

PROJECT INFORMATION DOCUMENT (PID) CONCEPT STAGE

Report No.: PIDC655

Project Name	Pacific Regional Connectivity Program 2:Palau-FSM Connectivity Project (P130592)
Region	EAST ASIA AND PACIFIC
Country	Pacific Islands
Sector(s)	Telecommunications (100%)
Theme(s)	Infrastructure services for private sector development (85%), Regulation and competition policy (15%)
Lending Instrument	Specific Investment Loan
Project ID	P130592
Borrower(s)	Ministry of Public Infrastructure, Industries and Commerce, Ministry of Finance
Implementing Agency	Responsible Agencies: Department of Transport, Communication & Infrastructure, Ministry of Public Infrastructure, Industries and Commerce
Environmental Category	B-Partial Assessment
Date PID Prepared/ Updated	22-Apr-2013
Date PID Approved/ Disclosed	25-Oct-2014
Estimated Date of Appraisal Completion	24-Oct-2014
Estimated Date of Board Approval	22-Dec-2014
Concept Review Decision	Track II - The review did authorize the preparation to continue

I. Introduction and Context

Country Context

Federated States of Micronesia

The FSM is an island nation in the northern Pacific Ocean comprising more than 600 islands and atolls with up to 1,000 miles between the farthest islands. The total population is approximately 108,000 divided across four states: Pohnpei (35,000), Kosrae (8,300), Yap (12,000) and Chuuk (53,000). The economy is based largely on natural resources (fisheries) and transfers (remittances from expatriate workers and US Government grants through the Compact of Free Association). It is dominated by a large public sector. One of the main challenges facing the FSM is to overcome its remoteness and dispersed geography by developing the infrastructure it needs to connect its people

domestically and internationally, and to encourage social and economic development. The long-term viability of FSM hinges on domestic and international economic integration. Improved connectivity and lower communications costs will contribute both to national economic development and to regional coordination and the integration of FSM in the Pacific and internationally. Broadband Internet offers improved connectivity, lowers transaction costs, creates new economic opportunities, and increases service delivery options. FSM is a lower middle income with a GNI per capita of US\$2,830 (2011). It is currently eligible for assistance from the International Development Association (IDA).

Republic of Palau

Palau is situated in the Micronesian group of islands in the northern Pacific with a population of almost 21,000 people (2011 figures). Palau is the World Bank Group's second smallest member (only Tuvalu has a smaller population). Until 2009 Palau received substantial assistance from the United States through the Compact of Free Association, and a package of renewed financial assistance was subsequently granted in January 2010 to the value of US \$250 million. The renewed Compact grant agreement, which is pending US Congressional approval, is set to end in FY2024 and an overarching challenge for Palau is to achieve self-sufficiency when the renewed Compact grants expire. Palau is an upper middle income with a GNI per capita of \$7,250 (2011). Apart from external aid (averaging 25 percent of GDP over the last decade), tourism – and to a lesser degree, fishing – is the mainstay of the economy. Annual tourism receipts amount to about 50 percent of GDP, more than twice the Pacific island average and among the highest in the world. Visitors from Japan and Taiwan Province of China account for the bulk of tourist arrivals. Palau has rebounded strongly from the impact of the global economic crisis in 2008. Real GDP growth is estimated to have reached about 6 percent in FY2011 which was driven by a 25 percent increase in tourist arrivals, surpassing pre-crisis levels. While the economy seems set to grow by 3 percent in FY2012, and by 2 percent over the next few years, Palau, like many small and isolated countries, remains vulnerable to external shocks. The IMF Article IV staff report dated February 24, 2012 (IMF Country Report No. 12/54) recently concluded that due to a high dependence on tourism, imports of food and fuel, and foreign aid, Palau remains vulnerable to external headwinds and has limited policy space to counter these risks.

Sectoral and Institutional Context

Federated States of Micronesia

Pohnpei is the only FSM state with submarine cable connectivity. Pohnpei is connected to a multi-wavelength submarine fibre optic cable system (HANTRU1) that provides 80Gbps of total capacity to the Government-owned sole operator, the FSM Telecommunications Corporation (FSMTC). This cable links the islands of Pohnpei (FSM), Majuro (Marshall Islands) and Kwajalein (Marshall Islands) to the United States territory of Guam, the Internet hub for the northern Pacific region (numerous cables ex-Guam link East Asian economies with the United States west coast). The FSM section of the HANTRU1 cable was financed by a loan to FSMTC from the United States Department of Agriculture's (USDA) Rural Utilities Service (RUS). Cable capacity is presently under-used, in part due to sector structure and the limited potential demand that is available while only Pohnpei is connected to the cable. Two Gbps of total cable capacity is in service and peak demand is around 120Mbs (including the three states connected to Pohnpei via satellite, which collectively use less than 20Mbs).

New private sector-led investment is needed to improve access to ICT. Access to ICT services is significantly lower outside Pohnpei. Access to Internet, especially broadband services, is also relatively limited. Pohnpei has benefited from the connection of the HANTRU1 cable. The other states--Chuuk, Kosrae, and Yap-- still depend on satellite links which are relatively expensive and offer limited capacity: satellite bandwidth costs are typically in the range of \$1,500-3,500/Mb/month.

The main reasons for the limited and costly services outside Pohnpei include the high costs of connecting remote and sparsely populated islands. The monopolistic market structure also limits opportunities for attracting new investment into the sector to improve access to services. The legal framework is outdated, and the regulatory framework is extremely limited and deals only with radio spectrum regulation. There are no regulations in place to support the effective introduction of new operators, in particular: no provision for basic telecommunications market oversight, licensing, interconnection, numbering, tariffs, and competitive behavior. Moreover, there are no regulations in place for open access or wholesaling capacity on the existing HANTRU1 cable or new cable systems, or dealing with convergence issues.

The Government is committed to liberalizing the ICT sector and supporting the introduction of competition in order to stimulate additional investment. The Government has issued its first National Information and Communication Technology and Telecommunications Policy (September 2012) with the goal of secure, efficient and affordable services to achieve equitable access to communications for all. The policy calls for sector reforms to increase private participation and investment in the provision of ICT services, strengthening the incumbent operator, and open the sector to competition. The Government recognizes that changes are needed in terms of market structure, regulation and the capacity of institutions to lead and implement the Government's vision for the sector. The pillars of the proposed reforms that will be supported by this Palau-FSM Connectivity Project and the associated TA Project are the: (a) development of a new legal framework; (b) reform of the incumbent monopoly operator, FSMTC; and (c) the introduction of competition.

Sector experience in comparable countries and analysis of the FSM economy supports an assessment that new licensees will likely enter the market upon liberalization of the ICT sector. Nevertheless, the Government acknowledges that the size of the market means that, depending on prevailing economic conditions, it will be challenging to attract private investment. The Bank is therefore providing assistance to Government regarding the development of a legal and regulatory framework that maximizes the attractiveness of the ICT sector as an investment opportunity. Technical Assistance Project will help the Government to maximize the likelihood of creating a sustainable, workably competitive marketplace for ICT. Even without new operators, the threat of new competitive entry and the introduction of effective regulatory oversight will help to promote the more efficient supply of ICT services.

Responsibility for the ICT Sector. ICT Sector Policy falls under the Department of Transportation, Communication and Infrastructure (DTCI). The Department is currently responsible for managing technical regulation spectrum management and numbering. The Department has limited technical capacity and a small number of staff who are available to guide the development of the sector. A new independent regulator will be established to take on these responsibilities in relation to the telecommunications sector, as well as responsibility for economic regulation. The capacity of the Department in the policy area, which cuts across other sectors, will need to be enhanced.

Republic of Palau

Telecommunications sector. There are three service providers, each serving targeted, though overlapping, market segments. The state-owned Palau National Communications Corporation (PNCC) provides fixed line services (6,000 subscribers), GSM 900 mobile service (about 14,000 subscribers), and Internet (about 1,500 subscribers mostly dial-up). The privately-owned Palau Mobile Communications (PMC) targets the overseas business and expatriate worker market and offers lower-cost international GSM1800 service. PMC and PNCC have no technical or commercial interconnection arrangements in place. The privately-owned Palau Telecom offers an Internet service. Subscriber numbers are not available for PMC or Palau Telecom. Each operator is looking to expand/diversify its service. An additional operator (Palau WiFi) is also seeking a license to commence services in 2013. Palau relies entirely on satellite links for international connectivity. The high cost and limited availability of this international bandwidth represents a major constraint to future development of the sector, particularly to broadband Internet. There is keen interest by operators to utilize the potential capacity offered by a submarine fibre-optic cable to connect Palau to Guam, with a spur to Yap, however private investment appetite is difficult to determine at this stage.

The legal and regulatory framework for ICT in Palau is outdated, extremely limited and deals only with radio spectrum regulation. There are no regulations in place covering basic telecommunications market oversight, in particular: interconnection (with serious consequences in a market that has multiple operators), numbering, tariffs, and competitive behavior. Moreover, as the Government and industry contemplate investment in a fibre-optic submarine cable to provide low-cost international bandwidth, there are no regulations in place for open access or wholesaling, or convergence issues. The Division of Communication under the Ministry of Public Infrastructure, Industries and Commerce comprises a division chief, two staff and a technical specialist (JICA volunteer). Technical assistance is required to build capacity and support skills development for implementing and managing a modern regulatory framework.

The Government has drafted a National ICT Policy, with input from the Bank and ITU (International Telecommunication Union), to guide sector reforms, to be approved by the President. The policy recognizes the importance of competitive telecommunications markets that will encourage investment, improve service quality and choice, and lead to efficient pricing. Fundamental to that outcome is the creation of a modern legal and regulatory environment, including the establishment of an independent regulator with power to issue licenses, ensure network interconnection and access for all service providers to key wholesale inputs such as international connectivity, and prevent anticompetitive behavior.

The World Bank prepared a detailed report on international connectivity options for Pacific member countries in 2009. The report was widely disseminated and discussed in the region. The main conclusions are that: (a) there is clear evidence of growing demand for bandwidth across the region; (b) improved connectivity contributes to economic and social development at the national level, and is regarded by stakeholders as a driver of regional cooperation and integration in several sectors. The findings of the report were endorsed by the regional ICT community—including representatives of telecommunications policymakers and regulators, the Pacific Islands Telecommunications Association, the Secretariat of the Pacific Community, and the Pacific Islands Forum Secretariat. As a follow-up the World Bank has also undertaken detailed country/

subregional options analyses for FSM, Palau, Samoa, Solomon Islands, and Vanuatu during the period 2010-2012. Analytical/advisory assistance was also provided to the Government of FSM in 2010-11 on: (a) ICT sector development options and strategy issues, including an assessment of existing network infrastructure, a supply and demand analysis, and an initial review of the current policy and legal environment (2010/2011); and (b) policy reform and development. This report also indicated that improved intra-state connectivity (Chuuk, Kosrae, and Yap) would not be viable on purely commercial terms without contributory concessional financing.

World Bank support for new investment in submarine cable infrastructure. Under Phase 1 of the Pacific Regional Connectivity Adaptable Lending Program, the World Bank and the Asian Development Bank (ADB) are financing a submarine fibre-optic cable system linking Tonga and Fiji which is scheduled to be ready for service in mid-2013. Recognizing the benefits of high-speed cable systems, as part of the Bank's recent engagement on ICT in the North Pacific, the Government of FSM requested the Bank to explore options for financial assistance for providing high-speed lower cost Internet bandwidth to other FSM states, particularly to Yap and Chuuk, and the Government of Palau has requested assistance to connect to Guam. Both countries agreed that investment in cable infrastructure needed to go hand in hand with ICT sector reforms.

Stakeholders in FSM and Palau have already taken steps to progress a new submarine cable project to connect Palau to Guam, with a spur to the FSM state of Yap. In Palau a Presidential Task Force was established to progress the project. PNCC and FSMTC have established a joint venture company called the Caroline Communications Corporation (CCC). The rationale for establishing this joint venture company is that both Palau and FSM will share the costs of building a submarine cable system for high-speed international bandwidth into their respective markets. As currently envisaged, the CCC will be responsible for the proposed Palau-Guam cable system including construction and operation of the network, technical specifications and operating parameters. The Government of Palau is maintaining its interest in CCC through PNCC but may consider other forms of ownership options (e.g. designated SOE). The Government of FSM has proposed the transfer of the interest in the CCC currently held by FSMTC to a new state-owned enterprise (SOE). The costs of membership for FSM in the CCC will be a proportion of the overall investment required to construct and operate the proposed Palau – Guam cable system. The participation of FSM in the CCC will help to ensure the overall viability of the proposed submarine cable system, and will be commensurate with the expected direct benefits to the FSM state of Yap.

Relationship to CAS

The Project is consistent with the World Bank's regional engagement strategy in the Pacific. The Project supports improving incentives for private sector-led growth and employment. It also supports the regional strategy's objective of strengthening capabilities for service delivery, by both public and private sectors. The Bank has extensive experience in supporting telecommunications market liberalization and development of new regulatory structures, including in small island economies in the Pacific (Fiji, Samoa, Vanuatu, Solomon Islands), Africa, and the Caribbean. The Bank, together with other regional partners, has also supported the establishment and operation of a new Pacific ICT Regulatory Resource Centre for the Pacific, hosted at the University of the South Pacific in Fiji. The Bank also has significant experience in extending communications to remote areas. The Project will draw on the lessons learned from implementing similar operations. The Bank also has experience in coordinating and financing regional connectivity projects. For example, the World Bank Group is the major player offering support to regional communications infrastructure development in Africa. In the East and Southern Africa, the World Bank is supporting a Regional

Communications Infrastructure Program covering about 25 countries. The IFC has contributed US \$32.7 million and mobilized additional investment of more than US\$200 million for the East African Submarine Cable System, or EASSy, a 10,000 km submarine fiber-optic cable which will run along the East Coast of Africa from Sudan to South Africa. The World Bank Group is also supporting a new multiphase Central Africa Backbone project using the fiber route along the Chad-Cameroon oil pipeline, a West Africa Regional Connectivity program (WARCIP), and a Caribbean Communications Infrastructure program (CARCIP).

The ICT sector is widely recognized as an enabler of economic growth and social stability and development worldwide. ICT sector reforms implemented in similar countries, including elsewhere in the Pacific such as Fiji, Papua New Guinea, Samoa, Solomon Islands, and Vanuatu, demonstrate linkages between market-based reforms and improved economic and social indicators. Reliable and affordable telecommunications supports business development in all sectors, including small and medium enterprises, and, particularly in Palau, inbound international tourism. Existing business users of telecommunications can expand their reach and address new markets. The social value of widely available communications is also very important: facilitating a more mobile work force, enabling family and community links to be preserved despite distance, and assisting interaction between islands and communities. By increasing access to telecommunications, the Project is also expected to contribute to the economic and social empowerment of women, as has been the case in other countries.

Improved connectivity may also be considered a regional public good for the northern Pacific. Higher quality and lower-cost connectivity for FSM and Palau are likely to promote economic growth, permit greater efficiency of resource use, and facilitate cooperation and integration on numerous transnational issues, including, for example, management and monitoring of natural resources, disaster mitigation, and collaborative service delivery. Improved, affordable connectivity, both domestic and international, is a cornerstone of the Framework for Action on ICT for Development in the Pacific, which is a regional strategy endorsed by Ministers and regional agencies that seeks to mobilize ICT for development, governance, and sustainable livelihoods.

II. Proposed Development Objective(s)

Proposed Development Objective(s) (From PCN)

The development objective of the Project is to reduce the cost and increase the availability of ICT services needed to support social and economic development.

Key Results (From PCN)

Key Results. The Project is expected to lay the conditions to enable the delivery of improved public services (including online government services, health and education and financial services), increased private sector development opportunities, and reduced transaction costs for businesses and individuals. The Project will also support regional integration objectives of improved service delivery, trade and communications between Pacific island economies, and contribute to more efficient use of revenues within the region.

Monitoring Indicators. Progress will be measured against the following results indicators:

- Improved international connectivity: Options for improving international connectivity for FSM and Palau and promoting non-discriminatory open access to international connectivity cable infrastructure are developed and implemented;

- Increased international connectivity: measured in bandwidth against baseline;
- Increased access to ICT infrastructure and services using two proxies:
- Access to broadband Internet access services: measured per 100 people against baseline;
- Access to mobile voice services: Measured per 100 people against baseline;
- Reduced price of international communications: measured in retail price for core services (mobile calling and broadband Internet) against baseline.

Beneficiaries. The direct beneficiaries of the Project will be the people of FSM and Palau (including individuals, businesses, government agencies and remote communities) who will receive improved access to telephony and Internet, as well as related value-added services.

III. Preliminary Description

Concept Description

The proposed Project is Phase 2 of the Pacific Regional Connectivity Program Adaptable Program Loan. The proposed financing instruments are:

Federated States of Micronesia: Country and Regional IDA Credit of \$22.5 million

Republic of Palau: IBRD loan of \$13m provided under the traditional elements of the enclave loan structure

Proposed Project Components

PROJECT IN FSM

Component 1. Submarine cable system for Palau-Yap-Guam (\$5 million). IDA financing will be on-lent to an SOE (representing the Government's participation in the CCC) to finance a spur from the state of Yap to the proposed Palau-Guam cable. Further, the IDA financing will finance the membership of the SOE in the CCC in exchange for a set of rights including the use of a certain amount of capacity on the Guam – Palau cable. Following market liberalization, the Government intends to sell down its ownership interests in the SOE to the private sector pursuant to robust ownership and governance arrangements that will ensure open and nondiscriminatory access to international cable capacity. The Government of FSM will also implement regulatory arrangements to ensure that the domestic market in FSM is guaranteed access to international capacity on an open and nondiscriminatory basis.

Component 2. Chuuk and Kosrae communications backbone subsidy (\$15 million) will support the establishment of a universal access fund under the new Communications Law, to provide stimulus funding for backbone infrastructure for Chuuk and Kosrae. Funding will be offered through a competitive bidding process for “least cost” subsidy. Details of the funding mechanism and implementation support will be developed under technical assistance provided in Component 3.

Component 3. Technical Assistance includes technical assistance (\$2 million) for:

- (a) Assessing options for improved connectivity for Chuuk and Kosrae and developing a universal access scheme:: (i) assessing options for submarine cable or improved satellite connectivity for Chuuk and Kosrae; and (ii) designing and implementing a universal access scheme to provide access for virtually all FSM citizens to voice calling and Internet access services;
- (b) Sector regulation and regulatory capacity development. Complementing the TA Project which is more short-term in nature, this component will finance medium-term technical assistance for the new sector regulator to develop and implement regulatory policies and procedures, establish

a licensing procedure for all operators, design processes for the resolution of disputes between service providers, and the protection of consumers against unfair or misleading practices by service providers.

Component 4. Project management support (\$0.50 million) will finance Project financial management, audit, general Project reporting, and monitoring and evaluation.

PROJECT IN PALAU

Component 1. Submarine cable system for Palau-Yap-Guam (\$12.5 million). IBRD financing will be on-lent by the Government of Palau to PNCC, or to a specially designated SOE, for membership in the CCC in exchange for a set of rights including the use of a certain amount of capacity on the cable. The Government of Palau will implement arrangements to ensure that the domestic market in Palau is guaranteed access to international capacity on an open and non-discriminatory basis.

Component 2. Project management support (\$0.5 million) includes support for Project financial management, audit, general Project reporting, and monitoring and evaluation.

IV. Safeguard Policies that might apply

Safeguard Policies Triggered by the Project	Yes	No	TBD
Environmental Assessment OP/BP 4.01	x		
Natural Habitats OP/BP 4.04	x		
Forests OP/BP 4.36			x
Pest Management OP 4.09		x	
Physical Cultural Resources OP/BP 4.11			x
Indigenous Peoples OP/BP 4.10	x		
Involuntary Resettlement OP/BP 4.12	x		
Safety of Dams OP/BP 4.37		x	
Projects on International Waterways OP/BP 7.50		x	
Projects in Disputed Areas OP/BP 7.60		x	

V. Financing (in USD Million)

Total Project Cost:	72.50	Total Bank Financing:	47.50
Financing Gap:	0.00		
Financing Source			Amount
BORROWER/RECIPIENT			0.00
International Development Association (IDA)			47.50
Asian Development Bank			25.00
Total			72.50

VI. Contact point

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