiveness is partly a function of its ability to move people and goods efficiently to markets. PNG's fragmented transport network system limits the markets producers can sell to, fosters local monopolies, and raises costs considerably.

2. Government's Sector Strategy

14. Papua New Guinea's Vision 2050 places great emphasis on access to services and wealth creation (including agriculture, forestry, fisheries and tourism), and includes transport as a means to those goals.

15. The PNG Development Strategic Plan (DSP) 2010–2030¹ proposes specific, ambitious transport infrastructure investments. This includes raising the share of national roads in good condition from 32% in 2010 to 100% in 2030, while tripling their length, in the next twenty years. This includes long "missing link," "corridor," or "nation building roads" creating a national road network. DSP anticipates even greater increases in shipping and air transport traffic. Government funds and construction sector capacity sufficient to support these investments will likely accrue later, once the PNG liquefied natural gas (LNG) project and other developments boosts government revenues. There are likely, however, to be capacity constraints during 2011 to 2015, the duration of the next ADB Country Partnership Strategy..

16. The Department of Transport (DOT) is responsible for transport planning and coordination, as distinct from other agencies responsible for maintenance and civil works,

¹ Government of PNG. 2010. PNG Development Strategic Plan 2010–2030. Port Moresby.

operations, safety, registration and other line functions. DOT is currently preparing a National Transport Strategy 2011-2030 (NTS) and Medium Term Transport Plan 2011-2015 (MTTP—a 5-year capital improvement program). The NTS and MTTP are likely to emphasize maintenance and rehabilitation above system expansion, just as the previous National Transport Development Plan 2006-10 did, and will also focus on institutional arrangements.

17. Papua New Guinea's transport strategies have suffered problems in implementation. There are numerous national government institutions responsible for PNG's transportation². Unclear agency assets, roles and responsibilities have led to inaction. Unpredictable budget allocations delay projects, and emergency works can consume precious funds. Procurement suffers from excessively long approval processes. Project management, reporting, monitoring and accountability can be improved. Community service obligations (CSO) impose losses from operations without compensation, and make it difficult for state-owned enterprises (SOE), such as PNGPCL and NAC, to operate on a commercially viable basis. The result is an overwhelming maintenance backlog.

18. ADB has supported many transport reforms improving data inputs and strengthening the planning process, providing institutional support for statutory authorities, supporting donor harmonization, and other initiatives. The ADB continues to assist the Government of PNG (GoPNG) developing innovations, such as long-term performance-based contracts, improvements to the procurement process, and CSO reform.³

19. A civil works sector with weak capacity acts as a constraint to infrastructure development. The PNG LNG project's investment requirements represent an enormous increase in demand on this already over-burdened sector. Access to land, compensation demands and security threats, especially in the Highlands region, represent further constraints and costs. ADB hopes to assist PNG increase capacity and competition in the civil works sector by attracting more, larger, international contractors to enter the market, and is exploring opportunities to increase the skills base and foster small and medium construction enterprises.⁴

3. ADB Sector Experience and Assistance Program

20. The ADB is the second largest source of foreign assistance, and largest lender, in Papua New Guinea's transport sector. While ADB typically concentrates on one transport sub-sector in each country, it is active in land, water and air transport. Its land transport programs concentrate in the Highlands region. ADB loans and TA projects have supported asset maintenance and upgrading, institutional strengthening, and capacity building.

21. AusAID Transport Sector Support Program (TSSP) umbrella transport program provides approximately A\$50 million (approximately US\$42 million) per annum to build capacity, support asset maintenance, and improve governance. It funds large land, water and air transport projects in many provinces, including highways in the Highlands region. AusAID also manages additional capacity-building assistance to the transport sector through the Strongim Gavman Program. The World Bank and JICA fund road and bridge programs in many provinces (the Donor Results Matrix lists the various AusAID and other foreign assistance projects active in the country.)

² See separate appendix on PNG Transport Planning, Implementation and Finance Agencies.

³ A fuller discussion of the opportunities for the reform of government systems and processes appear in a separate knowledge base paper, *Institution Building in Infrastructure Sector*.

⁴ A fuller discussion of the constrained construction sector and opportunities for reform appear in a separate knowledge base paper, *Civil Works Capacity Constraints in Papua New Guinea*.

22. The greatest concern arising from the performance of ADB's transport loans in PNG has been the frequent delays and cost over-runs arising during projects implementation. Road infrastructure projects have a poor history of falling short of output targets, even after extensions, and costing much more than anticipated. The causes of project implementation delays and cost over-runs are several: counterpart funding shortages, capacity shortfalls in government institutions, an extended procurement process, and a constrained private civil works sector, as well as the special land acquisition, compensation and security challenges that arise around land transport projects in Papua New Guinea, especially in the Highlands region.⁵

⁵ See also *Civil Works Capacity Constraints* and *Sector-Level Risk Assessment and Risk Management Plan* listed under supplementary documents of the PNG country partnership strategy 2011–2015 (Appendix 2).