



Report and Recommendation of the President to the Board of Directors

Project Number: 44172-2
July 2011

Proposed Grant Kingdom of Tonga: Tonga–Fiji Submarine Cable Project

Asian Development Bank

CURRENCY EQUIVALENTS

(as of 23 June 2011)

Currency Unit – pa'anga (T\$)

T\$1.00 = \$0.5890

\$1.00 = T\$1.6978

ABBREVIATIONS

ADB	–	Asian Development Bank
FINTEL	–	Fiji International Telecommunications Limited
Gbps	–	gigabits per second
GDP	–	gross domestic product
IDA	–	International Development Association
ISP	–	internet service provider
Mbps	–	megabits per second
MFNP	–	Ministry of Finance and National Planning
MIC	–	Ministry of Information and Communication
PAM	–	project administration manual
PRIF	–	Pacific Region Infrastructure Facility
SCCN	–	Southern Cross Cable Network
TA	–	technical assistance
TCC	–	Tonga Communications Corporation
TCL	–	Tonga Cable Limited

NOTES

- (i) The fiscal year (FY) of the government and its agencies ends on 30 June. FY before a calendar year denotes the year in which the fiscal year ends, e.g., FY2010 ends on 30 June 2010.
- (ii) In this report, "\$" refers to US dollars unless otherwise stated.

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PROJECT AT A GLANCE

1. Project Name: Tonga-Fiji Submarine Cable Project		2. Project Number: 44172-022																		
3. Country: Tonga		4. Department/Division: Pacific Department/Urban, Social Development & Public Management Division																		
5. Sector Classification:																				
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I. THE PROPOSAL

1. I submit for your approval the following report and recommendation on a proposed grant to the Kingdom of Tonga for the Tonga–Fiji Submarine Cable Project.¹

2. Under the proposed project, the Asian Development Bank (ADB) and the World Bank will support the development and operation of a submarine fiber optic communication cable system linking Tonga to Fiji where an existing international submarine cable network will provide onward cost-effective access to the rest of the world.² Separately, the World Bank and the Government of Australia, through the Pacific Region Infrastructure Facility (PRIF), will also provide technical assistance (TA) to improve the regulatory framework and develop the capacity of the regulator.

II. THE PROJECT

A. Rationale

3. Tonga is one of the more isolated countries in the Pacific region, with a small population of 102,000³ spread across 48 inhabited islands out of 171 islands.⁴ About 70% of the population is in Tongatapu where the capital city of Nuku'alofa is located. Main economic activities include fishery, agriculture, and tourism. Tonga's small size and distance from large markets do not allow the people to exploit economies of scale. A narrow resource base and small market have resulted in a highly undiversified economy. Before the recent financial crisis, remittances from about 100,000 Tongans overseas account for an estimated 30% of the gross domestic product (GDP). As the global economic slowdown affected the principal remittance-sending countries (Australia, New Zealand, and the United States), remittances fell by 10.2% in FY2010, following a decline of 13.6% in FY2009.⁵ Lack of economic opportunity within the country resulted in migration from rural to urban areas, and overseas.

4. Tonga's isolation and other constraints to economic development may be mitigated in part by improved access to and more affordable telecommunications, especially high-speed (broadband) internet, which offers new economic opportunities domestically, as well as connections to larger markets, and new avenues for delivery of services, nationally and internationally. A recent World Bank study indicates that a 10% increase in broadband penetration results in a 1.38% increase in GDP growth in low and middle income countries.⁶ Such impacts result from (i) reduced transaction costs for business, government, and household communications; (ii) new business opportunities such as investments in e-commerce and business process outsourcing facilities; and (iii) improved public service delivery, in particular to support e-education and e-health services. Affordable high speed internet services will help Tongans maintain social cohesion with their relatives residing abroad and improve disaster risk management.

¹ The design and monitoring framework is in Appendix 1.

² ADB provided project preparatory TA, complementing preparatory activities by the World Bank and the Tonga Cable Limited (ADB. 2010. *Technical Assistance to the Kingdom of Tonga for the Tonga–Fiji Submarine Cable Project*. Manila.)

³ Tonga Department of Statistics. Tonga Population Census 2006. <http://www.spc.int/prism/country/to/stats/>.

⁴ US Department of State. *Background Note: Tonga*. <http://www.state.gov/r/pa/ei/bgn/16092.htm>.

⁵ National Reserve Bank of Tonga. 2011. *Monetary Policy Data*. Nuku'alofa. http://www.reservebank.to/docs/MonetaryPolicyData/Apr11_MP_data.pdf.

⁶ World Bank. 2009. *Extending Reach and Increasing Impact: Information & Communication Technology for Development*. Washington DC.

5. Tonga was the first country in the Pacific to liberalize its telecommunications sector. Since 2002, access to basic telecommunications has increased significantly. Mobile tele-density,⁷ at about 60%, is among the highest in the region; and local and international call tariffs are among the lowest in the Pacific. Internet penetration, however, remains low with about 2,500 subscribed broadband internet users. This is because of the high cost and limited availability of international bandwidth, resulting in congestion. Internet service is open for competition and five internet service providers (ISPs) have been licensed. However, because of the high cost of satellite infrastructure and capacity leases, only two telecommunications operators are operational ISPs.

6. The limited capacity and high cost of international bandwidth is the principal constraint to higher internet penetration, the introduction of new telecommunications services, and new market entrants. This is due to Tonga's total dependence on satellite connectivity. The current market price for two-way satellite capacity is about \$3,600 per megabit per second (Mbps) per month. With normal growth, Tonga's bandwidth demand is projected to increase to 1.243 gigabits per second (Gbps) by 2032.⁸ With the current satellite capacity and price, it would be impossible to meet the growing demand.

7. The government and telecommunications industry in Tonga have considered several options to improve access and reduce the international connectivity cost. The preferred option is to invest in a new submarine fiber optic cable linking to the Southern Cross Cable Network (SCCN) in Fiji. This will provide substantially higher initial capacity of 10 Gbps and reduce international connectivity costs by more than 60%. Currently, the cheapest broadband internet is around \$60 per month, which is about 28% of monthly income approximated with GDP per capita in 2010. The submarine cable system will stimulate increased take-up of broadband internet by reducing the price rapidly.

8. In addition to the positive socioeconomic impact in Tonga, the submarine cable system will contribute to regional integration. It will increase the frequency and quality of communications among the countries in the region, thus increasing trade in services (tourism and back-office functions) and allowing the region to form a sizable market for digital products and services. It will also strengthen the existing regional public goods and encourage new ones by allowing countries to share the limited knowledge and human resources available in the Pacific.

9. Despite the submarine cable's perceived benefits, investment in submarine cable in the Pacific has been limited. The requirement of a large upfront capital investment, a long period of return on investment, and commercial risks from rapid changes in technology and business environment has led to a market failure. A meager private sector in Tonga cannot mobilize a large investment for a cable. The cable's long-term public benefits far exceed private sector investment return, and therefore, the government considers it as a public investment priority.

10. The project responds to the Pacific Islands Forum leaders' call for improved international connectivity for the islands member countries.⁹ ADB's Pacific Approach 2010—2014 stresses connectivity through improved information and communication technology as a driver of change.¹⁰ It also supports ADB's country partnership strategy in Tonga by contributing to

⁷ The number of subscribers per 100 inhabitants.

⁸ World Bank. 2010. *Technical, Economic and Financial Connectivity Study for Tonga and Samoa*. Unpublished.

⁹ Pacific Islands Forum. 2005. *The Pacific Regional Digital Strategy*. Suva.

¹⁰ ADB. 2010. *ADB's Pacific Approach 2010—2014*. Manila.

improved social services delivery in urban areas and an improved private sector-enabling environment.¹¹ The project will be the first phase of the Pacific Regional Connectivity Program led by the World Bank, which aims to connect Tonga, Samoa, Solomon Islands, and Vanuatu by submarine optic fiber cables to the existing global submarine cable network.

B. Impact and Outcome

11. The impact of the project will be that widely available and affordable information and communication technology services improve Tonga's economic performance and public service delivery. The outcome is that the population of Tonga will have access to good quality broadband internet services at a lower price.

C. Outputs

12. Output 1 of the project is the establishment and efficient operation of the Tonga submarine cable system by Tonga Cable Limited (TCL), a company established in late 2009 to develop submarine cable options for Tonga. The submarine cable system will comprise installation of an 827-kilometer cable link between Nuku'alofa (Tonga) and Suva (Fiji) and construction of a landing station in Tonga. In Fiji, the cable will use an existing landing station where the Tonga cable is connected to the SCCN for data traffic to Australia, the United States, and the rest of the world. TCL will procure, own, and operate the cable; and it will be sole wholesaler of the cable capacity to the retail service providers. Output 1 will be jointly financed by ADB and the World Bank.

13. Output 2 will ensure efficient and effective project management services by TCL. This output will mainly be financed by TCL, with some parallel financing from the World Bank.

14. Since TCL will be a sole wholesaler with dominant market power for international connectivity, it needs to be regulated to maintain cost-based pricing and open and fair access to all retail service providers, thus maximizing market competition. In parallel to the project, the World Bank will provide TA to support the regulator, the Ministry of Information and Communications (MIC), to improve telecommunications policy and the legal and regulatory environment for internet access and e-transactions. The TA will also support MIC's capacity development. It will be financed by the World Bank and the Government of Australia through PRIF. The regulatory and capacity development of the MIC is critical to achieve the outcome envisaged from the ADB-financed outputs. Close collaboration between ADB and the World Bank will be maintained during the development of the regulatory framework and the capacity development of MIC through joint review of both agencies on the terms of reference, inputs, reports and recommendations of the consultants.

D. Investment and Financing Plans

15. The project is estimated to cost \$32.8 million. The investment plan is summarized in Table 1. Detailed cost estimates by expenditure category and by financier are in the project administration manual (PAM).¹²

¹¹ ADB. 2007. *Country Partnership Strategy: Tonga, 2007—2012*. Manila.

¹² Project Administration Manual (accessible from the list of linked documents in Appendix 2).

Table 1: Project Investment Plan
(\$ million)

Item	Amount ^a
A. Base Cost	
1 Civil works (landing station)	4.20
2 Mechanical and equipment (submarine cable system) ^b	26.20
3 Consulting services	1.20
4 Tax and duties ^c	0.80
Subtotal (A)	32.40
B. Recurrent Cost ^d	0.40
Total (A+B)	32.80

^a End-2010 prices. Including contingencies.

^b Including related services such as transportation, insurance, installation, commissioning, training, and initial maintenance.

^c To be financed by Tonga Cable Limited.

^d Salaries and other expenses during construction.

Source: Asian Development Bank estimates.

16. The government has requested a grant of \$9.7 million from ADB's Special Funds resources to help finance the submarine cable system development.¹³ The government has also requested grant finance from the World Bank of \$16.5 million in joint financing to support the submarine cable system. Tonga is at high risk of debt distress and cannot afford to take on more borrowing as its public debt is projected to reach 58.5% of gross domestic product in FY2011.¹⁴ Therefore, grant financing has been sought. TCL will provide counterpart financing equivalent to \$6.6 million to fund (i) construction of a landing station, including the land lease; (ii) environmental management and legal expenses; (iii) consulting services for cable construction supervision; (iv) taxes and duties; and (v) recurrent costs during construction.

17. The government will make the proceeds of the grants from the cofinanciers available to TCL, against the issuance of shares in the capital of TCL, under a share purchase agreement on terms and conditions satisfactory to ADB. The share purchase agreement will require TCL to finance the submarine cable system from the proceeds of the grants. The share purchase agreement will value shares in TCL at the nominal amount contributed by the government and TCL's current sole shareholder, Tonga Communications Corporation (TCC). The financing plan is in Table 2.

Table 2: Financing Plan

Source	Amount (\$ million)	Share of Total (%)
Asian Development Bank ^a	9.7	29.6
World Bank (IDA) ^b	16.5	50.3
TCL	6.6	20.1
Total	32.8	100.0

IDA = International Development Association, TCL = Tonga Cable Limited.

^a ADF grant, including \$1.93 million from Tonga's country allocation and \$7.77 million from the regional allocation.

^b Joint financing from IDA regional funds.

Source: Asian Development Bank estimates.

¹³ ADB's grant will finance the submarine cable system contract including associated transportation and insurance costs.

¹⁴ ADB. 2011. *Pacific Economic Monitor, February 2011*. Manila; and World Bank. 2011. *East Asia and Pacific Economic Update 2011*. Volume 1. Washington DC.

E. Implementation Arrangements

18. The Ministry of Finance and National Planning (MFNP) will be the executing agency responsible for overall administration of the project. TCL will be the implementing agency and will handle all procurement and financial management for outputs 1 and 2. The implementation arrangements are summarized in Table 3 and described in detail in the PAM.

Table 3: Implementation Arrangements

Aspects		Arrangements		
Implementation period		October 2011–June 2016		
Estimated project completion date		30 June 2016		
Estimated grant closing date		31 December 2016		
Management				
(i) Project steering committee ^a		Chaired by deputy prime minister; consists of ministers of MFNP, MPE, and MTEYS and chief secretary and secretary to cabinet		
(ii) Executing agency		MFNP		
(iii) Implementing agencies		TCL		
(iv) Project management unit		8–9 persons under TCL are proposed		
Procurement		Limited international bidding	1 contract	\$26,200,000 ^b
		National procurement	1 contract ^c	\$3,957,000
Consulting services		National procurement	3 contracts ^d	\$1,000,000
Retroactive financing and/or advance contracting		TCL requested advanced procurement action for the submarine cable system up to bid evaluation. No retroactive financing is envisaged.		
Disbursement		The grant proceeds will be disbursed in accordance with ADB's <i>Loan Disbursement Handbook</i> (2007, as amended from time to time) and detailed arrangements agreed upon between the government and ADB.		

ADB = Asian Development Bank; MFNP = Ministry of Finance and National Planning; MPE = Ministry of Public Enterprises; MTEYS = Ministry of Training, Employment, Youth, and Sports; TCL = Tonga Cable Limited.

^a A cabinet subcommittee has been established in January 2011 to provide strategic direction to the project.

^b Including \$9.7 million from ADB and \$16.5 million from the World Bank.

^c Landing station construction financed by TCL.

^d Construction supervision consultant, environmental study, and legal services financed by TCL.

Source: Asian Development Bank.

19. A submarine cable system is an integrated system of plant, materials, equipment, civil works, and services. For technical reasons, considerations of economy and efficiency, management risks, and in view of the limited number of suppliers, the submarine cable system is best procured as a single contract. The contract will be jointly financed by ADB and the World Bank. ADB and the World Bank have agreed to a memorandum of understanding to capture detailed collaboration and coordination arrangements in relation to this procurement, and the project more generally. The procurement will be carried out in accordance with ADB's Procurement Guidelines (2010, as amended from time to time).

20. To enable joint financing of the cable system contract package, ADB's Board of Directors' waiver of member country procurement eligibility restrictions is sought to permit participation of bidders from non-ADB member countries and/or procurement of goods and services from non-ADB member countries. The World Bank and the Government of Tonga acknowledge that ADB cannot finance the submarine cable system contract under the currently

proposed arrangements if the Board of Directors does not approve the project or grant the necessary waiver.

III. DUE DILIGENCE

21. The project is expected to benefit the population of Tonga, as the submarine cable system and improved regulations will lead to low cost and high quality broadband internet service. It will contribute to the economy's efficiency and bring new business opportunities that can leverage Tonga's well-educated young population and diaspora in developed countries. It will also enable the government to provide better education and health services. Due diligence was based on detailed technical, regulatory, environmental, and social assessments, and consultations with the stakeholders in Tonga.

A. Technical

22. For the submarine cable system, a technical assessment included the alternative cable routes and different technical options, cable landing station selection, and legal and regulatory issues involved in the cable system development and operation. Alternative cable routes examined are summarized in Table 4. Considering the lifespan, capacity, and capital and operational expenses, a new cable to Fiji has been selected as the most feasible and least-cost option. Several cable landing sites in Tonga were examined, and a site in Sopu area was selected based on its proximity to the shore, availability of land, and minimum disruption to the marine environment and human activities. The landing station building and auxiliary facilities will be designed and built to adapt to cyclones and the rising sea level.

Table 4: Different Route Options for Tonga Submarine Cable

Point of Connection	Type of Cable	Capex (\$ million)	Opex (\$'000)	Lifetime (years)	Capacity (Gbps)	Backhaul cost (\$/Mbps/ month)
Samoa	New cable	42	1,100	10 ^a	1	600
New Zealand	Secondhand cable	20	1,750	10	1	100
New Zealand	New cable	62	1,750	25	10 to 320	100
Fiji	New cable	29	900	14–25 ^b	10 to 320	200

Capex = capital expenditure, Gbps = gigabits per second, Mbps = megabits per second, Opex = operating expenditure.

^a Samoa has a submarine cable link to American Samoa, which is linked to Hawaii with a recovered (secondhand) cable. The lifespan of secondhand cables is about 10 years.

^b Minimum 14 years, as the Southern Cross Cable Network's original lifespan is until 2025. However, as the Southern Cross Cable Network has been continuously upgraded, it can be operational for well beyond 2025.

Source: World Bank. 2010. Technical, Economic and Financial Connectivity Study for Tonga and Samoa. Unpublished. Some modifications made by the Asian Development Bank.

23. At Suva, the cable will land on the existing cable station of SCCN, managed by the Fiji International Telecommunications Limited (FINTEL). TCL will have a landing party agreement with FINTEL for collocation services and interconnection with SCCN. As per the landing party agreement, FINTEL will facilitate the necessary permits and authorization from the relevant Fiji authorities, i.e., agencies responsible for communication, land, marine affairs, environment, and indigenous people's issues. The Fiji Ministry of Finance and Department of Communications have indicated their support for the project. At Nuku'alofa, TCL will obtain all permits. Once the detailed cable route is confirmed by a marine survey, the government will declare the cable passing area as a special management area under the Fisheries Management Act to avoid any disrupting fishing practices like trawling. The government will also adopt any other legislation or

regulations required to ensure adequate protection of the submarine cable system in its territorial water.

B. Financial and Economic

24. A financial analysis of the submarine cable system confirmed its financial viability, as its financial internal rate of return (13.63%) far exceeded the weighted average cost of capital (0.02%). A sensitivity analysis shows that the financial return is more sensitive to demand decrease. Therefore, it is essential to encourage demand growth by lowering consumer price through competition among retail service providers. A cash flow projection was prepared based on the revenue projection and the proposed share purchase agreement, and it shows that TCL can achieve a positive net cash flow from 2013. This confirms that TCL's operation become sustainable during the lifespan of the submarine cable.

25. The submarine cable system and improved regulatory environment will allow faster and cheaper communications services, especially broadband internet, and exert a positive social and economic impact through cost savings, efficiency gains, and better public services, among others. However, such an impact is difficult to quantify. The economic analysis included only quantifiable benefits of the project: (i) incremental benefits, including revenue from the sales of cable capacity and consumer surplus from the additional internet subscribers caused by the lower internet price; and (ii) savings from replacing satellite capacity with the submarine cable for international bandwidth, and savings by existing internet subscribers as a result of the lower internet price. The economic internal rate of return is 17.3%, which exceeds 12%, the economic opportunity cost of capital. A sensitivity analysis concluded that the project will remain economically viable unless TCL revenue falls by 40%.¹⁵

C. Governance

26. Analyses included existing and proposed legislation, regulations, and institutional structures for sector planning and management. Tonga has a good overall framework for sector management—the Communications Act 2000—which covers important issues including consumer protection, tariff management, fixed licensing terms with opportunities for renewal, universal-service policy, anticompetitive policies, and arbitration. However, it lacks the detailed regulations and procedures to guide the regulator and the industry in an increasingly complex sector environment. For example, there are no detailed procedures or transparency requirements for licensing. Established on 1 May 2009, the MIC is responsible for the overall regulatory management of the sector, but it lacks technical and human resource capacity to fulfill its mandate.

27. The government, the World Bank, and PRIF have agreed on a TA for capacity development and regulatory reform activities. These will include legal and regulatory reforms necessary to incorporate into national law (i) Tonga's specific commitments regarding telecommunications to the World Trade Organization; and (ii) international best practices in the field of (a) telecommunications regulation, with a view to creating an enabling telecommunications and information and communication technology environment; and (b) cyber legislation. The World Bank and PRIF funded TA will also support the government to develop a road map and policy framework to address any remaining medium- and longer-term regulatory needs, such as the possible establishment of an independent regulatory institution for the telecommunications sector.

¹⁵ Financial and Economic Analyses (accessible from the list of linked documents in Appendix 2).

28. As the regulatory reform and capacity development will take time, the government will ensure TCL's operational requirements are well defined within a license. It will be a wholesale license, and its terms and conditions will require TCL to set cost-based pricing and provide fair and open access to the cable capacity for any interested retail service providers. Once issued, the license information will be publicly available through MIC and TCL websites.

29. In November 2009, TCL was established as a limited liability company following the Companies Act (Amendment) 2009. It became a wholly owned subsidiary of TCC, a state-owned enterprise, with the intention to offer 20% of TCL's share capital to private investors after the cable system becomes operational. On the one hand, TCC's involvement and financial contribution to the project so far has been crucial because there is limited technical capacity within the country for large-scale telecommunication infrastructure development. On the other hand, TCL is a wholesale business and will sell capacity to all retail service providers including TCC. TCC's dominant ownership of TCL could undermine TCL's ability to operate independently.

30. In March 2011, the government therefore decided to turn TCL into a separate public enterprise, and developed a transition plan for the board composition and management arrangement. To do so, the government will make available to TCL the grants from ADB and the World Bank against the issuance of shares in the capital of TCL pursuant to the proposed share purchase agreement. TCL will use the grants to procure the submarine cable system. As a result, the government will own approximately 80% of TCL's shares while TCC will own approximately 20%.¹⁶ After the cable system starts generating revenue, but before the project implementation period ends, the government intends to sell 20% of its shares in TCL to private sector investors. During the cable system installation period, two TCC board members will also serve on TCL's board. The interim managing director, who also serves as TCC board chairperson, will remain. At the end of the installation period, TCL will submit for cabinet approval its application to become a public enterprise in accordance with the Public Enterprises Act 2002, as amended. Pursuant to this Act, a new board will be appointed and a new management will be recruited under a competitive and transparent process.

31. A governance risk assessment has been completed in accordance with the Second Governance and Anticorruption Action Plan.¹⁷ Separate financial and procurement assessments by the World Bank concluded that the overall risk of the project is medium, but it can be mitigated to low through capacity development of TCL in procurement, close monitoring of the procurement process by ADB and the World Bank, direct payment to the contractor, and quarterly financial statement reviews. ADB's Anticorruption Policy (1998, as amended to date) was explained to and discussed with MFNP and TCL. The specific policy requirements and supplementary measures are described in the PAM.

D. Poverty and Social

32. Absolute or extreme poverty is rare in Tonga. Poverty and hardship mainly means lack of opportunity for cash income and access to quality education and health services. In addition to the efforts to encourage private sector business activities, technical and vocational education and training is a priority for the government to prepare its young population to be a more

¹⁶ The share purchase agreement will value the shares in TCL at nominal value, which means that the actual ratio of shareholding will be adjusted once the actual value of the cable system contract (and, therefore, the government contribution) is known.

¹⁷ ADB. 2006. *Second Governance and Anticorruption Action Plan (GACAP II)*. Manila. <http://www.adb.org/Documents/Policies/Governance/GACAP-II.pdf>.

productive workforce. Internet penetration is about 20%, with the highest rate in Nuku'alofa (32%). Rural areas of Tongatapu and other islands have penetration of 18%. Across all island groups, female users (55%) outnumbered male users. Lowering the cost of internet service can create new job opportunities, enhance education and health services, and increase available knowledge for the economy. A competitive market structure has brought an increase in internet penetration in the rural areas of Tongatapu and other islands, and lower cost international connectivity through the submarine cable will accelerate the service expansion.

E. Safeguards

33. Environment, involuntary resettlement, and indigenous peoples impacts were assessed in accordance with ADB's Safeguard Policy Statement (2009). Proposed cable laying and minor civil works will not result in any significant adverse environmental impact, and all potential environmental impacts can be adequately mitigated and monitored. An initial environmental examination, incorporating an environmental management and monitoring plan, has been prepared for each stage of the project.¹⁸ The government and World Bank assessment procedures are compatible with ADB's Safeguard Policy Statement requirements. The project has incorporated additional strengthening of TCL's capacity to monitor compliance of the environmental management plan. The project is categorized environmental category B.

34. The project does not involve any land acquisition, and no indigenous people issues have been identified. Potential impacts on fishing and oyster aquaculture will be avoided while laying the cable. In case any project activity unavoidably involves such impacts during implementation, the project will follow the resettlement framework consistent with ADB's Safeguard Policy Statement and World Bank's policy on involuntary resettlement.¹⁹ The project is categorized involuntary resettlement and indigenous peoples category C. The safeguard documents have been endorsed by the government and posted on TCL and ADB websites.

F. Risks and Mitigating Measures

35. Major risks and proposed mitigating measures are summarized in Table 5.

Table 5: Summary of Risks and Mitigating Measures

Risks	Mitigating Measures
Weak financial management capacity in implementing agency	TCL to sign a formal agreement with TCC for accounting and audit services and to ensure that TCC maintains separate accounts for the funds from ADB TCL to produce quarterly unaudited interim financial reports for review by ADB, and external audit terms of reference to include review of internal control
Weak capacity of implementing agency to manage complex procurement	ADB and the World Bank to coordinate closely and provide assistance in the procurement process TCL to hire an international construction supervision consultant to oversee the contract management
Weak regulatory capacity of MIC and	The World Bank and PRIF to provide TA for the regulator in regulatory framework and capacity development

¹⁸ Initial Environmental Examination (accessible from the list of linked documents in Appendix 2).

¹⁹ Resettlement Framework (accessible from the list of linked documents in Appendix 2).

Risks	Mitigating Measures
governance structure of TCL	MIC to monitor TCL's compliance with the license terms and conditions. The government to implement the proposed changes in ownership and the operational independence of TCL to the satisfaction of ADB
Risk arising from cable landing in Fiji	TCL to ensure the Tonga cable is connected to FINTEL's backhaul in parallel to Fiji's domestic connection TCL to explore direct purchasing of SCCN capacity without going through FINTEL
Delay in meeting grant effectiveness conditions	Cofinancers to coordinate closely with government and TCL to ensure that the effectiveness conditions are met

ADB = Asian Development Bank, FINTEL = Fiji International Telecommunications Limited, MIC = Ministry of Information and Communication, PRIF = Pacific Region Infrastructure Facility, SCCN = Southern Cross Cable Network, TA = technical assistance, TCC = Tonga Communications Corporation, TCL = Tonga Cable Limited.
Source: Asian Development Bank.

IV. ASSURANCES AND CONDITIONS

36. The government has assured ADB that implementation of the project shall conform to all applicable ADB policies including those concerning anticorruption measures, safeguards, gender, procurement, consulting services, and disbursement as described in detail in the PAM and grant documents.

37. The government has agreed with ADB on certain covenants for the project, which are set forth in the grant agreement and project agreement. Effectiveness of the ADB grant and project agreements is conditional upon (i) effectiveness of Tonga's grant agreements with World Bank and PRIF; (ii) a share purchase agreement among TCL, the government, and TCC, upon terms and conditions satisfactory to ADB; (iii) the issuance and publication of an individual license for TCL for wholesale broadband network services, upon terms and conditions satisfactory to ADB; (iv) landing arrangements for the Sopa landing station and the Suva landing station, satisfactory to ADB; (v) certification that all licenses required for the project have been obtained; and (vi) legal opinions in relation to the first two conditions.

V. RECOMMENDATION

38. I am satisfied that the proposed grant would comply with the Articles of Agreement of the Asian Development Bank (ADB) and recommend that the Board approve

- (i) the grant not exceeding \$9,700,000 to the Kingdom of Tonga from ADB's Special Funds resources for the Tonga–Fiji Submarine Cable Project, on terms and conditions that are substantially in accordance with those set forth in the draft grant and project agreements presented to the Board; and
- (ii) the proposal set forth in paragraph 20 of this report that procurement (a) in countries that are not developing member countries of ADB or developed member countries of ADB that have contributed to ADB's relevant Special Funds resources, and (b) of goods and services produced in such countries, be eligible for financing under the Tonga–Fiji Submarine Cable Project.

Haruhiko Kuroda
President

26 July 2011

DESIGN AND MONITORING FRAMEWORK

Design Summary	Performance Targets and Indicators with Baselines	Data Sources and Reporting Mechanisms	Assumptions and Risks
<p>Impact</p> <p>Widely available and affordable ICT services improve Tonga's economic performance and public service delivery.</p>	<p>New business opportunities in ICT sector measured by (i) at least one additional ISP for 12 months or longer by June 2016, and (ii) at least a 10% increase in the number of Tonga-based ICT companies providing telecommunications, business network, and computer and information services (databases, data processing, software design and development, maintenance, and repair services) by 2016.</p> <p>At least two ICT-based public services in education and health are accessible by general public by end of 2016.</p>	<p>The newly active ISP license is viewable on the regulator's website, and the ISP is providing internet services to customers.</p> <p>Business registration records for this category</p> <p>MIC and relevant government agency reports</p>	<p>Assumptions</p> <p>Global and regional economy has fully recovered from the 2008 global economic crisis, allowing increased business activity.</p> <p>The government has invested in e-education and e-health service development.</p>
<p>Outcome</p> <p>The population of Tonga has access to good quality broadband internet services at a lower price.</p>	<p>By 2016, the number of broadband internet service subscribers has increased by at least 50% and the internet retail tariffs have decreased by at least 50% against the 2011 baseline.</p> <p>An industry standard internet speed test shows at least a 100% improvement against the 2011 baseline within 6 months of TCL capacity being used by ISPs.</p>	<p>Broadband Internet subscription numbers information from ISPs and MIC</p> <p>Internet service price list as published by ISPs.</p> <p>The Global Broadband Speed Test (www.speedtest.net) figures checked in Q2 2014</p>	<p>Assumptions</p> <p>The domestic network continues to be improved and expanded within Tongatapu and other islands.</p> <p>Regulatory capacity is strengthened to develop and implement the telecommunications sector policy and regulatory framework effectively for internet access and e-transaction (the World Bank and PRIF-financed TA).</p> <p>TCL has a sound governance structure and operational independence from TCC.</p>

Design Summary	Performance Targets and Indicators with Baselines	Data Sources and Reporting Mechanisms	Assumptions and Risks
			Risk Weak capacity of the regulator to ensure cost-based regulated wholesale tariff and to monitor compliance of retail service providers
Outputs 1. Establishment and efficient operation of the Tonga submarine cable system by TCL 2. Efficient and effective project management services by TCL	By 2016, TCL has consistently achieved the debt service coverage ratio target of 1.2 as agreed between the government and TCL starting not later than June 2014. TCL achieves 99.999% system availability. 12 months after the cable system is ready for service, TCL's fault handling time (measured by mean time to recovery) is equal to the industry standard of 1 hour. Achieved 100% of the projected disbursement and contract awards within the agreed time frame in the work plan.	TCL financial statement TCL operational reporting logs TCL operational reporting logs TCL project progress reports	Risks The Tonga cable traffic may be interrupted by changes in Fiji's domestic communication arrangement unless it is connected to FINTEL's backhaul in parallel to Fiji's domestic connection. TCL lacks financial and operational management capacity.
Activities with Milestones 1.1 Carry out marine survey and complete marine operations for laying cables (Q4 2011–Q1 2013) 1.2 Train TCL staff on landing facility operation and maintenance and update skills and knowledge periodically (Q1 2012–Q2 2013) 1.3 Establish monitoring and supervision guideline for regular maintenance and other contractor services (Q4 2011–Q2 2013) 1.4 Continue regular monitoring and supervision (Q2 2013–Q4 2016) 2.1 Tender, award contracts and manage contracts (Q2 2011–Q1 2013) 2.2 Provide timely progress reports (Q4 2011–Q4 2016) 2.3 Carry out regular accounting and annual audits (Q1 2012–Q4 2016) 2.4 Follow up safeguard issues and risk management plan in timely manner (Q4 2011–Q4 2016)			Inputs ADB: \$9.7 million TCL: \$6.6 million World Bank: \$16.5 million (for output 1)

ADB = Asian Development Bank, FINTEL = Fiji International Telecommunications Limited, ICT = information and communication technology, ISP = internet service provider, MIC = Ministry of Information and Communications, PRIF = Pacific Region Infrastructure Facility, TA = technical assistance, TCC = Tonga Communications Corporation, TCL = Tonga Cable Limited.

Source: Asian Development Bank.

LIST OF LINKED DOCUMENTS

<http://www.adb.org/Documents/RRPs/?id=44172-022-2>

1. Grant Agreement
2. Project Agreement
3. Sector Assessment (Summary): Information and Communication Technology
4. Project Administration Manual
5. Contribution to the ADB Results Framework
6. Development Coordination
7. Financial and Economic Analyses
8. Country Economic Indicators
9. Summary Poverty Reduction and Social Strategy
10. Initial Environmental Examination
11. Risk Assessment and Risk Management Plan

Supplementary Document

12. Resettlement Framework