



# Report and Recommendation of the President to the Board of Directors

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Project Number: 46382-001  
November 2015

## Proposed Loans Republic of Palau: North Pacific Regional Connectivity Investment Project

This document is being disclosed to the public prior to its consideration by ADB's Board of Directors in accordance with ADB's Public Communications Policy 2011.

Asian Development Bank

## CURRENCY EQUIVALENTS

The currency of Palau is the US dollar.

## ABBREVIATIONS

ADB	–	Asian Development Bank
BSCC	–	Belau Submarine Cable Corporation
COBP	–	country operations business plan
FIRR	–	financial internal rate of return
FSM	–	Federated States of Micronesia
ICT	–	information and communication technology
IRU	–	indefeasible right of use
m	–	meter
OCR	–	ordinary capital resources
PAM	–	project administration manual
PMU	–	project management unit
SEA–US	–	Southeast Asia–United States
TA	–	technical assistance

## NOTES

- (i) The fiscal year (FY) of the Government of Palau ends on 30 September. “FY” before a calendar year denotes the year in which the fiscal year ends, e.g., FY2015 ends on 30 September 2015.
- (ii) In this report, “\$” refers to US dollars.

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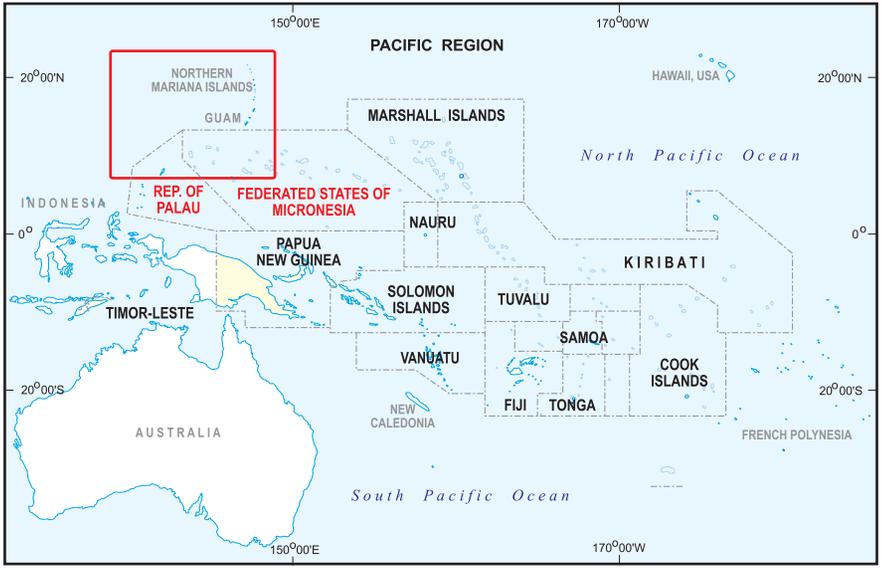
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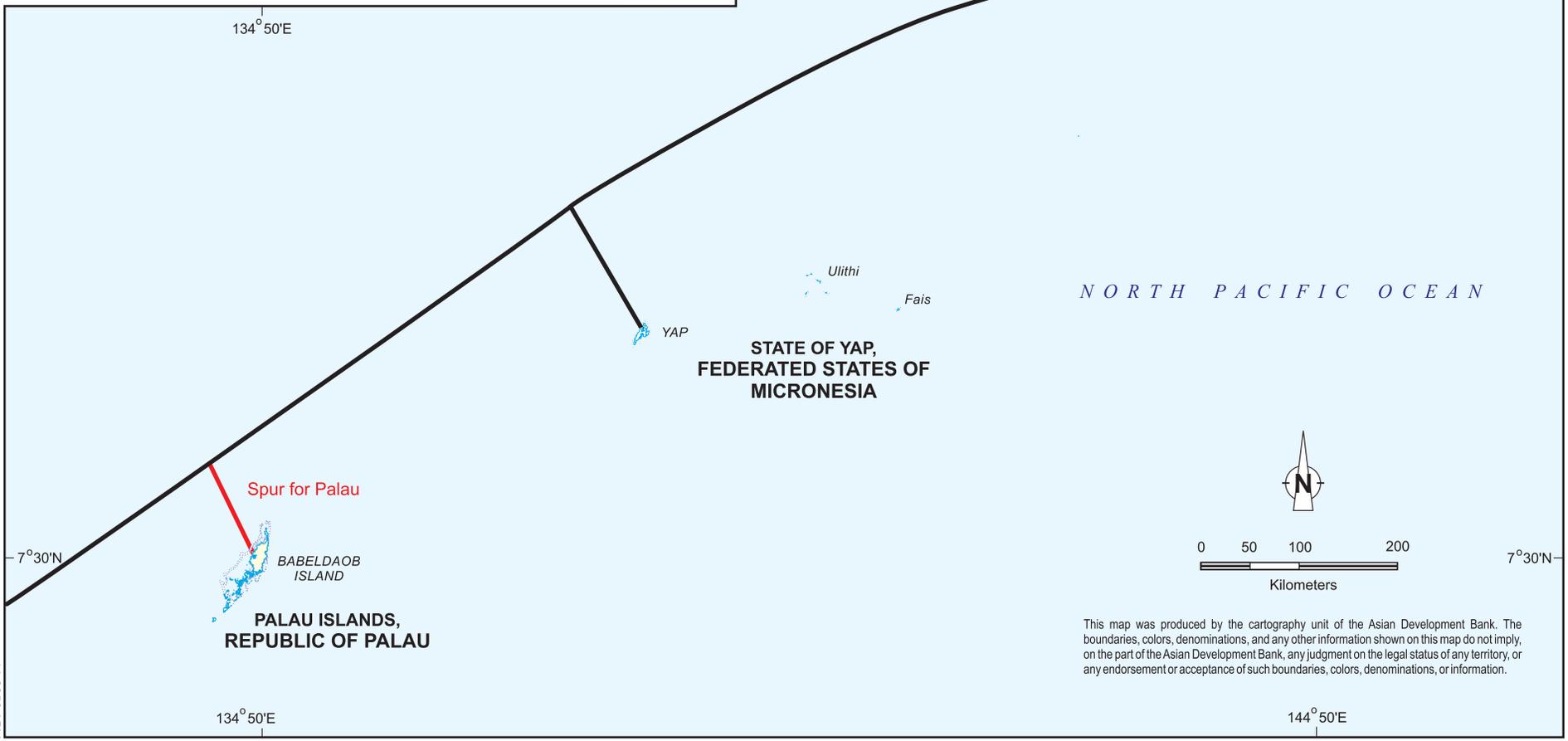
## PROJECT AT A GLANCE

<b>1. Basic Data</b>		<b>Project Number: 46382-001</b>	
<b>Project Name</b>	North Pacific Regional Connectivity Investment Project	<b>Department /Division</b>	PARD/PAUS
<b>Country Borrower</b>	Palau, Republic of Government of Palau	<b>Executing Agency</b>	Ministry of Finance
<b>2. Sector</b>	<b>Subsector(s)</b>	<b>ADB Financing (\$ million)</b>	
✓ <b>Information and communication technology</b>	ICT infrastructure		25.00
		<b>Total</b>	<b>25.00</b>
<b>3. Strategic Agenda</b>	<b>Subcomponents</b>	<b>Climate Change Information</b>	
Inclusive economic growth (IEG)	Pillar 1: Economic opportunities, including jobs, created and expanded	Climate Change impact on the Project	Medium
Environmentally sustainable growth (ESG)	Urban environmental improvement		
Regional integration (RCI)	Pillar 1: Cross-border infrastructure Pillar 2: Trade and investment		
<b>4. Drivers of Change</b>	<b>Components</b>	<b>Gender Equity and Mainstreaming</b>	
Governance and capacity development (GCD)	Anticorruption Client relations, network, and partnership development to partnership driver of change Institutional development	No gender elements (NGE)	✓
Private sector development (PSD)	Conducive policy and institutional environment Promotion of private sector investment Public sector goods and services essential for private sector development		
<b>5. Poverty Targeting</b>		<b>Location Impact</b>	
Project directly targets poverty	No	Regional	High
<b>6. Risk Categorization:</b>	Complex		
<b>7. Safeguard Categorization</b>	Environment: B Involuntary Resettlement: C Indigenous Peoples: C		
<b>8. Financing</b>			
<b>Modality and Sources</b>		<b>Amount (\$ million)</b>	
<b>ADB</b>		<b>25.00</b>	
Sovereign Project loan: Ordinary capital resources		16.47	
Sovereign Project loan: Asian Development Fund		8.53	
<b>Cofinancing</b>		<b>0.00</b>	
None		0.00	
<b>Counterpart</b>		<b>5.19</b>	
Government		5.19	
<b>Total</b>		<b>30.19</b>	
<b>9. Effective Development Cooperation</b>			
Use of country procurement systems			No
Use of country public financial management systems			No





# REPUBLIC OF PALAU NORTH PACIFIC REGIONAL CONNECTIVITY INVESTMENT PROJECT



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## I. THE PROPOSAL

1. I submit for your approval the following report and recommendation on the proposed loans to the Republic of Palau for the North Pacific Regional Connectivity Investment Project.<sup>1</sup>

2. The proposed project will decrease the cost and increase the quality of internet service in Palau by establishing broadband internet connectivity—connecting Palau to the Southeast Asia–United States (SEA–US) submarine cable that joins the international cable hub in Guam.<sup>2</sup> The Asian Development Bank (ADB) has been providing technical assistance (TA) to Palau for project preparation.<sup>3</sup> The World Bank has provided complementary TA to Palau to develop legislation establishing a state-owned submarine cable company and an Information and Communications Technology (ICT) Regulatory Office.

## II. THE PROJECT

### A. Rationale

3. Palau relies entirely on satellite links for internet connectivity. The technical capacity limitations and the delay associated with such satellite-based connectivity severely limit the quality of internet service.<sup>4</sup> The high cost and limited international bandwidth restrict internet penetration.<sup>5</sup> In Palau, internet is accessed by only 25% of the population, while 90% have access to mobile phones.

4. The ICT sector is widely recognized as an enabler of economic growth, social stability, and development. Increased access to ICT, particularly broadband internet services, helps deliver improved financial services and social services, such as health and education, among others.<sup>6</sup> It brings efficiency and reduces the cost of such services, and in turn enables an environment conducive to private sector investment. The ICT sector has created significant employment opportunities in many Asian countries. High-speed international communication is important to the tourism industry (on which Palau is highly reliant) for marketing, facilitating bookings and contributing to tourist satisfaction.<sup>7</sup>

5. In 2014, Palau and the Federated States of Micronesia (FSM) jointly initiated a submarine internet cable project and set up a joint committee, MicroPal,<sup>8</sup> to examine connectivity options through submarine cable by recognizing the similar nature of their needs

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<sup>1</sup> The design and monitoring framework is in Appendix 1.

<sup>2</sup> SEA–US is a consortium of seven private telecom operators created in April 2015 to build a \$250 million fiber optic cable from Indonesia to the west coast of the United States via Guam, Hawaii and the Philippines. The West Subsystem parties are Globe (the Philippines) and Telin (Indonesia).

<sup>3</sup> ADB. 2013. *Technical Assistance for the Pacific Information and Communication Technology Investment Planning and Capacity Development Facility*. Manila.

<sup>4</sup> The latency of the satellite service is about 500 milliseconds compared with 80 milliseconds for cable.

<sup>5</sup> Palau has a capacity of 220 megabits per second. Satellite connectivity is generally available at a cost of \$1,500/megabit/second/month compared with submarine cable at \$600/megabit/second/month.

<sup>6</sup> World Bank. 2009. *Information and Communications for Development 2009: Extending Reach and Increasing Impact*. Washington, DC.

<sup>7</sup> Palau has a population of about 20,000 and a tourism industry of over 120,000 visitors annually. Tourism is equivalent to over 50% of gross domestic product, and services represent 87%. Economic growth has been strong, averaging above 3% annually since 2010, thanks to record visitor arrivals and construction.

<sup>8</sup> MicroPal has six members—three representatives from each country—appointed by the President of the Republic of Palau and the Government of FSM. MicroPal has been supported by World Bank-funded consultants. It meets every quarter (and more often as required) to discuss project implementation progress and other issues.

and the benefits of cooperation.<sup>9</sup> MicroPal initially explored building an independent cable connecting to Guam through a single procurement package. The Palau portion of the project is to be financed by ADB and the Yap state of FSM portion by the World Bank. The World Bank approved a grant of \$47.5 million to the FSM in December 2014 that includes supporting the Yap cable.<sup>10</sup>

6. In 2015, the construction of SEA–US cable provided an opportunity for Palau and Yap to connect to Guam through spurs and branching units. Palau and Yap will each own their respective spurs and will have indefeasible right of use (IRU) on the SEA–US cable. This option is found to be the most cost-effective solution, requiring significantly lower capital expenditure and lower operational costs. Moreover, the SEA–US option gives the newly established cable company in Palau (Belau Submarine Cable Corporation [BSCC]) and the FSM cable company the opportunity to leverage experience from the members of the SEA–US consortium (footnote 2) to maintain and operate a submarine cable—thereby reducing the technical risk to both countries.

7. MicroPal, on behalf of BSCC and the FSM cable company, is at the final stage of negotiating a memorandum of understanding with the SEA–US parties. Subsequently, BSCC and the FSM cable company will enter into agreements with SEA–US that will set out a clear demarcation of responsibilities for Palau and the FSM, with no cross-linkages such as cross-effectiveness, cross-default, and cross-termination between the rights and obligations of Palau on the one part and FSM on the other part. Under this structure, ADB and World Bank funds will not be financing a single procurement package.

8. The proposed project will provide higher quality broadband internet at a much lower cost to Palau, making it accessible and affordable for the broader population. The passing on of reduced costs by the wholesaler (BSCC) and retailers will be ensured through the effective operation of the telecoms sector regulator.<sup>11</sup> The cable, with a capacity of 2 terabits per second, will more than meet the broadband capacity needs of Palau at least until 2040 (the expected cable life is as long as 50 years). The uptake of internet will be a reflection of the project's success. The Palau country operations business plan (COBP) includes TA in 2017 to build capacity and demonstrate efficient public service provision through use of the internet.<sup>12</sup> Elsewhere in the Pacific, ADB is supporting e-health and e-education initiatives that will inform the design of the application in Palau.<sup>13</sup> The project will also improve the operation of the secured transactions system (improving access to finance), as well as online business registration, both of which are supported by ADB's Private Sector Development Initiative.<sup>14</sup>

9. The proposed project is consistent with ADB's Interim Pacific Approach 2015, which

<sup>9</sup> As an interim solution, Palau and the FSM telecom providers separately contracted a 5-year, 150-megabit-per-second service from a medium earth orbit satellite broadband service at the end of 2014. Once the more reliable submarine cable system is operational, the satellite system will complement this by providing back up in case of an interruption.

<sup>10</sup> World Bank. 2014. *Project Information Document (Appraisal Stage) - Pacific Regional Connectivity Program 2: Palau-FSM Connectivity Project - P130592*. Washington, DC.

<sup>11</sup> If required, ADB will provide further support to the development of this office, either through TA (footnote 3), or from the Pacific ICT Regulatory Resource Center (<http://www.pirrc.org/home/index.php?lang=en>).

<sup>12</sup> ADB. 2014. *Country Operations Business Plan: Palau, 2015–2017*. Manila.

<sup>13</sup> ADB. 2007. *Report and Recommendation of the President to the Board of Directors: Proposed Asian Development Fund Grant to the Independent State of Samoa for the SchoolNet and Community Access Project*. Manila; and ADB. 2013. *Technical Assistance to Solomon Islands for Information and Communication Technology for Better Education Services*. Manila.

<sup>14</sup> ADB. 2013. *Technical Assistance Completion Report: Private Sector Development Initiative*. Manila.

extends the validity of the Pacific Approach, 2010–2014, and with the Midterm Review of Strategy 2020.<sup>15</sup> It is included in ADB’s COBP, 2015–2017 for Palau; the government’s Medium Term Development Strategy, 2009–2014;<sup>16</sup> and the management action plan adopted in 2013.<sup>17</sup> Prioritized goals of the COBP and Palau’s strategy include (i) improving connectivity, (ii) improving public sector effectiveness, and (iii) facilitating private sector development.

## **B. Impact and Outcome**

10. The impact of the project will be access to affordable ICT infrastructure in Palau.<sup>18</sup> The outcome will be a decrease in the cost and an increase in the quality of internet service.

## **C. Output**

11. The output will be the establishment of an efficient and effective submarine cable system connecting Palau to the international internet cable hub in Guam. It will be achieved through (i) the construction of the approximately 300-kilometer spur and a branching unit to connect to the SEA–US submarine cable, (ii) efficient and effective operation of BSCC by the government, and (iii) agreements for IRU and maintenance between BSCC and SEA–US parties. The project will be supported by a project management unit (PMU) initially resourced by a team of project implementation consultants.

## **D. Investment and Financing Plans**

12. The project is estimated to cost \$30.19 million (Table 1).

13. The government has requested a loan from ADB’s ordinary capital resources (OCR) in the amount of \$16,470,000 and a loan in various currencies equivalent to SDR6,032,000 from ADB’s Special Funds resources. Palau will contribute \$5.19 million in kind, bearing taxes and the cost of operating BSCC during the project construction period.

14. The OCR loan will have a 25-year term, including a grace period of 5 years, using the straight-line repayment method with an annual interest rate determined in accordance with ADB’s London interbank offered rate (LIBOR)-based lending facility, and a commitment charge of 0.15% per year. Based on this, the average loan maturity is 15.25 years and the maturity premium payable to ADB is 0.1% per annum. The ADF loan will have a 25-year term, including a grace period of 5 years and interest of 2% per annum during the grace period and thereafter. Other terms and conditions are set forth in the draft loan and project agreements. The interest for both loans and the commitment charge for the OCR loan during project implementation will be capitalized.

15. The loans proceed will be onlent to BSCC on the same terms and conditions as the ADB loans.<sup>19</sup> BSCC will enter into a project agreement with ADB. The financing plan is in Table 2.

<sup>15</sup> ADB. 2015. *Interim Pacific Approach 2015*. Manila; ADB. 2009. *ADB’s Pacific Approach, 2010-2014*. Manila; and ADB. 2014. *Midterm Review of Strategy 2020: Meeting the Challenges of a Transforming Asia and Pacific*. Manila

<sup>16</sup> Government of the Republic of Palau. 2009. *Medium Term Development Strategy for Palau—Actions for Our Future*. Koror (accessible from the list of linked documents in Appendix 2).

<sup>17</sup> The management action plan endorses the thrusts of the Medium Term Development Strategy; and Government of the Republic of Palau. 2008. *Medium Term Fiscal Strategy for Sustainable Economic Development*. Koror.

<sup>18</sup> Government of the Republic of Palau. 2013. *Palau National ICT Policy, 2013–2016*. Koror.

<sup>19</sup> This will be formalized in subsidiary loan agreements between the Ministry of Finance and BSCC.

**Table 1: Project Investment Plan**  
(\$ million)

Item	Total Cost <sup>a</sup>
<b>A. Base Cost<sup>b</sup></b>	
1. Spur to connect SEA–US cable system	12.65
2. Cable station construction (including civil works)	1.61
3. Infeasible right of use	5.21
4. Legal and consulting services—project management unit	0.84
<b>Subtotal (A)</b>	<b>20.31</b>
<b>B. Cable Company Costs</b>	0.47
<b>C. Import Taxes and Duties</b>	4.72
<b>D. Contingencies<sup>c</sup></b>	4.42
<b>E. Financing Charges and Fees<sup>d</sup></b>	
1. Interest during implementation	0.24
2. Commitment charges	0.03
<b>Subtotal (E)</b>	<b>0.27</b>
<b>F. Total Project Cost (A+B+C+D+E)</b>	<b>30.19</b>

SEA–US = Southeast Asia–United States

<sup>a</sup> Includes taxes and duties estimated at \$4.72 million to be exempted by the government.

<sup>b</sup> In mid-2015 prices.

<sup>c</sup> Physical contingencies computed at 14.6% for total cost.

<sup>d</sup> Includes interest and commitment charges. For ordinary capital resources funds, interest during construction for Asian Development Bank loan(s) has been computed at the 5-year forward London interbank offered rate (LIBOR) plus a spread of 0.5%. Commitment charge for the Asian Development Bank loan is 0.15% per year to be charged on the undisbursed loan amount. For the Asian Development Fund, the interest is fixed at 2% per year.

Source: Asian Development Bank and World Bank estimates.

**Table 2: Financing Plan**

Source	Amount (\$ million)	Share of Total (%)
Asian Development Bank		
Ordinary capital resources (loan)	16.47	54.6
Special Fund resources (loan)	8.53	28.3
Government <sup>a</sup>	5.19	17.1
<b>Total</b>	<b>30.19</b>	<b>100.0</b>

<sup>a</sup> The Government of the Republic of Palau will contribute in kind, bearing taxes and the cost of running Belau Submarine Cable Corporation during project implementation.

Source: Asian Development Bank and World Bank estimates.

## E. Implementation Arrangements

16. The Ministry of Finance will be the executing agency to facilitate the smooth flow of funds and overall management of the project. Palau has set up BSCC, a state-owned enterprise that will implement the project.<sup>20</sup> BSCC will have a board comprising five directors, nominated by the President of Palau, and a chief executive officer reporting to the board to manage the day-to-day operations of BSCC. The chief executive officer will be responsible for staff recruitment. BSCC will have its own by-laws. The implementation arrangements are summarized in Table 3 and described in detail in the project administration manual (PAM).<sup>21</sup>

<sup>20</sup> The President of the Republic of Palau signed RPPL No. 9-47, creating the BSCC, into law on 21 September 2015. Palau has already nominated BSCC board and it is awaiting approval from senate.

<sup>21</sup> Project Administration Manual (accessible from the list of linked documents in Appendix 2).

**Table 3: Implementation Arrangements**

<b>Aspects</b>	<b>Arrangements</b>		
Implementation period	January 2016–March 2018		
Estimated completion date	31 March 2018		
<b>Management</b>			
(i) Oversight body	MicroPal is the project steering committee. Palau’s representatives in MicroPal are appointed by the President.		
(ii) Executing agency	Ministry of Finance		
(iii) Key implementing agencies	Belau Submarine Cable Corporation		
(iv) Implementation unit	Belau Submarine Cable Corporation (6 staff)		
Procurement	Direct contracting	2 contracts	\$16.86 million
	International competitive bidding	1 contract	\$1.61 million
Consulting services	International firm, QCBS	75 person-months	\$0.84 million
Retroactive financing and advance contracting	Advance contracting for eligible expenditures incurred for the submarine cable system, and for retroactive financing of eligible expenditures incurred not more than 12 months before the signing of the loan agreement and up to a maximum of 20% of the loans amount.		
Disbursement	The loans proceed will be disbursed in accordance with ADB’s <i>Loan Disbursement Handbook</i> (2015, as amended from time to time) and detailed arrangements agreed between the government and ADB.		

ADB = Asian Development Bank, QCBS = quality-and cost-based selection.

Source: Asian Development Bank.

17. During project implementation, BSCC will receive support from the PMU, comprising a team of project implementation and coordination consultants. The PMU will have a project manager; accountant; technical, legal, and environment specialists; and other office staff. BSCC will recruit consultants for the PMU. The PMU will support the Ministry of Finance and BSCC in day-to-day project operation, managing contracts, producing reports, and providing regular status updates to stakeholders. The PMU will also provide support to Palau’s representatives in MicroPal.

18. MicroPal will continue to facilitate smooth information flows and liaise between Palau and Yap. ADB and the World Bank will enter into a memorandum of understanding, reflecting the coordination of this project between Palau and Yap.

### **III. DUE DILIGENCE**

19. The proposed project is expected to benefit the people of Palau through lower cost and higher quality broadband internet services. Due diligence was based on detailed technical, regulatory, environmental, and social assessments; and stakeholder consultations. The project preparatory activities were divided between ADB and the World Bank. ADB activities included economic, financial, social, and safeguards assessments undertaken through regional TA and staff consultant inputs (footnote 3).

#### **A. Technical**

20. The project will connect Palau through a spur and branching unit to the international submarine cable owned by the SEA–US connecting to Guam. Palau will own its spur and will

have an IRU on the SEA–US cable. Palau will leverage the SEA–US landing station and permit in Guam.

21. Submarine cable is the preferred, most cost-effective, and most sustainable method for internet connectivity, with well-established and proven technology. The cable will be 4.0–7.5 centimeters in diameter, with no significant impact on the ocean environment. The government will establish the cable path in the ocean as a “no anchor zone” to avoid any damage to the cable. The cable will land in Meyuns hamlet on Arakabesang Island in Koror, a government-owned landing site used by the Palau National Communications Corporation, which already has a conduit for placement of the cable leading directly to the existing landing site. BSCC will sign an agreement with Palau National Communications Corporation, the state-owned telecom supplier, to use the land and facility for the landing and for connection to the existing national terrestrial network and a 128-kilometer interisland, fiber-optic cable.

22. BSCC will act as a wholesale supplier of internet in Palau, and will obtain the necessary operating permit and license. BSCC will buy the capacity from the service providers in Guam and sell it to all local telecom providers in an equitable and nondiscriminatory way, following Palau’s telecom regulatory policy. The local telecom providers will be responsible for providing a retail internet service using their own infrastructure.

## **B. Economic and Financial**

23. **Financial.** In assessing the financial viability of the project, demand is forecast conservatively below the region’s average adoption rates, at an annual growth rate of about 40.0%, declining to 20.0% within the first 5 years after the cable comes into service, then falling steadily to about 3.5% growth by 2021, which is expected to be sustained thereafter. The average annual growth rate over 15 years will be 12.0%. The resulting capacity is positioned at the lower end of all available Pacific-based benchmark data. BSCC will generate revenues from the wholesaling of broadband internet capacity. The financial viability of the project was evaluated by estimating the cash flows from operations and calculating the financial internal rate of return (FIRR). The cost of the project was estimated based on constant US dollar prices as of September 2015. For the financial evaluation, contingencies and financing charges were excluded.

24. The FIRR was estimated at 11.7% against the weighted average cost of capital of 2.38%. The interest rate of domestic borrowing has been used to assign an assumed cost to the grant from the World Bank, while the proceeds of the ADB loans will be onlent to BSCC on the same terms and conditions as the ADB loan. The cash flows were most sensitive to subscription levels. Prices, initially set at \$863/megabit/second/month, are forecast to fall as efficiencies and economies of scale are achieved. An increasing subscriber base is projected based on local demand and tourist arrivals. The FIRR after tax compares favorably with the weighted average cost of capital, showing the financial viability of the project. It remains robust against a 10% increase in investment costs, a 10% increase in operating costs, or a 20% decrease in revenues.

25. **Economic.** The capital cost assumed for the economic analysis was \$25.19 million including physical contingencies. The projected costs and benefits are converted to economic

values by applying a standard conversion factor of 0.9 and a shadow wage rate factor of 0.8.<sup>22</sup> The analysis used constant 2015 prices and the world price numeraire. Costs include some minor incremental operating and capital costs incurred by the retail service providers (BSCC's wholesale customers) to expand and upgrade their capacity to meet increased demand.

26. The project benefits are assumed proportional to traffic volume. With all existing internet users reasonably expected to migrate to faster and more reliable connections, broadband services represent a new market segment, with benefits corresponding to willingness to pay. This is calculated as the sum of consumer surplus, and internet retail revenue. Annual consumer surplus is projected at about 0.8% of gross domestic product.<sup>23</sup> Annual internet retail revenue is computed by multiplying the average revenue per user by the projected number of subscribers. The average revenue per user is estimated at 7% of gross domestic product per capita (i.e., \$70 per month in 2016).<sup>24</sup>

27. The project's economic internal rate of return under the base case scenario is estimated at 18.8%, well above the ADB social discount rate of 12% per annum. Sensitivity analysis confirms that economic viability is maintained even with a 20% reduction in projected revenues, a 10% increase in capital expenditure, or a 10% increase in operating expenditures.

### C. Governance

28. **Financial management.** Palau has a robust budget allocation framework for government policies and priorities.<sup>25</sup> The Palau public auditor contracts out audits to an internationally affiliated certified professional audit firm and audits are conducted in accordance with the requirements of the Single Audit Act, 1996. BSCC is a newly established state-owned enterprise with no permanent staff, so the financial management risk is assessed as high. During implementation, BSCC will be supported by the PMU, with an experienced finance and accounting specialist to manage its accounting and reporting within six months from the project effective date. A comprehensive time-bound action plan has been developed in the PAM to mitigate the risk.

29. **Procurement capacity.** The World Bank has funded MicroPal to engage an experienced team of project coordinators to explore available design options and to prepare for implementation of the most cost-effective solution. The proposed SEA-US submarine cable provides the best option for Palau and Yap to connect to Guam. Palau and the FSM decided to engage SEA-US parties to procure and operate their respective cable systems. This arrangement simplifies the procurement process for the cable system in Palau and BSCC. The project coordinators have worked with ADB, and are fully aware of ADB's direct contracting procurement guidelines and requirements. For landing station construction, ADB will review the procurement process and approve the selection of suppliers. BSCC will recruit a PMU consultant to manage the contracts during implementation.

30. **Anticorruption.** ADB's Anticorruption Policy (1998, as amended to date) was explained

<sup>22</sup> This was the shadow wage rate factor used in ADB. 2013. *Report and Recommendation of the President to the Board of Directors: Proposed Loans to the Republic of Palau for the Koror-Airai Sanitation Project*. Manila.

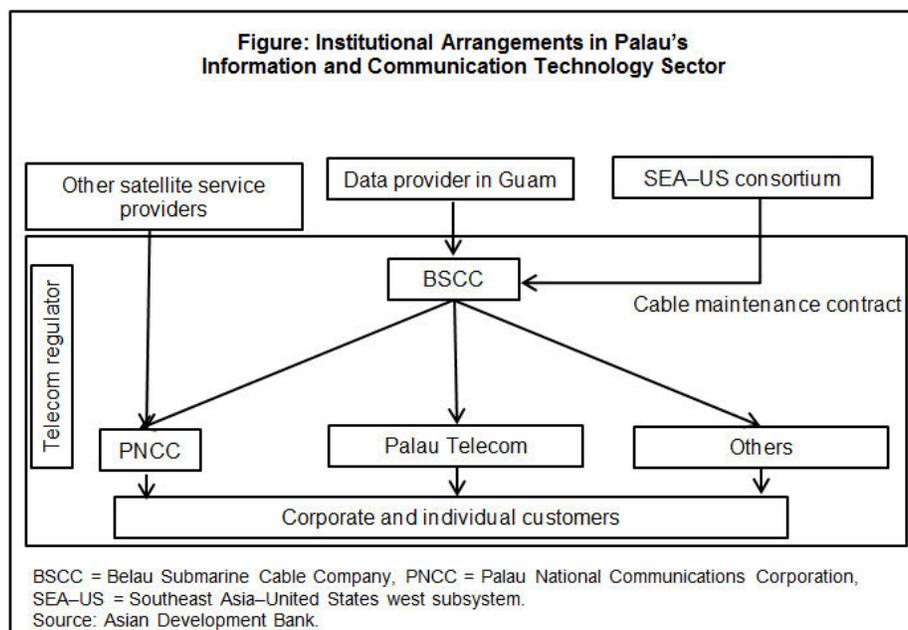
<sup>23</sup> Annual consumer surplus is derived from World Bank estimates of comparable demand curves for mobile telephony (and their corresponding consumer surplus ratios) in the People's Republic of China, India, and the Philippines.

<sup>24</sup> It is based on a composite normalized demand curve for the three comparator countries namely the People's Republic of China, India, and the Philippines

<sup>25</sup> ADB. 2015. *Annual Report on the 2014 Country Performance Assessment Exercise*. Manila.

to and discussed with the government. The specific policy requirements and supplementary measures are described in the PAM (footnote 21).

31. The Palau National ICT Policy, issued by the government in November 2013, lays out the sector goals, objectives, and strategies for 2013–2016. The World Bank-funded TA aims to strengthen the legal and regulatory framework for ICT and address critical issues like interconnection between mobile operators. The ICT regulatory office is expected to be set up prior to the submarine cable system coming online. Strong and robust regulation is essential to ensure that BSCC does not engage in monopoly pricing or other anticompetitive behavior, and that internet retailers do not abuse their market position. ADB will monitor implementation closely, and TA support (footnote 3) will be provided if needed. The figure depicts the future operational structure of telecom players.



## D. Poverty and Social

32. Palau has achieved most of the Millennium Development Goals.<sup>26</sup> Palauans enjoy free, or heavily subsidized, and relatively high standards of health services, education, and other public utilities. Building on this solid base of quality public services, the project will provide reliable, faster, and affordable internet to the population. It will facilitate more young people pursuing higher or more relevant labor market qualifications via the internet, reducing the need to go overseas to study. In addition, it will improve opportunities for rural and urban households to easily connect to families overseas, and increase e-marketing opportunities for businesses, as well as enable improved delivery of key government services to the local population through e-education, e-health, and e-governance actions. With faster internet at a lower cost, business efficiencies and cost reductions will create additional employment opportunities, particularly for lower skilled labor.

33. The project is classified as having no gender elements. However, the project outcome will support (i) women's improved access to social and financial services as a result of improved

<sup>26</sup> United Nations. 2013. *The Millennium Development Goals Report 2013*. New York.

communications services, and (ii) increased employment opportunities for women as the fiber optic cable facilitates business opportunities.

## E. Safeguards

34. **Involuntary resettlement and indigenous peoples.** The project has been classified category C for involuntary resettlement and indigenous peoples. Due diligence has confirmed that the project does not require land acquisition and resettlement, and does not impact any distinct and/or vulnerable group of indigenous peoples. The cable landing site is on government-owned land, and existing networks or rights-of-way will be utilized for the cable extension. The project beneficiaries are part of the mainstream Palauan people.

35. **Environment.** The project is classified category B for environment. An initial environmental examination (including environmental management plan) and an environmental code of practice have been prepared to ensure compliance with environment safeguards. The project will impact a corridor about 0.30 meters (m) to 0.50 m wide on the sea floor, and in some locations up to 0.75 m beneath the sediment. As it enters the near-shore waters, the alignment will be on the seabed (essentially coral rubble and sand) at a sea depth of 40m to 50m in the shipping channel. The landing site will be an existing manhole, outfitted with a conduit running from the shore into the Palau National Communications Corporation building. A detailed oceanographic survey of the alignment will be completed during the design period, which will include updating of the initial environmental examination and environmental management plan and integration of the updated plan in the contract specifications. The PMU will monitor compliance. Overall project progress reports will include safeguards and will be submitted to ADB quarterly. Safeguard monitoring reports will be prepared separately and submitted to ADB semiannually.

## F. Risks and Mitigating Measures

36. Major risks and mitigating measures are summarized in Table 4 and described in detail in the risk assessment and risk management plan.<sup>27</sup> The integrated benefits and impacts are expected to outweigh the costs.

**Table 4: Summary of Risks and Mitigating Measures**

<b>Risks</b>	<b>Mitigating Measures</b>
Limited government experience in implementing ADB projects, particularly procurement	The proposed project is the second ADB project for Palau. ADB provided technical assistance to help Palau prepare the project. During implementation, ADB will monitor progress closely. The procurement packages are designed to minimize the number of contracts to be managed. The PMU budget includes hiring implementation specialists to help implementation agencies. A simplified disbursement process for all direct payments to suppliers and consultants will minimize issues in financial management and bookkeeping.
No dedicated BSCC staff to manage finance and accounting	The PMU will have experienced financial management consultants to support BSCC in setting up practices, systems, and procedures to manage accounting. A time-based action plan has been prepared to ensure the proper handover and training for BSCC permanent staff.
Monopoly or collusion among local supplier(s) prevent decrease in retail internet price	Technical assistance from the World Bank is helping Palau to implement its ICT policy and set up the Office of the Regulator. The regulator is scheduled to be in place by the end of Q1 2017, and will ensure fair and competitive pricing for retail users.
Lack of consortium financing delays	Globe Telecom, Philippines, and Telin, Indonesia, are the two financiers for the

<sup>27</sup> Risk Assessment and Risk Management Plan (accessible from the list of linked documents in Appendix 2).

implementation of the SEA-US	SEA-US. Initial due diligence on available financial statements and external credit ratings for these two companies shows sound financial status to support the investment.
Unavailability of commitment funds required after MicroPal signs the contract with SEA-US parties	Palau has provisioned funds in the FY2016 budget to pay the initial deposit. The World Bank grant to the FSM is already in place.

ADB = Asian Development Bank, BSCC = Belau Submarine Cable Corporation, FSM = Federated States of Micronesia, ICT = information and communication technology, PMU = project management unit, Q = quarter, SEA-US = Southeast Asia-United States.

Source: Asian Development Bank.

#### IV. ASSURANCES AND CONDITIONS

37. 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 loan documents.

38. The government has agreed with ADB on certain covenants for the project, which are set forth in the loan agreements and project agreement.

39. Effectiveness of the loan agreements is conditional upon the borrower entering into a subsidiary loan agreement with BSCC as described in the loan agreements. No withdrawals will be made from the loan accounts (i) for the main cable supply and IRU until BSCC has signed agreements with SEA-US and/or NEC Corporation for construction, operation, and financial arrangements for the submarine cable system and the IRU; and (ii) for the cable landing station until BSCC has signed a landing agreement with Palau National Communications Corporation, as set forth in the loan agreements.

#### V. RECOMMENDATION

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

- (i) the loan of \$16,470,000 to the Republic of Palau for the North Pacific Regional Connectivity Investment Project, from ADB's ordinary capital resources, with interest to be determined in accordance with ADB's London interbank offered rate (LIBOR)-based lending facility; for a term of 25 years, including a grace period of 5 years; and such other terms and conditions as are substantially in accordance with those set forth in the draft loan and project agreements presented to the Board; and
- (ii) the loan in various currencies equivalent to SDR6,032,000 to the Republic of Palau for the North Pacific Regional Connectivity Investment Project, from ADB's Special Funds resources, with an interest charge at the rate of 2% per annum during the grace period and thereafter; for a term of 25 years, including a grace period of 5 years; and such other terms and conditions as are substantially in accordance with those set forth in the draft loan and project agreements presented to the Board.

Takehiko Nakao  
President

16 November 2015

## DESIGN AND MONITORING FRAMEWORK

<b>Impact the Project is Aligned with</b>			
Access to affordable ICT infrastructure has been achieved in Palau. <sup>a</sup>			
<b>Results Chain</b>	<b>Performance Indicators with Targets and Baselines</b>	<b>Data Sources and Reporting</b>	<b>Risks</b>
<p><b>Outcome</b></p> <p>Decrease in cost and increase in quality of internet service</p>	<p>By 2019:</p> <p>Retail price of fixed internet service for 2-megabit-per-second connection decreases at least 15% against 2015 baseline of approximately calculated at \$1,000 per month.</p> <p>Bandwidth availability will be increased at least 20% against 2015 baseline of approximately 220 megabits per second.</p> <p>Availability of service will be 99% in accordance with the industry standard.</p>	<p>Internet service price list published by ISPs and telecom operators</p> <p>Internet bandwidth list published by ISPs and telecom operators</p> <p>“Ping” time at consumer level as measured by tools such as web-based speed tests (e.g., <a href="http://www.speedtest.net">www.speedtest.net</a>)</p>	<p>Lack of guidelines, policy, and capacity to manage the assets around submarine cable</p> <p>Monopoly or collusion among local supplier(s) prevents decrease in retail internet price</p>
<p><b>Output</b></p> <p>A submarine cable system connecting Palau to the international internet cable hub in Guam established</p>	<p>1a. Indefeasible right of use and maintenance agreements between BSCC and SEA-US parties by Q2 2016</p> <p>1b. Construction of the approximately 300-kilometer spur and branching unit to connect to SEA-US submarine cable by Q1 2018</p> <p>1c. BSCC establishes process to achieve 99% of service availability by Q1 2018</p>	<p>1a. Signed agreements from BSCC</p> <p>1b. Final acceptance of cable by BSCC</p> <p>1c. BSCC operational reporting logs, including capacity sold to retailers</p> <p>1d. Performance testing report, including target of 1 hour (industry standard) for fault handling time (measured by mean time to recovery)</p>	<p>Lack of consortium financing delays implementation of the SEA-US</p> <p>Unavailability of commitment funds required after signing the contract by MicroPal with SEA-US parties</p> <p>Limited experience of the government in implementing ADB projects, particularly procurement</p> <p>Lack of BSCC staff to manage finance and accounting.</p>

<p><b>Key Activities with Milestones</b></p> <p><b>1. Submarine cable connecting Palau to the international internet</b></p> <p>1.1 Award contracts by Q2 2016</p> <p>1.2 Carry out marine survey and complete marine operations for laying cables by Q3 2016</p> <p>1.3 Install terminal equipment by the end of Q2 2017</p> <p>1.4 Equip cable landing systems with the necessary cross-connect facilities for customers by Q2 2017</p> <p>1.5 Train cable company staff on landing facility operation and maintenance, and update skills and knowledge periodically by Q3 2017</p> <p>1.6 Put in place an appropriate cable repair and maintenance agreement for spur before completing laying of cable by Q2 2016</p> <p>1.7 Achieve commissioning, provisional acceptance, and be ready for service by Q1 2018</p> <p>1.8 BSCC secures final acceptance by Q1 2018</p> <p><b>Project Management Activities</b></p> <p>Continue regular monitoring and supervision until Q3 2018</p> <p>Follow up on safeguard issues and risk management plan in a timely manner until Q1 2018</p> <p>Manage contracts from Q1 2016 until Q1 2018</p> <p>Provide timely progress reports until Q3 2018</p> <p>Carry out regular accounting and annual audits until Q3 2018</p> <p><b>Inputs</b></p> <p>ADB: \$25.00 million (loan)</p> <p>Government: \$5.19 million</p> <p><b>Assumptions for Partner Financing</b></p> <p>Not applicable.</p>
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ADB = Asian Development Bank, BSCC = Belau Submarine Cable Corporation, ICT = information and communication technology, ISP = internet service provider, Q = quarter, SEA-US = Southeast Asia–United States.

Q = quarter,

<sup>a</sup> Government of the Republic of Palau. 2013. *Palau National ICT Policy, 2013–2016*. Koror.

Source: Asian Development Bank.

**LIST OF LINKED DOCUMENTS**

<http://www.adb.org/Documents/RRPs/?id=46382-001-3>

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

**Supplementary Documents**

14. Project Procurement Classification
15. Medium Term Development Strategy for Palau—Actions for Our Future