

Document of
The World Bank

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Report No: 68009-LAC

PROJECT APPRAISAL DOCUMENT

ON PROPOSED

CREDIT IN THE AMOUNT OF SDR 6.5 MILLION
(US\$ 10 MILLION EQUIVALENT)
TO GRENADA

CREDIT IN THE AMOUNT OF SDR 3.9 MILLION
(US\$ 6 MILLION EQUIVALENT)
TO SAINT LUCIA

CREDIT IN THE AMOUNT OF SDR 3.9 MILLION
(US\$ 6 MILLION EQUIVALENT)
TO SAINT VINCENT AND THE GRENADINES

REGIONAL GRANT IN THE AMOUNT OF SDR 2 MILLION
(US\$ 3 MILLION EQUIVALENT)
TO CARIBBEAN TELECOMMUNICATIONS UNION PROJECT

IN SUPPORT OF THE FIRST PHASE (APL 1A) OF THE CARIBBEAN REGIONAL
COMMUNICATIONS INFRASTRUCTURE PROGRAM

April 24, 2012

Transport, Water and ICT Department
Caribbean Country Management Unit
Latin America and the Caribbean Region

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CURRENCY EQUIVALENTS

(Exchange Rate Effective February 29, 2012)

Currency Unit = SDR
1.55602 = US\$1
US\$ = SDR 1

FISCAL YEAR

January 1 – December 31

ABBREVIATIONS AND ACRONYMS

ACS	Association of Caribbean States
BP	Bank Procedures
BPO	Business Process Offshoring
CARIFORUM	The Caribbean Forum
CARICOM	Caribbean Community
CAS	Country Assistance Strategy
CCI	Centros de Capacitación en Informática
CCL	Computer Center Ltd.
CD	Country Disbursement
CDB	Caribbean Development Bank
CED	Center for Enterprise Development
CIDA	Canadian International Development Agency
CKLN	The Caribbean Knowledge Network
CMMI	Capability Maturity Model Integration
CNSIC	Comisión Nacional para la Sociedad de la Información y el Conocimiento
CPS	Country Partnership Strategy
CSME	CARICOM Single Market Economy
CTU	Caribbean Telecommunications Union
ECCB	Eastern Caribbean Central Bank
ECDL	European Computer Driving License
ECTEL	Eastern Caribbean Telecommunications Authority
EDF	European Development Fund
E-ID	Electronic Identification
EIRR	Economic Internal Rate of Return
EPIC	Entrepreneurship Program for Innovation in the Caribbean
FDI	Foreign Direct Investment
FDT	Fondo de Desarrollo de las Telecomunicaciones
Gbps	Gigabit per Second
GIDC	Grenada Investment Development Corporation
GSM	Global System for Mobile Communication
HDI	Human Development Index
IBRD	International Bank for Reconstruction and

	Development
ICT	Information and Communication Technologies
IDA	International Development Association
IDB	International Development Bank
IEG	Independent Evaluation Group
IFC	International Finance Corporation
IFMIS	Integrated Financial Management Information Systems
INDOTEL	Instituto Dominicano de las Telecomunicaciones
INFOTEP	Instituto de Formación Técnico Profesional en República Dominicana
INTOSAI	International Organization of Supreme Audit Institutions
IT	Information Technology
ITES	Information Technology Enabled Services
ITLA	Instituto Tecnológico de las Américas
ITU	International Telecommunication Union
IXP	Internet Exchange Point
Mb	Megabyte
MIGA	Multilateral Investment Guarantee Agency
Mbps	Megabit per second
NPV	Net Present Value
NTRC	National Telecommunications Regulatory Commission
OAS	Organization of American States
OD	Operational Directives
OECS	Organization of Eastern Caribbean States
OFID	OPEC Fund for International Development
OP/BP	Operation Policies/Bank Procedures
PPP	Public Private Partnership
PSIPMU	Public Sector Investment Programme Management Unit
QAG	Quality Assurance Group
RGSM	Regional Government Securities Market
SDR	Special Drawing Rights
SEMCAR	Support for Economic Management in the Caribbean
SFLAC	Spanish Fund for Latin America and the Caribbean
SMART	Specific, Measureable, Achievable, Relevant, Timebound
SME	Small and Medium Enterprise
SPV	Special Purpose Vehicle
UAS	Universal Access Fund
UNDB	United Nations Development Business
UNDP	United Nations Development Program
VPN	Virtual Private Network
WBG	World Bank Group

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CARIBBEAN REGION
Caribbean Regional Communications Infrastructure Program APL 1A (CARCIP)

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PAD DATA SHEET

Caribbean Regional Communications Infrastructure Program (APL 1A)

PROJECT APPRAISAL DOCUMENT

Latin America and the Caribbean

Transport Water and Information and Communication Technologies Sector

Date: April 24, 2012 Country Director: Françoise Clottes Sector Director: Jose Luis Irigoyen Acting Sector Manager: Juan Navas Sabater Team Leader(s): Mavis Ampah Project ID: P114963 Lending Instrument: APL	Sector(s): Telecommunications (50%), Information Technology (50%) Theme(s): Regional integration (30%), Regulation and competition policy (30%), Infrastructure services for private sector development (40%) EA Category: B (Partial Assessment)
Project Financing Data:	
Proposed terms: IDA credit with final maturity of 40 years, including grace period of 10 years for Grenada, Saint Lucia and Saint Vincent and the Grenadines. <input type="checkbox"/> Loan <input checked="" type="checkbox"/> Credit <input checked="" type="checkbox"/> Grant <input type="checkbox"/> Guarantee <input type="checkbox"/> Other:	
Source	Total Amount (US\$M) Equivalent
Total Program Cost: Of which APL 1A APL 1B APL 2 and subsequent phases Regional Grant Co-financing: Borrower: Total Bank Financing (APL 1A): IDA IDA Regional Grant New Recommitted	US\$ 98.0 Million (estimated) US\$ 25.0 Million Equivalent US\$ 30.0 Million US\$ 43.0 Million US\$3.0 Million US\$ 25.0 Million Equivalent US\$ 22.0 Million Equivalent US\$ 3.0 Million Equivalent

Borrower:

Government of Grenada

Responsible Agency: Ministry of ICT (Prime Minister's Office)

Contact Person: Margaret Belfon
Telephone No.: (473)-443-0531/0532
Fax. no.: (473) -443-0533
Email: margaret.belfon@gmail.com

Government of Saint Lucia

Responsible Agency: Ministry of Finance

Contact Person: Isaac Anthony
Telephone No.: (758) 468-5500
Fax No.: (758) 452-6700
Email: ianthony@gosl.gov.lc

Government of Saint Vincent and the Grenadines

Responsible Agency: Ministry of Finance and Economic Planning

Contact Person: Mrs. Laura Anthony-Browne
Telephone No.: (784) 457-1746
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Email: cenplan@vincysurf.com

Estimated Disbursements APL 1A (Bank FY/US\$ m equivalent)

FY	2013	2014	2015	2016	2017
Annual	1.91	7.00	7.10	6.10	2.89
Cumulative	1.91	8.91	16.01	22.11	25.00

Project Implementation Period: Start August 1, 2012, End August 1 2016

Expected effectiveness date: August 1, 2012

Expected closing date: February 1, 2017

Does the project depart from the CAS in content or other significant respects?

☐ Yes ☒ No

Does the project require any exceptions from Bank policies?
Have these been approved/endorsed (as appropriate by Bank management?)

☐ Yes ☒ No

☐ Yes ☐ No

Is approval for any policy exception sought from the Board?

☐ Yes ☐ No

If yes, please explain:	
Does the project meet the Regional criteria for readiness for implementation?	X Yes <input type="radio"/> No
Project Development objective	
The development objective of CARCIP is to increase access to regional broadband networks and advance the development of an ICT-enabled services industry in the Caribbean Region.	
<p>Program description:</p> <p>CARCIP will be structured into three components and will have an overall Results Framework for measuring performance. The components for APL 1 A will be as follows:</p> <ol style="list-style-type: none"> Component 1: Regional Connectivity Infrastructure. This component addresses the: (i) physical connectivity infrastructure including submarine cable infrastructure, terrestrial broadband backbone fiber networks and terrestrial or submarine cross-border links, leveraging government networks as needed, and national and regional Internet Exchange Points (IXPs), and (ii) enabling environment that would ensure Public Private Partnership in the ownership, management and competitive access to the infrastructure. Component 2: ICT-led innovation. This component will support activities that will leverage the regional broadband infrastructure to foster growth of the regional IT/IT Enabled Services (ITES) industry. Activities will include IT and technology incubators and IT Parks, skills development and certification programs with regional harmonization, special business development vehicles as well as strategies, policies, regulatory and incentive structures to support regional IT and ITES industry. Component 3: Implementation Support. This component will support implementation, institutional and capacity building as well as monitoring and evaluation. Additional resources from a regional grant will complement national implementation efforts through knowledge-sharing activities and regional coordination to ensure that the program delivers results both at the national and regional level. A fourth component is included in the overall program design, but will largely be triggered beyond Phase 1. This component will be aimed at improving government and private sector efficiency and transparency by leveraging the regional broadband infrastructure towards the delivery of a wide variety of e-services. Only Saint Lucia will have a pilot e-Transformation program which will focus on selected priority e-services as part of its Component 2. <p>The program will be implemented in phases, based on country demand and readiness. Phase 1 of CARCIP includes four countries (Grenada, Saint Lucia and Saint Vincent and the Grenadines under sub-Phase APL 1A, expected to be joined shortly by the Dominican Republic under sub-Phase APL 1B), and will be initiated in FY13. Other eligible CARIFORUM countries may join in subsequent phases, and would be targeted for development in FY13-14. In line with the program's incremental approach, Phase 1 will focus primarily on component 1 and to a lesser extent on component 2, with support of component 3. Subsequent phases may add additional components as required. The deferred participation of the Dominican Republic will not affect the success of the Program outcome.</p>	

Safeguard policies triggered?	
Environmental Assessment (OP/BP 4.01)	<input checked="" type="radio"/> Yes <input type="radio"/> No
Natural Habitats (OP/BP 4.04)	<input checked="" type="radio"/> Yes <input type="radio"/> No
Forests (OP/BP 4.36)	<input type="radio"/> Yes <input checked="" type="radio"/> No
Pest Management (OP 4.09)	<input type="radio"/> Yes <input checked="" type="radio"/> No
Physical Cultural Resources (OP/BP 4.11)	<input checked="" type="radio"/> Yes <input type="radio"/> No
Indigenous Peoples (OP/BP 4.10)	<input type="radio"/> Yes <input checked="" type="radio"/> No
Involuntary Resettlement (OP/BP 4.12)	<input checked="" type="radio"/> Yes <input type="radio"/> No
Safety of Dams (OP/BP 4.37)	<input type="radio"/> Yes <input checked="" type="radio"/> No
Projects on International Waterways (OP/BP 7.50)	<input type="radio"/> Yes <input checked="" type="radio"/> No
Projects in Disputed Areas (OP/BP 7.60)	<input type="radio"/> Yes <input checked="" type="radio"/> No
<p style="text-align: center;">Conditions and Legal Covenants: (Refer to the relevant sections of the data sheet of the Annexes 8, 9, 10 and 11, respectively)</p>	

I. STRATEGIC CONTEXT

A. Regional Context

1. The CARIFORUM region¹ is one of the most diverse in the world in terms of economic performance and demography. Economic growth averaging about 2.48 percent in the last decade (2001-10)² includes outliers such as Grenada, Bahamas, Barbados and Haiti with nearly 0 percent growth rate, and the Dominican Republic and Trinidad and Tobago with about 6 percent growth. In 2010 economies ranged from GDP of US\$52 billion in the Dominican Republic to US\$0.46 billion in Dominica, with four countries accounting for about 82 percent of the regional GDP, and the remaining eleven countries accounting for only 18 percent.³ Per capita income ranges from a high of US\$21,880 in the Bahamas to US\$670 in Haiti. Three of the countries are classified as high-income countries (Trinidad and Tobago, Bahamas and Barbados), nine as upper-middle income countries (Antigua and Barbuda, Dominica, the Dominican Republic, Grenada, Saint Lucia, Saint Vincent and the Grenadines, St. Kitts and Nevis, Jamaica and Suriname), two as lower middle income (Belize and Guyana) and one as low-income country (Haiti).

2. Disparity among the CARIFORUM countries is also reflected in the population distribution. Two countries dominate the region: the Dominican Republic and Haiti have approximately 75 percent of the population (20 million people), evenly split between them⁴ followed by Jamaica and Trinidad and Tobago with 2.7 million and 1.3 million inhabitants respectively. The remaining 3 million is spread among eleven countries, none of which accounts for more than 2.8 percent of the CARIFORUM total population.

3. The region's diversity, strategic location, small size, and natural endowment present opportunities and challenges in almost equal measure. The factors behind the high incomes include the establishment of major offshore banking centers, the large tourism industry, and small populations - a combination that inevitably results in high per capita incomes, wealth creation and social progress within a relatively stable environment. However, the combined impact of small size⁵, inadequate economies of scale, high reliance on the service sector, particularly tourism and related construction, increased competition from other tourist destinations, and in a number of cases single source income (e.g. oil in Trinidad and Tobago, apparel in Haiti, and agriculture in Guyana), also present challenges to the CARIFORUM region. This has been particularly challenging in the region's response to external shocks, such as natural disasters or financial/economic crisis, and its ability to compete in international markets. Most of the countries exhibit lower economic performance compared to other small-size economies that

¹ CARIFORUM comprises the 15 Caribbean countries of CARICOM (i.e., Antigua and Barbuda, Bahamas, Barbados, Belize, Dominica, Grenada, Guyana, Haiti, Jamaica, Montserrat, St. Kitts and Nevis, St. Lucia, St. Vincent and the Grenadines, Suriname, Trinidad and Tobago) and the Dominican Republic. Figures through the document do not include Montserrat since it is a British overseas territory.

² The GDP grew only by 2.64 percent in 2008 as a result of the global financial crisis, contracting by 2.6 percent and 0.26 percent in 2009 and 2010 respectively.

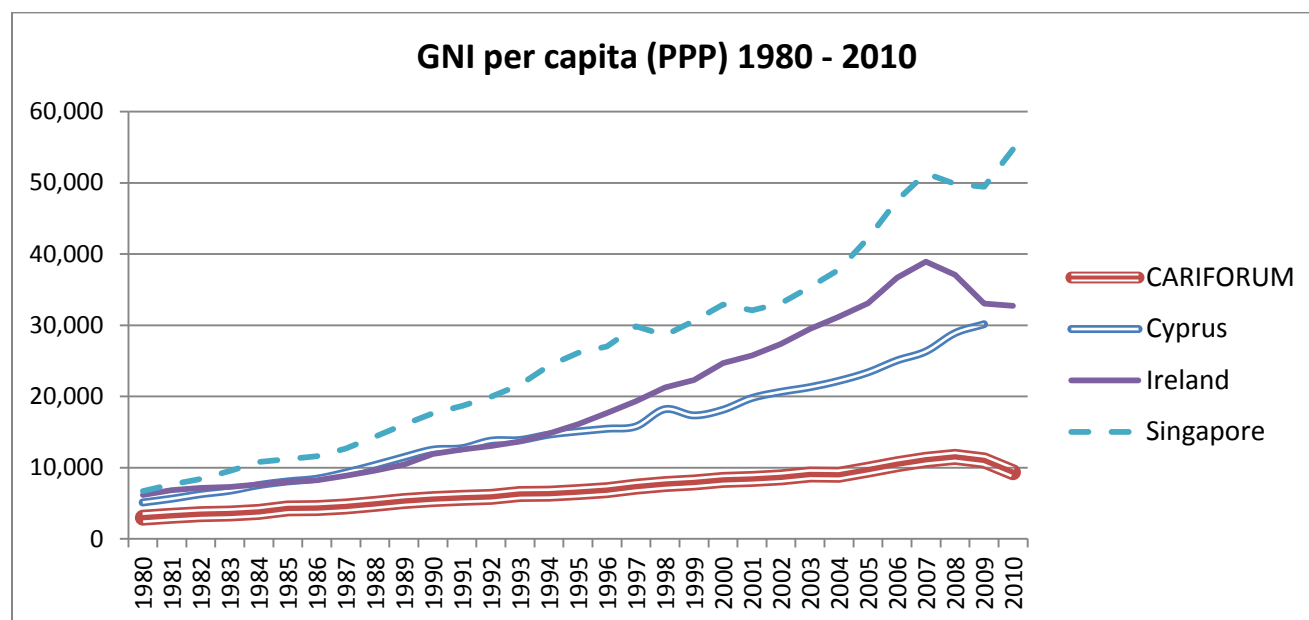
³ Dominican Republic, Trinidad and Tobago, Jamaica and the Bahamas account for 45 percent, 18 percent, 12.5 percent and 6.5 percent respectively of the regional GDP.

⁴ World Bank database. Suriname is excluded from analysis, as it does not have available data.

⁵ The CARIFORUM's total GDP and population of US\$114 billion and 27 million respectively in 2010 compares for example, to Peru, with a GDP of US\$157 billion and population of 29 million - World Bank database

have based their economic growth on gaining international competitiveness, such as Singapore, Cyprus or Ireland as indicated in the graph below.

Graph 1 - GNI per capita (PPP) 1980 – 2010



Source: World Bank indicators

4. Persistent high unemployment and poverty rates exist despite notable progress. Although many countries in the region have achieved middle-income status, unemployment rates have stayed chronically high, at over 10 percent in several countries,⁶ and above 20 percent in Saint Vincent and the Grenadines, and Saint Lucia.⁷ Poverty rates are also high, estimated to be 15 percent or above in most OECS⁸ countries, and 50 percent in the Dominican Republic. Haiti, which alone represents 38 percent of the total population of the CARIFORUM region,⁹ is the poorest country in the Western Hemisphere, with 77 percent of the population living under the poverty line and 54 percent in absolute poverty.¹⁰

5. The countries of CARIFORUM are seeking to foster sustainable growth through an integrated regional strategy. A 2005 Bank report on growth and competitiveness in the Caribbean countries highlights a decline in productivity in the region which has limited economic growth and hindered its long-term sustainability.¹¹ CARIFORUM is already in the process of developing an integrated and harmonized regional strategy to assist countries to

⁶ World Development Indicators, 2010 or last available data.

⁷ OECS, Regional Partnership Strategy, World Bank, 2010.

⁸ OECS, Regional Partnership Strategy (2010). OECS countries include Dominica, Grenada, St. Kitts & Nevis, St. Lucia, and Vincent & the Grenadines. Data from Dominican Republic, 2007, World Development Indicators, poverty headcount ratio at \$2 a day (PPP) (% of population).

⁹ World Bank Database, population data for 2010

¹⁰ UN, <http://www.unohrrls.org/en/orphan/307/>

¹¹ A Time to Choose: Caribbean Development in the 21st Century, 2005.

compete more effectively in the international market and contribute to a faster economic recovery. The strategy seeks to identify the competitive advantages of each country in the hope of leveraging them for regional growth. It encompasses multiple areas of action (infrastructure, social and economic policies, international trade competitiveness, education, ICT etc). This is crucial to stimulating economic recovery and increasing competitiveness. A well-integrated region will facilitate trade within the region, bring economies of scale and reduce overall cost of infrastructure. A key feature of this regional strategy is the promotion of the CARICOM Single Market Economy (CSME), which aims to facilitate trade within the region and attract investment, as well as explore options for full employment and full exploitation of natural resources and capital in the region.

6. The potential spillover effects of Information and Communication Technologies (ICT) make it a critical sector for stimulating growth, competitiveness and diversification in the region. The region's prosperity depends on how well it is integrated into the global economy. Information and Communication Technologies (ICT), particularly high-speed Internet, is playing an increasingly central role in this – enhancing trade, facilitating cross-border payments, increasing investment – all key components of economic growth/diversification and poverty reduction. ICT investments in one country can generate positive externalities for other countries and for the region as a whole. While current ICT service exports as a percentage of GDP are low, ranging from none in the case of Suriname to 6 percent in the case of Jamaica, there is potential for massive scale up. Only Guyana, with 20.7 percent, has a range similar to its income peer countries (lower middle-income countries).¹² As described in the 2005 Bank report, ICTs are already being used in the economy to increase productivity of firms.¹³ However, for the regional economy to remain competitive, the region needs to further develop its ICT sector and increase the ICT skills of its population. CARIFORUM is conscious of the potential of ICT as a source of sustainable economic development and has created a Regional ICT Steering Committee and a Regional ICT strategy to facilitate the process.

B. Sectoral and Institutional Context

7. Telecommunications sector liberalization came relatively late to the Caribbean region. Nevertheless, most of the countries have been successful in establishing competition in mobile services, and most have achieved a penetration rate of 100 percent or above. This would, however, be an “artificial” saturation, considering that mobile rates are very high and that people often own multiple phones from different service providers.

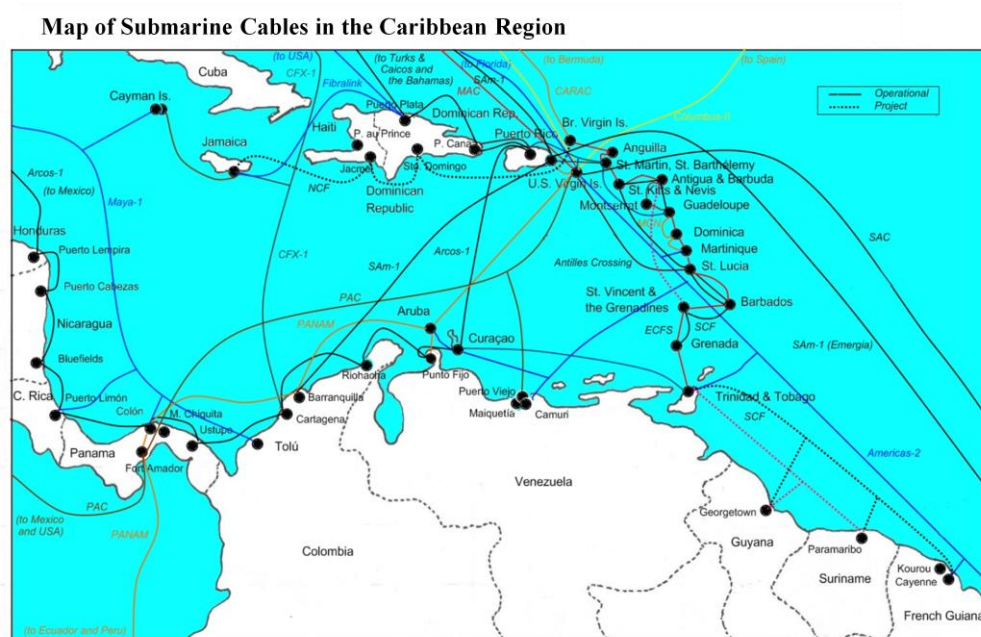
8. The region is serviced by an extensive, complex, and robust submarine network but significant gaps remain. Majority of destinations are already well connected with submarine capacity. Some 30 submarine cable networks serve the region, but hunger for bandwidth (international bandwidth usage grew 75 percent in 2010) is prompting renewed activity in the development of additional submarine networks or the upgrading of existing ones. With numerous cables servicing the region¹⁴ (see map below), in diverse ownership, it could also appear that

¹² World Development Indicators, 2008 or last available data.

¹³ A Time to Choose: Caribbean development in the 21st Century, 2005.

¹⁴ Among others: 1) the Southern Caribbean Fiber to link Trinidad and Tobago to Guyana, Suriname and French Guyana; 2) the Northern Caribbean Fiber to link the Dominican Republic, Haiti and Jamaica to international cables in St. Croix; 3) the Colombia-Florida Subsea Fiber to link Colombia to Southern Florida with a landing station in

there are too many cables already in existence, but this needs to be analyzed in the context of consistent growth in bandwidth demand for mobile use, Internet access, and other services requiring high-speed connections and the lack of redundancy. For example, at the international level, most countries in the region are currently served by only one international cable, and some countries such as Haiti and Guyana were only recently connected to a cable. At the national level, major infrastructure gaps also exist, with very little investment in broadband networks venturing beyond the main urban centers, especially in the form of fiber backbone networks, which have very limited extension, in the few countries that have one. The lack of redundancy in the ICT infrastructure, both at the international and the national levels, and the inexistence of emergency communications networks, leaves the countries very exposed to major disruptions in communications services, which makes the countries particularly vulnerable in the face of emergencies, as was demonstrated in the aftermath of the recent Haiti earthquake and in previous years' hurricane seasons.



9. Incomplete Liberalization hinders broadband growth and economic development in CARIFORUM countries. Despite increased competition in the telecommunications sector¹⁵ which has resulted in significant improvements in mobile infrastructure within the region (mobile cellular subscriptions per population increased from 21.99 percent in 2002 to 121.6 percent in 2010),¹⁶ access to fixed telecommunications and broadband services is limited and expensive. Monopolies or partially competitive ICT sub-sectors continue to exist in countries such as Antigua and Barbuda, Bahamas, and Trinidad and Tobago.¹⁷ There is no effective

Jamaica; 4) Telefónica's Emergia cable which could land in the Dominican Republic; 5) Columbus Networks' possible extension to Haiti.

¹⁵ Arrival of Digicel with operations in more than 20 territories

¹⁶ Countries in sample: Antigua and Barbuda, Bahamas, Barbados, Belize, Dominica, Dominican Republic, Grenada, Haiti, Jamaica, St Kitts and Nevis, St. Lucia, St. Vincent and the Grenadines, Suriname, Trinidad and Tobago. Data from World Bank 'ICT-at a glance' database. 2010.

¹⁷ Data from World Bank 'ICT-at a glance' database, 2010.

competition in the provision of international services, as in most countries, the former incumbent operators still control international facilities. Similar challenges exist at the national level in the form of persistent interconnection disputes between the two main regional service operators - LIME and Digicel. The result is the relatively slow growth of broadband access and high prices. In 2010, the average rate of Internet users was 41.41 percent and that of fixed broadband Internet subscribers was 13.36 percent, far below the level seen in a sample of developed countries.¹⁸ These figures, moreover, mask high intra-regional disparity in ICT access, with countries such as Haiti and Belize having only 8 percent and 12 percent Internet access respectively, compared to 80 percent in Antigua and Barbuda. The generally high price of fixed broadband services, limits their affordability for business and consumers. The average price of the ITU fixed broadband sub-basket in the region in 2010 was US\$30.34 (or almost 8 percent of GNI per capita in average for the region), compared to US\$20 in the United States (0.5 percent of GNI per capita).¹⁹ The result of such major gaps in ICT infrastructure and high prices is that the region is ill prepared to compete in the global economy. Without access to affordable and reliable ICT infrastructure and services, the countries of the Caribbean are also limited in their options to improve their productivity and diversify their economies through knowledge- and information-based services.

10. Inadequate policies fail to stimulate demand for ICT services. Intensive usage of ICT in the public and private sectors, as well as society in general, is associated with higher levels of government transparency, a more innovative and investment-friendly private sector, and an overall more resilient and competitive economy. In general, while there has been improvement, the CARIFORUM region lags behind in demand-side activities, which stimulate such intensive use. For instance, most CARIFORUM countries ranked low in e-government (online services, connectivity, human capital) averaging 0.43, far below developed countries like the Republic of Korea (0.88) or the United States (0.85), which lead the ranking. Furthermore, only one CARIFORUM country- (Jamaica) makes it into AT Kearney's top 50 Global Services Location Index²⁰. This means that it is the only country currently able to position itself as an attractive destination for IT/ICT enabled services business.

11. A new Regional Digital Development Strategy has been developed by the Caribbean Community (CARICOM) to address key policy and regulatory bottlenecks which constrain the use of ICT to stimulate growth. The key objectives of the Strategy are to:

- a. Establish a modern regional regulatory and open telecommunications infrastructures with affordable networks using converged technologies,
- b. Build a digital Community culture and increase the value and volume of the region's trained ICT workforce,
- c. Use ICT to demonstrate good governance and increase efficiency in operations,
- d. Establish a culture of innovation and quality, and enable sustainable production of Regional digital goods and services, and

¹⁸ As a reference for comparison, the average of Internet users per population and fixed broadband subscribers in 2010 of a sample of OECD countries was 83.38 and 31.94, respectively. This average is composed of Canada, Denmark, France, Finland, Germany, the Netherlands, Japan, Republic of Korea, United Kingdom and United States. Data from World Bank 'ICT-at a glance' database.

¹⁹ The ITU fixed broadband sub-basket is calculated based on the price of the monthly subscription to an entry-level fixed broadband plan. Data from ITU, Measuring the Information Society, 2011.

²⁰ <http://www.atkearney.com/index.php/Publications/global-services-location-index-gsli.html>.

- e. Guide businesses and governments to use ICT for sustainable growth and support social development objectives through partnerships.

12. The proposed Caribbean Communications Infrastructure Program (CARCIP) supports this regional strategy. CARCIP will support the implementation of the region's comprehensive strategy, allowing the countries to accelerate the deployment of critical regional infrastructure to foster regional economic development and growth. It expects to do this through support of physical connectivity gaps as well as technical assistance to improve the enabling environment to maximize the development potential of the regional ICT infrastructure to diversify and stimulate growth.

13. CARCIP provides targeted solutions for the countries to benefit from the developmental and transformational potential of ICT. First, CARCIP provides opportunities for the CARIFORUM region to bridge the remaining gaps in regional and domestic broadband communications infrastructure, including submarine cable infrastructure and landing stations, domestic backbone networks and cross-border links and, national and regional internet exchange points (IXPs). Second, CARCIP aims at creating an enabling environment that leverages this regional and domestic infrastructure to foster employment and economic growth. This includes the support of policies and regulatory frameworks to further increase market competition, as well as support to develop innovative regional IT and ITES industries, e-services, m-services and other applications by the private sector and, e-government and m-government²¹ services. Specific skills development programs will target women and youth to improve employability and bridge the gender gap in access to, and use of ICT. Finally, CARCIP aims at supporting institutional development and capacity building that enhances the effectiveness of the regional institutional ICT framework.

14. CARCIP complements and seeks synergies with existing World Bank connectivity initiatives within the CARIFORUM region. Several projects are already in place in the CARIFORUM region, which are aimed at addressing the regional gaps and supporting the region's ICT strategy. Three of them are in the implementation phase: Telecom & ICT Development – TICT²² – (P088448) (OECS countries), E-Government for Regional Integration Program – EGRIP²³ – (P100635) (OECS countries) and Caribbean Knowledge and Learning Network – CKLN – (P108711) (CARIFORUM region). Two projects are almost ready to launch: Support for Economic Management in the Caribbean – SEMCAR – (Caribbean region) and Entrepreneurship Program for Innovation in the Caribbean – EPIC – (Caribbean region). CARCIP looks to establish specific synergies with the existing projects in order to attain a real regional integration that also permeates the boundaries of the CARIFORUM countries. For instance, CKLN and CARCIP are complementary programs; whereas CKLN's goals are mainly focused on international connectivity to interconnect the different countries through a Research and Educational Network, CARCIP aims to provide the countries with the requisite regional infrastructure that permits countries to interconnect with CKLN and other networks and therefore contribute to the global and regional interconnectivity.

²¹ M-government refers to e-government services provided through mobile devices, such as mobile phones or PDAs. It includes the use of text messages through Short Message Service (SMS).

²² OECS Telecommunications and ICT Development Project; Bank Approval May, 2005

²³ OECS E-Government for Regional Integration Program; Bank Approval May, 2008

15. The World Bank is well placed to support CARIFORUM with the development of CARCIP. The World Bank has extensive experience in similar regional programs globally, including the Regional Communications Infrastructure Program focusing on East and Southern Africa, the Central African Backbone, the West Africa Regional Communications Infrastructure Program, the Pacific Islands Connectivity Program, among others. Furthermore, The World Bank is also very active in the ICT sector in the CARIFORUM region, through a number of highly complementary programs, as described in the previous paragraph.

C. Higher Level Objectives to which the Program Contributes

16. The program ultimately seeks to contribute to the higher strategic objectives of regional and global integration, green growth and competitiveness of the Caribbean region. CARCIP is expected to contribute to the CARIFORUM regional integration strategy by fostering economic growth, generating employment, supporting poverty reduction plans, enabling rural integration and enhancing the regional and domestic competitiveness of each of the member countries. Moreover, CARCIP is also expected to have an indirect impact on education through the integration with the Caribbean Knowledge and Learning Network, enabling domestic education institutions and schools to connect the regional CKLN network.

17. Links to CPSs, CASs, ISN and RPSs are consistent. The current Dominican Republic CPS (Report # 49620-DO, May 19 2005), Haiti ISN (Report # 65112-HT, June 2 2009), Jamaica CAS (Report # 52849-JM, July 19 2007”), Guyana CAS (Report # 47983-GY, May 17 2002), and the RPS for the OECS (Report # 53762-LAC, May 3 2010), have all identified CARCIP as a program for scaling up regional investment. While the countries that would benefit from the program vary in size and needs, the program is well suited to support a number of common strategic themes identified in the various strategies, which will clearly benefit from improved communications infrastructure and cheaper access to ICT. For example, for Jamaica, consolidating backbone networks and promoting private sector growth through targeted investments could address fiscal and debt sustainability issues, the growth agenda; for Haiti, increasing connectivity throughout the country and improving private sector investment and incentives could help in promoting growth and local development; for Guyana, improving private sector investment and incentives and leveraging other donors will support the need to work in areas where the Bank’s support could significantly leverage additional financing to contribute to the Government’s overarching PRSP focus of accelerating and sustaining growth; for the Dominican Republic, targeting private sector investments in country-wide connectivity, high degree of government interconnectivity and growth of the local ICT industry will promote competitiveness in a sustainable and resilient economic environment, enhance quality of public expenditures and institutional development ; while for the OECS in general, enhancing regional connectivity between the islands, facilitating private sector investment, promoting a cooperative approach to development of the regional ICT industry, and exploiting economies of scale in deploying services for citizens and businesses would go a long way to enhance competitiveness and stimulate sustainable growth in the medium term.

II. PROGRAM DEVELOPMENT OBJECTIVES

A. Program Development Objective and Phases

18. The development objective of CARCIP is to increase access to regional broadband networks and advance the development of an ICT-enabled services industry in the Caribbean Region.

19. This objective will be achieved through: (a) targeted investments in ICT infrastructure that fill the gaps at the regional and domestic levels, in partnership with the private sector and other development partners, where applicable; (b) creating an enabling environment that fosters competitive access to infrastructure and an IT/ITES and other knowledge industries; (c) enabling and supporting the creation of e-services, including m-government services; (d) integrating rural areas in the knowledge and information society thereby increasing their participation in the regional economy; (e) strengthening of institutional arrangements to ensure effective program implementation and outcomes; and (f) improving procurement and safeguards processes to ensure sustainable investments in ICT .

Program Beneficiaries

20. CARCIP will benefit the entire 27.5 million population of the CARIFORUM region in both urban and rural areas, and will include operators, schools, hospitals, emergency responders, government ministries and departments, ICT services consumers (business and residential), IT/ITES and other knowledge-intensive businesses and employees, and e- and m-government services users. Benefits are expected to include improved access to broadband services, lower prices and higher quality of services. IT/ITES impact is also expected to be considerable on direct employment and economic diversification. Additionally, there will be an important social impact for rural areas in terms of education by leveraging the CKLN. Furthermore, as the number of e- and m-government services increase, it is expected that the quality of public services will be enhanced. For monitoring purposes under CARCIP Phase 1, direct project beneficiaries will be defined as a percentage of the number of employees in supported firms plus number of people trained under the project in the Dominican Republic, Grenada, Saint Lucia and Saint Vincent and the Grenadines. Female beneficiaries are expected to be at least 50 percent of this estimate.

PDO Level Results Indicators

21. The PDO Level Results Indicators are the following:

- a) Number of Internet Users
- b) IT/ITES employment
- c) Businesses receiving Support through the project
- d) Direct project beneficiaries, (percentage of which are female)

III. PROGRAM DESCRIPTION

A. Program Components

22. The program provides a flexible and tailored approach to address each country's needs. The proposed program will have different elements depending on the priority areas for each of the participating countries, and will be tailored to each country's needs. However, the interventions for each of the participating countries will be structured along the same set of strategic priorities and will be closely coordinated and jointly implemented to the extent possible to ensure the regional spillover effects are maximized. APL1A is structured along three main components, as described below:

Component 1: Regional Connectivity Infrastructure.

23. This component will be aimed at bridging the remaining gaps in the regional broadband communications infrastructure. The component addresses: (a) the physical connectivity infrastructure; and (b) the enabling environment that would ensure Public Private Partnership in the ownership or management of connectivity infrastructure, as well as competitive access to such infrastructure.

- a. **Connectivity Infrastructure:** In general, the provision of broadband requires a combination of network components, technologies and services, which constitute a seamless 'supply chain'— from connection to global networks through to the consumer. Figure 1 in Annex 2 illustrates the chain of activities that constitutes such supply chain and that are likely to be financed under CARCIP to deliver cost effective, mass-market communications to the region. The decision on where to place the most emphasis on the supply chain depends on whether the connectivity gap is primarily at the domestic level (for both voice and data) or at the regional and international levels. CARCIP funding focuses primarily on addressing regional and international gaps based on a competitive "least-cost" subsidy under a public-private partnership model, with payments triggered by demonstrated delivery of pre-defined outputs. Project funds will support the financial, legal and regulatory services to design and implement the Public Private Partnership mechanism, including the tender documentation and tender process; consultant services for environmental screening, and the services of an independent verification agent to certify that winning bidders have fulfilled their service agreements. The principles underlying this component include: (a) private-sector led supply of the infrastructure, supported by least-cost public subsidy; and (b) infrastructure shall be provided on non-discriminatory, open access and competitively neutral basis.
- b. **Enabling Environment for Connectivity:** This will focus on providing policy, regulatory, institutional and transaction advisory support that will maximize the benefits of the infrastructure that will be put in place. Support will include: (i) promoting public private partnerships in the deployment of terrestrial connectivity infrastructure and submarine cable infrastructure, including landing stations; (ii) telecoms regulatory support to ensure appropriate governance structures, infrastructure sharing and competitive access to connectivity infrastructure; and (iii) harmonization and institutional capacity building. The enabling environment sub-component will also aim at improving government and private

sector efficiency and transparency by leveraging the regional broadband infrastructure towards the delivery of a wide variety of e-services.

Component 2: ICT-led innovation.

24. This component will support activities which will leverage the regional broadband infrastructure to foster employment, as well as growth of a robust regional IT and ITES industry. This may include a combination of support for: (i) leveraging and expanding existing regional network of IT and technology incubators, IT parks and technology centers, and investment promotion centers; (ii) targeted skills development and certification programs with regional harmonization, including support for university-industry collaboration on R&D and global linkages. The component will also promote national and regional strategies, policies, regulatory and incentive structures to support a multi-lingual regional IT and ITES industry capable of meeting local and regional demands oriented to the export of services.

Component 3: Implementation Support.

25. This component will provide the support necessary for developing and strengthening the capacity of the governments to implement, coordinate and monitor the program at the national level including, setting up of very small project implementation teams composed of a project coordinator, supported by a PCU for the fiduciary aspects of the implementation of the national program.

26. Given the importance to ensure a well integrated connectivity program, CARCIP will leverage the services of the Caribbean Telecommunications Union (CTU), a regional institution which was established to facilitate the development of the Caribbean regional information and communications (ICT) sector to coordinate the program at the regional level, share best practices, facilitate knowledge exchange and harmonize policies and strategies among CARIFORUM countries. Most of the implementation support that involve coordination at the regional level will be financed through an IDA regional grant for regional organizations available under IDA-16.²⁴ Specific regional activities will include regional coordination studies or other implementation issues related to trans-boundary interconnectivity outside the scope of the national level project, regional skills development and certification programs, and harmonized strategies for positioning the Caribbean region as an attractive destination for IT/ITES business. The regional grant will also focus on building the institutional capacity of the CTU, whose mandates are to, respectively enhance members' global competitiveness by upgrading and diversifying the skills and knowledge of human resources through greater regional collaboration and connectivity, and create an environment for members to optimize returns from ICT resources for the benefit of stakeholders. The Grant will also finance the provision of technical assistance and skill development/training provided by the regional institution to the countries, as well as the recruitment of personnel needed to coordinate the project at a regional level. A regional steering committee composed of relevant regional and national institutions will be set up to determine the respective roles of the regional and national implementation institutions. Part of the grant would cover the operating costs to convene the regional steering committee. In areas where other entities are better placed, or further expertise is needed, the CTU

²⁴ CTU meets the eligibility for IDA regional grants, and this eligibility is summarized in detail in Annex 8.

will coordinate and oversee the efforts by these other entities. The Caribbean Knowledge and Learning Network (CKLN) will be one such agency engaged in the implementation of Component 1 given their role in establishing C@ribNet. Likewise, due to the importance of harmonized regional regulatory frameworks, the CTU will collaborate with the Eastern Caribbean Telecommunications Authority (ECTEL). Grant resources will also support this collaboration.

27. A fourth component is included in the overall program design, but will not be triggered under Phase 1 except for a minor pilot in the case of Saint Lucia, which is included under component 2 of the country project (see Annex 10 for more details).. This component will be aimed at improving government and private sector efficiency and transparency by leveraging the regional broadband infrastructure towards the delivery of a wide variety of e-services. This may include a combination of support for: (i) harmonized regional enabling environment for e-services and mobile applications, including strategies, policy, legal and regulatory frameworks, e-government standards, interoperability frameworks, and enterprise architectures, as required; (ii) deployment of regional e-government and m-government shared services and infrastructure, including data centers and “cloud computing” infrastructure; (iii) deployment of regional e-security infrastructure, including identification platforms, digital signatures certification authorities, and computer emergency response teams; (iv) sharing and transfer of knowledge, best practices and technical solutions for e-services and m-services within the region, including e-services and mobile applications on the basis of PPPs, high impact e-society and mobile applications (education, health and rural development), high impact e-commerce and mobile applications (banking, tourism, retail); and (v) PC for all programs aimed at increasing computer penetration and digital literacy in the region, by lowering the cost of access to credit for vendors and consumers.

B. Program Financing

Lending Instrument

28. The lending instrument is a Regional horizontal Adaptable Program Loan (APL) with the possibility of structuring additional financing phases, as needed. The APL structure allows countries substantial flexibility to join the program on a need and readiness basis, and to select the elements of the program that fit their immediate needs within an overall harmonized regional framework. Introducing additional financing phases allow countries that joined in earlier phases to receive complementary financing for additional components in subsequent phases. Additional financing will also ensure incremental incorporation of additional elements in subsequent phases and technical assistance to address relevant policy and regulatory challenges prior to, or as part of the, investment. Within this context, the first phase within any given country of the program focuses on high priority components and activities, and additional components and activities may be added in a subsequent phase as needed.

Summary of Phase 1 CARCIP design.

29. Phase 1 is specifically designed to support implementation of the various CARCIP components on an incremental manner, and hence it focuses on a limited number of countries and a limited set of interventions. The number of countries and interventions will grow as future phases of the program are designed. Specifically, Phase 1 will focus primarily on component 1 and, to a lesser extent, on component 2, so as to ensure that the necessary infrastructure is in place.

30. Within component 1, the participating countries in Phase 1 are primarily those where the telecommunications sector has been fully liberalized, and hence there is sufficient private sector investment in international connectivity. The program in these countries is thus aimed at promoting massive uptake of broadband within countries and between neighboring countries, so as to further trigger private sector investment in the regional connectivity infrastructure and at the same time maximize the investment that the region is making in CKLN's C@ribNet. For instance, in the case of the Dominican Republic and Haiti (even though Haiti is not part of the Phase 1 program, it participates to a limited extent with support of IDB funding) the focus will be on creating an island-wide broadband infrastructure, through provision of financial support to PPPs for deployment of broadband backbone networks, including one or several cross-border fiber links. In the case of the three OECS participating countries, the focus will also be to create an island-wide broadband infrastructure, including linking outlying minor islands, as well as interconnecting directly to one another, where feasible, such as between Grenada and Saint Vincent, which share a string of smaller islands, the Grenadines. The exact extent of these investments is currently being assessed as part of a series of detailed feasibility studies, which will provide preliminary results during project implementation.

31. Within component 2, the emphasis will be on leveraging existing and new regional broadband infrastructure to boost ICT-led innovation and position the region as an attractive destination for IT and IT enabled services. The range of activities supported under CARCIP are targeted at promoting strong local IT markets, and will include enabling environment and business models; IT skills development and certification programs; IT Parks, as well as financing and business incubation schemes to harness a competitive IT/ITES industry. The choice of specific instruments for Phase 1 countries is based on preliminary assessment of country objectives and strengths, as well as the challenges that constrain sector growth. Saint Lucia and Saint Vincent would like to further nurture the IT industry through business incubation, support, in addition to skills development and certification. All Phase 1 countries have expressed the interest to gradually form regional Centers of Excellence and develop harmonized certification programs, which could further improve the region's attractiveness. The region is benefitting from earlier feasibility studies undertaken by *infoDev* on improving competitiveness and diversifying the region's economy through ICT. Additional assessments are expected to be undertaken with Project Preparation funds and will provide more detailed information to assist in structuring the identified interventions.

32. **APL Phases and Triggers.** The program will be implemented in phases, based on country demand and readiness. Phase 1 includes four countries (Grenada, Saint Lucia and Saint Vincent and the Grenadines under APL 1A. The project in the Dominican Republic has been

developed and prepared along the projects of the three OECS countries, and thus is expected to join shortly under APL 1B. The eligibility criteria for the first Phase countries are sector liberalization, country commitment, the explicit request from countries to participate in CARCIP, confirmation from participants to ensure an open and non-discriminatory access to communications infrastructure, and further commitment to pursue Public Private Partnerships for projects funded under CARCIP. All the first phase countries have met the criteria through their commitment to engage the private sector and to ensure open and non-discriminatory access to communications infrastructure as part of formal requests to the World Bank. All four countries have also demonstrated their commitment to PPPs by requesting PPA resources to develop frameworks. To fast-track the process, Korean and Spanish Trust Funds are also being used to provide options for addressing the connectivity gaps in the four countries. This is being complemented by the PPA to structure the tender process for relevant connectivity programs. Additionally, all four countries have introduced competition in their mobile markets. For subsequent phases which could include other eligible Caribbean countries (e.g., Jamaica, Antigua & Barbuda, Barbados, Belize, Dominica, Guyana, Haiti, St. Kitts and Nevis, Suriname, and Trinidad and Tobago), the triggers will be: assessment of satisfactory performance under the earlier approved financing, governments' documented commitment to continuous sector liberalization, and adoption of PPP frameworks for communications infrastructure development. Subsequent phases will also provide support for technical assistance, for OECS, in co-ordination with ECTEL, to complement work being done on cyber-legislation, including (without limitation) laws and regulations to provide a legal enabling environment for secure electronic transactions, ensuring on-line security (protection against cyber-crimes), protection of personal data and protection of intellectual property rights in an on-line environment. Assistance under this component will focus on ensuring that appropriate rules are in effect to support the supply of next-generation Internet applications (including e-commerce, e-government, IXPs and e-ID).

33. **Partnerships.** The World Bank is collaborating with other development partners, specifically the Caribbean Development Bank (CDB), and the Inter-American Development Bank (IDB) to leverage respective institutional strengths and ensure effective targeting of resources. The IDB has already provided some project preparation support. CDB has already expressed interest in a number of countries including Antigua and Barbuda, and St. Kitts and Nevis. Haiti CARCIP is likely to start with IDB support. Both institutions are likely to make their contributions in subsequent phases of CARCIP. Separately, the Korean Trust Fund has also made available some trust funds to facilitate CARCIP project preparation. Internally, the World Bank is also collaborating closely with the IFC in selected countries including Trinidad and Tobago and Suriname.

34. For latter phases, synergies and partnerships amongst the participating countries will also be more feasible. The most plausible opportunity now is the CKLN network in which all the CARIFORUM countries participate and which will be a key platform for collaboration. It is also proposed that Grenada and Saint Vincent and the Grenadines embark jointly in the deployment of a cross-border submarine cable to serve the smaller outlying islands. An additional collaboration will be the link between the Dominican Republic and Haiti, which could increase the connectivity between both countries and permit Haiti to enjoy an additional submarine cable to improve its international connectivity.

Program Cost and Financing

35. IDA and IBRD allocations will follow country considerations. The table below provides a summary of the proposed lending by country, with the breakdown of IDA and IBRD and government counterpart allocations. Funding for subsequent phases are subject to availability of IDA/IBRD resources. Eligible countries for subsequent phases include all CARIFORUM countries. Details of Project Financing Activities are included in Annex 2 and the relevant technical Annexes.

Table 2: Estimated lending envelope by country and phase (US\$ million equivalent)

Phase	Country	National IDA	Regional IDA	IDA Total	IBRD	Gov. Counterpart	Total IDA/IBRD
APL 1A (FY12)	Saint Vincent and the Grenadines	2.4	3.6	6.0			
	Grenada	2.5	7.5	10.0			
	Saint Lucia	2.9	3.1	6.0			
	Regional Grant		3.0	3.0			
Total APL 1A		7.8	17.2	25.0			
APL 1B (FY12, estimated)	The Dominican Republic				30.0	6.7	
Total APL 1B					30.0	6.7	
Total Phase 1		7.8	17.2	25.0	30.0	6.7	61.7

36. The CARCIP program fits the eligibility criteria of the IDA16 financing for regional programs. Since this is a regional program with significant spillover benefits across countries, supplementary regional IDA funding is provided to complement national IDA allocations for up to two-thirds of the total IDA financing of the regional activities, with national IDA allocations covering the rest.²⁵ By promoting regional economic integration, supporting the harmonization of regional policies and regulations, while at the same time strengthening the regional institutions involved, and increasing donor harmonization and coordination, CARCIP is expected to deliver important economies of scale and overall economic benefits that will spill over country boundaries. The bulk of IDA funding will support connecting the countries and many locations within countries to regional and global networks and is therefore regional in nature, with the only exception of limited Virtual Private Network (VPN) sub-activities (more details in technical Annexes and Annex 2). Specific support will include facilities and networks that provide connectivity to international and regional markets (submarine cables, satellite teleports, domestic backbone/transmission, and will focus on: (i) countries with limited access to international

²⁵ To enhance IDA support to island countries with small allocations in regional integration, their national IDA contribution to the regional activities of a regional project is capped at 20 percent of the respective country's allocation, but additional national IDA can be provided to support national activities in the project to maximize the development impact.

submarine cables; (ii) regional/cross-border links (e.g. between Haiti and the Dominican Republic/ Grenada and Saint Vincent and the Grenadines); (iii) national and regional Internet Exchange Points (IXPs) to keep traffic within the region; (iv) terrestrial broadband backbone fiber networks extending to the borders of countries; and (v) enabling environment and activities which will leverage the regional broadband infrastructure to foster employment, as well as growth of a robust regional IT and ITES industry. The table above provides a summary illustration of the breakdown of the IDA funding into activities that link directly to the regional connectivity agenda, and those that support the objective at the national level. These are very notional figures, and details of breakdown are included in the respective Technical Annexes.

37. The combined activities will enhance regional public goods, such as: (i) a highly interconnected regional broadband infrastructure which facilitates infrastructure sharing; (ii) a conducive enabling environment for attracting investment to the regional IT/ITES industry; (iii) the joint deployment and transfer of experience in electronic services and content; and (iv) institution building at the regional level to ensure sustainability and further regional integration. All these initiatives will have positive externalities that will accrue to the participating countries in much larger measures than if they were to embark on these activities individually. In fact, the economic analysis conducted for the program (see Annex 7) shows the economic impact of the regional approach under Phase 1 to be close to double that of the projects if implemented in isolation. In addition to that, CARCIP seeks to build synergies with the existing projects in the region in order to foster a real regional integration that also permeates the boundaries of the CARIFORUM countries. For instance, CARCIP will complement CKLN's regional broadband network and allow the CKLN network to reach domestic areas through the national CARCIP networks. Left on its own, the CKLN's potential would be limited to specific already well served cities, contributing to increasing the Digital Divide within the countries.

C. Lessons Learned and Reflected in the Project Design

38. CARCIP is benefitting from the World Bank's experience in managing regional and national ICT Projects. The proposed Program takes into account the experiences garnered from implementation of telecommunications sector reform/development projects, and regional connectivity projects in particular in Africa, South Asia, East Asia and Pacific, and also from operations in the Caribbean region more broadly. Specific lessons reflected include focus on: (i) country/regional priorities and ownership; (ii) strong policy/regulatory environments including PPP frameworks and safeguards to underpin investment in ICT infrastructure; (iii) flexible program which is able to adapt to changing environments; and (iv) strong but lean implementation arrangements with effective performance monitoring. These lessons have shaped the design of the proposed Program, risk analysis and management, and selection of country readiness/eligibility criteria.

39. CARCIP is benefitting from the World Bank Group's experience in PPPs. The World Bank has had extensive experience in supporting Governments to structure PPPs for international, regional and national connectivity. In general, it has been observed that submarine cable international connectivity projects, often led by private consortia, have attracted significant private capital, been completed relatively faster, and tended to be more successful in structuring partnerships between the public and private sectors that involve equity ownership of both parties, through SPVs, with operation left to the private sector. Terrestrial networks, which transit

national territories and borders have been more challenging to structure such equity partnerships. In these cases, private sector has often tended to invest exclusively in more commercially viable segments of the market, with governments partnering with the private sector, through regulatory and performance based financial incentives, to address connectivity gaps. Whether it is through direct equity or performance based incentive schemes, the broad consensus is that strong private financial and operational interest from the private partner is essential, preferably with the latter leading in the financing, operating and maintenance of the project. Challenges in structuring PPPs have included: (i) inadequate trust and cooperative relationships between government and private sector and between competitors – the World Bank Group has been instrumental in mediating and developing transparent governance frameworks; (ii) inability of governments to provide effective regulations, and therefore any solution that depends on solely on the regulator likely to fail – the World Bank Group has supported development of robust transaction agreements which include clear rules of engagement; (iii) high cost of quality expert advisory services for design, management of tenders and negotiation of contracts, and countries' reluctance to invest their limited resources on such expertise – the World Bank Group has identified additional Trust Funds to complement preparatory work; (iv) World Bank Group support systems not ideally suited for PPPs (procurement, legal, disbursement) – Increasing efforts to improve Bank support but more needs to be done; and (v) Bank preparation and supervision budgets (primarily regional integration unit funding source) minimal and decreasing.

40. The Project is providing support to national and regional regulatory institutions to develop requisite instruments and to strengthen their capacity to ensure enabling environment for PPPs in regional connectivity, and competitive access to communications infrastructure. The legal and regulatory environment in participating countries needs to support open access to international communications infrastructure, and wholesale pricing needs to be fair and transparent; the regulatory institutions, both at the national and regional levels need to be empowered to protect the interests of consumers and to ensure the requisite environment exists for private sector investment.

41. As regional connectivity projects can be complex, particularly if their scope includes PPPs, the proposed scope of the regional connectivity projects will focus primarily on infrastructure. Financing of the connectivity infrastructure would be based on a competitive performance based financial incentives, under a public-private partnership model, and payments would be triggered by demonstrated delivery of pre-defined outputs. In this respect, the Project will support: (i) financial, legal and regulatory services to design and implement the PPP performance based financial incentives mechanism, including the tender documentation and tender process; (ii) consultant services for environmental screening; and (iii) the services of an independent verification agent to certify that winning bidders have fulfilled the service agreements requirements. The principles underlying this component include: (a) private-sector led supply of the infrastructure, supported by least-cost public subsidy; and (b) infrastructure shall be provided on non-discriminatory, open access and competitively neutral basis.

42. CARCIP is benefitting from the Bank's Quality Assurance Group (QAG) assessment of the performance of ICT components in World Bank projects, conducted in July 2006. The assessment rates quality at entry of Bank project with ICT components at 42 percent "satisfactory" below the Bank average of 64 percent. The low rating is attributed to poor project design of some earlier projects (implementation planning, poor risk assessment), inadequate

skills mix and inadequate resources for project supervision. For CARCIP, extensive upfront work has been undertaken to improve quality at entry, including detailed feasibility studies in 2009 and 2012 to confirm connectivity gaps, Technical Assistance for initial capacity building, active engagement with the public and private sectors through workshops and direct engagement, and upfront engagement with CARIFORUM organizations on additional sector reforms and innovative strategies for leveraging ICT for growth.

43. The World Bank IEG report includes a set of recommendations that have also been addressed in CARCIP's design. The IEG (Independent Evaluation Group) Report includes a set of recommendations for the World Bank Group activities in Information and Communication Technologies that had already been taken into consideration when defining CARCIP. According to the report, the progress in reforms suggests an ICT role for the Bank in the following areas:

- a) **Reform and access.** Support broadband and Internet access by incorporating lessons learnt from experience and by updating the regulatory frameworks. In the regulatory aspect, the IEG suggests to maintain the focus on preserving competition and supporting policy makers with new regulatory issues, as well as support catalytic public-private partnerships to accelerate regional and national backbone deployment to promote access to underserved areas. CARCIP is working with both national and regional institutions to update and improve the regulatory frameworks in the CARIFORUM region to increased competition that could make broadband services more affordable. Additionally, CARCIP will support governments to structure appropriate private-public partnerships to own/manage connectivity infrastructure in a transparent and non-discriminatory manner.
- b) **Applications.** IEG suggests building ICT expertise and awareness across regions, while taking into account the local context, building ICT skills, implementing the right policies and promoting the benefits of share infrastructure and services so that applications and services may be share across government agencies wherever feasible. This is the approach taken by customizing the approach to each country's need, within the regional context, as well as in defining component 1 (Regional Connectivity Infrastructure) and 2 (ICT – Led innovation), which will leverage the regional broadband infrastructure to foster the growth of the regional IT and ITES industry, and improve the government and private sector efficiency through the development of regional e-regional services.
- c) **Delivery systems.** IEG suggests a strong procurement framework that supports the overall Program delivery as well as that of each of the components.

IV. IMPLEMENTATION

A. Institutional and Implementation Arrangements

44. National implementation will leverage existing national systems. The fiduciary aspects of the respective projects will be implemented by project coordination units (PCUs) established earlier in the respective countries and that are already implementing other World Bank funded projects and grants. Most of these units have good experience in World Bank project implementation processes. However, their capacities may need to be strengthened by adding some more procurement and financial management experts as required. Leveraging and

strengthening existing institutions will help to minimize costs and reduce complexity and does not require the design of new structures for each country. Project. Project Coordinators will be mainstreamed in ministries/departments responsible for telecommunications to coordinate the technical and implementation aspects of the program, as well as relevant stakeholders and beneficiaries. Detailed implementation arrangements are included in Technical Annexes for each country operation.

45. Regional institutions will support program coordination at the regional level. Given the importance of regional buy-in, substantive regional spillovers of harmonized implementation, and need for coherent monitoring framework for the success of the program, special attention will be devoted to providing support to selected regional institutions to coordinate key aspects of the program. The program is linked at the CARICOM/CARIFORUM level within existing regional institutions. The Caribbean Telecommunications Union (CTU) will be the primary regional coordinator for CARCIP, serving as the main focal point for monitoring the implementation of the regional program, including the collection and reporting of coordinated results data. CTU will coordinate lessons learned from the overall program, share best practices and promote knowledge exchange between countries, as well as ensure synergies among countries implementing similar components. In cases where implementation capacity at the national level is weak, or where splitting among national level implementation agencies may prove impractical, the CTU could also support project implementation for selected aspects of the program. The CTU will be supported by other specialized regional agencies and national implementing agencies as required. They will prepare a Regional Program Implementation Manual that articulates the responsibilities of the various regional and national institutions. Support for the regional institutions will be provided through a regional IDA grant. Annex 8 provides more details on the regional grant and institutional arrangements.

B. Results Monitoring and Evaluation

46. PCUs will monitor and evaluate the program implementation at a national level. The PCUs in different countries will bear the primary responsibility for project monitoring and evaluation (M&E), and, as such, will establish standard formats and guidelines for data collection and reporting, and organize training sessions for project stakeholders in their use. The CTU will be responsible at the regional level for collecting and collating the data from each country. Mechanisms will be put in place to ensure cooperative arrangements between national PCUs and the CTU to enhance information sharing and effective use of resources. Monitoring and evaluation of the program will be embedded in the various components of the program to ensure results are properly monitored. The role of regional institutions in Monitoring and Evaluation is important for the success of the project.

C. Sustainability

47. CARIFORUM countries are committed to a holistic regional ICT agenda which ensures the sustainability of the program. As stated earlier, CARIFORUM countries through the CARICOM Regional ICT Steering Committee have developed a holistic regional ICT Strategy in which CARCIP is integrated, and have developed a Draft ICT Action Plan which includes capacity building, ICT applications and ICT industry promotion. Moreover, the holistic approach of the program covering both the supply and the demand side of the ICT sector ensures its

sustainability beyond the program duration. As demand is created through IT/ITES and applications industry, and e- and m-government services, it is expected that supply of ICT services will be further stimulated, ensuring a self-reinforcing cycle of ICT investment and growth in the region.

V. KEY RISKS AND MITIGATION MEASURES

A. Risk Ratings Summary Table

Stakeholder Risk	Low
Implementing Agency Risk	
- Capacity	High
- Governance	Moderate
Project Risk	
- Design	Moderate
- Social and Environmental	Low
- Program and Donor	Low
- Delivery Monitoring and Sustainability	Moderate
Overall Implementation Risk	Moderate

B. Overall Risk Rating Explanation

48. The overall risk is based on: (i) the complexity of the regional coordination is mitigated through identification of national and regional champions (PCUs with experience in implementation of Bank projects, CTU and CKLN) to coordinate activities; (ii) the limited experience in management of ICT projects is mitigated by the experience in implementation of World Bank financed projects in general, and strengthened with additional support structures to improve capacity; (iii) only low or minor social and safeguard issues are expected; (iv) financial needs from governments and donors and engagement with the private sector have been identified up front; and (v) there is clarity on the PPP model for the countries and upfront assessment of options.

VI. APPRAISAL SUMMARY

A. Economic and Financial Analyses

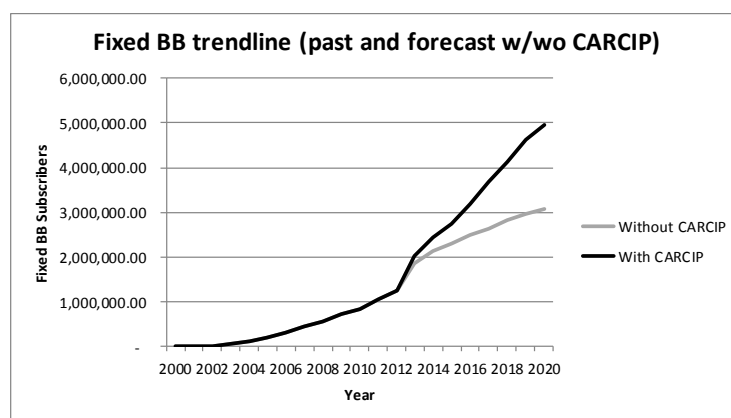
49. At the Program level, improving connectivity will bring a net economic value of US\$3.91 billion (in present value) to the CARIFORUM region, which also represents an economic internal rate of return (EIRR) of 49 percent. Detailed explanation of the approach, assumptions and results is included in Annex 7.

50. For Phase 1 (Grenada, Saint Lucia and Saint Vincent and the Grenadines under sub-Phase APL 1A, expected to be joined shortly by the Dominican Republic under sub-Phase APL 1B),

the net economic value of the program is US\$ 2.09 billion in present value and the Economic Internal Rate of Return (EIRR) is 60 percent. The figure includes potential savings of US\$873 million attributed to regional synergies. For the Dominican Republic, Grenada, Saint Lucia and Saint Vincent and the Grenadines, the net economic values are respectively US\$1.02 billion (52percent EIRR), US\$16.9 million (36 percent EIRR), US\$21.75 million (37 percent EIRR), and US\$6.22 million (24 percent EIRR). A detailed explanation of the approach, assumptions and results is included in Annex 7.

51. CARCIP regional connectivity will boost the fixed broadband connectivity and increase its affordability.

Graph 2: Fixed Broadband trend line



52. The Program could provide a sustainable source of income to help diversify the economy and reduce unemployment in the Region. The development of an ICT industry in the countries of the Caribbean region will contribute to diversify the economy from tourism and to provide a less cyclical source of income. By its nature, the ICT industry makes it easier to redirect exports from one set of demand countries to another when economic crisis impact the initial set of demand countries. Moreover, ICT services have proven to be among the most resilient sectors in the global economy²⁶. As tourism dependent economies, most Caribbean countries receive tourists from mostly the North America and Europe, and they are not integrated in trade relationships with the growth poles of the 21st Century – the BRIC nations (Brazil, Russia, India China). The proposed project has the potential to integrate BRICS and the Caribbean countries, which could anchor them with high performing economies for future growth and also foster tourism diversification. The impact of connectivity in rural areas will contribute to integrate social groups and bridge the gender divide.

B. Technical

53. Detailed technical design of each of the program components is defined in the Technical Annexes based on country-specific components. Common design issues include PPPs, open and competitive networks, effective utilization of government networks to complement national

²⁶ UNCTAD, Information Economy Report (2009), available at http://unctad.org/en/docs/ier2009_en.pdf

networks, financing of terrestrial and submarine cable deployments, assistance to develop an IT/ITES industry and support for creating an enabling environment for e- and m-services. Also the project seeks to leverage the CKLN, and countries will make efforts to integrate their networks to improve reach and reduce cost. Additionally, all the countries are deploying Internet Exchange Points, which are expected to keep traffic local and further reduce connectivity costs.

C. Financial Management

54. The Financial management of APL 1A of CARCIP will be undertaken by the PCUs already established within the Ministries of Finance. The PCUs have considerable experience with implementing the financial aspects of World Bank Projects, and are currently implementing several World Bank Projects. Preliminary assessments were completed for the PCU's implementing the PPAs for Grenada (IDA Q7830), Saint Lucia (IDA Q7840) and Saint Vincent and the Grenadines (IDA Q7850). Additional financial management assessments have been carried out for each PCU during project preparation to ensure that the systems to be used to manage the project satisfy the Bank's minimum FM requirements under OP/BP10.02, and are adequate to provide, with reasonable assurance, accurate and timely information on the status of the project. Similar assessments have been undertaken for key regional institutions that are likely to play roles in project implementation. The residual financial management risk in all countries and institutions is assessed as being Moderate. Details of conducted financial management assessments are included in the respective technical annexes.

D. Procurement

55. Procurement for CARCIP and IDA regional grant will be carried out in accordance with the World Bank's Procurement Guidelines. Procurement for the proposed program and Regional IDA grant will be carried out in accordance with the World Bank "Guidelines: Procurement under IBRD Loans and IDA Credits" dated January 2011 and "Guidelines: Selection and Employment of Consultants by World Bank Borrowers" dated January 2011 and the IDA Anticorruption Guidelines dated July 1, 2005, and as amended through October 15, 2006, in addition to the provisions stipulated in the Financial Agreement. For each contract to be financed under the program, the different procurement methods or consultant selection methods, the need for pre-qualification, estimated costs, prior review requirements, and time frame are agreed between the Borrower and the Bank in the Procurement Plans, cleared on March 8, 2012 (Grenada), March 15, 2012 (CTU), March 16 (Saint Lucia) and March 19 (Saint Vincent and the Grenadines). The Procurement Plans will be updated at least annually or bi-annually as required to reflect the actual project implementation needs and improvements in institutional capacity.

56. An assessment of the agencies' capacity to implement procurement has been carried out. The procurement assessment for the CTU and national PCUs who will be handling fiduciary aspects under the Program, has been carried out. The PCUs in the various countries under Phase 1 of CARCIP are staffed with general technical and procurement experts. It was proposed to strengthen the capacity of the PCUs by recruiting IT procurement experts as needed or train existing Procurement staff in IT procurement. Given that CTU has no experience with World Bank projects, it is proposed that an experienced Procurement Specialist will be recruited to support the regional implementation. More country and regional details are provided in the respective technical annexes.

E. Environment (including Safeguards)

57. CARCIP is rated as a Category B project. The activities being financed under the Program consist of: (i) support for the development of broadband backbone and government networks; (ii) expansion of the national connectivity to rural areas; (iii) regional links; (iv) promotion of the Information Technology industry; and (v) support to training programs in the use of ICT tools in order to increase the productivity and efficiency of public and private sectors.

58. The potential social and environmental impacts of such activities are expected to be minor and reversible. Nevertheless, appropriate safeguards instruments are being prepared to ensure that all project activities meet the requirements of the relevant national legislation and international conventions to which the region is a signatory, as well as World Bank Group environmental and social safeguard policies.

59. The exact locations of the backbone networks and possible regional links have not been determined, and it is therefore premature to undertake a site-specific Environmental and Social Impact Assessment (ESIA) and a Resettlement Action Plan (RAP). Nevertheless, a regional Environmental and Social Management Framework (ESMF) (consistent with national and regional laws, any applicable treaty concerning international waters, and OP/BP 4.01) and a Resettlement Policy Framework (RPF) consistent with OP/BP 4.12 have been prepared and publicly disclosed between March 1 and 2, 2012 in all countries participating in Phase 1 A as well as in the World Bank Infoshop prior to project Appraisal. The purpose of the frameworks is: (i) to provide as much information as possible about potential environmental and social impacts (including possible land acquisition and resettlement) at the project's current state of preparation; (ii) to inform the project planning and design process by comparing the potential impacts of alternative locations, configurations, and construction techniques that are under consideration; and (iii) to describe the procedures for subsequent assessment of impacts and development of the appropriate impact management instruments (including associated mitigation measures) when the details of the project become available. These management instruments are likely to be an Environmental and Social Management Plan (ESMP) and Resettlement Action Plan (RAP).

60. The physical components of terrestrial connectivity to be financed under the Program will likely include construction of ducts, poles and deployment of earthed and unearthed cables. The Environmental and Social Management Framework will also cover the deployment of earthed or unearthed cable for national backbones, government networks and rural networks. Specific Environmental and Social Management Plans (ESMPs) will be prepared as necessary for terrestrial facilities, if any, during project implementation, in line with the Environmental and Social Management Framework, once the locations of those facilities have been identified.

61. For submarine cables, once the final sites of the Landing Stations are chosen and the specific civil works identified, an Environmental and Social Management Plan (ESMP) and RAP for each country, as may be required, will be prepared, consulted on, and disclosed.

F. Social (including Safeguards)

62. Land acquisition issues will be assessed on a project-specific basis, and mitigation plans prepared accordingly. Due to the fact that specific program areas are still unknown, a

Resettlement Policy Framework (RPF) has been prepared. The Program is not expected to impact indigenous peoples in any negative way, and therefore OP/BP 4.10 is not triggered. While unlikely, the possibility that there may be a need for land acquisition for terrestrial facilities has triggered OP/BP 4.12 Involuntary Resettlement, and the RPF has been prepared according to the guidelines set out by the Involuntary Resettlement Framework. However, impacts are not anticipated given that facilities are expected to follow existing rights of way, especially roads. A determination of specific impacts will be made early during project implementation and corresponding Resettlement Action Plans, if applicable, will be prepared. In the meantime, the PCUs are continuing to build their capacity to manage safeguard issues in view of the region's vulnerability, and the related projects, which require effective management of social safeguards. Additional capacity will be added as required.

63. The Program is expected to have many positive social impacts by improving access to communications, the development of an IT-ITES industry and improved government service delivery. Particularly, the program is expected to: (i) enable ICT to become a driver for sustainable economic growth; (ii) increase employment opportunities through the development of an IT-ITES industry; (iii) enable the government to use ICT to provide decentralized services; (iv) improved access and quality of ICT services for the population, business, and government; (v) reduce isolation and enhance economic activities in rural areas; and (vi) create additional opportunities for women entrepreneurs to develop ICT-related SMEs through targeted skills development and relevant business development support.

Annex 1: Results Framework and Monitoring

CARIBBEAN REGION Caribbean Regional Communications Infrastructure Program (CARCIP) Results Framework

Project Development Objective (PDO): To increase access to regional broadband networks and advance the development of an ICT-enabled services industry in the Caribbean Region.												
PDO Level Results Indicators*	Core	Unit of Measurement	Baseline	Cumulative Target Values**					Frequency	Data Source/ Methodology	Responsibility for Data Collection	Description (indicator definition etc.)
				YR 1	YR 2	YR3	YR 4	YR5				
Indicator One Regional Grant: Policies developed for PPP and Open Access	<input checked="" type="checkbox"/>	Units (cumulative)	0	0	0	1	2	2	Annual	CTU	CTU	Number of policies developed for PPP and Open Access.
Indicator Two Regional Grant: Regional regulations for Open Access	<input checked="" type="checkbox"/>	Units (cumulative)	0	0	0	1	2	2	Annual	CTU	CTU	Number of regional regulations developed.
Indicator Three Regional Grant: Coordinated activities in network and ICT-led innovation	<input checked="" type="checkbox"/>	Units (cumulative)	0	1	2	3	4	5	Annual	CTU	CTU	Number of coordinated activities in network and ICT-led innovation.

Indicator One: Number of Internet Users per 100 people Grenada Saint Lucia Saint Vincent and the Grenadines	<input checked="" type="checkbox"/>	Percenta ge	33.46 36 34.6	36 38 37	39 41 40	42 45 42	44 48 45	47 51 48	Semi- Annual	Operators /Regulato rs Reports	NTRC NTRC NTRC	Internet users is divided by the total population and multiplied by 100. Countries that do not carry out surveys generally base their estimates on derivations from reported Internet Service Provider subscriber counts.
Indicator Two IT/ITES employment Total Grenada Saint Lucia Saint Vincent and the Grenadines	<input checked="" type="checkbox"/>	Number of people	0 0 0 0	1,500 500 500 500	3,000 1,000 1,000 1,000	5,500 2,000 2,000 1,500	9,000 3,500 3,500 2,000	11,000 4,000 4,000 3,000	Annual	Survey	Ministry of Communic ation in the three countries	This indicator measures the total number of people employed in the IT/ITES under the project
Indicator Three Businesses receiving Support through the project Total Grenada Saint Lucia Saint Vincent and the Grenadines	<input type="checkbox"/>	Number	0 0 0 0	23 10 3 10	36 15 6 15	51 20 11 20	71 30 16 25	100 50 20 30	Semi- annual	PCURep orts	Ministry of Communic ation in the three countries	This indicator measures the total number of businesses receiving incubation support under the project

Indicator Four Direct project beneficiaries, (of which are female)		Number (%)							Annual	Survey		Calculated as % of number of employees in supported firms plus number of people trained.
Total Grenada ²⁷		0	6,000	10,000	13,000	17,500	21,000				Ministry of Communication in the three countries	
Saint Lucia		0	2,000	3,000	4,000	6,000	7,000					
Saint Vincent and the Grenadines		0	80%	75%	65%	55%	50%					
		0	3,000	5,000	6,000	7,500	9,000					
		0	40%	40%	45%	50%	50%					
		0	1,000	2,000	3,000	4,000	5,000					
		0	40%	40%	45%	50%	50%					
INTERMEDIATE RESULTS												
Intermediate Result (Component One): To decrease retail price of internet												
Intermediate Result indicator one: Retail price of internet services	<input checked="" type="checkbox"/>	US\$/Mbps							Semi-Annual	Operators/Regulators Reports		This indicator measures the price of access to the internet at an equivalent of 1Mbit/s per month
Grenada			29.3	26	24	22	20	18			NTRC	
Saint Lucia			29.3	26	24	22	20	18			NTRC	
Saint Vincent and the Grenadines			33.6	29	27	25	23	20			NTRC	
Intermediate Result indicator two: Kilometers of fiber under project	<input type="checkbox"/>	Kilometers							Annual	Operators/Regulators Reports	CTU	This indicator measures the kilometers of fiber deployed in the country.
Grenada			0	20	40	60	80	100			NTRC	
Saint Lucia			0	20	30	40	50	70			NTRC	

²⁷ Because of the specific demographics in Grenada, with over 80 percent of labor force being women, this indicator has been modified to increase the percentage of men in the labor force to 50 percent by the end of the project, fostering gender equality in the country.

Saint Vincent and the Grenadines			0	20	30	40	50	70			NTRC	
Intermediate Result indicator three: Fixed Internet Subscribers	☒	Percent age							Semi-annual	Operators /Regulators Reports		This indicator measures the total number of people with an internet subscription.
Grenada			14	15	16	17	18	19.6			NTRC	
Saint Lucia			9.1	10	11	11.8	12.5	13			NTRC	
Saint Vincent and the Grenadines			10.8	11.4	12	13	14	15			NTRC	
Intermediate Result (Component Two): To increase capacity in the ICT sectors												
Intermediate Result indicator one: People trained under the project	☒	Number (cumulative)							Semi-Annual	Training Providers , reports/certification bodies' attestation	Ministry of Communications	This indicator measures the number of people trained in IT/ITES skills under the project.
Total			0	2,000	6,000	12,100	17,500	24,000				
Grenada			0	1,000	3,000	6,500	8,500	10,000				
Saint Lucia			0	500	1,500	2,800	4,500	7,000				
Saint Vincent and the Grenadines			0	500	1,500	2,800	4,500	7,000				
Intermediate Result indicator two: People certified after training under the project	☒	Percent age							Semi-Annual	Training Providers , reports/certification bodies' attestation	Ministry of Communications	This indicator measures the number of people certified after training under the project.
Total			0	600	2,250	3,800	5,250	6,700				
Grenada			0	200	1,500	2,200	3,100	4,000				
Saint Lucia			0	300	500	1,000	1,300	1,600				
Saint Vincent and the Grenadines			0	100	250	600	850	1,100				

Intermediate Result indicator three: People trained under the project in gainful ICT employment Total Grenada Saint Lucia Saint Vincent and the Grenadines	<input type="checkbox"/>	Number							Annual	Training Providers' reports/certification bodies' attestation	Ministry of Communications	Estimating about 80% of people trained will find gainful employment in ICT sector
			0	840	2,450	5,500	8,150	10,640				
			0	500	1,500	4,000	6,000	8,000				
			0	300	800	1,200	1,700	2,000				
			0	40	150	300	450	640				
Intermediate Result indicator four: Occupancy rate of business incubation Facilities supported under Project Grenada Saint Vincent and the Grenadines	<input type="checkbox"/>	(%)							Annual	Incubation Facilities	Ministry of Communications	This indicator measures the occupancy rate of business incubation facilities under the project.
			0	10%	20%	40%	65%	80%				
			0	20%	40%	55%	65%	80%				

Annex 2: Detailed Program Description

Caribbean Regional Communications Infrastructure Program (CARCIP)

1. The program will provide a flexible and tailored approach to address regional as well as individual country needs. It will focus on connectivity and ICT-related interventions at the regional and national level with the ultimate objective of promoting well-integrated regional networks. While the interventions for each of the participating countries will be structured along the same set of strategic priorities, and closely coordinated to maximize regional spillover effects, the different elements will depend on the priority areas for each of the participating countries, and will be tailored to each country's needs. All CARIFORUM countries are eligible for this support.

2. **The program is structured along four main components**, as described below:

Component 1: Regional Connectivity Infrastructure.

3. This component will be aimed at bridging the remaining gaps in the regional broadband communications infrastructure. Because they are interdependent, the component will address: (a) the physical connectivity infrastructure; and (b) the enabling environment that would ensure Public Private Partnership in the ownership and/or management of connectivity infrastructure, as well as competitive access to such infrastructure.

4. **Connectivity Infrastructure:** In general, the provision of broadband requires a combination of network components, technologies and services, which constitute a seamless 'supply chain' – from connection to global networks through to the consumer. Figure 1 below illustrates the chain of activities that constitutes such supply chain and that are likely to be financed under CARCIP to deliver cost effective, mass-market communications to the region. The decision on where to place the most emphasis on the supply chain depends on whether the connectivity gap is primarily at the domestic level (for both voice and data) or at the regional and international levels. A Caribbean Communications Infrastructure study completed in 2009²⁸ confirmed that the infrastructure gaps in the region consisted primarily of the need to expand and upgrade the inter-regional and international networks, and expand national backbones to accommodate new services and provide seamless regional connectivity.

5. At the international level, most countries in the region are currently served by only one alternative international cable, and some countries such as Haiti²⁹ and Guyana³⁰ were only recently connected to a cable. There are a number of new submarine cables that have been proposed over the past few years³¹, which may fill part of this gap, and incumbent operators are

²⁸ Caribbean Regional Communications Infrastructure Assessment Study, prepared by PADECO (December 2009)

²⁹ Haiti submarine cable linking it to Bahamas had recently become operational, but was damaged during the January 12, 2010 earthquake and needs to be repaired.

³⁰ Guyana recently inaugurated a submarine cable as a joint venture with Suriname, connecting both countries to Trinidad and Tobago, where they have access to onward connectivity through a number of other cables.

³¹ Among others: 1) the Southern Caribbean Fiber to link Trinidad and Tobago to Guyana, Suriname and French Guyana; 2) the Northern Caribbean Fiber to link the Dominican Republic, Haiti and Jamaica to international cables in St. Croix; 3) the Colombia-Florida Subsea Fiber to link Colombia to Southern Florida with a landing station in

slowly planning to expand their fiber backbones. However, given the current still fragile recovery of the global economy, it appears that most of these projects may have been put on hold, and even if some do go ahead their long-term economic viability may be questionable. While Phase 1 focuses primarily on regional and national connectivity, the opportunity exists for subsequent phases of CARCIP to address missing international links.

6. CARCIP countries are seeking to further use this opportunity to improve cross-border connectivity between countries, with the long-term objective of achieving a robust integrated regional network. The backbone networks in both Grenada and Saint Vincent and the Grenadines could be an opportunity to provide affordable connectivity to the entire populations in the two countries, including the small islands of Carriacou and Petite Martinique, which could lead to more direct connectivity between the two countries. While Haiti is not part of Phase 1, it is expected that the development of a robust national network in the entire Dominican Republic (expected to join shortly under Phase 1B) up to its borders, will improve the viability of Haiti's internal network when it is able to connect to the Dominican Republic in subsequent phases of CARCIP.

7. Major infrastructure gaps also exist at the national level, with very little investment in broadband networks venturing beyond the main urban centers, especially in the form of fiber backbone networks, which have very limited extension, in the few countries that have one. During a November 2010 workshop, almost all participating countries highlighted as priority, the need to fully leverage existing regional infrastructure, including taking full advantage of the Caribbean Regional Research and Education Network (C@ribNet), by developing missing national broadband links. The C@ribNet is a network being organized under the leadership of the Caribbean Knowledge and Knowledge and Learning Network (CKLN), which aims at connecting Caribbean educational institutions among themselves and the rest of the world. The APL 1A countries (Grenada, Saint Vincent and the Grenadines, and Saint Lucia) are particularly keen to accelerate the development of national networks which could be further leveraged as the primary backbone for National Research and Education Networks which could link to the C@ribNet.

8. AleCARCIP will support facilities and networks that provide connectivity to international and regional markets (submarine cables, satellite teleports, domestic backbone/transmission), and will focus on: (i) countries with limited access to international submarine cables; (ii) regional/cross-border links (e.g. between Haiti and the Dominican Republic/ Grenada and Saint Vincent and the Grenadines); (iii) national and regional Internet Exchange Points (IXPs) to keep traffic within the region; and (iv) terrestrial broadband backbone fiber networks extending to the borders of countries. In a number of the smaller islands, the government network also serves as the backbone, and in which case the support will extend to provision of high-speed government virtual private networks and repair of public infrastructure destroyed by natural disasters. The broadband backbone is expected to be leveraged to provide connectivity support for government offices, health centers, schools, colleges and universities (leveraging CKLN), as well as national and regional emergency communications networks. The focus on international, regional and national connectivity is to ensure the creation of a seamless and fully integrated network that

Jamaica; 4) Telefónica's Emergia cable which could land in the Dominican Republic; 5) Columbus Networks' possible extension to Haiti.

eventually links all networks in the region and provide affordable high-speed connectivity within the region. The private sector is already complementing these efforts with last mile access and retail services.

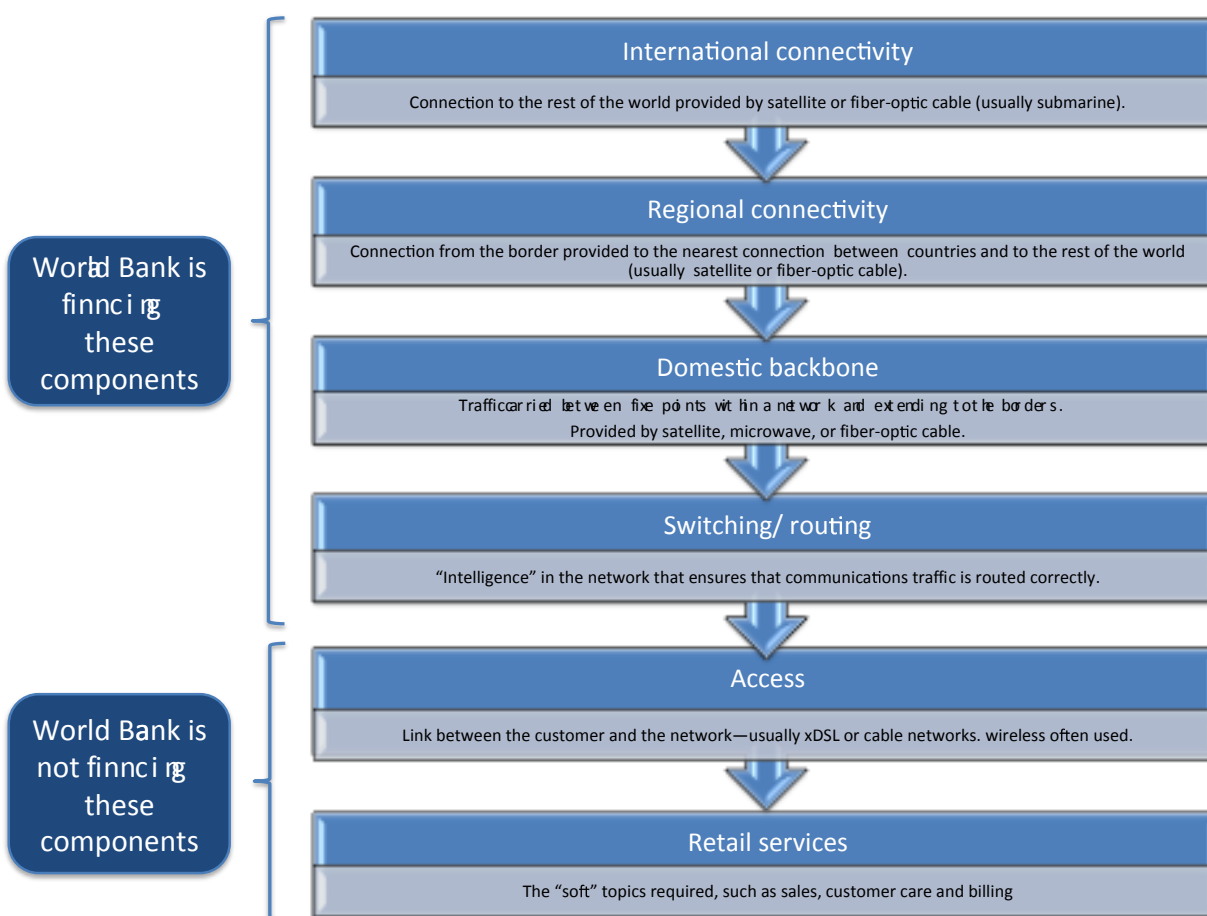


Figure 1: Supply Chain Activities. Source: Adapted from Broadband for Africa, Mark Williams

9. **Enabling Environment for Connectivity:** This sub-component will focus on addressing policy, regulatory, institutional and transaction advisory services that will maximize the benefits of the infrastructure which is expected to be put in place. Support will include (i) promoting public private partnerships in the deployment of submarine cable infrastructure, including landing stations; (ii) telecoms regulatory support to ensure appropriate governance structures and competitive access to connectivity infrastructure; and (iii) harmonization and institutional capacity building. The enabling environment sub-component will also aim at improving government and private sector efficiency and transparency by leveraging the regional broadband infrastructure towards the delivery of a wide variety of e-services.

Component 2: ICT-led innovation.

10. This component will support activities which will leverage the regional broadband infrastructure to foster employment, as well as growth of a robust regional IT and ITES industry.

This includes a combination of support for: (i) strategies, policies, regulatory and incentive structures to support a multi-lingual regional IT and ITES industry capable of meeting local demands oriented to the export of services; (ii) leveraging and expanding existing regional network of IT and technology incubators, IT parks and technology centers, and investment promotion centers; (iii) targeted skills development and certification programs with regional harmonization, including support for university-industry collaboration on R&D and global linkages; (iv) creation of special financing vehicles, such as regional or national Venture Capital Funds, for regional IT/ITES industry, and (v) mobilizing the Caribbean diaspora in North America, Europe and elsewhere for knowledge, connections and investment.

11. The component is expected to boost ICT-led innovation through the establishment of: (i) IT parks and technology centers; (ii) business incubators; (iii) targeted skills development and certification programs; (iv) links with multinational companies (MNCs); and (v) mechanisms for financing early stage startups and SMEs.

12. Innovative ITES/BPO business models such as Rural BPO³², Impact Sourcing³³ and Micro-tasking³⁴ may also be considered, to leverage Component 1 of CARCIP, which seeks to expand connectivity. These initiatives will support IT/ITES firms to reduce costs by offshoring business processes to rural areas of the country, allow rural SMEs and startups to flourish, and generate income opportunities for the poor, especially youth and women.

13. Through Project Preparation Advances (PPAs), the APL 1A countries are expected to undertake preliminary skills assessments, which will assist the countries to position themselves as destinations of choice for IT and ITES Business. It is expected that this component will have impact at the micro-level in the following: (i) increased revenue from IT/ITES industry; (ii) job creation; (iii) improved skills; and (iv) increased productivity and competitiveness.

Component 3: Implementation Support.

14. This component is included to ensure the requisite capacity exists to implement, coordinate and monitor the program at the regional and national levels. CARCIP will leverage the services of the Caribbean Telecommunications Union (CTU), a regional institution which was established to facilitate the development of the Caribbean regional information and communications sector to coordinate the program at the regional level, share best practices, facilitate knowledge exchange and harmonize policies and strategies among CARIFORUM countries. A regional steering committee composed of relevant regional and national institutions, and chaired by the CTU will be set up to determine the respective roles of the regional and national implementation institutions. Part of the grant would cover the operating costs to convene the regional steering committee. It is proposed that the committee will meet quarterly (Details to

³² Rural Business Process Outsourcing (BPO) is expected to generate income opportunities for the rural poor, particularly youth and women. It is becoming increasingly popular in countries like India where skills scarcity and rising costs is becoming an issue for business sustainability.

³³ The Rockefeller Foundation has recently launched a program in Kenya to foster and scale up a new arm of the outsourcing industry called “impact sourcing” by supporting programs aimed at creating employment for the poor.

³⁴ Micro-work allows existing firms, startups and entrepreneurs to divide work into micro-tasks and use simple GSM phones or the cloud platform to outsource work directly to billions of workers worldwide. It can provide small but sustained income generating opportunities for the unemployed, particularly in developing countries.

be included in Regional Project Implementation Manual). At the national levels, each country will also establish a steering committee composed of relevant national ministries and institutions which would provide oversight, and lean project implementation teams composed of a project director/coordinator, supported by a PCU for the fiduciary aspects of the implementation. The component will finance the technical capacity needed for the collection and sharing of information among participating institutions.

15. Regional activities proposed under Component 3 would be financed by the IDA regional grant for regional organizations available under IDA-16. Component 3 is also focused on building institutional capacity in CTU, whose mandate is to enhance members' global competitiveness by upgrading and diversifying the skills and knowledge of human resources through greater regional collaboration and connectivity. Additionally, in view of the important role of the CKLN in deploying a regional research and educational network, and the need to leverage such network, and the role of ECTEL as a regulatory body in telecommunication, the regional grant under CARCIP will benefit CKLN and ECTEL by supporting some additional institutional capacity to allow coordination of regional infrastructure development, and harmonization of regulatory frameworks and development of missing enabling instruments to facilitate open access. Where necessary, the institutions will coordinate with other regional and national institutions. The Grant will finance the strengthening of their capacity, given their expanded role in the project, to better coordinate the development and implementation of the participating country's ICT strategies. The Grant will also finance the provision of technical assistance and skill development/training provided by the regional institution to the countries, as well as the recruitment of personnel needed to coordinate the project at a regional level. Furthermore, the grant would cover the operating costs to convene the regional steering committee meetings.

Component 4: Regional E-Transformation.

16. A fourth component is included in the overall program design, but will not be triggered under Phase 1. This component will be aimed at improving government and private sector efficiency and transparency by leveraging the regional broadband infrastructure towards the delivery of a wide variety of e-services. This may include a combination of support for: (i) harmonized regional enabling environment for e-services and mobile applications, including strategies, policy, legal and regulatory frameworks, e-government standards, interoperability frameworks, and enterprise architectures, as required; (ii) deployment of regional e-government and m-government shared services and infrastructure, including data centers and "cloud computing" infrastructure; (iii) deployment of regional e-security infrastructure, including identification platforms, digital signatures certification authorities, and computer emergency response teams; (iv) sharing and transfer of knowledge, best practices and technical solutions for e-services and m-services within the region, including e-services and mobile applications on the basis of PPPs, high impact e-society and mobile applications (education, health and rural development), high impact e-commerce and mobile applications (banking, tourism, retail); and (v) PC for all programs aimed at increasing computer penetration and digital literacy in the region, by lowering the cost of access to credit for vendors and consumers.

17. Given the potential complexity of this component, an incremental approach will be applied, and this component is not fully included in Phase 1, except for minor pilot in the case of

Saint Lucia, which is included under component 2 of the country project (see Annex 10 for more details). Furthermore, the APL 1A countries are also participants of the OECS E-Government for Regional Integration Program (EGRIP) and have generally expressed a preference for this component to only be considered for inclusion in their individual CARCIP projects once EGRIP will have been largely implemented.

18. Country-specific details are included in the technical annexes. Detailed Project Financing included below:

Project Financing Table for all Phase 1A Activities

Activities	IDA US\$
Component 1: Regional Connectivity Infrastructure	14,320,000
Validation/Design/tendering of Broadband Network	650,000
Backbone Broadband Network	9,025,000
Government Network (VPN)	2,200,000
Support for IXP	145,000
TA legal and regulatory safeguards for open access	1,000,000
Regional Open Access and PPP Policy Framework	250,000
Capacity building/training/workshops for open access/PPP in infrastructure	300,000
Regional Strategy/Action plan for IXP	50,000
Capacity building/training and workshops	100,000
Strategy/Action plan for connection to Caribnet	100,000
Support for NREN	350,000
Support for commercializing of bandwidth	100,000
Capacity Building (project support)	50,000
Component 2: ICT-Led Innovation	8,110,000
TA for Skills Assessment and Program development	250,000
TA to develop Grants Manual for Bus. Incubation	150,000
Business Incubation Grants	3,850,000
TA for Incubation	110,000
Skills development and Certification	2,250,000
Support for Pilot applications (equipment)	500,000
Implementation and capacity building support for Centre of Excellence	400,000
Support for development of Regional Centers of Excellence	100,000
Regional strategy for ITES	100,000
Support for Regional Network of Incubators	50,000
Support for Knowledge Exchange on ITES	100,000
Marketing Strategy to position region as destination for R&D	50,000

Support for Knowledge Exchange for RENs	200,000
Component 3: Implementation support - Incremental Operating Cost	2,570,000
Project Coordinator	1,000,000
M&E	200,000
Operating expenses	640,000
Fiduciary Support	120,000
Audit	170,000
Environmental Safeguards	30,000
Implementation and capacity building support for Centers of Excellence	100,000
Administrative Assistant (Pro. Coordinator)	50,000
Procurement & FM support	260,000
TOTAL	25,000,000

Annex 3: Implementation Arrangements

Caribbean Regional Communications Infrastructure Program (CARCIP)

i. Program administration mechanisms

1. The administration of the program will include: (i) national level Project Coordination Units (PCUs) already established within the Ministries of Finance who will manage the fiduciary aspects of the respective projects, and as may be required; (ii) Project Coordinators mainstreamed within the sector Ministries, or as determined by the Governments, who will coordinate project activities on behalf of the Government; (iii) national level steering or oversight committees who will provide guidance on strategic issues; and (iv) regional institutions who will collate best practices and ensure that the program's regional aspects are well reflected during implementation, and shared activities are implemented at the regional level to reduce costs.

(a) National Project Coordination Units

2. Project Coordination Units (PCUs) have already been established to support implementation of CARCIP projects. PCUs exist in all the CARCIP Phase 1 countries. These will be leveraged for implementation of the fiduciary aspects of CARCIP to minimize implementation costs. The PCUs already have in place procurement, finance specialists and accountants who are managing other World Bank projects, and are familiar with World Bank procedures. The non-fiduciary aspects of CARCIP will be managed by a Project Coordinator and Technical specialists, as required, who will be located within the sector ministries or the PCU. Resources for additional fiduciary staff and capacity building are included to strengthen existing arrangements as required.

3. The PCUs will be Loan/Credit/Grant Administrators who will deal with all fiduciary issues. The PCUs will serve as the Loan/Credit/Grant Administrators of the CARCIP projects, and will handle all administrative matters in accordance with the Project Implementation Manuals (PIM). They will also ensure financial management and handle disbursements issues, including the preparation and submission of replenishment requests to IDA. The Units will also be responsible for: (i) maintaining Management Information System (MIS) for tracking progress in all project subcomponents in various countries, both in terms of financial performance and meeting implementation targets, and monitor the performance of all contractors under the various projects. The Project Coordinators will be responsible for the overall coordination of the program activities and preparation of annual work programs and budgets, and if necessary, review, in consultation with IDA, the reallocation of resources across the various components of the projects, as lessons emerge as to patterns of demand and development impact. In all the three OECS countries, project implementation arrangements are already well advanced with support from PPAs.

(b) Project Coordinator

4. **The PCUs will be assisted by a Project Coordinator.** The Project Coordinator will be responsible for the effective and flexible coordination, management, and implementation of the

technical aspects project and will liaise with all relevant stakeholders. Grenada has completed the process of selecting Project Coordinators, while Saint Lucia and Saint Vincent and the Grenadines is expecting to finalize the selection soonest. The Project Coordinators will be assisted by task teams composed of focal points. The focal points who will be technical specialists will be responsible for advancing preparation of activities related to specific components, including developing Terms of Reference (ToRs), assisting in drafting procurement documents and supporting the PCUs and Project Coordinators in review of consultancy reports, as well as monitoring progress of project components. A typical task team will be composed of representatives from the regulatory authority focusing on regulatory aspects, representatives from the Ministry dealing with policy aspects and representatives from the Finance Ministries or national investment commissions to deal with investment aspects. The description of task teams and their proposed activities will be defined on a case-by-case basis in the Project implementation manuals of each project.

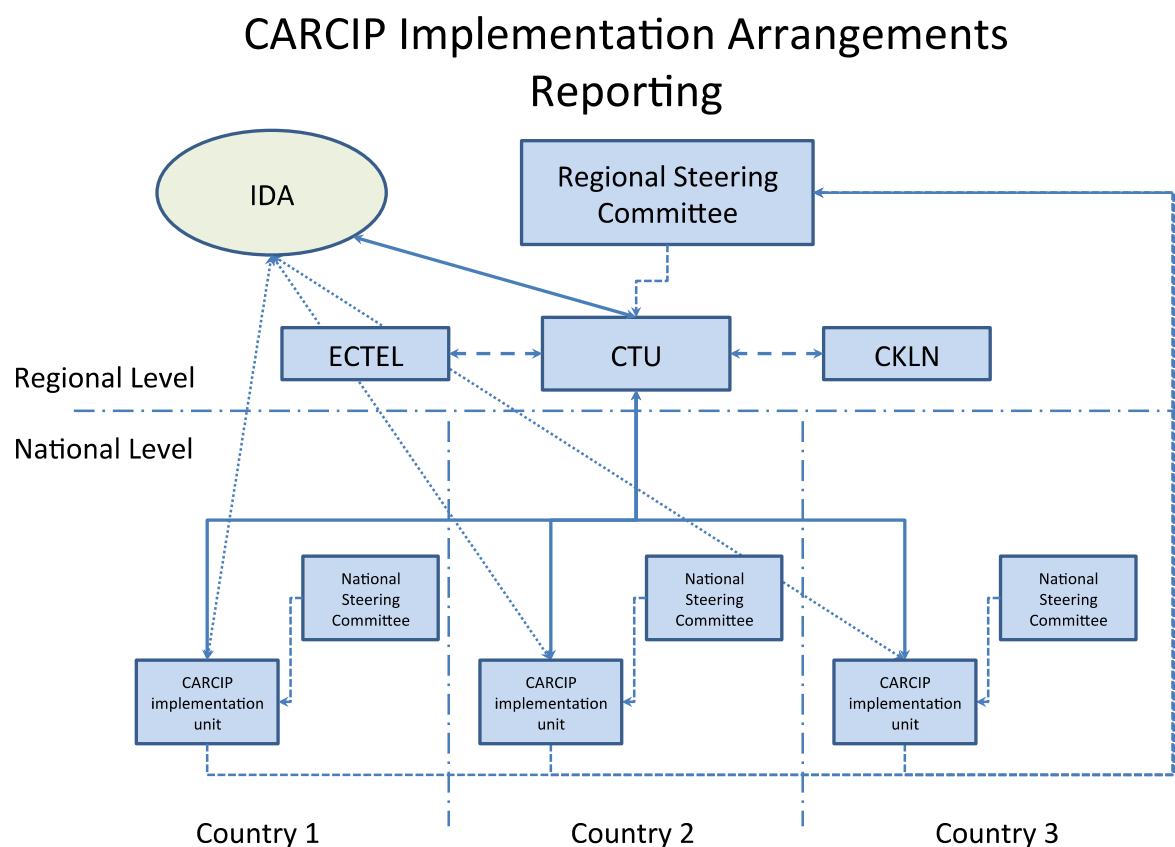
(c) Steering and Oversight committees

5. Steering and Oversight committees who liaise with PCUs will be established with representation from the private sector and civil society as determined by the borrowers for each country, and an overall regional steering committee will be established with representatives of the participating countries and other regional entities. Given the PPP nature of the project and possible involvement of a number of ministries in addition to the telecom ministry (Finance, Planning), it is proposed that steering and oversight committees with representatives from government, regulatory authorities, private sector and civil society will be considered to provide overall guidance to the PCUs. At a regional level, it is proposed to establish a steering committee composed of regional entities, including regulatory authorities and borrowing countries' national representation to provide guidance to the regional implementing unit (CTU). Confirmation of the establishment of the Steering Committee will be a condition of effectiveness.

(d) Regional Program Coordination

6. The program is linked at the CARICOM/CARIFORUM level within existing regional institutions. The CTU will coordinate the overall program, share best practices and promote knowledge exchange between countries, as well as ensure synergies and shared platforms among countries implementing similar components. In cases where implementation capacity at the national level is weak, or where splitting among national level implementation agencies may prove impractical, the CTU could also support project implementation for selected aspects of the program. The CTU would also assist in providing the countries with guidance and technical assistance in the preparation of their ICT strategies as well as supporting them with the implementation of the connectivity programs, IXPs and the ICT-Led innovation aspects of the national projects. Through Implementation Agreements to be concluded under the Regional Grant, CKLN will provide more specific support to connectivity to the C@ribNet, and ECTEL will provide support harmonization of regional regulatory frameworks. The CTU would be the main focal point for overall regional program coordination and collect the status updates from each of the participating countries. CTU will be supported by other specialized regional agencies and national implementing agencies as required. Support for the regional institutions will be provided through a regional IDA grant. (A matrix of the implementation interface included below). While OECS countries participating in Phase 1A are member of CTU, each of them will

sign a Technical Agreement with the CTU for the purpose of ensuring closer coordination of the regional activities under CARCIP.



Coordinating Arrangements	Responsibility	Reporting Mechanism
<p>National</p> <ul style="list-style-type: none"> • Project Coordination Units • Project Coordinator • Steering/Oversight Committees 	<ul style="list-style-type: none"> • Project management and fiduciary aspects of project implementation • Provides support for the effective and flexible coordination, management, and implementation of the technical aspects project Assists PCU with technical inputs to Terms of Reference (ToRs) and drafting of relevant procurement documents, assist in monitoring progress • Provide overall guidance to the PCUs and Government in general 	<ul style="list-style-type: none"> • Reports to Ministries of Finance • Reports to Ministries of ICT and Finance as determined in PIM • Report to the Ministries of Finance/Communication in coordination with Project Coordinator or as determined in the PIM
<p>Regional</p> <ul style="list-style-type: none"> • CTU • CKLN • ECTEL 	<ul style="list-style-type: none"> • Ensure harmonized development of national backbones and IXPs; monitoring of performance at regional level • Work with countries to connect networks to CKLN and manage capacity; provides technical assistance on project designs • Work with countries on harmonized policy and regulatory frameworks and removing regulatory bottlenecks; provides technical assistance on project designs 	<ul style="list-style-type: none"> • Works with Project Governments through Project Coordinator • Works with Project Governments through CTU • Works with Project Governments through CTU

ii. Financial Management, Disbursements and Procurement

(a) Financial Management

7. Financial Management Assessments were undertaken for each PCU. Preliminary assessments were completed for the PCU's implementing the PPAs for Grenada (IDA Q7830), Saint Lucia (IDA Q7840) and Saint Vincent and the Grenadines (IDA Q7850). Additional financial management assessments have been carried out for each PCU during project preparation to ensure that the systems to be used to manage the project satisfy the Bank's minimum FM requirements under OP/BP10.02. Results of assessment, summary of risks and proposed mitigation measures are identified in the technical annex of each country.

(b) Procurement

8. Procurement for CARCIP will be carried out in accordance with World Bank guidelines. Procurement for the proposed program would be carried out in accordance with the World Bank's "Guidelines: Procurement under IBRD Loans and IDA Credits" dated January 2011; and "Guidelines: Selection and Employment of Consultants by World Bank Borrowers" dated January 2011; and the IDA Anticorruption Guidelines dated July 1, 2005 and as amended through October 15, 2006; and the provisions stipulated in the Grant Agreement and Legal Agreements of each project. The procurement will be carried out by the project coordinator units already established in the respective countries.

9. **Anti-Corruption Guidelines.** The Bank team intends to maintain customary oversight and will carry out prior review of all major contracts according to thresholds that will be regularly reviewed and adjusted as needed in the Procurement Plan. Initial thresholds are provided in each Annex. The following measures will be carried out to mitigate the risk of corruption:

- *Training of Fiduciary Staff:* Starting from the project launch and periodically thereafter customized to procedure and methods that would be required in the next 12-month period. This will include on-the-job training during supervision missions and regional training provided by the RPM office for the countries in the region;
- *Prior Review:* Intensive and close supervision by Bank procurement accredited staff. In addition, contract amendments will be subject to prior approval by the Bank;
- *Publication of Advertisements and Contracts:* All publications of advertisements and contract awards—will be done in accordance with the Guidelines requirements and published in the client connection system, on external websites, i.e. UNDB;
- *Debarred Firms:* Appropriate attention will be given to the need to ensure that debarred firms or individuals are not given opportunities to compete for Bank-financed contracts;
- *Complaints:* All complaints by bidders will be diligently addressed and monitored in consultation with the Bank;

- *Evaluation Committee:* The Bank will review and comment on the qualifications and experience of proposed members of Evaluation committee(s) with a view to prevent the nomination of unqualified or biased candidates. All members will be required to sign a disclosure form (a sample will be included in the Project Implementation Manuals);
- *Monitoring of Contract Awards:* All contracts are required to be signed within the validity of the bids/proposals, and in case of prior review contracts, promptly after the no objection is issued. The Procurement Plan format shall include information on actual dates (of no objections and awards), and will be monitored for cases of delay—which will be looked at on a case-by-case basis to identify the causes. The respective PCU will maintain up to date procurement records that will be readily available to auditors and all concerned Bank staff, including INT;
- *Monitoring of Payments:* All contracts shall include bank account information. The bank account shall be in the name of the same supplier/consultant that submitted the bid and awarded the contract.

iii. Environmental and Social (including safeguards)

10. The activities being financed under the Program consist of: (i) support for the development of broadband backbone and government networks; (ii) expansion of the national connectivity to rural areas; (iii) regional links; (iv) promotion of the Information Technology (IT) industry; and (v) support to training programs in the use of Information and Communication Technology (ICT) tools in order to increase the productivity and efficiency of public and private sectors.

11. The potential social and environmental impacts of such activities are expected to be minor and reversible. Nevertheless, appropriate safeguards instruments must be prepared to ensure that all project activities meet the requirements of the relevant national legislation and international conventions to which the region is a signatory, as well as World Bank Group environmental and social safeguard policies.

12. The exact locations of the backbone networks and possible regional links have not been determined, and it is therefore premature to undertake a site-specific Environmental and Social Impact Assessment (ESIA) and a Resettlement Plan (RP). Consequently, a regional Environmental and Social Management Framework (ESMF) (consistent with national and regional laws, any applicable treaty concerning international waters, and OP/BP 4.01) and a Resettlement Policy Framework (RPF) consistent with OP/BP 4.12 are being prepared. The purpose of the frameworks is: (i) to provide as much information as possible about potential environmental and social impacts (including possible land acquisition and resettlement) at the project's current state of preparation; (ii) to inform the project planning and design process by comparing the potential impacts of alternative locations, configurations, and construction techniques that are under consideration; and (iii) to describe the procedures for subsequent assessment of impacts and development of the appropriate impact management instruments (including associated mitigation measures) when the details of the project become available. These management instruments are likely to be an Environmental and Social Management Plan (ESMP) and Resettlement Plan (RP).

13. For submarine cables, once the final sites of the Landing Stations are chosen and the specific civil works identified, an Environmental and Social Management Plan (ESMP) and Resettlement Policy (RP) for each country, as may be required, will be prepared, consulted on, and disclosed.

14. The physical components of terrestrial connectivity to be financed under the Program will likely include construction of ducts, poles and deployment of earthed and unearthed cables. The Environmental and Social Management Framework will also cover the deployment of earthed or unearthed cable for national backbones, government networks and rural networks. Prior to project appraisal, the draft Environmental and Social Management Framework (ESMF) was reviewed by the World Bank and publicly disclosed in all countries participating in Phase 1 as well as in the World Bank Infoshop. Specific Environmental and Social Management Plans (ESMPs) will be prepared as necessary for terrestrial facilities, if any, during project implementation, in line with the Environmental and Social Management Framework, once the locations of those facilities have been identified.

15. Land acquisition issues will be assessed on a project-specific basis, and mitigation plans prepared accordingly. Where involuntary land acquisition and/or resettlement is confirmed and specific program areas are known prior to appraisal a Land Acquisition and Resettlement Action Plan will be prepared. Where involuntary land acquisition and /or resettlement is not confirmed or specific program areas are unknown prior to appraisal then a land acquisition and resettlement framework will be prepared. The Program is not expected to impact indigenous peoples in any negative way, and therefore OP/BP 4.10 is not triggered. However, once the actual locations of the facilities to be financed in each phase are known, this will be reassessed. Land acquisition for terrestrial facilities, if required, would trigger OP/BP 4.12 Involuntary Resettlement, and would require the preparation of an Involuntary Resettlement Plan according to the guidelines set out by the Involuntary Resettlement Framework. However, impacts are not anticipated given that facilities are expected to follow existing rights of way, especially roads. A determination will be made early during project implementation and, if the policy is triggered, plan(s) will be prepared and disclosed accordingly. Project Coordination Units within each country are expected to have safeguard specialists who will work with consultants to manage risks, albeit minimal.

16. The Program is expected to have many positive social impacts by improving access to communications, the development of an IT-ITES industry and improved government service delivery. Particularly, the program is expected to: (i) enable ICT to become a driver for sustainable economic growth; (ii) increase employment opportunities through the development of an IT-ITES industry; (iii) enable the government to use ICT to provide decentralized services; (iv) improved access and quality of ICT services for the population, business, and government; (v) reduce isolation and enhance economic activities in rural areas; and (vi) create additional opportunities for women entrepreneurs to develop ICT-related SMEs.

iv. Monitoring & Evaluation

17. **Where will the data for the project's outcome and results indicators come from?** PCUs will monitor and evaluate national projects. They will bear the primary responsibility for project monitoring and evaluation (M&E), and, as such, will establish standard formats and

guidelines for data collection and reporting, and will organize training sessions for project stakeholders in their use.

18. Project Coordinators within Sector Ministries will also develop M&E systems to keep track of and evaluate implementation progress of the proposed IDA project within the broader context of the institutional framework for the telecommunications sector provide information and data to the PCUs. CTU will be responsible for collecting and sharing data across countries from a regional perspective.

19. **What capacity is available to collect data? If limited, how will it be strengthened?** The Sector Ministries and CTU may recruit or designate a person responsible for M&E, based on the capacity assessment immediately after effectiveness. This person will liaise with all the project's stakeholders (through designated focal points) to gather relevant information and data regularly.

20. **What additional costs will be required to support M&E?** Additional resources have been allocated to the CTU under the regional grant to ensure well coordinated monitoring and coordination of program progress.

21. **How will data be used assess the project's effectiveness during implementation?** Regional institutions are being leveraged to evaluate progress and share lessons and best practice.

22. **Implementation support missions will be conducted at least twice a year.** The governments may perform evaluations jointly with the World Bank team and conduct supervision or implementation support missions at least twice a year. Missions will be based on the latest quarterly implementation and financial monitoring reports prepared by different governments. The regional grant is also expected to boost capacity of key regional institutions, including CTU for collecting, monitoring and evaluating performance indicators in the sector.

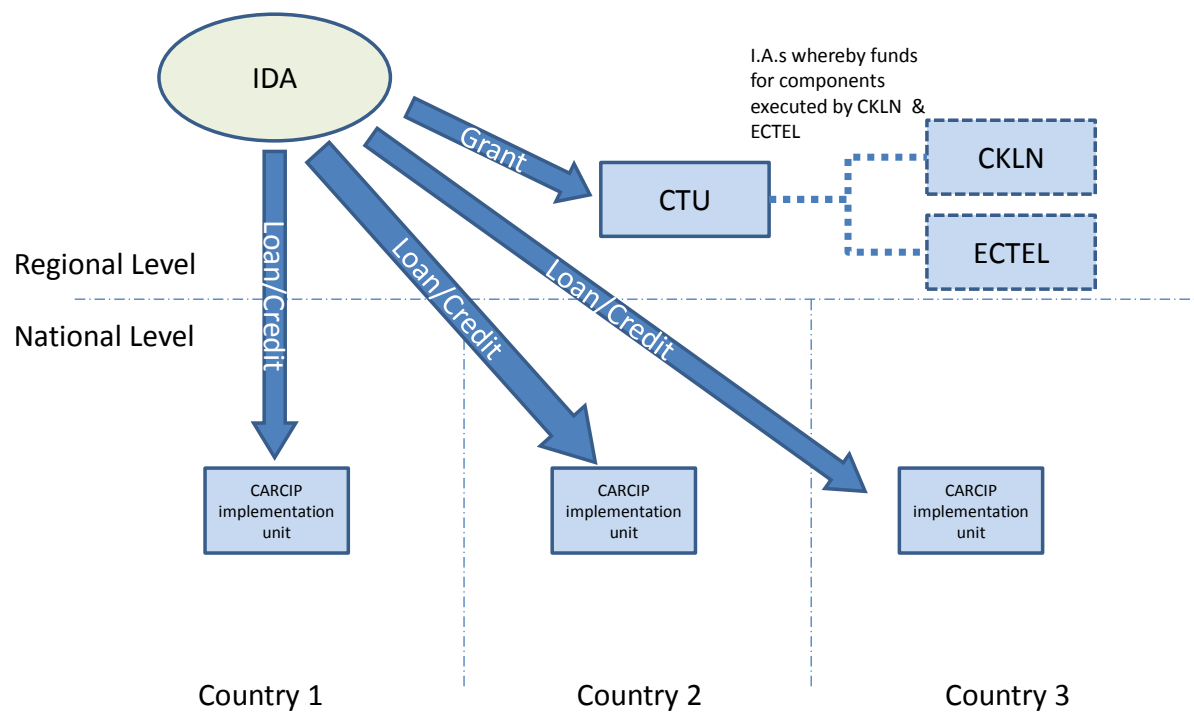
v. Role of Partners

23. **World Bank will collaborate with the Inter American Bank and Caribbean Development Bank on CARCIP.** At the program level, different donors have already expressed interest to collaborate in financing CARCIP including IDB and CDB. The specific modalities of cooperation and amounts are still under discussion and will depend on country needs, interest and requirements. Separately, the Korean Trust Fund has also provided some resources for limited project preparation activities.

24. Additional details of implementation arrangements will be included in country specific technical annexes.

25. The following charts summarize the overall implementation arrangements for CARCIP:

CARCIP Implementation Arrangements



Annex 4: Operational Risk Assessment Framework (ORAF)

CARIBBEAN REGION

Caribbean Regional Communications Infrastructure Program (CARCIP)

1. Project Stakeholder Risks		Rating	Low
<p>Description : Opposition to open access in communications infrastructure funded by the Project</p> <p>National political priorities not aligned with the regional integration agenda in ICT could hamper decision-making, and outcomes</p>	<p>Risk Management: Ensure competitive access to infrastructure through contracts; Work with regulatory institutions to develop of regulatory instruments including pricing, infrastructure sharing; work with regional institutions including ECTEL and CTU on consensus building activities across the region. Funding of infrastructure is also limited to countries that have opened up their international segment to competition and willing to ensure open access to fiber.</p> <p>- Resp: Governments & Bank Stage: Preparation & Implementation Due Date: Continuous Status: Ongoing</p>		
	<p>Risk Management: The program has been designed as a tool to support the regional ICT strategy, and complements already ongoing regional communications infrastructure development programs. Existing models of regional cooperation will be built upon, such as the successful ECTEL program.</p> <p>- Resp: Governments Stage: Implementation Due Date: Continuous Status: Ongoing</p>		
2. Implementing Agency Risks (including fiduciary)			
2.1 Capacity		Rating:	High

<p>Description:</p> <p>Inexperience of the CTU in implementing Bank financed projects, and in particular with the regional complexity of CARCIP, may cause delays.</p>	<p>Risk Management: Capacity assessments have been conducted for the CTU with recommendations for strengthening their capacity. Provision has been made to supplement CTU staffing with a Project Coordinator, a Procurement Specialist & an FM Specialist and M&E Specialist. In addition individual staff members have experience in international procurement procedures in their previous jobs.</p> <p>- Resp: CTU Stage: Implementation Due Date: Before effectiveness Status: Hiring of additional staff ongoing.</p>		
<p>2.2 Governance (including fiduciary)</p>		<p>Rating:</p>	<p>Moderate</p>
<p>Description:</p> <p>There is an independent media and existing civil society organizations operate without governmental interference. However, the capacity of these organizations to significantly influence country strategies and monitor government performance could be improved.</p> <p>In the case of Grenada, there are some measures in place to encourage the participation of civil society and non-governmental organizations in public policy making by means of participation in consultations and steering committees.</p> <p><i>Financial Management:</i></p> <p>Recipient countries have adequate budgetary and financial management systems. Donor funds are integrated into the overall budget.</p>	<p>Risk Management:</p> <p>Individual Fiduciary assessments were conducted for each of the participating entities. While they already have the required capacity to implement this program, additional, detailed</p>		

<p>Project activities will be implemented by the centralized project coordination units, which are already implementing a number of the donor-financed projects. Performance of such units in the past has been satisfactory. Project's design from the fiduciary point of view is rather simple (each country will be receiving and managing only its share of financing). As such, fiduciary risks have been defined as Moderate.</p> <p>The regional component of the program will be implemented by CTU, which has some previous experience in the implementation of donor-financed projects.</p>	<p>recommendations have been provided to facilitate further strengthening. Those recommendations are described in the individual annexes.</p>
<p><i>Procurement:</i></p> <p>PCU procurement staff in several of the participating countries have limited ICT procurement experience and are overloaded with implementation of other World Bank/EU funded projects/grants.</p> <p>There is a risk that evaluation committee members are not familiar with international procurement procedures, and may obstruct or delay the procurement process.</p> <p>Potential bidders may not be aware of procurement opportunities available in the project for ICT, goods and services, or the bidding documents may not be of sufficient quality, including ambiguous technical specifications or unclear and unrealistic requirements.</p>	<p>Risk Management:</p> <p>CTU project implementation team will be provided with the Financial Management training on the application of the World Bank-specific rules and procedures.</p> <p>The WB team will provide on-the-job training to PCU staff on Single stage and Two stages IT procurement and Non-consulting services procurement as well as on Public Private Partnerships during the project launch workshop. PCUs will recruit procurement experts with experience in IT procurement. The PCUs will provide on the job training to evaluation committee members. In addition, detailed Financial Management and Procurement Manuals (volumes in the PIM) will be prepared by</p>

<p><i>Economic Management:</i> As members of the ECCU, the OECS countries share a common central bank. The level of the exchange rate peg has not been changed in more than three decades and this exchange rate stability has helped foster a highly monetized and stable financial system. Although fiscal space is limited, progress has been made on fiscal consolidation through increased tax revenues.</p> <p>Debt ratios have worsened substantially with natural disasters and the global financial and economic crisis. Despite efforts to reduce public debt through restructuring, high debt service costs continue to be a burden.</p>	<p>respective PCUs prior to credit effectiveness. The procurement volume of the PIM will include inter alia: (a) TORs and qualifications requirements for procurement staff and evaluation committee members, (b) conflict of interest disclosure forms (for evaluation committee members to sign prior to each evaluation)</p> <p>The PCUs will carry out aggressive public awareness programs using various media, such as newspapers, brochures, radio, TV, project web-site, etc. and will prepare and make available widely clear, easy to understand standard bidding documents containing all bidding requirements, as well as train beneficiary staff on preparing unambiguous technical specifications and set up mechanisms for obtaining technical experts in relevant areas for the preparation of specifications.</p> <p>- Resp: PCUs Stage: Implementation Due Date: Continuous Status: Ongoing</p> <p>Risk Management: The Bank's ongoing and planned analytical and advisory assistance through Development Policy Loans and technical assistance aims to address challenges in debt and fiscal sustainability and modernization of public sector management, respectively.</p>
3. Project Risks	
3.1. Design	Rating: Moderate

<p>Description:</p> <p>Project Complexity and Institutional Capacity of participating institutions to project manage and coordinate across Ministries / agencies involved.</p>	<p>Risk Management:</p> <p>The proposed program will include substantial support for capacity building, following international good practices in ICT, project management and monitoring and evaluation. The project team will strive to reduce complexity by approaching the program in phases, applying existing working models, and coordinating between countries by keeping the program aligned on clear measurable outcomes, full stakeholder involvement, implementing a communication strategy, and by learning from experiences and sharing knowledge in roll-out throughout the sub-region.</p> <p>- Resp: PCUs Stage: Implementation Due Date: Continuous Status: Ongoing</p>		
	<p>Risk Management:</p> <p>An initial assessment has been completed by <i>infoDev</i> on how the Caribbean can improve competitiveness and increase economic diversification through ICT. The program will leverage this work and provide additional resources for more targeted assessments and strategies to harness individual country and regional competitive strengths and business environment for the BPO sector.</p>		
<p>3.2. Social & Environmental</p>		<p>Rating:</p>	<p>Low</p>

Description: While the exact locations of infrastructure are not known at this point, it is expected that potential social and environmental impact of activities proposed will be minimal and reversible. There is risk that implementing teams will not have the requisite capacity to monitor any potential risk, however, minimal, during the entire duration of the project.	Risk Management: Regional ESMFs and RPFs for the OECs countries have been prepared, consulted and disclosed prior to appraisal. Additional ESMP/RP will be prepared as needed during project implementation and before construction of any infrastructure begins. The PCUs are continuing to build their capacity to manage safeguard issues in view of the region’s vulnerability and the related projects, which require effective management of social safeguards. Additional capacity will be added as required. - Resp: PCUs Stage: Implementation Due Date: N/A Status: N/A		
3.3. Program & Donor		Rating:	Low
Description: Inadequate financing	Risk Management : Pre-feasibility studies have been completed which quantify risks and identify size of required contributions from government and donors, and provide a basis for leveraging private sector funding. - Resp: PCUs Stage: Implementation Due Date: N/A Status: N/A		
3.4. Delivery Monitoring & Sustainability		Rating:	Moderate
Description: Inadequate government funding to sustain project beyond CARCIP.	Risk Management: Enabling environment being improved, and PPP model being proposed for the connectivity component to ensure additional private sector resources are available. - Resp: Ministries of ICT Stage: Implementation Due Date: N/A Status: N/A		
4. Overall Implementation Risk: Moderate			

Annex 5: Implementation Support Plan

CARIBBEAN REGION

Caribbean Regional Communications Infrastructure Program (CARCIP)

Strategy and approach for implementation support

1. The Implementation Support Plan (ISP) focuses on mitigating the risks identified in the ORAF, and aim at making implementation support to the client more flexible and efficient. It also seeks to provide the technical advice necessary to facilitate achievement of the PDO (linked to results/outcomes identified in the result framework), as well as identify the minimum requirements to meet the Bank's fiduciary obligations.

- **Procurement.** Implementation support will include: (a) leveraging the existing PCUs in the Ministries of Finance for Procurement Support; (b) providing additional staff and training as needed to the PCUs; (c) Providing additional centralized procurement support at the regional level through the CTU; (d) reviewing procurement documents and providing timely feedback to the PCUs; (e) providing detailed guidance on the Bank's Procurement Guidelines to the PCUs; and (f) monitoring procurement progress against the detailed Procurement Plan.
- **Financial management.** Implementation support will include: (a) reviewing of the country's financial management system of the chosen implementing agencies, including but not limited to, accounting, reporting and internal controls; (b) leveraging the existing PCUs in the Ministries of Finance for financial management support; (c) hiring additional staff and providing training as needed to the PCUs; and (d) reviewing submitted reports and providing timely feedback to the PCUs.
- **Environmental and Social Safeguards.** The Bank team will supervise the implementation of the agreed Environmental and Social Management Frameworks and Plans and provide guidance to PCUs and governments.
- **Other Issues.** Sector level risks will be addressed through policy dialogue with the governments' Ministries and Regulatory Authorities.

Implementation Support Plan

2. While all CARCIP Phase 1 countries have adequate experience in implementing World Bank Projects, and despite the Bank's own experience in preparing similar projects, the relative complexity of structuring PPPs and ensuring the enabling environment exists for open and competitive access to communications infrastructure will require fairly intensive supervision, especially during the first two years of implementation. The Bank team members will be based either in Washington DC, or in Country Offices, and will be available to provide timely, efficient and effective implementation support to the clients. Formal supervision and field visits will be carried out three to four times annually in the first 2 years, with possibility for annual visits in later years of the project. These will be complemented with monthly video conferences to discuss project progress. Detailed inputs from the Bank team are outlined below:

- **Technical, Policy and legal/Regulatory inputs.** Technical, policy and legal/regulatory related inputs will be required to review bid documents to ensure fair competition, sound technical specifications and assessments, and confirmation that activities are in line with Governments' ICT and growth strategies.
- **Fiduciary requirements and inputs.** Training will be provided by the Bank's financial management and procurement specialists as needed to CTU and other PCUs. The Bank team will also help identify capacity building needs to strengthen financial management capacity and to improve procurement management efficiency. Financial management and the procurement specialists will be based in both Washington DC and the region to provide timely support. Formal supervision of financial management will be carried out semi-annually or annually, while procurement supervision will be carried out on a timely basis as required by the client.
- **Safeguards.** Inputs from environment and social specialists will be provided as needed.
- **Operation.** The Task Team will provide day-to-day supervision of all operational aspects, as well as coordination with the clients and among Bank team members. Relevant specialists will be identified as needed.

3. The main focus of implementation support is summarized below.

Time	Focus	Resource Estimate
Project duration	Team leadership, technical, legal and procurement review of the bidding documents and Institutional arrangement and project supervision/coordination	ICT Policy Specialists 10SWs ICT Legal Specialist 2SWs
	Procurement training	Procurement specialist(s) 10SWs
	FM training and supervision	FM specialist(s) 10SWs
	Environmental and Social Issues	Social specialist(s) 1SW Environmental specialist(s) 1 SW

Note: SW – Staff-Week

Staff skill mix required is summarized below.

Skills Needed	Number of Staff Weeks	Number of Trips	Comments
Task team leaders	10 SWs annually	Fields trips as required.	DC or Country office based
Procurement	10 SWs annually	Fields trips as required.	DC or Country office based
FM Specialist	10 SWs annually	Fields trips as required.	DC or Country office based
Social specialist	1 SW annually	Fields trip as required.	DC based
Environment specialist	1 SW annually	Field trip as required.	DC based
Legal Specialist	1 SW annually	Field trip as required	DC based

Annex 6: Team Composition

CARIBBEAN REGION Caribbean Regional Communications Infrastructure Program (CARCIP)

World Bank staff and consultants who worked on the project:

Name	Title	Unit
Anders Jensen	M&E Specialist	AFTDE
Anjali Acharya	Sr. Environmental Specialist	LCSN
Aristeidis I. Panou	ET Consultant	LEGAF
Catherine Abreu	Procurement Specialist	LCSPT
Doyle Gallegos	Lead ICT Policy Specialist	TWICT
Edith Ruguru Mwenda	Senior Counsel	LEGAF
Emmanuel Njomo	Consultant	LCSFM
Fabiola Altimari	Senior Counsel	LEGLA
Félix González Herranz	Summer Intern	TWICT
Gurcharan Singh	Senior Procurement Specialist	TWICT
Iván González-Berenguer Peña	Operations Analyst	TWICT
James Neumann	ET Consultant	LEGPS
Jannina Flores Ramírez	Program Assistant	TWICT
Jimmy Pannett	Operations Officer	LCC3C
Juan Navas-Sabater	Lead ICT Policy Specialist	TWICT
Junko Narimatsu	Consultant	TWICT
Kimberly Vilar	Social Development Specialist	LCSSO
Maritza Rodríguez	Sr. FM Specialist	LCSFM
Mavis Ampah	Sr. ICT Policy Specialist, TTL	TWICT
Michael Corlette	Country Officer	AFCS4
Miguel-Santiago Oliviera	Sr. Finance Officer	CTRLN
Patricia De la Fuente Hoyes	Sr. Finance Officer	CTRLN
Peter Lafere	Social Development Specialist	LCSSO
Sophier Guerrier-Gray	Paralegal	LEGLA
Svetlana Klimenko	Sr. FM Specialist	LCSFM
Victor Mulas	ET Consultant	TWICT

Annex 7: Economic Analysis

CARIBBEAN REGION

Caribbean Regional Communications Infrastructure Program (CARCIP)

1. Improving Broadband Connectivity in the CARIFORUM region has the potential to rapidly advance regional Growth. Broadband infrastructure is expected to have a strong link with GDP growth, and has the potential to transform social and economic development, especially with the improvements in the tourism and IT and IT Enabled Services sector. It has the potential to promote a fundamental restructuring of the economy and contribute to virtually every sector in the economy through productivity gains and generate employment.
2. The cost-benefit analysis performed for CARCIP assesses the broad impact of regional connectivity and focuses on the potential contribution to regional GDP, comparing the situation with CARCIP to that without the program, with specific emphasis on the infrastructure investments and the potential economic returns based on projected traffic. Although this macroeconomic analysis captures the overall benefits for the economy, specific positive network effects and spillovers that will be derived from the CARIFORUM connectivity are difficult to quantify, and are therefore summarized in qualitative terms. The analysis also concentrates on the two key components of CARCIP Phase 1 – (i) Regional Connectivity; and (ii) ICT-Led innovation. Additional detailed analysis is being undertaken to complement these preliminary observations. Subsequent phases of the program will revise the analysis based on new information.

Regional Connectivity

3. CARCIP's regional connectivity has the potential to contribute to the CARIFORUM regional economic growth. The analysis shows that this growth could be up to US\$ 3.91 billion in present value, which also represents, for the program, an economic internal rate of return (EIRR) of 49percent. CARCIP will enable countries to connect to each other more easily and within a regional network that will leverage existing regional backbones, such as CKLN. CARCIP is expected to move toward an overall fixed broadband penetration of 16.2 percent by 2020, which corresponds to about 4.9 million fixed broadband subscribers. This represents a 19 percent Cumulative Average Growth Rate (CAGR) in terms of subscribers (the region currently has 0.84 million fixed broadband subscribers) and 13 percentage points increase in fixed broadband penetration for the period 2010-2020. The EIRR best captures the viability of the connectivity program, and it is defined as the interest rate at which the Net Present Value of a project is zero. A project is worth investing in if the EIRR is greater than the rate of interest. The progressive increase in penetration following the investment translates into US\$3.91 billion increase in the regional GDP, in present value and 49 percent in the program EIRR.
4. The analysis assumes a capital expenditure (CAPEX) of US\$170 million for the first phase, which was taken from a prefeasibility study conducted in the project preparation phase. US\$145 million for the Dominican Republic, US\$8 million for Grenada, and US\$9 million for Saint Lucia and Saint Vincent and the Grenadines respectively. The Operating Expenditure (OPEX) was assumed to be 10 percent of the CAPEX based on industry practice. The Cash Flows considered for the calculation of the Program EIRR was based on the difference between

the impact in the GDP (Cash Inflow) and the CAPEX/OPEX (Cash Outflow). The economic assessment is based on a conservative 10-year scenario (until 2020), assuming a flat growth rate after the period (in reality, the broadband penetration would be expected to continue growing after 2020). It has also been assumed that CARCIP will start to have an impact in 2013. For the region as a whole, the yearly net economic benefit was calculated and then discounted to calculate the net economic benefit in present value. The discount rate used (16.06 percent) was estimated using the Capital Asset Pricing Model (CAPM). While similar assumptions have been made for the respective countries, specific discount rates for each of the countries in Phase 1 have been estimated based on country risk premiums and cost of debt. These are: the Dominican Republic: 17.86 percent, Grenada: 17.74 percent, Saint Lucia: 18.06 percent, and Saint Vincent and the Grenadines: 17.61 percent.

5. CARCIP Phase 1 connectivity (Grenada, Saint Lucia and Saint Vincent and the Grenadines under sub-phase APL 1A, expected to be joined shortly by the Dominican Republic under sub-phase APL 1B) will have a net economic impact of US\$ 2.09 billion in present value, which also represents an economic internal rate of return (EIRR) of 60 percent. CARCIP will provide countries in Phase 1 with broadband connectivity (projected increase of about 3 million fixed broadband subscribers) and facilitate connection of regional and national backbone networks. The consolidated yearly net economic benefit has been assessed by also considering the potential synergies amongst the first phase countries. Such synergies bring about economies of scales and cost sharing, which further deepen regional integration and allow the individual countries to benefit from regional public good. The analysis indicates that the total economic impact of an individual country approach to developing infrastructure would be US\$ 1.22 billion; US\$ 873 million less than under the regional approach. Increasing the fixed broadband coverage and helping to put in place the right policies to boost competition or allowing the development of a regional IXP network that will avoid routing domestic traffic internationally will further reduce the cost of communication for the entire region. Additionally, CARCIP will provide domestic and regional networks that will connect government offices, health centers, schools that will result in significant costs savings and increased productivity.

6. CARCIP connectivity for the Dominican Republic will have a net economic impact of US\$ 1.02 billion in present value, which also represents an economic internal rate of return (EIRR) of 52 percent. CARCIP is expected to help fixed broadband in the Dominican Republic achieve 16 percent in penetration by 2020, which corresponds to approximately 1.9 million subscribers. This represents 18 percent CAGR in terms of subscribers (the country currently has 361,000 fixed broadband subscribers).

7. For Grenada, the net economic impact is expected to be US\$ 16.9 million in present value, which also represents an economic internal rate of return (EIRR) of 36 percent. CARCIP is expected to help fixed broadband in the Grenada achieve 31 percent penetration by 2020, which corresponds to approximately 32,000 subscribers. This represents 12 percent CAGR in terms of subscribers (the country currently has 10,500 fixed broadband subscribers).

8. CARCIP connectivity for Saint Lucia will have a net economic impact of US\$ 21.75 million in present value, which also represents an economic internal rate of return (EIRR) of 37 percent. CARCIP is expected to help fixed broadband in the Saint Lucia achieve 32 percent in penetration by 2020, which corresponds to approximately 61,500 subscribers. This represents 12

percent CAGR in terms of subscribers (the country currently has 20,500 fixed broadband subscribers).

9. Finally, Saint Vincent is expected to have a net economic impact of US\$ 6.22 million in present value, which also represents an economic internal rate of return (EIRR) of 24 percent. CARCIP is expected to help fixed broadband in the Saint Vincent achieve 32 percent in penetration by 2020, which corresponds to approximately 35,300 subscribers. This represents 11 percent CAGR in terms of subscribers (the country currently has 12,500 fixed broadband subscribers).

10. Regional connectivity will enhance regional and international trade. The regional connectivity will allow each of the member countries to gain competitiveness in international markets as well as to facilitate the exchanges among member states, exploiting regional synergies while overall increasing trade in goods and services.

11. CARCIP will improve the viability of ongoing regional backbones, such as the CKLN. One of CARCIP's key benefits is to increase the capillarity of the CKLN networks to reach domestic locations and therefore allow a real regional connectivity. CARCIP will connect the schools and education centers in each of the countries to the CKLN backbone. As a result, more knowledge sharing, educational research, information, and capacity building will be generated thereby enhancing the welfare of the CARIFORUM region.

12. The regional broadband connectivity is likely to lead to the creation of up to 1.9 million jobs in the CARIFORUM region (cumulative in a 10 years horizon, until 2020). CARCIP will boost direct and indirect job creation thanks to the broadband connectivity expansion. CARIFORUM's citizens will have better access to information, gain ICT skills to increase competitiveness or start own businesses in the ICT/ICT enabled industry. The estimate of the number of jobs created is based on the study conducted by Katz³⁵ estimating the effect of increase in broadband penetration on employment rates.³⁶ For the CARCIP project, the estimate is conservative and assumes that an 8 percent increase in broadband penetration could result in 2 percent increase in the employment rate. Based on these assumptions, CARCIP's broadband connectivity could result in the creation of up to 476,500 jobs in the Dominican Republic; 10,000 in Grenada; 15,800 in Saint Lucia; and 7,700 in Saint Vincent and the Grenadines, which adds up to 510,000 jobs for CARCIP Phase 1.

ICT-Led Innovation

13. The addressable market for the IT/ITES³⁷ industry globally has been estimated at \$756 billion in 2011.³⁸ The market realization, however, is under 25 percent, largely because of supply side constraints such as lack of skilled manpower and weak business enabling environments for SMEs and startups to flourish. Enabling environment includes access to ICT infrastructure,

³⁵ Raul L. Katz. "The Role of ICTs in Development"

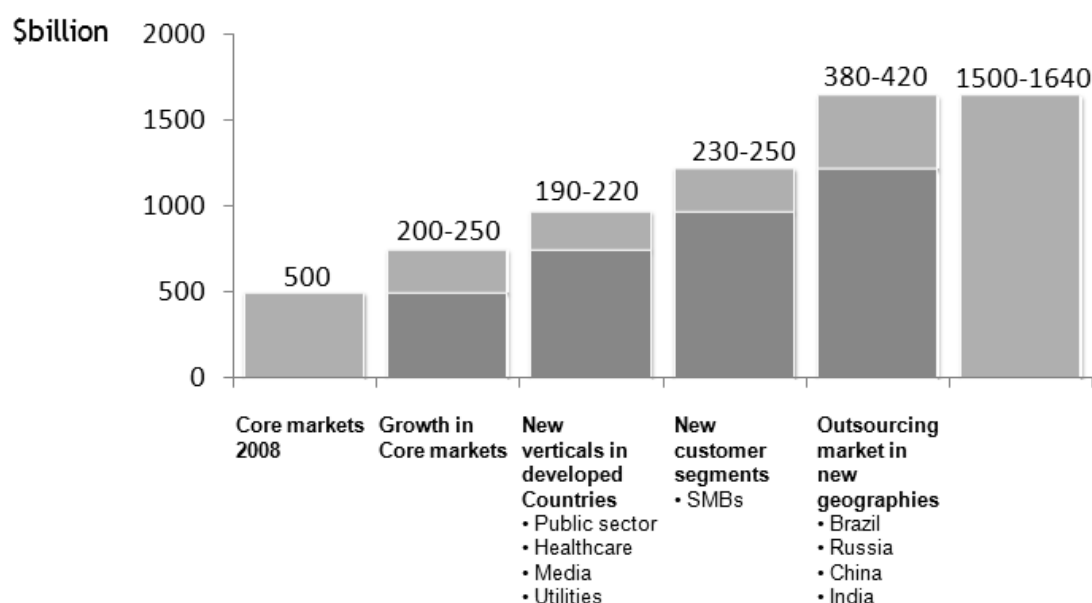
³⁶ Countries include Argentina, Brazil, Chile, Colombia, Ecuador, El Salvador, Mexico, Nicaragua, Panama, Peru, Venezuela and Uruguay.

³⁷ IT/ITES covers a broad range of activities with different levels of complexity including: call centers, online customer support, tax and accounting processing, software development, knowledge services

³⁸ www.tholons.com

adequate financing mechanisms, and opportunities for building organizational and technological capacity. According to estimates, the IT/ITES market is likely to grow to \$1.6 trillion by 2020 (see figure below) and the global job creation potential is estimated to be 60 million, benefiting mostly youth and women. Given the growth potential, it is evident that countries and regions that can quickly ramp up the availability of their talent pool and improve business/investment climate can benefit hugely from the economic opportunity that lies in the IT/ITES industry. Innovative business models such as Rural BPO, Impact Sourcing and Micro-tasking may also be considered to alleviate poverty in rural and remote areas and achieve inclusive growth at the country and regional levels.

Table 2: Total Addressable Market for IT-Enabled Services, 2020



Source: NASSCOM, Perspective 2010: Transform Business, Transform India, April 2009

14. With this component, CARCIP is expected to boost ICT-led innovation. The innovation will be accelerated through the establishment of: (i) IT parks and technology centers; (ii) business incubators; (iii) targeted skills development and certification programs; (iv) links with multinational companies (MNCs); and (v) mechanisms for financing early stage startups and SMEs.

15. Innovative ITES/BPO business models such as Rural BPO³⁹, Impact Sourcing⁴⁰ and Micro-tasking⁴¹ may also be considered, as CARCIP's connectivity component seeks to expand

³⁹ Rural Business Process Outsourcing (BPO) is expected to generate income opportunities for the rural poor, particularly youth and women. It is becoming increasingly popular in countries like India where skills scarcity and rising costs is becoming an issue for business sustainability.

⁴⁰ The Rockefeller Foundation has recently launched a program in Kenya to foster and scale up a new arm of the outsourcing industry called "impact sourcing" by supporting programs aimed at creating employment for the poor.

⁴¹ Micro-work allows existing firms, startups and entrepreneurs to divide work into microtasks and use simple GSM phones or the cloud platform to outsource work directly to billions of workers worldwide. It can provide small but sustained income generating opportunities for the unemployed, particularly in developing countries.

connectivity in underserved areas of participating countries. These initiatives will support IT/ITES firms to reduce costs by offshoring business processes to rural areas of the country, allow rural SMEs and startups to flourish, and generate income opportunities for the poor, especially youth and women.

16. **It is expected that this component will have impact at the micro-level.** The ICT-Led innovation development will have an impact in the following: (i) increased revenue from IT/ITES industry; (ii) job creation; and (iii) increased productivity and competitiveness. It is also expected to contribute to national/regional and diversified growth in terms of: (i) export-led growth; and (ii) poverty reduction (see Figure 3). It is, however, hard to estimate numerically benefits such as knowledge spillovers and productivity increases across other sectors.

Figure 3: Economic Impact

Micro Level Outcomes	National/Regional Outcomes
1. Increased Revenues from IT/ITES Industry	1. Export led growth
2. Job creation	2. Poverty reduction
3. Increased productivity and competitiveness	3. Global competitiveness and increased revenues

17. **Micro Level Outcomes** - The following direct and indirect impact is expected at the micro-levels

- **Increased revenues from IT/ITES industry** – Through the establishments of IT Parks, Venture Funds and Business Incubators, this component will help the local IT/ITES industries to develop, foster local innovation and grow. The direct impact of this component can be tracked through revenue growth generated by the benefited SMEs/Startups and MNCs. Increased technology transfer and foreign investment can also be anticipated through the creation of linkages with the Caribbean diaspora in North America, Europe and elsewhere and clusters abroad (e.g. Silicon Valley, Hyderabad).
- **Job Creation** – Another significant impact is on job creation. According to NASSCOM,⁴² every single job created in ITES/BPO creates indirect employment for 3 to 4 people in other ancillary sectors, including transportation and construction. These jobs are particularly expected to benefit youth and women. For example, in the Philippines women constitute 60 percent of the IT-based workforce. Rural poor may provide additional benefits as Rural BPO is increasingly attracting attention in

⁴² The National Association of Software and Services Companies (NASSCOM), is the Indian chamber of commerce is a consortium that serves as an interface to the Indian software industry and Indian BPO maintaining a state of the art information database of IT software and services related activities for use of both the software developers as well as interested companies overseas.

developing countries where rising costs and skills shortage is becoming an issue in urban cities.

- **Increased productivity and competitiveness (skills development)** – Job creation will lead to higher demand for skilled labor and increased productivity in the ICT/knowledge sector. According to studies, the lack of skilled manpower is a binding constraint to realizing the potential of the sector. Even India which has 30 percent of the global labor supply suitable for the industry expects a shortfall of 0.8 to 1.2 million skilled workers for its IT/ITES industry by 2012. This challenge could translate into an opportunity for the CARIFORUM countries. The targeted skills development program that would train and certify youth with globally benchmarked employable skills and provide linkages to leading industry players can lead to increased competitiveness and productivity in the CARIFORUM region.

18. **National/Regional Outcomes** - The ICT-led innovation is expected to contribute to overall economic growth in the CARCIP countries:

- **Export-led growth** –The ICT-led Innovation component is expected to allow CARIFORUM countries to enjoy more robust export-led growth. For example, in India, annual growth rates of IT/ITES exports have been on average 10 percent in the past years. In Mexico, total revenue from IT/ITES in 2010 was US\$10.87 billion of which US\$4.15 billion was from exports.⁴³ The component is also expected to strengthen economic resilience of the region by diversifying the economy and increasing regional competitiveness. There is opportunity to replicate this experience in the CARIFORUM region.
- **Reduction of Poverty** – It is also expected that this component will contribute to the reduction of poverty. Rural BPO and micro-tasking may also help to establish industries and generate more stable and higher income opportunities in marginalized areas, particularly for women and youth. Further, IT/ITES firms may experience significant cost reduction by leveraging inexpensive rural work force, office space, among others.

⁴³ MexicoFirst, presentation at World Bank March 2011.

Annex 8: Technical Annex for Regional Grant
CARRIBEAN TELECOMMUNICATIONS UNION
Caribbean Regional Communications Infrastructure Program (CARCIP)

Date: April 24, 2012 Country Director: Francoise Clottes Sector Director: Jose Luis Irigoyen Acting Sector Manager: Juan Navas-Sabater Team Leader: Mavis Ampah Project ID: P114963 Lending Instrument: APL	Sector(s): Telecommunications (50%), Information technology (50%) Theme(s): Regional integration (30%), Regulation and competition policy (30%), Infrastructure services for private sector development (40%) EA Category: B (Partial Assessment)
Project Financing Data:	
IDA Grant. <input type="checkbox"/> Loan <input type="checkbox"/> Credit <input checked="" type="checkbox"/> Grant <input type="checkbox"/> Guarantee <input type="checkbox"/> Other:	
Financing Plan	
Source	Total Amount (US\$3.0M)
Recipient	Local Foreign Total
Total	US\$3.0M
Recipient: CTU Responsible Agency: Caribbean Telecommunications Union (CTU) Contact Person: Bernadette Lewis Telephone No.: (868) 6270281/6270347 Fax No.: (868) 623 1523 Email: Bernadette.Lewis@ctu.int	
Estimated Disbursements – APL 1A (Bank FY/US\$ millions)	
FY	2013 2014 2015 2016 2017
Annual	0.4 1.3 0.6 0.46 0.24
Cumulative	0.4 1.7 2.3 2.76 3.0
Project Implementation Period: Start August 1, 2012, End August 1 2016 Expected effectiveness date: August 1, 2012 Expected closing date: February 1, 2017	

Project Development Objective:

The development objective of the regional grant is to facilitate the implementation of CARCIP, to increase coordination, harmonization of policies and strategies and transfer of knowledge among participating countries. This objective is fully consistent with and contributes to the achievement of the overall program, which seeks to increase access to regional broadband networks and advance the development of an ICT-enabled services industry in the Caribbean Region. ...

Project description

The CARCIP regional grant will be structured into three components and will have an overall Results Framework for measuring performance. The components will be as follows:

1. **Component 1: Regional Connectivity Infrastructure.** Expanding the regional broadband backbones and the broadband backbones of the Participating Countries that are eligible for financing by the Association, by providing technical assistance and co-ordination support in connection with: (a) the design, deployment, regulation, use and interface of the respective national and regional networks; (b) the development of regulatory frameworks for the management and regulation of submarine fiber cable systems and cross border infrastructure; (c) monitoring compliance with the social and environmental safeguards under the Program; (d) the expansion of internet exchange points (IXPs), including building public awareness, on the benefits of establishing IXPs, developing framework and regulatory instruments for connecting respective national IXPs to create a regional IXP; (e) supporting ECTEL to, *inter alia* develop and strengthen the regional legal and regulatory enabling environment for telecommunications; and (f) working with CKLN to facilitate the dimensioning of the design of the regional backbones to ensure that they fit within the broader regional framework of C@ribNet.
 2. **Component 2: ICT-led innovation.** Supporting the regional IT industry in knowledge creation and sharing, including: (a) facilitating the development of state of the art regional centers of excellence; (b) facilitating the development of common strategies, policies, regulatory and incentive structures to support a multi-lingual regional information technology (IT) and IT-enabled services (ITES) industry; (c) designing and implementing standardized skills, certification and training of trainer programs for IT and ITES; (d) promoting regional network of IT and technology incubators, and technology centers, and identification of business and investment opportunities in the IT and ITES sector, and (e) Facilitating CKLN to leverage usage of C@ribNet for innovation and skills development activities.
 3. **Component 3: Implementation Support.** Strengthening the capacity of the CTU CKLN and ECTEL for implementation, management, coordination, monitoring and evaluation of the Project, including hiring core staff for the Project.
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-

Safeguard policies triggered?		
Environmental Assessment (OP/BP 4.01)		X Yes <input type="radio"/> No
Natural Habitats (OP/BP 4.04)		X Yes <input type="radio"/> No
Forests (OP/BP 4.36)		<input type="radio"/> Yes X No
Pest Management (OP 4.09)		<input type="radio"/> Yes X No
Physical Cultural Resources (OP/BP 4.11)		X Yes <input type="radio"/> No
Indigenous Peoples (OP/BP 4.10)		<input type="radio"/> Yes X No
Involuntary Resettlement (OP/BP 4.12)		X Yes <input type="radio"/> No
Safety of Dams (OP/BP 4.37)		<input type="radio"/> Yes X No
Projects on International Waters (OP/BP 7.50)		<input type="radio"/> Yes X No
Projects in Disputed Areas (OP/BP 7.60)		<input type="radio"/> Yes X No
Conditions and Legal Covenants:		
Financing Agreement Reference	Description of Condition/Covenant	Date Due
Article 4.01 (a)	CTU's constitutive instrument has been amended in a way that impairs its ability to perform any obligation under the Project.	Additional Event of Suspension
Article 4.01 (b)	ECTEL's constitutive instrument has been amended in a way that impairs its ability to perform any obligation under the Project.	Additional Event of Suspension
Article 4.01 (c)	CKLN's constitutive instrument has been amended in a way that impairs its ability to perform any obligation under the Project.	Additional Event of Suspension
Article 4.01 (d)	At least two of the following agreements, namely, the Grenada Financing Agreement, or the Saint Lucia Financing Agreement, or the Saint Vincent and the Grenadines Financing Agreement have failed to become effective.	Additional Event of Suspension
Article 4.01 (e)	(i) The right to withdraw the proceeds of any financing under either, the Grenada Financing Agreement, or the Saint Lucia Financing Agreement, or the Saint Vincent and the Grenadines Financing Agreement has been suspended, canceled or terminated, in whole or in part, pursuant to the terms of the relevant agreement; or (ii) any financing under either of any of these agreements has become due and payable prior to its agreed maturity.	Additional Event of Suspension
Article 5.01 (a)	CTU to enter into an Implementation Agreement with CKLN and ECTL, respectively.	Effective Date

Article 5.01 (b)	CTU to prepare and adopt a Project Implementation Manual.	Effective Date
Article 5.01 (c)	CTU to enter into a Technical Agreement with at least two of the countries participating in Phase 1A.	Effective Date
Article 5.01 (d)	CTU to establish a Project Coordination Unit and hire a Project Coordinator, a Procurement Specialist and a FM specialist.	Effective Date
Section I.A.1 (a) of Schedule 2	CTU to establish a Regional Steering Committee.	Sixty (60) days after the Effective Date
Section I.A.2 (b) of Schedule 2	CTU to enter into a Memorandum of Understanding with the Dominican Republic.	Sixty (60) days after the Effective Date
Section II.B.4 of Schedule 2	CTU to appoint the external auditors for the Project.	Six months after the Effective Date

II. INTRODUCTION

A. Regional Context

1. The proposed World Bank financed Caribbean Regional Communications Infrastructure Program (CARCIP) focuses on bridging the remaining gaps in the regional broadband communications infrastructure in the Caribbean Region. The primary development objective of CARCIP is to increase access to regional broadband networks and advance the development of an ICT-enabled services industry in the Caribbean Region, and thereby promote increased social and economic development and more effective regional integration. The program expects to achieve this objective through strategic interventions at the national and regional levels.

2. In general, the provision of broadband requires a combination of network components, technologies and services, which constitute a seamless ‘supply chain’ – from connection to global networks through to the consumer. Figure 4 below illustrates the chain of activities that constitutes such supply chain and that are likely to be financed under CARCIP to deliver cost effective, mass-market communications to the region. CARCIP emphasis is expected to be focused on the International through the Switching segments of the supply chain. The Private Operators are already providing the remaining segments.

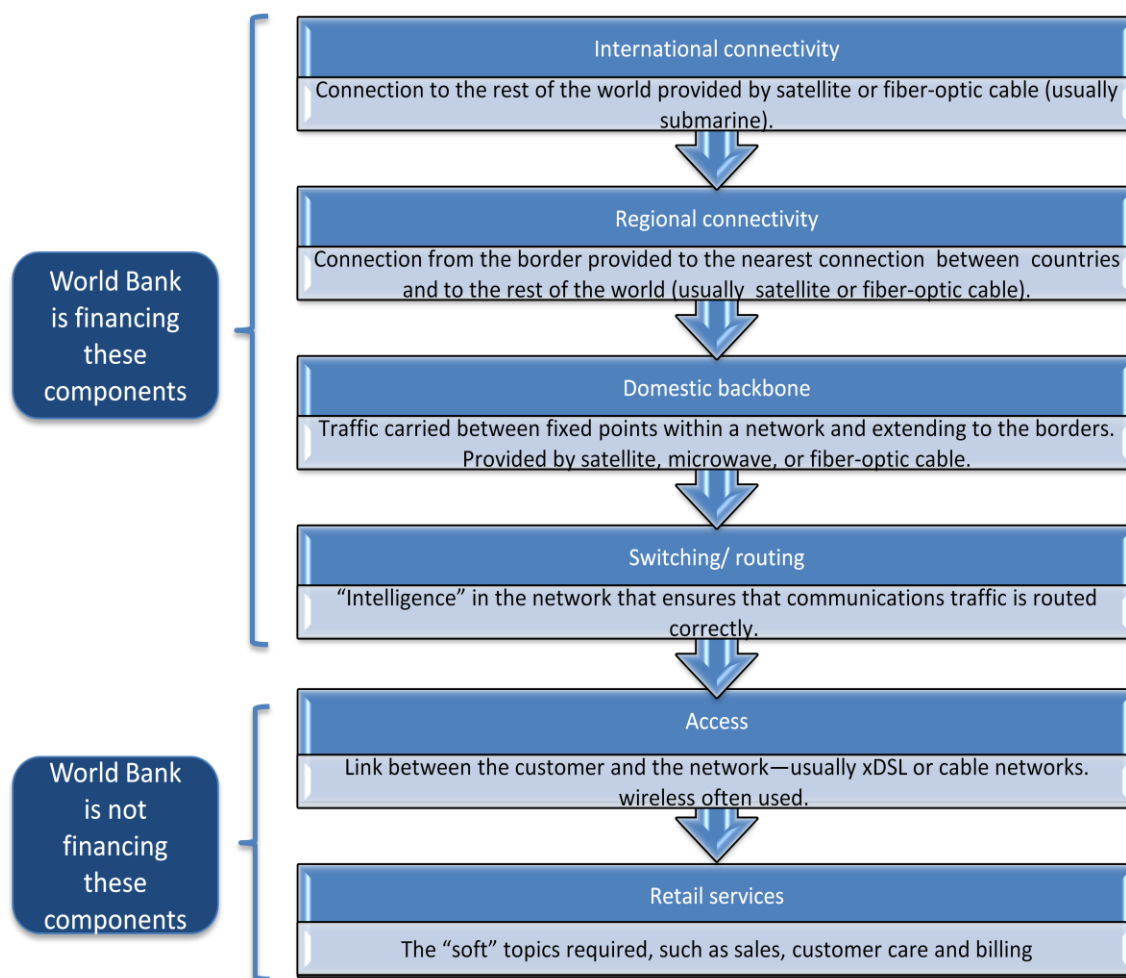


Figure 4: Supply Chain Activities. Source: Adapted from Broadband for Africa, Mark Williams

3. CARCIP will support facilities and networks that provide connectivity to international and regional markets (submarine cables, satellite teleports, domestic backbone/transmission, and will focus on: (i) countries with limited access to international submarine cables; (ii) regional/cross-border links (e.g. between Haiti and the Dominican Republic/ Grenada and Saint Vincent and the Grenadines); (iii) national and regional Internet Exchange Points (IXPs) to keep traffic within the region; and (iv) terrestrial broadband backbone fiber networks extending to the borders of countries. In a number of the smaller islands, the government network also serves as the backbone, and in which case the support will extend to provision of high-speed government virtual private networks and repair of public infrastructure destroyed by natural disasters. The broadband backbone is expected to be leveraged to provide connectivity support for government offices, health centers, schools, colleges and universities (leveraging CKLN), as well as national and regional emergency communications networks. The focus on international, regional and national connectivity is to ensure the creation of a fully integrated network that eventually links all networks in the region and provide affordable high-speed connectivity within the region.

4. Activities include the development of: national, cross-border and regional backbone infrastructure to foster seamless connectivity in the region; and national and regional internet exchange points (IXPs) to further lower the cost of bandwidth and improve internet access. The program will also provide the requisite support to stimulate ICT-led innovation, with the objective of positioning the region as a formidable competitor for IT and IT enabled investment. This is critical for diversifying the sources of growth for the region and for generating employment.

5. The challenging economic geography of the Caribbean region makes it particularly important for a regional approach to infrastructure development and harmonized implementation of programs. While Caribbean countries have similar economies based on tourism, agriculture and manufacturing, their competitiveness as isolated countries is limited. An integrated approach at various levels (economic and social strategy, communications, and infrastructure) not only helps to increase competitiveness within the international market but also allows the small-scale economies to leverage regional economies of scale and share the fixed costs of regional infrastructure. Furthermore, the establishment of regional networks, supported by the regional infrastructures and harmonized policies, is essential to share best practices and knowledge, and enable countries to benefit from possible synergies.

6. The ICT sector faces similar geographic challenges - highly fragmented market and uneven distribution of resources. To mitigate these challenges, the region has recently developed a Regional ICT Strategy, aimed at harmonizing efforts towards fast-tracking the formation of the CARICOM Information Society by 2015. The CARCIP program is designed to support this regional approach through a holistic “umbrella” ICT-enabled development framework, strongly anchored in CARICOM’s regional ICT agenda. Because of its regionally harmonized programmatic design, CARCIP is capable of providing maximum flexibility to the region, which allows countries to join the program individually, on a need and readiness basis, and to start with a core set of activities tailored to their particular needs but fitting into the broader regional strategy.

7. The importance of a regional approach makes it necessary to leverage existing regional institutions to link CARCIP at the CARICOM/CARIFORUM level. Advantages include ability to share resources and leverage ongoing regional activities to reduce program costs, as well as develop harmonized instruments, policies and regulatory frameworks to ensure more effective diffusion and use of ICT. The two regional institutions that are expected to support CARCIP are the CTU and CKLN, with the former being the recipient of the grant and playing the overall program oversight role, as well as providing direct technical assistance, while CKLN is expected to support the effective coordination of selected regional broadband connectivity activities, notably those that are able to link to the C@ribNet Regional Research and Education Network, as well as provide assistance on related aspects of the innovation agenda. CTU may also complement implementation capacity at the national level where this is weak, or where splitting projects among national level implementation agencies may prove impractical. CTU will provide support for overall program coordination at the regional level.

8. Technical assistance for regional activities is expected to be supported through a regional grant. This meets the criteria for IDA eligibility as follows: (1) CTU is a regional organization with legal and fiduciary capacity to receive grant funding and legal authority to carry out the activities financed. A preliminary Institutional assessment has been carried out for the CTU which confirms that the above legal criteria is satisfactory; (2) Being a regional entity, and not under any national government, the CTU is not entitled to take on an IDA Credit; (3) The regional nature of CARCIP, covering 4 countries in the first phase (Grenada, Saint Lucia and Saint Vincent and the Grenadines under sub-Phase APL 1A, expected to be joined shortly by the Dominican Republic under sub-Phase APL 1B) would make financing the CTU out of the national budgets difficult and impractical; (4) the activities to be funded under the IDA regional grant are directly related to the establishment and expansion of regional broadband infrastructure, as well as to regional cooperation and harmonization of policies and regulation for broadband development, and development of a regional IT industry, in particular through certification and skills development throughout the region. These activities are regional in nature and include shared resources, including a platform for improving enabling environment for infrastructure development and capacity building, which will be difficult to finance from national budgets. The regional approach has the potential to improve program outcome and reduce individual country investment costs; (5) Co-financing for the grant is not available from other sources, despite the outreach efforts that have been made throughout project preparation, though it is expected that co-financing for selected implementation aspects at the national level could conceivably become available in the future; (6) The regional entity CTU is associated with the IDA-funded regional operation to which this IDA grant is attached, given that the participating countries in the operation are members of CTU, and CTU has the mandate to support its members in the implementation of ICT-related strategy and programs.

B. Institutional context

9. The Caribbean Telecommunications Union (CTU) was established in 1989 by CARICOM Heads of Governments as the regional inter-governmental information and communications technologies (ICT) organization to facilitate the development of the Caribbean ICT sector. The CTU provides advisory and capacity building support on telecommunications, IT and IT enabled development to its members and supports them in formulating harmonized ICT policies, and promoting awareness of regional opportunities. With members drawn from

regional governments and the private sector, the CTU plays a pivotal role in the development of the Caribbean's ICT industry and in ensuring policy and regulatory harmonization across the participating countries. A new Constitution for CTU was recently approved by the CARICOM Council of Ministers of ICT to further clarify the mandate of CTU to include the full range of possible ICT sector interventions, rather than the original mandate that was primarily centered on regional telecommunications development. While the new constitution is undergoing ratification as an international treaty among the participating countries, the current agreement is in effect and provides sufficient basis for CTU to undertake the current grant.

10. The Caribbean Knowledge and Learning Network (CKLN) was established in October 2004 under the Companies Act of Grenada in 2004 and registered as a regional not-for-profit foundation with a strategic goal to enhance the global competitiveness of the Caribbean region by upgrading and diversifying the skills and knowledge of its human resources through greater regional collaboration and connectivity. In July 2006, at the Twenty-Seventh meeting of the Conference of Heads of Government of the Caribbean Community (CARICOM) held in St. Kitts and Nevis, it was agreed, among other things, that a regional network named C@ribNet be developed connecting all participating members of the community and that the Caribbean Knowledge Learning Network (CKLN) be the mechanism to coordinate the development and management of that network. The meeting also mandated the CKLN to take the necessary steps to develop a blueprint and a strategy to develop a regional education and research network to serve the Caribbean region. Based on the agreements reached in July 2006, the CARICOM agreed the Caribbean Knowledge Learning Network Agency be established as an institution of the CARICOM pursuant to Article 21 of the Revised Treaty of Chaguaramas, which had established the Caribbean Community including the CARICOM Single Market and Economy (CSME) in 2001. When the agreement establishing CKLN agency comes into force, the signatories of this agreement shall enter into an arrangement with the Directors of the Caribbean Knowledge Learning Network Foundation to transfer all assets and liabilities and the management and responsibility of the Foundation to the CKLN agency. CKLN is funded by regional and international donor agencies including the World Bank, the European Union, the Canadian International Development Agency (CIDA), the Organization of American States (OAS), the Inter-American Development Bank (IDB) and the Caribbean Development Bank (CDB) and supported by contributions from CARICOM member governments.

11. The Eastern Caribbean Telecommunications Authority (ECTEL) was established on 04 May 2000 by Treaty signed in St. George's, Grenada, by the Governments of five Eastern Caribbean States— Commonwealth of Dominica, Grenada, St. Kitts and Nevis, Saint Lucia, and Saint Vincent and the Grenadines. ECTEL is the regulatory body for telecommunications in its Member States. It is made up of three components - A Council of Ministers, a regional Directorate and a National Telecommunications Regulatory Commission (NTRC) in each Member State. The NTRCs are the Telecommunications regulators at the national level in each Member State. They are responsible for the processing of applications and advising the Minister on the award of licenses. ECTEL has experience in working with the World Bank, in particular with the recent Telecommunications Reform (P035730) and Telecommunications & ICT (P088448) projects.

III. PROJECT DEVELOPMENT OBJECTIVES

A. PDO

12. The development objective of the regional grant is to facilitate the implementation of CARCIP, to increase coordination, harmonization of policies and strategies and transfer of knowledge among participating countries. This objective is fully consistent with and contributes to the achievement of the overall program, which seeks to increase access to regional broadband networks and advance the development of an ICT-enabled services industry in the Caribbean Region.

B. Project Beneficiaries

13. **CARCIP will benefit the citizens of the Caribbean.** The primary target groups under the Grant are the CARIFORUM member countries (as well as members of CTU and CKLN) where knowledge sharing among the Governments will build capacity and coordinate regional efforts in a more systematic manner. The participating countries will also benefit from the provision of technical assistance to the implementation of their respective strategies and projects.

C. PDO Level Results Indicators

Project Development Objective	Outcome Indicators	At closing of Project
To facilitate the implementation of CARCIP, increase coordination, harmonization of policies and strategies, and transfer of knowledge between participating countries	<ul style="list-style-type: none">• Policies developed for PPP and Open Access• Regional regulations for Open Access• Coordinated activities in network and ICT-led innovation	<ul style="list-style-type: none">• Number of policies developed for PPP and Open Access: 2• Number of regional regulations developed: 2• Number of coordinated activities in network and ICT-led innovation: 5

IV. DETAILED PROJECT DESCRIPTION

14. The Regional grant will be designed to promote regional policy harmonization and deployment of regional ICT infrastructure and ICT-enabled services, complementing national programs and ensuring that such programs are well anchored within the CARICOM regional ICT strategy, and conform to harmonized standards and regulatory frameworks. The grant will also be structured to provide shared resources, and leverage ongoing regional activities to reduce program costs. Furthermore, it will enable CTU to provide broad oversight over the program, facilitate knowledge exchange, monitor program progress, and act as a central resource, in particular for the countries, which may have inadequate implementation capacity.

Component 1- Regional Connectivity (US\$ 1.75 million)

15. There are two key elements of the Connectivity component under CARCIP: (i) the physical infrastructure to improve connectivity; and (ii) the enabling environment to ensure competitive access to the connectivity infrastructure, and optimum private sector investment through public-private partnerships.

16. The physical infrastructure sub-component for Phase 1 CARCIP countries (and likely for most of the eligible CARCIP countries) involves the development of terrestrial broadband backbone fiber networks and cross-border links leveraging government networks where necessary, and the development of missing infrastructure links such as submarine cable infrastructure and Internet Exchange Points (IXPs). Seamless and cost-effective connectivity would require a harmonized approach in the design, deployment and management of the networks.

17. The CTU is already providing services for the planning and implementation of integrated communication networks (IP-based) and providing management support to the Governments to ensure they are able to implement and use the networks effectively for providing services for their internal and external clients and citizens. It is also in the process of developing an automated Caribbean inter-governmental information sharing facility for promoting functional integration and inter-government networking in support of the Caribbean Single Market Economy.

18. CKLN has recently completed the contracting of the C@ribNet Regional Research and Education Network, which is expected to go live in June 2012. The network is set up as a high-speed backbone with access nodes in most of the countries of the Caribbean, including all the CARCIP participating countries. However, given limitations in funding for C@ribNet and the lack of available high-speed connectivity within island on many of the participating countries, currently the number of institutions that have access to it is very limited. The goal is to expand its membership to all universities and colleges throughout the Caribbean, as well as eventually to all schools and other institutions in the region.

19. While the project will seek to address key regulatory issues through the NTRCs within the respective countries, it is important to anchor and harmonize national level reforms at the regional level through the regional regulatory institutions such as ECTEL (Eastern Caribbean Telecommunications Authority which was established in 2000 to promote market liberalization and competition in telecommunications sectors in five Eastern Caribbean states⁴⁴.

20. Resources from the regional grant will complement activities being funded by individual countries and will include:

1.1 Support for the expansion of national and regional broadband backbones (CTU US\$ 500,000)

⁴⁴ (Commonwealth of Dominica, Grenada, Saint Christopher and Nevis, Saint Lucia, Saint Vincent and The Grenadines)

- a. On-the-ground technical support to CTU for the design, deployment, use and interface of both national and regional networks, as well as technical assistance on key policy issues to ensure open and competitive access to connectivity infrastructure, and PPP frameworks. This would complement Transaction Advisory support that is being funded by the individual countries.
- b. In the case of cross-border connectivity and submarine cable landing which involves collaboration between countries, support CTU to establish guidance frameworks for regulatory authorities to manage the regulation of submarine fiber cable systems and cross border infrastructure, and ensure adherence to social and environmental safeguards.
- c. The coordinated expansion of Internet exchange points (IXPs) across the Caribbean, by supporting CTU to build public awareness and educate stakeholders across the region on the justification and benefits of establishing IXPs in each national jurisdiction; the development of framework and regulatory instruments for connecting all the national IXPs to create a regional IXP capable of keeping regional traffic within the region and thereby lowering the cost of internet access and ensure efficient use of international bandwidth.

1.2 Support to improve and harmonize regional regulatory frameworks (ECTEL US\$ 600,000)

- a. Technical assistance for ECTEL to: (1) improve the legal enabling environment to maximize the benefits of the infrastructure supported under the Project; and (2) strengthen the competitiveness of the telecommunications market in the medium term. Key areas of focus will include (but are not limited to) infrastructure sharing and cost-based access rules, retail pricing (including roaming), number portability, interconnection, competition rules, consumer protection (e.g. QoS), information gathering, and sanctions, monitoring and enforcement. Development and implementation of open access and wholesale price regulations will be an important element of this component in light of Project objectives. Knowledge transfer and capacity building is another priority aspect of this component to support effective sector regulation and development.
- b. Technical support for ECTEL to undertake, in collaboration with the national commissions (NTRCs) studies related to the social and economic and social factors, which are inhibiting the increase in broadband uptake. Other studies will include the development of tools and indices to measure the impact and contribution of broadband in particular and ICT in general to the GNP and the economies of the beneficiary countries.
- c. Support for capacity building initiatives of ECTEL and the national commissions (NTRCS) to implement and enforce revised legislation in support of the broader project objectives.

1.3 Support for the expansion of regional research and education networks (CKLN US\$ 650,000)

- a. CKLN to provide technical assistance to the participating countries in dimensioning the design of the regional backbones to ensure that they fit within the broader regional framework of C@ribNet. This may entail, for instance, identification of infrastructure gaps for the connection of all identified institutions and provision of detailed traffic analysis based on demand from research and education networks as well as from the potential participation of schools and other institutions in C@ribNet.
- b. Research and Education Networks (RENs) in the participating countries that would leverage the CARCIP-built infrastructure and would link with C@ribNet.
- c. Design harmonized policies for access to affordable bandwidth to ensure the sustainability of C@ribNet and the national RENs, with appropriate interface.

Component 2 – ICT-Led Innovation (US\$600,000)

21. At the national level, a number of countries have, or are in the process of establishing Multi-purpose Centers of Excellence aimed at targeted skills development and certification programs, incubating IT start-ups and providing technical/financial assistance for IT/IT enabled support. At the regional level, the CTU has also established a Caribbean Center of Excellence, which is currently a web-based facility through which member countries access support for migrating to knowledge societies and economies. It is expected that this component of the grant will provide additional support to foster a more unified and predictable enabling environment that will leverage the regional broadband infrastructure to foster growth of regional IT and ITES industry. Activities to be funded will include:

2.1 Support for regional IT industry development (CTU – US\$ 350,000)

- a. Collaboration with *infoDev* to develop state of the art Regional Centers of Excellence which will lead the regional agenda on innovation and knowledge providing services which include mobile application training programs. *infoDev*, through grants from CIDA and Finland, is in the process of developing a Mobile Lab and number of Business Incubators in the region.
- b. Development of common strategies, policies, regulatory and incentive structures to support a multi-lingual regional IT and ITES industry.
- c. Design and implementation of standardized skills, certification and Trainer of Trainer Programs for IT and IT Enabled Services (ITES). This builds on skills assessment work and programs being done at the national levels.
- d. Promotion of regional network of IT and technology incubators, and technology centers, identification of business and investment opportunities in the IT/ITES enabled sector.

2.2 Leveraging regional RENs for IT industry skills development (US\$ 250,000)

- a. Support to CKLN leverage usage of C@ribNet for innovation and skills development activities. This will entail coordination and standardization of IT industry certifications, and capacity building of RENS in C@ribNet participating institutions.

Component 3: Implementation Support (US\$ 650,000)

22. The introduction of the proposed CARCIP responsibilities to CTU will result in changes to the staffing levels and the skill mix of the staff. The CTU will need to be strengthened, at least with a program coordinator, industry specialists, as well as procurement, FM and safeguard specialists. The CKLN's and ECTEL's capacity will also require strengthening. This component will also support the CTU in the collection of monitoring indicators at the country level and aggregate them at the program level. Furthermore, the CTU will establish and maintain a CARCIP program website.

I. IMPLEMENTATION ARRANGEMENTS

A. Project Administration Mechanism

23. To ensure the regional program has a focused oversight over limited resources and to ensure adequate regional needs are covered as well as proper coordination with each country program, a regional entity – the CTU – will oversee the implementation of the program. For the oversight role, Technical Agreements will be signed between the participating OECS countries and the CTU. In addition, CTU will also enter into a Memorandum of Understanding with the Dominican Republic, which is expected to join under Phase 1B.

24. At the working level, a Project Coordinator will be recruited, who would be responsible for coordinating among all the stakeholders, leading the technical implementation team and working with the various country project coordination units. The Project Coordinator would be based in the CTU due to its regional mandate of advisory and capacity support to regional ICT.

25. The CTU would be responsible for all fiduciary activities under the Regional Grant. The Regional Steering Committee, established to oversee the entire CARCIP program would oversee this program. The Steering Committee would ensure adequate participation of the various participating governments as well as other regional entities, such as CKLN and the OECS Secretariat.

26. Regarding the implementation experience, since it was established, several development partners have provided funding for the CTU to implement a range of capacity building and institutional strengthening projects. While the World Bank is not one of these partners, an independent institutional assessment determined that the organization is staffed with experienced individuals, and the CTU has demonstrated its capacity to successfully design and implement projects funded by its various development partners and agencies. The project would fund the necessary fiduciary support (training and/or staff) needed, however and staffing changes to implement CARCIP is understood by the management and staff of the CTU and history has shown that these changes can be made without significant disruptions to on-going operations. Any staff changes would take place during the first year of implementation.

27. The PCU which will be established within the CTU, will be in charge of the day-to-day management of the project's technical and logistical aspects, including the work program and coordinating with the relevant regional organizations, country ministries and departments, procurement, financial management and monitoring and evaluation. A Project Implementation Manual for the regional coordination will be prepared and ready before effectiveness. For the overall coordination of the program, a MoU between the CTU and country PCUs would be signed before effectiveness outlining coordinating and reporting roles and responsibilities between the agencies for CARCIP.

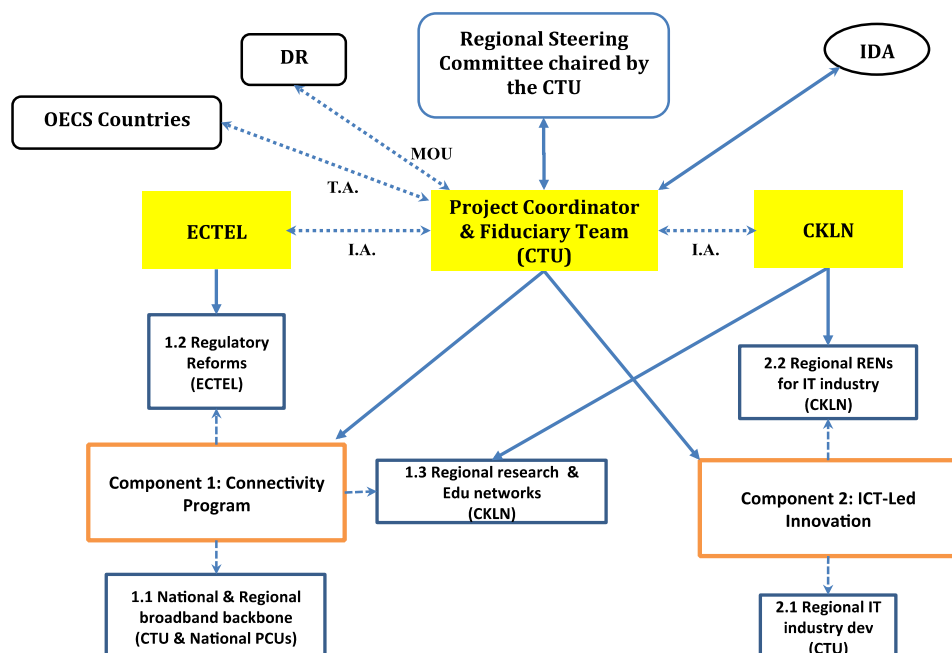
28. The CTU will be supported by other specialized regional agencies and national implementing agencies as required. Notably, the CKLN, whose mandate is to implement C@ribnet, which is aimed at connecting tertiary institutions, hospitals, schools, and CARICOM and other institutions engaged in knowledge development and research, within the Caribbean, and then to connect these institutions to research and education institutions in the rest of the world. With this focus it is envisioned that CKLN will take the lead in supporting the countries on selected connectivity and ICT-Led Innovation activities. The CTU and CKLN will sign an Implementation Agreement whereby CKLN will undertake to facilitate the implementation of components 1.3 and 2.2. CKLN will also undertake to coordinate stakeholders, leading the technical implementation team and relevant Government ministries. However, given CKLN is not yet legally a CARICOM agency, and thus cannot directly receive IDA funds, the fiduciary and disbursement aspects of component 1.3 and 2.2 would be carried out by the PCU in CTU at the request and direction of CKLN. Given the specific expertise, staff from CKLN may be seconded to CTU to assist with the implementation of the project.

29. Since its establishment CKLN has been funded by several development partners to implement a range of capacity building and institutional strengthening projects. An independent institutional assessment determined that for a relatively new organization, CKLN has solid experience in successfully implementing projects with the World Bank, the European Union, and other development partners. The organization is staffed with well qualified and experienced individuals and CKLN has demonstrated its capacity to successfully design and implement projects funded by the various development partners.

30. Similarly, the Eastern Caribbean Telecommunications Authority (ECTEL), whose mandate is to promote market liberalization and competition in telecommunications of the contracting states, will facilitate the implementation component 1.2. As with CKLN, ECTEL will sign an Implementation Agreement with the CTU whereby the CTU will implement all fiduciary aspects of the subcomponent.

CARCIP Implementation Arrangements

Regional Grant



A. Financial Management and Disbursements

31. The CTU has considerable experience with implementing donor (not World Bank)-financed projects. An assessment of the financial management capacity of the CTU was undertaken in January 2012.

32. **Conclusion.** The conclusion is that once the Action plan proposed in this document is implemented, the financial management arrangements will meet the Bank's requirements under OP/BP10.02 and will be adequate to provide, with reasonable assurance, accurate and timely information on the status of the project implementation. The residual financial management risk is assessed as being Medium.

Type of Risk	Residual Risk Level	Comments
Entity level risks		
Sustainability of the entity	L	CTU has been in operation since 1989 which mitigates the sustainability issues
Appropriateness of the Organization Structure	M	The operation of the project introduces new functions

		and responsibilities to the organization which must be managed
Staffing levels and capacity	M	Current staff is qualified and capable of expanding as needed to manage the project and the changes will need to be managed.
Overall Inherent Institutional Risk	M	
Project FM risks		
Staffing	L	Financial Controller provides strong technical and managerial experience to support the existing and/or new Project Accountant.
Budgeting	M	
Accounting	M	Computerized accounting system is in place and outside firm should have capacity to expand to accommodate the new project.
Reporting	M	Regular reporting processes are in place and being used. Project-specific reports will need to be developed.
Internal Controls	M	Internal control framework is in place and adequate, but the new operational responsibilities and the complexities of managing a complex regional project increases the risk level
Fund flow	M	Project funds will be channeled through the designated project account.
Auditing	M	External auditors will be hired to review project's financial statements.
Overall Project FM Risk	M	
Procurement Risk		
1. Lack of public awareness of procurement issues in ICT	L	Carry out aggressive public awareness programs using

projects.		various media, such as newspapers, brochures, radio, TV, project web-site, etc
2. Inadequately prepared bidding documents, including ambiguous technical specifications; unclear and unrealistic requirements, such as delivery, completion time, low estimated cost, which bidders would be unable to meet,.	M	Prepare and make available clear, easy to understand standard bidding documents containing all bidding requirements including sample PPP bidding documents. Train PCU/CTU staff in preparing unambiguous technical specifications and set up mechanisms for obtaining technical experts in relevant areas for the preparation of specifications. Create and maintain a database of sample specifications and prepare standard technical specifications for items procured frequently. Careful attention to be paid to preparation of cost estimates and updated as required from the preparation to appraisal to negotiation stages – to reflect prevailing market prices; and provide adequate price and physical contingencies.
3. The Procurement and FM Specialists may not have specific experience in procurement under World Bank procurement guidelines.	M	The World Bank will provide on-the-job training to ensure that the Procurement Specialist and the Evaluation Committee understand the procurement procedures and processes
4. The evaluation committee members do not familiarize themselves with international procurement procedures and	M	Ensure that the evaluation Committee members familiarize themselves with the World Bank

processes especially for the evaluation of bids and consultants' proposals.		procurement guidelines Also Evaluation Committee members will be asked to sign off at the start of each project year that they have read, understood and will adhere the Bank's conflict of interest policy guidelines.
5. Bid prices submitted are substantially higher than estimated costs in PAD and exceed estimated allocated funds	H	Prepare realistic cost estimates of bid packages before inviting tenders
Overall Project Procurement Risk	M	

Staffing: Currently, the CTU has designated the Telecommunications Strategist, a professional accountant to be responsible for managing the accounts of the organization. In addition, the Contract Administrator, another qualified accountant also supports the accounting function, from time to time. The CTU outsources the processing of the source documents to an accounting firm, Ark Outsourcing Limited, which is responsible for the preparation of the books of accounts and financial statements. To adequately support the project implementation process, CTU will need to employ a financial management specialist.

33. **Accounting Policies and Procedures:** The CTU uses the accrual basis of accounting and its financial statements are prepared in accordance with International Financial Reporting Standards. The accounting policies adopted have been consistently applied during the last two financial years. The firm responsible for recording transactions, maintaining the books of account, and producing financial statements uses the Quick Books accounting software. The accounting software (Quick Books), which is used by Ark Outsourcing Limited allows for the tracking of inflows by funding source and outflows by: (i) project component; (ii) funding source; and (iii) disbursement category. The same software is being successfully used for the support of other World Bank-financed projects.

34. **Internal Controls:** The operations manual presents detailed policies and procedures, and since all transactions are recorded in the Quick Books accounting system, the internal controls in that package are also applied. An Annex describing project-specific policies and procedures will be added to the Implementation Manual prior to the project's effectiveness.

35. Separate bank accounts are maintained for donor funded projects, and project expenditures are monitored and tracked. Bank Accounts are maintained in separate US and TT dollars, and the accounts require two authorized signatories. CTU has a separate corporate account into which it receives funding from its Members for its administrative expenses.

36. The payroll is processed by the Telecommunications Strategist and is approved by the Secretary General.

37. All payments by check or through instructions to the bank must be authorized jointly by the Secretary General and the Telecommunications Strategist (the Financial Controller) or else they would not be honored by the Bank. In the case of petty cash payments, either the Secretary General or the Telecommunications Strategist (the Financial Comptroller) can approve payments within the specified limits. Bank account reconciliations are prepared on a monthly basis.

38. **Budgeting.** Project annual budgeting will be based on the cost tables, and will be updated according to the latest information as the implementation will rollout. The annual budgets will be prepared by the CTU and submitted to the project TTL for approval. The approved annual budget will then be entered into the accounting system and used for periodic comparison with actual results as part of the interim reporting.

39. **Reporting Arrangements.** The CTU will be responsible for producing the Interim Financial Reports (IFRs) on a semi-annual basis to be submitted to the Bank. The IFRs will provide required monitoring information. The IFRs will include a narrative outlining the major project achievements for the six-month period, the project's sources and uses of funds, and necessary procurement tables. IFRs should be submitted to the Bank no later than 45 days after the end of each reporting period. The annual financial statements will include the project's sources and uses of funds, a detailed analysis of expenditures, a schedule of withdrawal applications presented during the year, a reconciliation of the Designated Account, the notes to the financial information and management representation letter. These reports will be prepared by the CTU with the assistance of the accounting firm and made available to the auditors after the end of each fiscal year.

40. **Auditing Arrangements.** Project financial statements will be audited annually in accordance with International Standards on Auditing and the World Bank's guidelines on auditing. Qualified independent audit firm acceptable to the World Bank will be hired to conduct project audits. The auditors' terms of reference (ToRs) will be prepared by the project and cleared by the World Bank before the engagement of the auditor. The ToRs will include the audit of financial transactions, the review of the internal control structure and mechanisms and the review of the project's compliance with the terms of the financing agreement(s). The annual audit reports will be prepared in a format in accordance with ISA and World Bank guidelines, and they will include an opinion on the project financial statements, including Designated Account Reconciliation, review of the internal controls, review of the project's compliance with the terms of the financing agreement(s) and a management letter. The project's annual audit report will be required to be submitted to the World Bank for review no later than four months following the end of the fiscal year (January-December).

Disbursement Arrangements

41. World Bank proceeds will be primarily channeled through a segregated Designated Account (DA) denominated in US Dollars, which will be opened by the CTU at the Royal Bank of Canada. The DA will have a Fixed Ceiling of US\$ 600,000 and the frequency for reporting eligible expenditures paid from the DA will be at least quarterly. The CTU will also operate a local currency account, to finance project expenditures in local currency, where funds from the US Dollars Designated Account will be periodically transferred (funds sufficient to cover no more than 30 days worth of expenditures). These accounts will be operated in accordance with the procedures and guidelines set forth in the Bank's Disbursement Guidelines.

1. Project proceeds would be transferred to the segregated US Dollar denominated Designated Account managed by the CTU. Reporting on the use of Advances would be based on the Statements of Expenditures (SOEs) and/or Summary Sheets with Records, prepared by CTU.
2. As eligible expenditures are incurred, the CTU will withdraw the amount to be financed (100 percent) by the World Bank from the Designated Account or Local Account (US\$ or TT\$).
3. The Reimbursement and Direct Payment disbursement methods will also be available. Reimbursements would also be documented by SOE's and/or Summary Sheets with Records. Direct Payments will be documented by Records. The Minimum Application Size for Reimbursement and Direct Payments will be US\$ 120,000 equivalent. The Project will have a Disbursement Deadline Date (final date on which the Bank will accept applications for withdrawal from the borrower or documentation on the use of loan proceeds already advanced by the Bank) four months after the Closing Date. This "Grace Period" is granted in order to permit the orderly project completion and closure of the Loan Account via the submission of applications and supporting documentation for expenditures *incurred* on or before the Closing Date. Expenditures incurred between the Closing Date and the Disbursement Deadline Date are not eligible for disbursement, except as otherwise agreed with the Bank.

Category	Amount of the Grant Allocated (expressed in SDR)	Percentage of Expenditures to be Financed (inclusive of Taxes)
(1) Goods, non-consulting services, consultants' services and Training for the Project.	1,550,000	100%
(2) Operating Costs for the Project	450,000	100%
TOTAL AMOUNT	2,000,000	

42. **Supervision arrangements.** As part of its project supervision missions, the World Bank will conduct risk-based financial management supervisions, at appropriate intervals. It is expected that in the first year of implementation there will be at least two supervision missions, including the project launch mission. These will pay particular attention to: (i) project accounting and internal control systems; (ii) budgeting and financial planning arrangements; (iii) review of the Interim Financial Reports; (iv) review of audit reports, including financial statements and remedial actions recommended in the auditor's Management Letters; (v) disbursement management and financial flows, including counterpart funds, as applicable; and (vi) any incidences of corrupt practices involving project resources.

Financial Management Action Plan

43. The following actions should be considered to strengthen the financial management capacity of CTU to coordinate and manage the proposed World Bank funded project:

#	Action	Responsibility	Date
1	Designate one of the qualified Accountant working in CTU as the Controller of Accounts	CTU	Done
2	Prepare and adopt the project implementation manual to reflect the proposed project and the operations of the proposed project;	CTU	By effectiveness
3	Design a Project-specific chart of accounts	CTU	By signing
4	Design a project-specific IFR format	CTU	Done
5	Employ an External Auditor	CTU	Six months after project effectiveness

B. Procurement

44. **The Caribbean Telecommunications Union (CTU) procurement capacity assessment.** CTU, a regional institution which was established to facilitate the development of the Caribbean regional information and communications sector, as well as share best practices, facilitate knowledge exchange and harmonize policies and strategies among CARIFORUM countries, will oversee the procurement aspects of CARCIP.

45. An assessment of the capacity of CTU by the World Bank Team revealed that the CTU consist of six permanent staff i.e.: (i) Secretary General; (ii) Telecommunication Strategist; (iii)

Telecom Specialist; (iv) Contract administrator; and (v) an assistant. The assessment reviewed the organizational structure for implementing the grant. The key issues and risks concerning procurement for implementation of the grant have been identified and include: (i) No Procurement expert in the organization; (ii) limited number of procurement activities in recent times; and (iii) need to strengthen overall procurement environment in the region. The overall procurement risk for the regional grant is High. The mitigating measures that have been agreed are:

- CTU to appoint a Procurement expert with relevant Bank and ICT experience before project effectiveness.
- World Bank to provide additional training in procurement to the CTU as soon as the project is declared effective. Further training to be provided during the first year of implementation.
- World Bank to provide hands on support to CTU staff and recruited procurement expert. This will enable them to train other PCUs as needed.

C. Safeguards Policy Issues

46. Given that the regional grant will focus exclusively on technical assistance, no safeguards policy issues are envisaged. However, it is envisaged that the CTU, as part of its M & E activities, will monitor the consistent application of Bank safeguards policies.

D. Monitoring and Evaluation

47. The CTU has developed their own evaluation instruments to assess their work in terms of relevance and meeting the needs of the stakeholders. This methodology has been used and worked well for example in helping to refine the Caribbean ICT Roadshow, and to shape it to deliver tangible results. Additional resources are included under the regional grant to monitor CARCIP related results.

Annex 9: Technical Annex for Grenada CARCIP

GRENADA

Caribbean Regional Communications Infrastructure Program (CARCIP)

Date: April 24, 2012 Country Director: Francoise Clottes Sector Director: Jose Luis Irigoyen Acting Sector Manager: Juan Navas-Sabater Team Leader: Mavis Ampah Project ID: P114963 Lending Instrument: APL	Sector(s): Telecommunications (50%), Information technology (50%) Theme(s): Regional integration (30%), Regulation and competition policy (30%), Infrastructure services for private sector development (40%) EA Category: B (Partial Assessment)				
Project Financing Data:					
Proposed terms: IDA Credit with maturity 40 years, including grace period of 10 years. <input type="checkbox"/> Loan <input checked="" type="checkbox"/> Credit <input type="checkbox"/> Grant <input type="checkbox"/> Guarantee <input type="checkbox"/> Other:					
Financing Plan					
Source	Total Amount (US\$10.0 million)				
Borrower	Local Foreign Total				
Total	US\$2.5m US\$7.5m US\$10.0				
Recipient: Government of Grenada Grenada Responsible Agency: Ministry of ICT (Prime Minister's Office) Contact Person: Margaret Belfon Telephone No.: (473)-443-0531/0532 Fax. no.: (473) -443-0533 Email: margaret.belfon@gmail.com					
Estimated Disbursements – APL 1A (Bank FY/US\$ m)					
FY	2013	2014	2015	2016	2017
Annual	0.34	1.00	3.10	3.30	2.26
Cumulative	0.34	1.34	4.44	7.74	10.00
Project Implementation Period: Start August 1, 2012, End August 1 2016 Expected effectiveness date: August 1, 2012 Expected closing date: February 1, 2017					

Project Development Objective:

Grenada CARCIP is fully consistent with the overall program development objective and seeks to increase access to regional broadband networks and advance the development of an ICT-enabled services industry in Grenada and the Caribbean Region

Project description

Grenada CARCIP will be structured in line with the overall program and will consist of the following three components:

1. **Component 1: Regional Connectivity Infrastructure.** This component will support bridging priority regional connectivity gaps in Grenada through several subcomponents, including a high speed broadband backbone network which will provide affordable connectivity to the entire population of Grenada, including the small islands of Carriacou and Petite Martinique which connect Grenada and Saint Vincent and the Grenadines, and also connect Grenada to global networks such as the CKLN. The component will also support implementation of an Internet Exchange Point (IXP) for regional and national traffic, which will eventually be part of a fully integrated Caribbean Regional IXP and will ensure that traffic within Grenada and the region is localized, and thereby improve the efficiency of the Internet. The activities will be underpinned by a robust enabling environment, both at the national and regional level that will maximize the benefits of the infrastructure, which will be put in place.
 2. **Component 2: ICT-led innovation.** This component will provide targeted support for human capacity and business development, and an investment promotion strategy to position Grenada as a destination of choice for regional IT and IT enabled business. Funds under this component would leverage the existing ICT Center of Excellence, and provide additional support in the form of performance based financial incentives for business development/incubation services, and targeted skills development and certification programs. The activities will complement as well as conform to frameworks and standards being supported at the regional level.
 3. **Component 3: Implementation Support.** This component will provide resources for the establishment and logistic support for a core PCU staff to administer and coordinate the project's implementation. It will also support oversight arrangements and capacity building for key Policy and Regulatory institutions.
-
-

Safeguard policies triggered?		
Environmental Assessment (OP/BP 4.01)		X Yes <input type="radio"/> No
Natural Habitats (OP/BP 4.04)		<input type="radio"/> Yes X No
Forests (OP/BP 4.36)		<input type="radio"/> Yes X No
Pest Management (OP 4.09)		<input type="radio"/> Yes X No
Physical Cultural Resources (OP/BP 4.11)		<input type="radio"/> Yes X No
Indigenous Peoples (OP/BP 4.10)		<input type="radio"/> Yes X No
Involuntary Resettlement (OP/BP 4.12)		X Yes <input type="radio"/> No
Safety of Dams (OP/BP 4.37)		<input type="radio"/> Yes X No
Projects on International Waters (OP/BP 7.50)		<input type="radio"/> Yes X No
Projects in Disputed Areas (OP/BP 7.60)		<input type="radio"/> Yes X No
Conditions and Legal Covenants:		
Financing Agreement Reference	Description of Condition/Covenant	Date Due
Article 4.01 (a)	Grenada to prepare and adopt a Project Implementation Manual.	Effective Date
Article 4.01 (b)	Grenada to enter into a Technical Agreement with CTU.	Effective Date
Section II.A.1 of Schedule 2	Grenada to ensure participation and adequate representation to the Regional Steering Committee.	Throughout Project implementation
Section II.B.4 of Schedule 2	Grenada to appoint the external auditors for the Project.	Six months after the Effective Date

I. INTRODUCTION

A. Country context

1. **Grenada's economic performance is aligned with that of the CARIFORUM region despite its small size.** Grenada is the fourth smallest country in the CARIFORUM region in terms of population (104,000 inhabitants in 2010), and the second smallest in terms of landmass (390 km)². In economic terms, its GDP was also the fourth smallest with US\$0.77 billion (2010). For the period 2001 - 2010, Grenada's economy grew by an average of 0.83percent, below the 2.48percent average growth in the CARIFORUM region⁴⁵. The GNI per capita of US\$6,930 was slightly above the CARIFORUM's average (US\$5,550)⁴⁶. The country's tourism sector has played a key role in the country's economic growth.

2. **Sustained growth in Grenada has, however, been constrained by the global financial crisis and natural disasters.** Economic growth averaged 2.45percent between 2001 and 2005 and declined 0.78percent between 2006 and 2010, peaking at 12percent in 2005. The global

⁴⁵ Simple average of GDP growth

⁴⁶ Weighted average using population

economic slowdown and the effect of the hurricanes Ivan (2004) and Emily (2005) have had an adverse impact on tourism and the agricultural sector in particular⁴⁷, resulting in a contraction in the GDP in 2009 (-8.3percent). The financial crisis has also resulted in a decrease in foreign direct investment (FDI): 6 percent in 2008, 36 percent in 2009 and 38 percent in 2010, and further dampened interest in the construction sector⁴⁸. Nonetheless, Grenada experienced some recovery in 2010 when the GDP only contracted by 0.82 percent. The recovery is predicted to be slow, with growth projected to reach 3 percent only in 2014⁴⁹.

3. **The challenging macroeconomic context has further reversed the gains made by Government of Grenada's constructive fiscal policies to reduce the country's deficit.** Since 2004, the Government of Grenada has made significant efforts to control the fiscal deficit limits with fiscal policy measures like the National Reconstruction Levy and the automatic oil pricing mechanism aimed at protecting fiscal revenues from fluctuations in oil prices⁵⁰. However, the fiscal balance has suffered deterioration due to decrease in external financing, and increase in aid for vulnerable groups to mitigate the impact of high food and energy prices and wage bill pressures. The overall fiscal balance deteriorated from a small surplus of 0.4 percent of GDP in 2005 to deficits of 6.1 percent of GDP in 2006, 7.9 percent in 2007, and 5 percent in 2008.

4. **Grenada has made impressive progress in reducing poverty rates.** The GNI per capita grew by 52 percent from 2000 to 2008, increasing to US\$5,580 in 2009⁵¹, above that of the CARIFORUM region (US\$ 5,550), albeit below the Latin American and Caribbean region's average of US\$7,169. Nonetheless, the percentage of poor people still stood at 38 percent in 2007/08 and the unemployment rate stood at 25 percent in June 2008⁵², ranking Grenada 74th in the UNDP's 2007 Human Development Index (out of 182 countries).

5. **Despite the progress, the country is challenged with an enormous infrastructure deficit.** The combined impact of hurricanes and financial crisis has placed an enormous financial strain on the country's fiscal resources. An Organization of Eastern Caribbean States (OECS) Secretariat assessment estimated the damage of Hurricane Ivan at US\$900 million, more than 200 percent of the country's 2003 GDP⁵³. The investments required to rebuild Grenada's facilities and infrastructures continue to challenge the country's resources. Public debt was 122 percent of the GDP, above the Eastern Caribbean Central Bank (ECCB) benchmark maximum of 60 percent of GDP⁵⁴.

6. **International support will be essential to ensure Grenada's economic recovery.** International financial support is crucial to complement Grenada's efforts in addressing many of its current challenges. On the one hand, support for its public debt financing would be necessary to relieve the interest payments and allow the country to invest in key productive sectors that contribute directly to the growth of the economy. On the other hand, international financial aid

⁴⁷ CIA The World Factbook

⁴⁸ OECS Regional Partnership Strategy. World Bank 2010

⁴⁹ OECS Regional Partnership Strategy. World Bank 2010

⁵⁰ OECS Regional Partnership Strategy. World Bank 2010

⁵¹ World Bank country At-a-Glance 2010 <http://data.worldbank.org/country/grenada>

⁵² OECS Regional Partnership Strategy. World Bank 2010

⁵³ OECS Regional Partnership Strategy. World Bank 2010

⁵⁴ OECS Regional Partnership Strategy. World Bank 2010

would be essential to provide the country with the necessary levers that help to increase the country's competitiveness, attract foreign investment and generate employment opportunities for citizens.

7. **Sustained economic recovery and growth will also depend on an effective regional integrated strategy.** Caribbean countries have similar economies based on tourism, agriculture and manufacturing. Although their potential is increasing, their competitiveness as isolated countries is limited. Regional integration at various levels (economic, social, communications, infrastructure) helps to increase Grenada's competitiveness within the international market and also allows the small-scale economy to leverage regional economies of scale and share the fixed costs of regional infrastructure. In particular, a more effective connectivity between Grenada and Saint Vincent and the Grenadines could result in among other things, shared and reduced cost of connectivity, increased visibility for the two countries, and better integration at the regional and global levels. Furthermore, the establishment of regional networks supported by the regional infrastructures is essential to share best practices and knowledge and enable Grenada to benefit from possible synergies with other neighboring countries by joining forces around harmonized strategies.

8. **Grenada has recognized ICT as a major economic driver to promote diversified and sustained growth.** The Grenadian government has identified ICT as a driver for growth, employment, and economic diversification, with the ultimate goal of leveraging the transformation power of ICT to increase growth and reduce poverty reduction in the country. This is critical given the contractions in income and productive capacity, which the country and the region have undergone over the past decade. Grenada is working on specific connectivity programs, policy and regulatory frameworks both in a regional and national level that provide the sector with the necessary infrastructure, skills and enabling environment to increase private sector investment, and the competitiveness of businesses, as well as improve the access of citizens to more efficient public services.

9. **As with the overall growth strategy, the success of Grenada's ICT for Development agenda will be dependent on a highly effective regional telecommunications market.** A strong unified telecommunications market is crucial for Grenada to benefit from harmonized initiatives that position the Caribbean region and its countries as consolidated, stable, technology cutting-edge economies, which is essential to attract private investment and to increase Grenada's competitiveness in ICTs. By leveraging unified policies, Grenada would be able to accelerate the country's integration into the knowledge and information society allowing its businesses to increase their productivity and its citizens to have better and broader access to information and public services. Grenada has played a key role in this integration. For instance, they led the region to create the Caribbean Knowledge and Learning Network (CKLN) in 2004, an essential institution that has allowed the member countries to coordinate efforts and cooperate on developing a regional educational network, which is expected to be leveraged under CARCIP.

A. Sectoral and Institutional context

10. **Grenada has made tremendous progress in the ICT sector since the establishment of the national telecommunications regulator in 2002.** The creation of the National Telecommunications Regulatory Commission (NTRC) in 2002 was instrumental in the

liberalization of the telecommunications sector by fostering a competitive regulated environment that has allowed the progress of the industry and thereby that of other sectors of the country. The NTRC has also benefited from the support and expertise from the Eastern Caribbean Telecommunications Authority, whose role is to advocate the market liberalization and competition in the countries attached to it (Dominica, Grenada, Saint Christopher and Nevis, Saint Lucia, Saint Vincent and the Grenadines). Nonetheless, further efforts to open the competition to all the telecommunications services are necessary. Although various licenses have been granted for fixed, mobile and Internet, as of 2010: (i) Cable & Wireless and Columbus Communications provide fixed telephony and Internet services; and (ii) Cable & Wireless and Digicel offer mobile services.⁵⁵ Working towards a fully competitive environment is a key step for Grenada in order to increase the quality and reduce cost of the telecommunications services provided to its citizens, which could translate into an increase in productivity and competitiveness for Grenada's businesses, and scale up the benefits of a knowledge-based economy for its people.

11. ICT policies, reforms and investments have resulted in significant improvements in Grenada's connectivity. Fixed broadband penetration has grown in average 18 percent CAGR from 2006 through 2010. The 10.12 percent penetration in 2010 was slightly below the average for the CARIFORUM countries⁵⁶ (12.53 percent) but aligned with neighboring economies such as Saint Lucia (10.69 percent), Saint Vincent and the Grenadines (11.43 percent) or Trinidad and Tobago (10.81 percent), and also comparable to technology innovative country like Chile where the fixed broadband penetration was 10.45 percent in 2010. However, the country is still far from developed countries like the US, where the fixed broadband penetration was 26.45 percent in 2010⁵⁷. The percentage of individuals using the Internet has also steadily increased up to 33.46 percent in 2010, somewhat behind the average for CARIFORUM countries⁵⁸ (40.7 percent) but still far behind the United States penetration of 79.3 percent. These facts demonstrate that national efforts are having positive impact but, at the same time, demonstrate that further investments are necessary.

12. Increased competition has resulted in an impressive growth in mobile penetration. The entrance of Digicel to compete with Cable and Wireless for the mobile telephone service has resulted in an increase in coverage and penetration of the service. Mobile telephony has experienced tremendous growth, especially in 2009 when it almost doubled from the previous year (in 2008 it was 58 percent and in 2009 it was 110 percent). In 2010, it grew again up to 117 percent. Fixed telephony has unfortunately remained stagnant around 27 percent.

13. Telecommunications prices are lower than the average of the CARIFORUM region but still high compared to developed countries, which limits the affordability and penetration of some of the services. ICT prices in Grenada have slightly increased from 2008 to 2010. The average ICT Price Basket increased from 3.8 percent of the GNI per capita in 2008 to 4 percent of the GNI per capita in 2010. However, this value situates the country better than the average CARIFORUM ICT Price Basket⁵⁹ (5 percent of the GNI per capita) and not far from an

⁵⁵ ECTEL

⁵⁶ Simple average

⁵⁷ ITU ICT Statistics

⁵⁸ Simple average. Data for St. Kitts & Nevis, St. Lucia and St. Vincent and the Grenadines correspond to 2009

⁵⁹ Data from ITU, Measuring the Information Society, 2011

OECD country like Chile (3.7 percent of the GNI per capita in 2009). However, the difference with the developed countries (as an example the average ICT Price Basket in the US was 0.5 percent of the GNI per capita in 2010) is an important contributor to the Digital Divide other than the gaps in infrastructure. Besides, it limits the penetration of the services, resulting in a loss of competitiveness and productivity for local businesses, discouraging foreign companies to settle down in Grenada and harming the access of Grenada's citizens to telecommunications services. Per services, mobile telephony experienced the greatest decrease. The average price of the mobile cellular sub-basket decreased from 3.2 percent of GNI per capita in 2008 to 3.1 percent GNI per capita in 2010, which is an additional fact that explains the tremendous increase of the penetration of this service. The average price of the fixed telephone sub-basket increased 2.4 percent of the GNI per capita in 2008 to 2.6 percent of the GNI per capita in 2010. The average price of the fixed broadband sub-basket also increased from 6 percent in 2008, to 6.3 percent in 2010. If compared to a developed country like the US, the gap for those three services is plausible. In the US, the average price of mobile cellular sub-basket was 0.8 percent of the GNI per capita in 2010, that of the fixed telephone sub-basket was 0.3 percent of the GNI per capita and that of the fixed broadband was 0.5 percent of the GNI per capita, for 2010⁶⁰.

14. Grenada has been able to narrow the Digital Divide through effective policies and reforms in the ICT sector. Grenada ranks 71 out of 181 under the Digital Opportunity Index (its DOI was 0.47) slightly better than the average for CARIFORUM countries (0.466⁶¹) and aligned with other neighboring countries (Saint Lucia ranks 73 and Saint Vincent and the Grenadines is 69), but still far from other Latin American countries like Chile (41) or Argentina (54) and developed countries like the US, who ranks 20⁶². Additional efforts on ICT deployment, especially in terms of connectivity, IT innovation and e-government are necessary to bridge that gap. Those would also have positive social and economic effects for Grenada: (i) Allow Grenada to integrate rural population (which represents 69 percent of the total population⁶³) and enable its social inclusion by gaining access to public information; (ii) Increase the competitiveness of local businesses (e.g. establishing e-commerce); (iii) Facilitate the creation of entrepreneurial ventures; (iv) Foster the ICT sector (in 2008 ICT good exports only accounted 3.9 percent of the total goods exports whereas the figure was 10.9 percent for the Latin American & Caribbean region⁶⁴); and (iv) Support the country's goals in terms of e-commerce and e-government. The endeavor should not rely solely on connectivity and infrastructures but also on regulation and policies that guarantee that all the efforts are orchestrated and work towards Grenada's goals in terms of economic diversification, job creation and poverty reduction.

15. Grenada's social and economic progress has contributed to an increase in ICT demand that needs to be supported by enhanced high quality and reliable infrastructures. Grenada has made enormous progress that has allowed its citizens and businesses to enjoy better

⁶⁰ Data from ITU, Measuring the Information Society, 2011

⁶¹ Simple average

⁶² ITU's DOI has been designed to as a tool for tracking progress in bridging the digital divide and the implementation of the outcomes of the World Summit on the Information Society (WSIS). As such, it provides a powerful policy tool for exploring the global and regional trends in infrastructure, opportunity and usage that are shaping the Information Society. It has a focus on the adoption of new technologies, such as broadband and mobile Internet.

⁶³ World Bank indicators 2010 (<http://data.worldbank.org/indicator>)

⁶⁴ ICT At-a-glance, World Bank, 2010 (http://devdata.worldbank.org/ict/grd_ict.pdf)

access to ICT services but the future is even more promising with the government's objectives of improving economic opportunities and reducing poverty levels. Grenada's rapid growth in the international telecommunications traffic demand (expected to be 3,161 Mbps in 2020⁶⁵, which represents a 52 percent CAGR starting in 2006) shows the progress in competitiveness and productivity of the country. However, this increase in demand will require a supportive set of infrastructures. In terms of international connectivity, Grenada is currently served by two submarine cables: Eastern Caribbean Fiber System and Southern Caribbean Fiber⁶⁶ but it may be the case that additional communications capabilities be needed to support the increase in traffic not only of Grenada but of other countries connected to those cables. International connectivity especially within the Caribbean region is a key element in Grenada's aspiration of boosting tourism and increasing the productivity and competitiveness of Grenada's businesses other than creating an IT ecosystem that permits permit local technology companies to flourish and big corporations to establish in the country.

16. Gaps remain however, in the form of a clear updated ICT legal framework to promote further competition and facilitate e-services. Grenada needs to continue working of the development of a legal framework that regulates the e-environment at various levels⁶⁷: (i) telecommunications regulation; (ii) e-commerce regulation; (iii) data and privacy protection; (iv) computer misuse criminalization; (v) transaction security; (vi) intellectual property protection; (vii) consumer protection; and (viii) fraud prevention. This would obviously contribute to enhance Grenada's image as an ideal location for ICT businesses and to help local and foreign businesses to establish in the country.

17. Grenada needs to address essential communications network gaps to facilitate integration within the Caribbean Regional and Global communications networks. Bridging the domestic connectivity gaps in Grenada which also connects to neighboring countries and plugs into available regional networks such as the CKLN as a key step towards the regional market integration strategy that will facilitate trade exchanges, employment generation and increase in competitiveness of the region and the country members. Grenada is already taking steps to lower the cost of connectivity by launching in May 2011 its national Internet Exchange Point (IXP) to allow routing of its domestic Internet traffic without having to cross third party countries. The main direct impact is an increase in the quality of service (reducing delays and latencies) and decrease in cost (international bandwidth is more expensive) which translates into indirect benefits in business productivity, user satisfaction, service penetration and overall in the competitiveness and appeal of the country. The IXP is expected to be connected to a Caribbean Regional IXP network to support the country in its aim to become part of the regional integration initiative that will allow Grenada to gain faster access to other Caribbean countries and thereby to the international networks.

18. Leveraging the connectivity infrastructure to position the region, as an IT business hub will also further enhance Grenada's competitiveness. The strong initial focus on providing the region with the best infrastructure and affordable services must be the starting point to create an IT business ecosystem that positions Grenada as an innovation reference in the

⁶⁵ World Bank AXIOM/Terabit: *Eastern Caribbean Submarine Cable System – Detailed Feasibility Study*, 2006

⁶⁶ Caribbean Advanced Regional Communications Infrastructure Assessment Study

⁶⁷ Information and communication technology. A strategy and action plan for Grenada, June 2002

Caribbean region. Not only does Grenada have to set up and enforce the right policies that govern the industry but also, the country has to leverage that to generate local employment opportunities. Grenada has the opportunity to learn from successes in other countries under CARCIP.

19. In improving Grenada's connectivity and innovation, CARCIP will contribute to increase Grenada's competitiveness and profitability of its businesses. The telecommunications and ICT sectors have been proven to improve business productivity and profitability, which generates direct wealth for the country by means of additional tax revenues and indirect by creating jobs.

20. Improving Government's efficiency and transparency through e-services is also crucial to improve the delivery and efficiency of public services and therefore provide opportunities for employment and improve country's competitiveness in the region. Grenada's e-government development index value was 0.4277 in 2010, slightly behind the average of the CARIFORUM region (0.4301) but close to similar countries in terms of GDP size, like Saint Vincent and the Grenadines (0.4355). However, the country still lags far behind the developed countries like the US where the index value was 0.8510⁶⁸. Regarding each of the components of the index separately, the differences are still and more meaningful. Online services component⁶⁹ was 0.0637 compared to 0.3184 in the US or 0.34 in the Korean Republic (the leader of the ranking) but above the CARIFORUM average (0.0554), which shows Grenada's leading focus on e-government but, at the same time, the need to continue working on the government digitalization. Telecom connectivity component⁷⁰ (0.0795 compared to 0.09475 CARIFORUM average and 0.3184 in the US, 0.34 in the Korean Republic) denotes a certain lacks in ICT services' penetration, especially fixed broadband. Human capacity component⁷¹ (0.2845) was above the average of the CARIFORUM region (0.2798) and not very far from the US (0.3198) or Korean Republic (0.3277), which shows that the country have competitive human resources. Working on the infrastructure side would move up Grenada and set up the foundations in which sustained efforts for the digitalization process would lie. Nonetheless, the digitalization process would also need complementary actions: (i) increase its capillary to reach Grenada's households not only in terms of network but also equipment (e.g. personal computers); (ii) facilitate the access to affordable technology; (iii) create ICT and e-government services awareness; (iv) train people (officials and citizens) to use those services; and (v) provide incentives to businesses to adopt ICT services and train their workforce in that respect.

⁶⁸ E-government development index value is an indicator calculated by the United Nations. It is a comprehensive scoring of the willingness and capacity of national administrations to use online and mobile technology in the execution of government functions. Mathematically, it is a weighted average of three normalized scores on the most important dimensions of e-government, namely: scope and quality of online services, telecommunication connectivity, and human capacity.

⁶⁹ Online services component was based on a research survey with four sections corresponding to the four stages of e-government development. The first of these includes questions relating to attributes that would be considered typical of an emerging online presence, the second to an enhanced presence, the third to a transactional presence and the fourth to a connected presence.

⁷⁰ The telecommunication infrastructure index is a composite of five indicators: number of personal computers per 100 persons, number of Internet users per 100 persons, number of telephone lines per 100 persons, number of mobile cellular subscriptions per 100 persons and number of fixed broadband subscribers per 100 persons.

⁷¹ The human capital index is a composite of two indicators: adult literacy rate and the combined primary, secondary, and tertiary gross enrollment ratio.

21. CARCIP is fully aligned with Grenada's Government's commitment to ICT sector development as an economic growth and diversification lever. The program will support Grenada's goals of regional integration and of leveraging the ICT sector for economic growth, employment creation, economic diversification and government transformation and providing Grenada's with higher quality and affordable ICT services that allow its citizens to have better access to information and public services and businesses to increase their competitiveness by leveraging ICTs. Specifically, CARCIP aims at: (i) bridging the gaps in Grenada's broadband communications infrastructure while ensuring appropriate connectivity with neighboring Saint Vincent and the Grenadines, as well as regional backbones like CKLN; (ii) setting up the policies, regulatory frameworks and skills to develop IT and ITES industries as drivers to foster employment and economic growth; and (iii) supporting institutional development and capacity building to ensure and productive use of ICT.

B. Higher Level Objectives to which the Project Contributes

22. Contributes to Grenada's and the region's economic growth by increasing access, quality and affordability to broadband connections. Broadband networks have a transformational social and economic impact. Recent research published under the World Bank IC4D09 flagship report⁷² for example, shows that a 10 percent increase in broadband penetration in developing countries can have an impact of close to 1.4 percent in increase in GDP per capita⁷³. This also has additional economic and social impact: (i) there is evidence that higher rates of ICT penetration are associated with greater levels of exports⁷⁴; (ii) employment is generated (a recent study⁷⁵ concludes that if Latin American countries were to increase broadband penetration to its potential, they could create almost 400, 000 new jobs)

23. Contributes to Grenada's objective of fostering its integration within the Caribbean region. Grenada's competitiveness largely depends on leveraging economies of scale established with other Caribbean countries as well as on uniting common forces to increase the productivity of the region. A main component of that integration is the telecommunications connectivity, especially the broadband that will allow Grenada to establish trade and information networks with other regional countries through existing regional backbones like CKLN, a key step towards the ultimate goal of opening to the global international market. Opening to international markets is a crucial step for local companies that need to expand internationally in order to continue growing and ICTs are the means to allow those businesses to reach out overseas targets. Besides, the increase in competitiveness of the private sector would have various benefits for Grenada. On the one hand, more employment opportunities would be created. On the other hand, the increase in private profitability would generate more tax revenues for the country, which would help relieve the financial needs and contribute to continue investing for Grenada's welfare.

24. Improves government efficiency and transparency and access to service, allowing the development of e-government and e-society applications. CARCIP seeks also to enlarge the

⁷² See <http://go.worldbank.org/DMY979SNP0>.

⁷³ See <http://www.worldbank.org/ict> to access these and many other relevant publications and studies.

⁷⁴ Telecommunications Infrastructure and Economic Development: A Simultaneous Approach; Lars-Hendrick Röller & Leonard Waverman, American Economic Review, 2001

⁷⁵ Katz, R., Estimating Broadband Demand and its Economic Impact in Latin America (2009), available at <http://unpan1.un.org/intradoc/groups/public/documents/gaid/unpan036761.pdf>

government infrastructure to connect government offices, schools, health care facilities and other institutions in order to facilitate their procedures and thereby ease the access of citizens to information. This first step seeks to constitute the grounds for two later directions. First, it is the base in which e-applications (e-government and e-society solutions) would rely making Grenada progress and narrowing the Digital Divide. Second, the broadband backbone network may be an opportunity to provide affordable connectivity for the entire population of Grenada and interconnect the country with other countries in the region like Saint Vincent and the Grenadines. Grenada's government sees the need for a robust national communications infrastructure as critical foundation for harnessing the power of ICT for economic growth and transformational change in public services and ongoing efforts are already carried out by the government of Grenada.

25. Contributes to emergency national plans with a more resilient regional infrastructure and an emergency communications network that allows the government to be more responsive. Grenada has a geographic location that has made the country suffer from natural disasters like the hurricanes Ivan (2004) and Emily (2005). In those situations, high levels of official responsiveness and coordination are essential to save lives. CARCIP will contribute to that aim by providing Grenada with an emergency communications network that facilitates and improves government current procedures. Also, support for broadband backbone networks provided under CARCIP will create alternative routes for regional traffic, which will enhance the resilience of the regional networks in the face of frequent natural disasters.

26. Supports the consolidation of a regional IT industry environment that allows the generation of employment and wealth for the country and the region. Besides supporting local business operations and activities, ICTs may become a key lever for Grenada as to become an IT destination for global companies, which would translate into additional local jobs and creating of local businesses that would accompany the growth of the foreign firms that decide to settle down in Grenada. CARCIP aims to support Grenada in that endeavor so that its competitiveness in the region increases by setting up an IT ecosystem that fosters the entrepreneurial community and gain the attention of multinational firms. Support will be provided for regional harmonization of IT industry skills, certification and accreditation programs to ensure the region exploits economies of scale in attracting investment to this growing new industry.

II. PROJECT DEVELOPMENT OBJECTIVES

A. PDO

27. **The project development objective (PDO) of Grenada CARCIP is fully consistent with the overall program development objective and seeks to increase access to regional broadband networks and advance the development of an ICT-enabled services industry in Grenada and across the Caribbean Region.**

28. The objective of CARCIP is expected to be achieved through: (a) targeted investments in ICT infrastructure that fills the gaps at the regional and domestic level, in partnership with the private sector and other development partners, where applicable; (b) creating an enabling environment that fosters competitive access to infrastructure and the creation of an IT/ITES and other applications industry; (c) enabling and supporting the creation of e-services, including e-

and m-government services; and (d) strengthening of institutional capacity/arrangements to ensure effective program implementation and outcomes.

B. Project Beneficiaries

29. CARCIP will benefit the citizens of Grenada. The primary target groups of the program are the ICT services consumers (business and residential), IT/ITES and other knowledge-intensive businesses and employees, and e- and m-government services users. It is expected that: (a) ICT consumers in Grenada will enjoy greater access to better quality and lower prices of ICT services, including high speed internet access; (b) the number of IT/ITES and other knowledge-intensive businesses and employees increase; and (c) the number of e- and m- government services increases and; thus, the quality of public services is enhanced.

C. PDO Level Results Indicators

Project Development Objective	Outcome Indicators	At closing of Project
To increase access to regional broadband networks and advance the development of an ICT-enabled services industry in Grenada and the Caribbean Region.	<ul style="list-style-type: none"> • Number of Internet Users • IT/ITES employment • Businesses receiving Support through the project • Direct project beneficiaries, (of which are female) 	<ul style="list-style-type: none"> • 47 per 100 • 4,000 • 50 • 7,000 (50%)

III. DETAILED PROJECT DESCRIPTION

A. Project components

30. CARCIP in Grenada, in line with the overall Program, will have the following three components:

Component 1 – Regional Connectivity Infrastructure (US\$5.62 million):

31. This component will support bridging priority connectivity gaps in Grenada and connect Grenada with neighboring countries and regional backbones through several subcomponents as detailed below:

- (a) ***Enabling environment (US\$ 0.5 million)*** – Financing of the connectivity infrastructure would be based on a competitive “least-cost” subsidy under a public-private partnership model, and payments would be triggered by demonstrated delivery of pre-defined outputs. Technical Assistance and Capacity Building for (i) the design of PPP frameworks consistent with those designed at the regional level, including validation of design/costs, tender documentation and process, environmental screening of the broadband infrastructure, as well as the services of an independent verification agent to certify that winning bidders have fulfilled the outputs of their service agreements. (US\$0.3m); and (ii)

design of enabling regulation harmonized at the regional level and provision of effective regulatory oversight in key technical areas including infrastructure sharing and open access for both the IXP and broadband network (US\$ 0.2m).

- (b) **Broadband Backbone Network (US\$4.57 million)** – Support of government's contribution to a public private partnership (PPP) in the form of goods and services contracts to develop a high speed broadband backbone network to connect major populated centers to existing regional broadband networks. The broadband backbone network would provide affordable regional connectivity to the entire population of Grenada, including the small islands of Carriacou and Petite Martinique, which could lead to more direct connectivity with neighboring Saint Vincent and the Grenadines and will enhance the overall resilience of the regional network. The network could be further leveraged as the primary backbone for a National Research and Education Network which would be linked to the Caribbean Regional Research and Education Network (C@ribNet), currently being deployed throughout the region, including Grenada, and being coordinated and managed by CKLN. The principles underlying this component include: (a) private-sector led supply of the infrastructure, supported by least-cost public subsidy, and (b) infrastructure shall be provided on non-discriminatory, open access and competitively neutral basis.
- (c) **Government Network (US\$0.5 million)** The backbone network could provide a unique opportunity for key government agencies (including Inland Revenue, post offices, schools, health facilities, police, security/emergency response agencies) to connect directly to each other through a government intranet or virtual private network (VPN). Minimal support for establishing this VPN will to be supported under the project. It will build upon existing systems as well as expand the network built under the backbone network. It is expected that similar private networks in the region will connect to each other to create a regional network that will improve communication between government agencies in the region. This is critical for the small and vulnerable islands in the region and in line with the regional integration agenda.
- (d) **Internet Exchange Point (US\$0.05 million)** – Technical support to the Grenada Internet Exchange Point (GREX) to facilitate regional and local interconnection of Internet traffic, allowing it to be channeled in a more efficient way by ensuring that traffic stays local without the need to transit through third party countries before coming back and thereby avoiding payment of high international bandwidth costs. This could result in improved access speeds and reduced latency as well as reduced costs to the consumer.

Grenada's government has confirmed that the GREX, the first of its kind in the region, had been launched earlier in May 2011 with some funding from the CTU (through the NTRC) and the private sector. The IXP is temporarily located in the premises of one of the Service Providers, but is expected to re-locate to the NTRC's new building to ensure neutrality and better governance. Program support therefore, will include structuring of the governance and management of the IXP, capacity building for content development, and additional minimum infrastructure to enhance the efficiency and sustainability of the GREX. It is expected that the Grenada IXP will eventually be part of a fully integrated

Caribbean Regional IXP, which will ensure that traffic in the region remains regional, thus further reducing the cost and improving the efficiency of connectivity.

IDA financing under this sub-component will therefore include technical assistance, capacity building and limited equipment.

The bulk of the IDA funding will support connecting Grenada and many locations within Grenada to regional and global networks and is therefore regional in nature, with the only possible exception of the Government Network sub-activity (more details in Annex 2).

32. The Government of Grenada requested and received a Project Preparation Advance (PPA), part of which will assist in the preparation of the PPP Framework and will support the preparation of draft feasibility studies and RFPs in order to speed up implementation. The World Bank also secured limited grant funding through the Korean Trust Fund, which will assist Grenada and other countries in the region to validate the network design, costs and potential economic benefits. This grant would complement work anticipated to be undertaken under the PPA.

Component 2- ICT- Led Innovation (US\$3.75 million)

33. This component will provide targeted support for human capacity and business development to generate employment, and an investment promotion strategy to position the region and within it Grenada as a destination of choice for IT business. Activities to be funded will include:

- (a) **Technology/Business Incubation (US\$2.45 million)** – The Government of Grenada has already secured US\$1.5 million funding from India for an ICT Center of Excellence, which has been completed and is already providing technical and vocational training to young graduates from Grenada and other countries in the region to improve their employability. The center is also expected to serve as a Business incubator, which supports small businesses from Grenada and neighboring countries. Both the ICT center and the Business Incubators are expected to form part of a regional network of ICT Centers and Business Incubators, which will position the region as an attractive destination for ICT business.

Funds under this component would therefore support the Government's efforts to develop a more sustainable ICT Center of Excellence, by funding grants for business development/incubation aimed at promoting the creation of a new ICT-enabled industry in the region with clear synergies among the various participating countries, and with robust facilities for training, certification and testing, to ensure that the mutual recognition of accreditation foreseen under activity (b) can be effectively implemented. Furthermore, in partnership with *infoDev* and other development partners and the private sector, the program will facilitate the development of similar initiatives in at least two additional parishes/territories, including Carriacou. Eligibility criteria and selection processes for the grant share of project funding will be described in Business Incubation and Grants Manual.

- (b) ***Skills Development and Certification Program (US\$1.3 million)*** – The component will build on earlier skills assessments done by the Government and provide resources to train and certify youth on IT-related skills with regionally harmonized curricula (e.g. software/apps development, database management, web development) linking with businesses to ensure a market-driven approach that can generate jobs in this new industry and facilitating certification and mutual recognition of this certification at the regional level and possibly at the international level as well. Part of the PPA will support a global/regional benchmarking assessment of IT skills and certification for IT graduates, and foundational skills for the ITES industry to enable growth of small and medium enterprises and competition in the local economy, as well as the development of a training of trainers program for IT and IT Enabled Services skills. The component would also finance minor infrastructure to ensure the training facilities are adequately furnished.

The ICT-led innovation component is therefore structured as two sub-components, one focused on facilities and the other one on skills development and accreditation. The implementation of the subcomponents will be conducted where the ICT Center for Excellence will work in close collaboration with the National Training Agency (NTA). The eligibility criteria and selection processes for the grant share of project funding under this component will be described in Business Incubation and Training Grants Manual and supported by a dedicated grant manager. This component forms an integral part of the Caribbean Region's strategy to position itself as a formidable destination for IT and IT Enabled Services. The activities being funded under this component are therefore critical pieces, which aggregate to ensure that the regional objective is achieved. It is hence almost impossible to unbundle the activities based on their regional vs. national impacts.

Component 3 – Implementation Support (US\$0.63 million)

34. This component will support the following activities:
- (a) Establishment and hiring of core Project implementation staff. Grenada's government has already hired a Project Coordinator under the program, to be funded through the PPA, to support project preparation and eventual project implementation. For fiduciary support, the program will leverage the expertise of the fiduciary staff of the existing PCU within the Ministry of Finance, however, there may be need to provide additional resources to strengthen such capacity.
 - (b) Logistic support for Ministry and PCU (PCs, office equipment, operating costs, audits, monitoring and evaluation (M&E), and communication support)
 - (c) Development of Project Implementation Manual (PIM)
35. The Table below provides a tentative illustration of the estimated breakdown of the IDA funding for Grenada into activities that link directly to the regional agenda, and those that can be seen as supporting the objective at the national level.

Grenada			
Component 1			
	Activity	Regional Activities (US\$)1/	National Activities (US\$)1/

	Enabling Environment	500.000	
	Backbone Broadband Network	4.570.000	
	Government Network		500.000
	Support for IXP	50.000	
	Total	5.120.000	500.000
Component 2			
	Activity	Regional Activities (US\$)	National Activities (US\$)
	Technology/Business Incubation	1.700.000	750.000
	Skills Development/Certification	1.300.000	
	Total	3.000.000	750.000
Component 3			
	Activity	Regional Activities (US\$)	National Activities (US\$)
	Implementation Support	630.000	

1/ Regional activities are jointly financed by national and regional IDA, while national activities are fully financed by national IDA

B. Project financing

36. **Lending instrument will be an Adaptable Program Loan.** The lending instrument is an Adaptable Program Loan (APL), which allows countries to join at different points in time, depending on interest and readiness. Financing for the program is expected to include a combination of several sources of financing: World Bank lending, donor grant funding, government own resources and substantial amounts of private sector investment.

37. **World Bank financing for Grenada will be on the basis of an IDA credit (40 year loan, with 10 years grace period, zero interest rate, 0.75 percent service charge).** The total amount of IDA resources required for Grenada-CARCIP is estimated at US\$10 million. Given that this is structured as a regional IDA operation, countries will be eligible to receive IDA resources beyond their country allocations, since regional projects typically count only 1/3 towards their national allocation and the other 2/3 come out of a special regional IDA pool. The World Bank will also continue to strive to engage in dialogue with donors to attract as much grant funding as feasible.

IV. IMPLEMENTATION ARRANGEMENTS

A. Project Administration Mechanism

38. The Project Coordinator will be responsible for the effective and flexible coordination, management, and implementation of the project, liaise effectively with selected Grenada CARCIP focal points, NTRC, Oversight Committee, Centre of Excellence, and with all public and private stakeholders involved in the implementation of the project. Furthermore the Project Coordinator will be in charge of the day-to-day management of the project technical and logistical aspects, including the work program and coordinating with the relevant ministries and

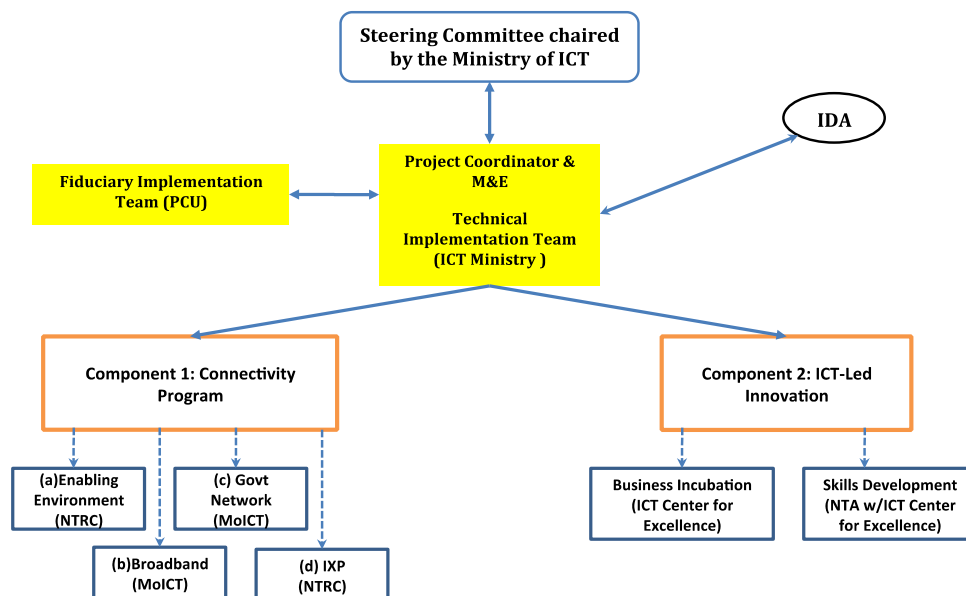
departments and monitoring and evaluation. The Project Coordinator will report to on the status of the implementation and interact.

39. The existing PCU under Grenada's Ministry of Finance will be in charge with the fiduciary aspects of project implementation. Capacity of the PCU will be augmented under the project to accommodate the additional work to be undertaken. The PCU will be supported, at the regional level, by CTU and CKLN for cases of transnational implementation to which they will report to on the status of the implementation and interact in case of transnational implementation. Monitoring and Evaluation will be coordinated under the MoICT.

40. At the national level a project steering committee has been established to ensure adequate participation of the various government agencies involved in project implementation, including the Ministry of ICT within the Prime Minister's Office, the National Telecommunications Regulatory Commission (NTRC), the Ministry of Finance, and the Grenada Investment Development Corporation (GIDC).

41. The following chart summaries the implementation arrangements for Grenada:

CARCIP Implementation Arrangements National Level - GD



NTA – National Training Agency

B. Financial Management and Disbursements

42. Financial management of the Project share for Grenada will be undertaken by the PCU currently located within the MoF. The PCU has considerable experience with implementing the financial aspects of World Bank Projects in Grenada. An assessment of the financial management capacity of the PCU was undertaken in May-September 2011 and updated in February 2012.

43. **Conclusion.** The conclusion is that once the Action plan proposed in this document is implemented, the financial management arrangements will meet the Bank's requirements under OP/BP10.02 and will be adequate to provide, with reasonable assurance, accurate and timely information on the status of the project implementation. The residual financial management risk is assessed as being Medium.

44. Financial Management Risks Rating.

	Risk Assessment				Risk Mitigation Measures	Residual Risk
	H	S	M	L		
Inherent Risk						
Country level			X			M
Entity level			X			M
Program level			X			M
Overall Rating Inherent Risk			X			M
Control Risk						
Staffing			X			M
Budget				X		L
Accounting			X		Project-specific Chart of Accounts will be designed.	M
Internal controls			X		Financial Management Manual will be updated.	M
Funds flow			X			M
Financial reporting			X		IFR format will be agreed-upon during the project preparation.	M

	Risk Assessment				Risk Mitigation Measures	Residual Risk
	H	S	M	L		
Auditing			X			M
Overall Control Risk			M			M
Residual Risk Rating			M			M

H = High; S = Substantial; M = Moderate; L = Low

45. **Staffing.** The PCU is fully staffed with three experienced, satisfactory performing accountants. Provided that two of the currently implemented projects will be closing in 2011/2012, existing capacity will be sufficient for the support of this project implementation.

46. **Accounting Policies and Procedures.** The project will use the existing accounting software (QuickBooks) to maintain the project accounts. The software will allow for the tracking of inflows by funding source, and outflows by: (i) project component; (ii) funding source; (iii) disbursement category. Based on this information relevant financial reports can be prepared. The Chart of Accounts is being drafted, and will be finalized by the project signing. While preparing accounting and financial information transactions will be recorded as incurred, and all primary supporting documentation will be maintained to facilitate ex post reviews and the external annual audits. Such documents should be maintained for a minimum period of five years. The detailed accounting policies and procedures will be set forth in the updated Project Implementation Manual.

47. The vote account at the Accountant General department will be reconciled quarterly with the project records to ensure that information in Smartstream, the Government financial management and accounting system, is up-to-date and accurate.

48. **Budgeting.** Project annual budgeting will be based on the cost tables, and will be updated according to the latest information as the implementation will rollout. The annual budgets will be prepared by the PCU and submitted to the project TTL and GOG for approval. The approved annual budget will then be entered into the accounting system and used for periodic comparison with actual results as part of the interim reporting.

49. **Internal Controls and Safeguard of Assets.** The updated Financial Management Manual will reflect the structure of the implementing unit, administrative arrangements, internal control procedures, including procedures for authorization of expenditures, maintenance of records, safeguard of assets (including cash), segregation of duties to avoid conflict of interest, regular reconciliation of bank account statements, bank signing mandate (to include at least two signatories), regular reporting to ensure close monitoring of project activities, as well as the flow

of funds to support project activities. The project-specific information, i.e. the Chart of Accounts, the formats of the reports, etc. will be added as part of the Annexes to the Manual.

50. Assets acquired by the project will be in the custody of the respective institutional departments, which will also keep copies of the supporting documentation. The implementing unit will maintain supporting records and balances. At least one annual physical inspection will be undertaken by the implementing agency and PCU staff, preferably with the participation of the external auditors.

51. **Reporting Arrangements.** The PCU will be responsible for producing the Interim Financial Reports (IFRs) on a quarterly basis to be submitted to the Bank. The IFRs will provide required monitoring information and will be used for disbursement purposes. The IFRs will include a narrative outlining the major project achievements for the quarter, the project's sources and uses of funds, and necessary procurement tables. IFRs should be submitted to the Bank no later than 45 days after the end of each reporting period. The annual financial statements will include the project's sources and uses of funds, a detailed analysis of expenditures, a schedule of withdrawal applications presented during the year, a reconciliation of the Designated Account, the notes to the financial information and management representation letter. These reports will be prepared by the PCU and made available to the auditors after the end of each fiscal year. Simultaneously with being submitted to the World Bank these reports will be submitted to the CTU, which will be responsible for monitoring the overall project implementation progress.

52. **Auditing Arrangements.** Project financial statements will be audited annually in accordance with International Standards on Auditing issued by the International Organization of Supreme Audit Institutions (INTOSAI) and the World Bank's guidelines on auditing. Qualified independent audit firm acceptable to the World Bank will be hired to conduct project audits. The auditors' terms of reference (ToRs) will be prepared by the project and cleared by the World Bank before the engagement of the auditor. The ToRs will include the audit of financial transactions, the review of the internal control structure and mechanisms and the review of the project's compliance with the terms of the financing agreement(s). The annual audit reports will be prepared in a format in accordance with ISA and World Bank guidelines, and they will include an opinion on the project financial statements, including Designated Account Reconciliation, review of the internal controls, review of the project's compliance with the terms of the financing agreement(s) and a management letter. The project's annual audit report will be required to be submitted to the World Bank for review no later than four months following the end of the fiscal year (January-December).

53. **Disbursement Arrangements.** The World Bank share of financing will be channeled through a Designated Account denominated in US Dollars, which will be opened by the PCU at the Grenada Coöperate Bank Limited. The PCU will operate a local currency account, to finance project expenditures in local currency, where funds from the US Dollars Designated Account will be periodically transferred (funds sufficient to cover no more than 30 days worth of expenditures). These accounts will be operated in accordance with the procedures and guidelines set forth in the Bank's Disbursement Guidelines.

54. Disbursement of the project proceeds would be transferred to the US Dollar denominated Designated Account managed by the PCU. Advances to the Designated Account would be made

based on the forecast of the project eligible expenditures for a period of at least six months based on Interim Financial Reports (IFRs). Supporting documentation for expenditures made from the Designated Account would also be based on IFRs. The IFRs will be submitted to the World Bank on a quarterly basis and no later than 45 days after the end of each quarter.

55. As eligible expenditures are incurred, the PCU will withdraw the amount to be financed by the World Bank from the Designated Account (US\$ or EC\$) in accordance with the financing percentages.

56. Reimbursement method of disbursement will also be available. The supporting documentation would also be IFRs and the pre-finance expenditures should clearly be identified in the reports if combined with supporting advances made to the Designated Account in same IFRs. The minimum application size for reimbursement should be US\$400,000. The Project will have a Disbursement Deadline Date (final date on which the Bank will accept applications for withdrawal from the borrower or documentation on the use of loan proceeds already advanced by the Bank) four months after the Closing Date. This "Grace Period" is granted in order to permit the orderly project completion and closure of the Credit Account via the submission of applications and supporting documentation for expenditures *incurred* on or before the Closing Date. Expenditures incurred between the Closing Date and the Disbursement Deadline Date are not eligible for financing, except as otherwise agreed with the Bank.

Project's disbursement arrangements will be described in details in a separately prepared Disbursement letter.

Category	Amount of the Financing Allocated (expressed in SDR)	Percentage of Expenditures to be Financed (inclusive of Taxes)
(1) Goods, works, non-consulting services, consultants' services, Training and Operating Costs for the Project (except Part B.1 of the Project)	3, 600,000	100%
(2) Business Incubation Grants or Training Grants for Business or Training Plans under Part B.1 of the Project	2,200,000	100% of the goods, consultants' services and non-consulting services financed by the respective Business Incubation Grant or Training Grant
(3) Refund of Preparation Advance	700,000	Amount payable pursuant to Section 2.07 of the General Conditions

TOTAL AMOUNT	6,500,000	
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Note: Eligibility criteria for Business Incubation and Training Grants will be specified in a separately developed Grants Manual.

57. **Supervision arrangements.** As part of its project supervision missions, the World Bank will conduct risk-based financial management supervisions, at appropriate intervals. These will pay particular attention to: (i) project accounting and internal control systems; (ii) budgeting and financial planning arrangements; (iii) review of the Interim Financial Reports; (iv) review of audit reports, including financial statements and remedial actions recommended in the auditor's Management Letters; (v) disbursement management and financial flows, including counterpart funds, as applicable; and (vi) any incidences of corrupt practices involving project resources.

58. **Financial Management Action Plan.**

#	Proposed Action	Responsible Party	Date of Completion
1	Prepare a Project-specific Chart of Accounts.	PCU	Project signing
2	Update the Financial Management Manual (as part of the Project Implementation Manual).	PCU	Project effectiveness
3	Agree with the World Bank on a sample format of the IFR.	PCU/WB	Project negotiations
4	Employ an external auditor	PCU	Within six months following commencement of project implementation.

C. Procurement

59. **Applicable Guidelines.** Procurement for the proposed project will be carried out in accordance with: (i) The World Bank's "Guidelines: Procurement Under IBRD Loans and IDA Credits", dated January 2011; (ii) "Guidelines: Selection and Employment of Consultants by World Bank Borrowers" dated January 2011; (iii) the IDA Anticorruption Guidelines dated July 1, 2005 and as amended through October 15 and (iv) and the provisions stipulated in the Legal Agreement. For each contract to be financed under the program, the different procurement methods or consultant selection methods, the need for pre-qualification, estimated costs, prior review requirements, and time frame are agreed between the Borrower and the Bank in the Procurement Plan. The Procurement Plan will be updated at least annually or bi-annually as required to reflect the actual project implementation needs and improvements in institutional capacity.

60. **A General Procurement Notice (GPN) will be published in the United Nations Development Business (UNDB) online and a national newspaper of broad circulation.** The

GPN gives a description of the Goods and consulting services contracts to be procured under the project and invites all potential suppliers and consultants to express interest and request additional information from the implementing agency. The following will be published in UNDB (online), and a national newspaper of broad circulation as the corresponding bid documents become available: (i) Specific Procurement Notices (SPNs) for International Competitive Bidding (ICB) procurement packages; and (ii) Expression of Interest (EoI) for consulting assignments estimated to cost more than US\$ 200,000 equivalent per contract. In addition, the Procurement Plan (including all formal updates), SPNs and EoIs for all contracts as well as the results of contract awards will be published on the external website of UNDB online and in dgMarket.

61. **Assessment of the Capacity of the Implementation Unit.** During appraisal the Bank team assessed the project implementation capacity of the PCU. This assessment was done as a complement to the Bank's regular Financial Management and Procurement Capacity Assessments carried out at earlier stages during project preparation. The assessment focused on the following issues: (1) the workload of the PCU; (2) the cross sectoral nature of the project; (3) and the social and technical complexity of specific activities.

62. The PCU currently handles six World Bank financed projects as well as two additional projects with financing from the Caribbean Development Bank (CDB), for a total value of US\$38.4 million. In 2012 the PCU is expecting to handle seven World Bank financed projects and two additional projects with financing from the CDB and the OPEC Fund for International Development (OFID), for a total value of US\$60.6 million. From 2013 the workload is currently projected to drop to a total of six projects for a total value of US\$56 million.

63. Based on the significantly increased workload the PCU will need to further strengthen fiduciary capacity to appropriately ensure quality in project implementation. The procurement team in the PCU currently consists of two procurement officers.

64. In view of the above, the Bank team revealed that the overall risk for procurement under the project was determined to be "moderate". To mitigate the risk, it is proposed that the PCU to provide additional training in ICT procurement to existing staff.

65. **The PCU will follow the Bank's anti-corruption guidelines, and will not engage the services of firms and individuals debarred by the Bank.** The listing of debarred firms and individuals is located at: <http://www.worldbank.org/html/opr/procure/debarr.html>.

66. **Anti-Corruption Guidelines.** The Bank team intends to maintain customary oversight and will carry out prior review of all major contracts according to thresholds that will be regularly reviewed and adjusted as needed in the Procurement Plan. Initial thresholds are provided in this Annex. The following measures will be carried out to mitigate the risk of corruption:

- *Training of Fiduciary Staff:* Starting from the project launch and periodically thereafter customized to procedure and methods that would be required in the next 12-month period. This will include on-the-job training during supervision missions and regional training provided by the RPM office for the countries in the region;

- *Prior Review:* Intensive and close supervision by Bank procurement accredited staff. In addition, contract amendments will be subject to prior approval by the Bank;
- *Publication of Advertisements and Contracts:* All publications of advertisements and contract awards—will be done in accordance with the Guidelines requirements and published in the client connection system, on external websites, i.e. UNDB;
- *Debarred Firms:* Appropriate attention will be given to the need to ensure that debarred firms or individuals are not given opportunities to compete for Bank-financed contracts;
- *Complaints:* All complaints by bidders will be diligently addressed and monitored in consultation with the Bank;
- *Evaluation Committee:* The Bank will review and comment on the qualifications and experience of proposed members of the Evaluation committee(s) with a view to prevent the nomination of unqualified or biased candidates. All members will be required to sign a disclosure form (a sample will be included in the Operational Manual);
- *Monitoring of Contract Awards:* All contracts are required to be signed within the validity of the bids/proposals, and in case of prior review contracts, promptly after the no objection is issued. The Procurement Plan format shall include information on actual dates (of no objections and awards), and will be monitored for cases of delay—which will be looked at on a case-by-case basis to identify the causes. The e PCU will maintain up to date procurement records that will be readily available to auditors and all concerned Bank staff, including INT;
- *Monitoring of Payments:* All contracts shall include bank account information. The bank account shall be in the name of the same supplier/consultant that submitted the bid and awarded the contract.

67. **Prior review.** There will be extensive support provided by Bank procurement accredited staff. In addition, contract amendments will be subject to prior approval by the Bank.

68. **Thresholds:** Thresholds for the use of the procurement methods specified in the project procurement plan are identified in the table below, which also establishes the notional thresholds for prior review. The agreed procurement plan will determine which contracts will be subject to Bank prior review.

Expenditure Category	Contract Value (Threshold)	Procurement Method	Contracts Subject to Prior Review / Estimated Total Value Subject to Prior Review
	US \$ thousands		
1. Works	>3.0	ICB	All
	250-3.0	NCB	First contract of each year
	<250	Shopping	First contract
2. Goods			

	>250 50-250 <50	ICB NCB .. Shopping	All First contract of each year None
	Pursuant to 3.6 of the Consultant Guidelines	DC	All
3. Services			
-3.A Firms	>200 <200	QCBS QCBS, QBS, FBS, LCS, CQ, SSS	All First contract of each year and later TOR only
-3.D Individuals	>50 <50	Comparison of 3 CV SSS	All TOR only as specified in the PP.

69. **Procurement of Goods.** Goods procured under the project would include: (i) ICT Hardware and Software; (ii) office equipment; and (iii) office furniture through shopping. For large Goods contracts, the procurement will be carried out by using Standard Bidding Documents (SBDs) for Goods or Supply and Installation for all International Competitive Bidding (ICB). (All NCB will be carried out as per the National Bidding Documents agreed with the Bank. Procurement through shopping will be carried out by comparing at least three quotations.

70. **Procurement of Works.** Minor works could include refurbishing of the existing offices /building to accommodate ICT equipment and any small ancillary mechanical, electrical or air conditioning installation. The procurement will be carried out through minor civil works (Shopping) by comparing at least three quotations. In case of larger amount from shopping NCB can be opted for the minor works.

71. **Selection of Consultants.** Consultant services required under this project would support: (i) bridging the remaining gap in the regional broadband communication infrastructure (ii) creating enabling environment that will leverage the regional broadband infrastructure to foster employment; (iii) improvement of government and private sector efficiency and leveraging the regional broadband infrastructure; and (iv) implementation support, development and associated training. Consultant services to be financed from the Credit would be selected in accordance with the Bank Guidelines, and would include: (i) Quality and Cost Based Selections (QCBS); (ii) Selection based on Consultants Qualifications (CQ); (iii) Fixed Budget Selection (FBS); (iv) Least Cost Selection (LCS); and (v) Individual Consultants (IC). Selection over US\$ 200,000 should be advertised in: (i) Development Business (online version); (ii) in local media (one newspaper of national circulation or the official gazette); and (iii) an electronic portal of free

access (CARICOM and/or OECS website) for expressions of interest. A short list of six firms would be drawn from among the qualified interested parties. Individual Consultants would be selected in accordance with Part V of the Consultant Guidelines.

72. **Training.** Procurement training for PCU staff and consultants will be conducted in accordance with a training program that will be submitted to the Bank for its agreement before implementation.

73. **Procurement Plan.** The Borrower has discussed with the Bank team and developed a procurement plan for project implementation, which provides the basis for the procurement methods. This plan has been agreed between the Borrower and the Project Team and is available at the PCU. It will also be available in the project's database and in the Bank's external website. The Procurement Plan will be updated in agreement with the Project Team annually or as required to reflect the actual project implementation needs and improvements in institutional capacity. The Bank team believes that the dates indicated in the procurement plan are realistic and the PCU will adhere to the dates.

74. **Frequency of Procurement Supervision.** In addition to the prior review supervision to be carried out from Bank offices, the capacity assessment of the PCU has recommended at least one post-review mission per year, when not less than 1 in 10 contracts should be reviewed. On the basis of this assessment, PCU capacity may be need to be strengthened by a dedicated senior procurement officer with ICT expertise.

75. **Details of the Procurement Arrangements Involving International Competition: Goods, Works, and Non Consulting Services.** The following table contains the list of contract packages to be procured following ICB and direct contracting.

Ref. No.	Contract (Description)	Estimated Cost (USD)	Procurement Method	P-Q	Domestic Preference (yes/no)	Review by Bank (Prior / Post)	Expected Bid-Opening Date
	Broadband Network	4,570,000	ICB	No	No	Prior	05-30-14

76. **Consulting Services.** The following table contains the list of consulting assignments with short-list of international firms:

Ref. No.	Description of Assignment	Estimated Cost (US\$)	Selection Method	Review by Bank (Prior / Post)	Expected Proposal Submission Date
	Design of broadband infrastructure	200,000	QCBS	Prior	06-25-12

D. Safeguards Policy Issues

77. The activities being financed under the Grenada CARCIP are not expected to have any major negative social and environmental impact. Nevertheless, appropriate safeguards instruments have been prepared to ensure that all project activities meet the requirements of the relevant national legislation and international conventions to which Grenada is a signatory, as well as World Bank Group environmental and social safeguard policies.

78. The exact locations of the backbone network, and possible cross-border link between Grenada and Saint Vincent and the Grenadines have not been determined, and it is therefore premature to undertake a site-specific Environmental and Social Impact Assessment (ESIA) and a Resettlement Action Plan (RAP). Consequently, these will form part of the regional Environmental and Social Management Framework (ESMF) (consistent with national and regional laws, any applicable treaty concerning international waters, and OP/BP 4.01) and a Resettlement Policy Framework (RPF) consistent with OP/BP 4.12, which have been prepared. Prior to project appraisal, the ESMF and RPF have been reviewed by the World Bank and publicly disclosed in country as well as in the World Bank Infoshop. The purpose of the frameworks is: (i) to provide as much information as possible about potential environmental and social impacts (including possible land acquisition and resettlement) at the project's current state of preparation; (ii) to inform the project planning and design process by comparing the potential impacts of alternative locations, configurations, and construction techniques that are under consideration; and (iii) to describe the procedures for subsequent assessment of impacts and development of the appropriate impact management instruments (including associated mitigation measures) when the details of the project become available. These management instruments are likely to be an Environmental and Social Management Plan (ESMP) and Resettlement Action Plan (RAP).

79. Land acquisition issues will be assessed on a project-specific basis, and mitigation plans prepared accordingly. Due to the fact that specific program areas are unknown prior to appraisal, a Resettlement Policy Framework (RPF) has been prepared. The Program is not expected to impact indigenous peoples in any negative way, and therefore OP/BP 4.10 is not triggered. A determination of specific impacts will be made early during project implementation and corresponding Resettlement Action Plans, if applicable, will be prepared.

Annex 10: Technical Annex for Saint Lucia CARCIP

SAINT LUCIA Caribbean Regional Communications Infrastructure Program (CARCIP)

Date: April 24, 2012 Country Director: Francoise Clottes Sector Director: Jose Luis Irigoyen Acting Sector Manager: Juan Navas-Sabater Team Leader(s): Mavis Ampah Project ID: P114963 Lending Instrument: APL	Sector(s): Telecommunications (50%), Information technology (50%) Theme(s): Regional integration (30%), Regulation and competition policy (30%), Infrastructure services for private sector development (40%) EA Category: B (Partial Assessment)
Project Financing Data:	
Proposed terms: IDA Credit on regular terms, with maturity 40 years, including grace period of 10 years. <input type="checkbox"/> Loan <input checked="" type="checkbox"/> Credit <input type="checkbox"/> Grant <input type="checkbox"/> Guarantee <input type="checkbox"/> Other:	
Financing Plan	
Source	Total Amount (US\$6.0million)
Borrower	Local Foreign Total
Total	US\$1.5 US\$4.5 US\$6.0
Recipient: Government of Saint Lucia Saint Lucia Responsible Agency: Ministry of Finance Contact Person: Isaac Anthony Telephone No.: (758)-468-5500 Fax No.: (758) 452-6700 Email: ianthony@gosl.gov.lc	
Estimated Disbursements – APL 1A (Bank FY/US\$ m)	
FY	2013 2014 2015 2016 2017
Annual	0.82 3.10 1.60 0.34 0.14
Cumulative	0.82 3.92 5.52 5.86 6.00
Project Implementation Period: Start August 1, 2012, End August 1 2016 Expected effectiveness date: August 1, 2012 Expected closing date: February 1, 2017	

Project Development Objective:

Saint Lucia CARCIP is fully consistent with the overall program development objective and seeks to increase access to regional broadband networks and advance the development of an ICT-enabled services industry in Saint Lucia and the Caribbean Region.

Project description

Component 1: Regional Connectivity infrastructure. This component will support bridging priority regional connectivity gaps in Saint Lucia through several subcomponents, including a high-speed broadband backbone network, which will provide affordable connectivity to the entire population of Saint Lucia, connect critical institutions including healthcare facilities, libraries, museums, community access points, and also connect the country to global networks such as the CKLN. The component will also support implementation of an Internet Exchange Point (IXP) for regional and national traffic, which will eventually be part of a fully integrated Caribbean Regional IXP. This will ensure that traffic within Saint Lucia and the region is localized, and thereby improve the efficiency of the Internet. The activities will be underpinned by a robust enabling environment, both at the national and regional levels that will maximize the benefits of the infrastructure which will be put in place

1. **Component 2: ICT-led innovation.** This component will provide targeted support for human capacity and business development assistance to nurture the regional IT and IT-enabled services sector. Funds under this component would contribute to collaboration with the private sector for business development activities including business incubation services, targeted skills development and certification programs with regional harmonization, and a pilot e-services program. The activities will complement as well as conform to frameworks and standards being supported at the regional level.
2. **Component 3: Implementation Support.** This component will provide resources for the strengthening and logistic support for a core PCU staff to administer and coordinate the project's implementation. It will also support oversight arrangements and capacity building for key Policy and Regulatory institutions.

Safeguard policies triggered?

Environmental Assessment (OP/BP 4.01)
Natural Habitats (OP/BP 4.04)
Forests (OP/BP 4.36)
Pest Management (OP 4.09)
Physical Cultural Resources (OP/BP 4.11)
Indigenous Peoples (OP/BP 4.10)
Involuntary Resettlement (OP/BP 4.12)
Safety of Dams (OP/BP 4.37)
Projects on International Waters (OP/BP 7.50)
Projects in Disputed Areas (OP/BP 7.60)

X Yes ☐ No
☐ Yes X No
☐ Yes X No
☐ Yes X No
☐ Yes X No
☐ Yes X No
X Yes ☐ No
☐ Yes X No
☐ Yes X No
☐ Yes X No

Conditions and Legal Covenants:		
Financing Agreement Reference	Description of Condition/Covenant	Date Due
Article 4.01 (a)	Saint Lucia to prepare and adopt a Project Implementation Manual.	Effective Date
Article 4.01 (b)	Saint Lucia to appoint a Project Coordinator and establish the Project Steering Committee.	Effective Date
Article 4.01 (c)	Saint Lucia to enter into a Technical Agreement with CTU.	Effective Date
Section II.A.1 of Schedule 2	Saint Lucia to ensure participation and adequate representation to the Regional Steering Committee.	Throughout Project implementation
Section II.B.4 of Schedule 2	Saint Lucia to appoint the external auditors for the Project.	Six months after the Effective Date

I. INTRODUCTION

A. Country context

1. Saint Lucia is a small economy within the CARIFORUM region with important natural resources that has allowed the country to accelerate growth in the past. Saint Lucia is the fifth smallest economy in the CARIFORUM region with a GDP of US\$1.19 billion (2010)⁷⁶. It is also the sixth country within CARIFORUM in terms of land mass (610 km²) with population of 174,000 inhabitants. However, this has not prevented the country from experiencing fast growth in the past. Saint Lucia maintained a fast economic growth, averaging 4.5 percent from 2003 to 2006; above the average within the CARIFORUM region⁷⁷ (3.8 percent) or developed countries like the United States (3 percent) or Spain (3.5 percent).

2. The relatively fast economic growth has, however, been mitigated by the global financial crisis. Saint Lucia's economy experienced a deceleration from 2007 due to a contraction in tourism, construction, manufacturing and agriculture⁷⁸ (the latter also impacted by the Hurricane Dean in 2007, and more recently by Hurricane Tomas). The GDP grew by 1.2 percent in 2007 and 5.4 percent in 2008, followed by a recession in 2009 (GDP contracted by 1.09 percent),⁷⁹ and resurgence in 2010 with growth of 3.1 percent. The impact of the global economic crisis and the increasing competition from other countries was especially harmful to the productive sectors, and agriculture in particular⁸⁰. Foreign direct investment (FDI) also decreased by 9.3 percent and 17 percent in 2009 and 2010 respectively⁸¹. It is important to note that the agricultural sector contributes 4.9 percent of Saint Lucia's GDP, making Saint Lucia the biggest exporter of

⁷⁶ World Bank indicators 2010 (<http://data.worldbank.org/indicator>)

⁷⁷ Simple average of GDP growth

⁷⁸ OECS Regional Partnership Strategy. World Bank 2010

⁷⁹ World Bank indicators 2010 (<http://data.worldbank.org/indicator>)

⁸⁰ UK Foreign and Commonwealth Office

⁸¹ World Bank indicators 2010 (<http://data.worldbank.org/indicator>)

agricultural products in the OECS region, and a key player in the CARIFORUM region.⁸² Manufacturing accounts for 4 percent of the GDP, while the services sector accounts for 67 percent.⁸³

3. The challenging overall context has hindered Saint Lucia's tremendous efforts to sustain debt levels and sound fiscal position. Saint Lucia was able to manage a stable 65 percent debt to GDP ratio during the period 2004-2008 despite Hurricane Dean. However, this rose to 77 percent in 2009. The 12 percent increase was largely due to issuance of bonds and other securities on the Regional Government Securities Market (RGSM), which contributed to the deterioration in the fiscal position. A 40 percent increase in capital expenditure and net lending further raised the overall deficit, which quadrupled in nominal terms from 1.8 percent of the GDP in 2008 to 7.8 percent of the GDP in 2009⁸⁴.

4. Saint Lucia's efforts to improve social conditions have also contributed to elevate the country to an upper middle-income status. Saint Lucia is an upper middle-income country with a GNI per capita of US\$6,560 in 2010, above that of the CARIFORM region (US\$5,550) but below that of the Latin American and Caribbean region (US\$7,735)⁸⁵. Besides, 28 percent of the population is estimated to live below the poverty line (2005/2006) and the unemployment rate was 16.8 percent (2008)⁸⁶. In 2007, the country ranked 69 out of 182 countries⁸⁷ in the UNDP Human Development index. These facts reinforce the clear government strategy to reduce poverty, create employment and improve the living conditions of its citizens, although the highly dependency on foreign economies (mainly through tourism and exports) and exposure to natural disasters make the endeavor more challenging for Saint Lucia. However, the country also benefits from consolidated international relationships like that with the United Kingdom that can help them gain international awareness and competitiveness.

5. Saint Lucia has been exemplary in facilitating the creation of local businesses to boost domestic economic growth. Saint Lucia's government has identified private businesses as a lever to create employment opportunities and growth for the country and is making every effort to improve doing business in the country for both local and foreign investors. The time to start a business in Saint Lucia, for example, decreased by 30 percent from 2008 to 2009 (from 20 to 14 days – compared to 15 days in Germany and 47 days in Spain) and the cost to set a company decreased by 4 percentage points from 2005 to 2010 (23.8 percent of GNI per capita) below the average for the CARIFORUM region (39 percent of the GNI per capita)⁸⁸

6. International support is, however, crucial to complement Saint Lucia's efforts to improve enabling environment and infrastructure for sustained growth. As with a number of the Caribbean countries, the cost of rebuilding infrastructure following disasters can be

⁸² Exports of goods and services in St. Lucia represented 49 percent of the GDP (one of the highest in the CARIFORUM region only surpassed by Barbados (60 percent))

⁸³ World Bank indicators 2010 (<http://data.worldbank.org/indicator>) and World Bank Country At-a-Glance <http://data.worldbank.org/country/st-lucia>

⁸⁴ OECS Regional Partnership Strategy. World Bank 2010

⁸⁵ World Bank indicators 2010 (<http://data.worldbank.org/indicator>) Weighted average using population

⁸⁶ OECS Regional Partnership Strategy. World Bank 2010

⁸⁷ OECS Regional Partnership Strategy. World Bank 2010

⁸⁸ World Bank indicators 2010 (<http://data.worldbank.org/indicator>) Simple average

overwhelming, and international financial support is essential to complement government investment efforts in infrastructure, economic diversification, employment generation and poverty reduction. Fortunately, the response from the international community has been largely positive, with increase in the net official development assistance (ODA) per capita doubling in 2009 to US\$238.7⁸⁹.

7. Saint Lucia has identified ICT as a major economic driver to promote diversified and sustained growth. Saint Lucia's government regards ICT as a growth pole and a key element in its national development strategy, which can assist to achieve the country's vision of economic diversification; increased employment, growth, competitiveness, and productivity; and improved social inclusion.

8. The impact of ICT on economic diversification would depend on a highly effective regional telecommunications market supported by a robust and regionally integrated communication network. As with the overall growth strategy, Saint Lucia stands to benefit from an integrated telecommunications market, which is underpinned by a fully harmonized policy and regulatory framework. In this regard, Saint Lucia must leverage possible synergies with other neighboring economies. By leveraging unified policies, Saint Lucia would be able to accelerate the country's integration into the knowledge and information society, which is essential not only to increase the competitiveness of local business, but also to facilitate the access of Saint Lucia's citizens to the international labor market. This could help to: (i) increase Saint Lucia's visibility in the international arena as part of a bigger and stronger regional player; (ii) harness economies of scale; (iii) share the fixed costs of regional infrastructure; (iv) reduce cost/ improve quality of knowledge sharing and support for common initiatives; as well as (v) boost national and regional trade.

B. Sectoral and Institutional context

9. **Sector** reform began in earnest following establishment of the national telecommunications regulator in 2000. The National Telecommunications Regulatory Commission, (NTRC), supported by the regional regulator (Eastern Caribbean Telecommunications Authority - ECTEL⁹⁰) has been a key player in Saint Lucia's telecommunications liberalization process, setting up a competitive environment and putting in place the appropriate legal framework, regulations and reforms that have allowed Saint Lucia's citizens to enjoy better services at lower prices. Jointly these institutions promote competition and ICT development by performing regulatory and administrative functions relating to licensing, tariffs spectrum management and universal service. Numerous licenses have been granted for fixed, mobile and internet service provision. As of 2010, Cable & Wireless Saint Lucia (now trading as LIME) offers a full range of services including fixed-line and mobile telephony, international leased circuits, Internet services, and CATV. Digicel offers mobile telephony and internet services. Karib Cable also offers fixed telephony, Cable TV and internet services⁹¹.

⁸⁹ World Bank indicators 2010 (<http://data.worldbank.org/indicator>)

⁹⁰ The ECTEL was established by the governments of Dominica, Grenada, Saint Christopher and Nevis, Saint Lucia, Saint Vincent and The Grenadines

⁹¹ ECTEL

10. The Government of Saint Lucia has shown tremendous support for ICT projects and continues to create a conducive environment for ICT development. The Government was a key partner in the Telecommunications and ICT project where a full legislative and regulatory review was undertaken of the Telecommunications Act No.27 of 2000 and its supporting regulations. As a result of the process, Saint Lucia has just concluded consultation on the Electronic Communications Bill, which seeks to address legal, regulatory, and policy gaps identified in the Act. The new Bill also recognizes ICTs and not just telecommunications, and provides more support to the regulator in areas pertaining to anticompetitive behavior and domain name management. The completion of the Saint Lucia National ICT Policy and Strategy has provided a roadmap for ICT development in all key sectors. The Committee of Permanent Secretaries and the National ICT Office/Taskforce are responsible for coordinating and aligning ongoing ICT projects within the Government domain. The policies and regulatory requirements for successful project implementation are in place and are modern. Many agencies are involved in this project and timely and successful completion hinges on the effective coordination and communication of all agencies involved.

11. Saint Lucia is also a beneficiary country under the International Telecommunications Union's (ITU) HIPCAR project. Through this initiative the country was able to review and propose amendments to the Interception of Communication Act, the Freedom of Information Bill, the Universal Service, Interconnection and Licensing regulations. Between HIPCAR and EGRIP a complete review of the suite of e-laws has been accomplished.

12. Sector liberalization and increased competition has resulted in a decrease in ICT prices, which are, however, still high compared to developed economies. ICT prices have been driven down (the average ICT Price Basket decreased from 6.5 percent of the GNI per capita in 2008 to 4.9 percent of the GNI per capita in 2010), resulting in a slightly better ranking for Saint Lucia than the average in the CARIFORUM region (5 percent of the GNI per capita in 2009). The rates are still very high in comparison to those of developed countries (for example the average ICT Price Basket in the US was 0.5 percent of the GNI per capita in 2009). This limits the affordability for Saint Lucia's citizens and businesses and becomes an additional hurdle for the penetration of the ICT services across the country, resulting in a loss of competitiveness and productivity. Although the average price of the fixed broadband sub-basket decreased dramatically from 12.2 percent of the GNI per capita in 2008 to 6.8 percent of the GNI per capita in 2010, the gap with the US was still above 5 percent points (in the US, the average price of the fixed broadband sub-basket in 2010 was 0.5 percent of the GNI per capita). For fixed telephony the gap is narrower. The average price of fixed telephone sub-basket for Saint Lucia was 2.6 percent of the GNI per capita in 2010 compared to 0.3 percent of the GNI per capita for the US. The average price of the mobile cellular sub-basket for Saint Lucia was 5.1 percent of the GNI per capita in 2010 is very high compared to 0.8 percent of the GNI per capita in the US⁹². The figures however show the important efforts made in Saint Lucia to drive prices down but at the same time depict the room for improvement that is still ahead.

13. Mobile telephony has become the main source of revenues in the ICT sector, displacing fixed telephony. As it has been the trend in other countries, mobile telephony has grown rapidly, averaging 5 percent annual growth for 2006-2010 and achieving an impressive 103 percent

⁹² Data from ITU, Measuring the Information Society, 2011

penetration in 2010. The increased competition in the mobile sector starting in 2003 when Digicel entered the market (Cable & Wireless Saint Lucia was the incumbent operator) has also fueled this growth. A number of operators were also allowed to provide international services, which led to a significant drop in call prices⁹³. On the contrary, penetration for fixed telephony has remained stagnant at around 23 percent during the same period⁹⁴.

14. Positive growth in fixed broadband and internet access but more needs to be done to use as lever to boost its economic development. Fixed broadband penetration has grown on by an average of 7 percent from 2006 through 2010, reaching a 10.67 percent in 2010, which is aligned with the average fixed broadband penetration of the CARIFORUM region⁹⁵ (12.53 percent) or with a reference country in innovation like Chile where the fixed broadband penetration was 10.69 percent in 2010. However, the country is still far from that of developed countries like the US, where the fixed broadband penetration was 26.45 percent in 2010⁹⁶. The case of Internet users is similar. The penetration was 11.9 percent in 2009, far away from that in developed countries (for example, in the US the internet penetration was 79.3 percent in 2010). Though geographic coverage of Internet services is widespread in Saint Lucia there is limited growth/penetration. Both rural and urban areas have sufficient coverage however the uptake of Internet services is much less in rural areas than in urban areas. The high cost of internet access devices coupled with the cost of internet service makes it very economically challenging. Affordable broadband coupled with solutions such as establishment of community access points and e-literacy training is the path to bridging the rural-urban divide and the greater international digital divide. Saint Lucia is expected to have the highest international telecommunications traffic demand (measured in Mbps) within the OECS region (3,854 Mbps in 2020)⁹⁷. The increase in demand shows the ICT progress within the country and, at the same time, brings an important rationale for providing the country with the necessary international communications. The country is currently served by three international submarine cables (ANTILLES CROSSING, ECFS and GCN) but the rise in demand (not only in Saint Lucia but also in the rest of countries served by those cables) may require reviewing the existing capacity of those cables in order to assess whether additional capacity would be necessary. Ensuring that Saint Lucia has the appropriate international communications in terms of capacity and quality of service is a pre-requisite for Saint Lucia's continued integration within the Caribbean region and the opening up process to international markets, as well as to increase its competitiveness.

15. Previous efforts have enhanced Saint Lucia's ICT global competitiveness and development but additional policies and investment are necessary to continue narrowing the Digital Divide with developed countries. Saint Lucia ranks 73 out of 181 under the Digital Opportunity Index (its DOI was 0.46) aligned with the average for CARIFORUM countries (0.466⁹⁸), but still far from other Latin American countries like Chile (41) or Argentina (54) and developed countries like the US, who ranks 20⁹⁹. Additional endeavors on ICT deployment,

⁹³ Caribbean Advanced Regional Communications Infrastructure Assessment Study, 2010

⁹⁴ ITU ICT Statistics

⁹⁵ Simple average

⁹⁶ ITU ICT Statistics

⁹⁷ World Bank AXIOM/Terabit: *Eastern Caribbean Submarine Cable System – Detailed Feasibility Study*, 2006

⁹⁸ Simple average

⁹⁹ ITU's DOI has been designed to as a tool for tracking progress in bridging the digital divide and the implementation of the outcomes of the World Summit on the Information Society (WSIS). As such, it provides a

necessary to bridge that gap, would also have positive social and economic effects for Saint Lucia: (i) Allowing Saint Lucia to integrate rural population (which represents 72 percent of the total population¹⁰⁰) and to connect them globally; (ii) Permitting local SMEs to gain global visibility and competitiveness and expand markets; (iii) Contributing to develop an entrepreneurial community (IT and non-IT related) and pushing the ICT industry forward (in 2008 ICT good exports only accounted for 5.7 percent of the total goods exports whereas the figure was 10.9 percent for the Latin American & Caribbean region¹⁰¹); (iv) Becoming a lever to attract foreign business and investment; and (v) Enabling social progress by creating an application layer with solutions like e-commerce and e-government. For that purpose, it is necessary that Saint Lucia's regulator put in place a set of clear ICT policies that are able, on one hand, to boost internet and broadband penetration and, on the other hand, to sow the seeds that may create a flourishing ICT ecosystem that increases Saint Lucia international exposure.

16. Further developing e-Government would create progress and increase citizen participation. Saint Lucia's e-government development index value was 0.4471 in 2010, outperforming the average of the CARIFORUM region (0.4301) and the overall Caribbean and Latin America region, whose e-government development index value was 0.4454, but still separated from developed countries like the US where the index value was 0.8510¹⁰². It is also important to analyze separately each of the three components of the index: (i) online services; (ii) telecom connectivity and iii) human capacity. Online services component¹⁰³ was 0.0378, somewhat behind the CARIFORUM region (0.0554) and far from the United States (0.3184) or the Korean Republic (the leader of the ranking, with 0.34), which demonstrates the need to work on the government digitalization. Telecom connectivity component¹⁰⁴ (0.1158 compared to 0.0497 in the CARIFORUM and 0.3184 in the US and 0.34 in the Korean Republic) shows the positive outcome of the national efforts to increase the penetration of the ICT services and, at the same time, the challenge to continue working in that direction, especially with fixed broadband. Human capacity component¹⁰⁵ was 0.2934, again above the CARIFORUM (0.2798) and not far from the 0.3198 in the US and 0.3277 in the Korean Republic, which shows that Saint Lucia's population is well educated. It seems that the online services component should be the initial focus and the first step must be to ensure a government network that allows to interconnect the

powerful policy tool for exploring the global and regional trends in infrastructure, opportunity and usage that are shaping the Information Society. It has a focus on the adoption of new technologies, such as broadband and mobile Internet.

¹⁰⁰ World Bank indicators 2010 (<http://data.worldbank.org/indicator>)

¹⁰¹ ICT At-a-glance, World Bank, 2010 (http://devdata.worldbank.org/ict/lca_ict.pdf)

¹⁰² E-government development index value is an indicator calculated by the United Nations. It is a comprehensive scoring of the willingness and capacity of national administrations to use online and mobile technology in the execution of government functions. Mathematically, it is a weighted average of three normalized scores on the most important dimensions of e-government, namely: scope and quality of online services, telecommunication connectivity, and human capacity.

¹⁰³ Online services component was based on a research survey with four sections corresponding to the four stages of e-government development. The first of these includes questions relating to attributes that would be considered typical of an emerging online presence, the second to an enhanced presence, the third to a transactional presence and the fourth to a connected presence.

¹⁰⁴ The telecommunication infrastructure index is a composite of five indicators: number of personal computers per 100 persons, number of Internet users per 100 persons, number of telephone lines per 100 persons, number of mobile cellular subscriptions per 100 persons and number of fixed broadband subscribers per 100 persons.

¹⁰⁵ The human capital index is a composite of two indicators: adult literacy rate and the combined primary, secondary, and tertiary gross enrollment ratio.

Ministries, offices and agencies so that country data can be easily gathered and consolidated. This, accompanied with other measures like facilitating population access to computers and training government officials and citizens about how to digital services would have a tremendous impact on people's access to e-services and their participation in electronic procedures.

17. Addressing remaining gaps in Saint Lucia's domestic communications network is essential to increase quality, decrease costs and facilitate its integration within the Caribbean Regional communications network. Bridging the domestic connectivity gaps in Saint Lucia is crucial to allow the country to connect to regional backbones like CKLN as a key step towards the regional market integration strategy that will facilitate trade exchanges, employment generation and increase in competitiveness of the region and the member countries. Furthermore, Saint Lucia's current domestic Internet traffic is routed through the US increasing the delays and latencies and thereby harming the user performance. Other than that, the wholesale costs are far higher than if the traffic was domestically routed. The installation of an Internet Exchange Point (IXP) would allow routing of the traffic more efficiently ensuring that only international traffic leaves the domestic network and thereby improving the quality of service and decreasing the price for end users as well. The integration of Saint Lucia's IXP within the Caribbean Regional IXP would further support the country's integration at the regional and global levels.

18. Saint Lucia needs to further strengthen its ICT legal framework. Saint Lucia already has trademark and patent regulations in place that ensure intellectual property rights¹⁰⁶, but it is necessary to develop a detailed legal and regulatory framework that addresses electronic security and privacy. This step is essential to guarantee that the ICT ecosystem has clear legal rules so that the rights of the users of ICT services are protected.

19. Saint Lucia has the potential to create an IT entrepreneurial ecosystem that could turn the country into an innovation pole. Saint Lucia possesses an educated skilled workforce with a set of available professionals for e-business and an increasing ratio of e-literacy among citizens (it was 30 percent in 2006)¹⁰⁷. However, policies are necessary to orchestrate and promote innovation by fostering an entrepreneurial community within the region that creates IT businesses with global exposure. The existing policy encourages the participation of foreign investors in ICT businesses¹⁰⁸ should be complemented with specific actions that may create a venture capital ecosystem. With these measures, not only would Saint Lucia and its neighbors allow their citizens to create their own companies, but they would also attract worldwide leading IT companies to open facilities in the region thereby generating additional employment opportunities for nationals.

20. CARCIP Saint Lucia provides a great opportunity to tackle many of Saint Lucia's and the region's challenges by leveraging ICTs. CARCIP could provide financial and technical assistance to improve regional connectivity infrastructure, enabling policy and regulatory environment to ensure competitive access and use of the infrastructure to accelerate growth, improve governance and accommodate emergency communication and disaster recovery needs.

¹⁰⁶ ICT Development Strategy for St. Lucia (draft for consultation) Mega Ace Consultancy, July 2006

¹⁰⁷ ICT Development Strategy for St. Lucia (draft for consultation) Mega Ace Consultancy, July 2006

¹⁰⁸ ICT Development Strategy for St. Lucia (draft for consultation) Mega Ace Consultancy, July 2006

It could also support the region in the creation of an ICT environment that encourages the creation of local businesses to increase economic competitiveness.

21. CARCIP is fully aligned with Saint Lucia's Government's economic diversification program. The program will support Saint Lucia's aspirations for economic growth and will rely on ongoing regional experiences like the E-Government for Regional Integration Program (EGRIP) that is helping to promote the values and benefits of ICTs as economic growth drivers. CARCIP will allow Saint Lucia's citizens to enjoy better access to affordable telecommunications services and better access to public services. Specifically, CARCIP aims at: (i) bridging the gaps in Saint Lucia's broadband communications infrastructure; (ii) setting up the policies and regulatory frameworks to develop IT and IT-Enabled Services (ITES) industries as drivers to foster employment and economic growth; and iii) supporting institutional development and capacity building to ensure an effective ICT strategic framework.

22. All CARCIP interventions target the end user. For example the Virtual Private Network will host applications that will be utilized by Public Servants and the General Public. Therefore training and exposure to e-services and m-applications must be in tandem with the rollout of these networks and platforms. The Government has already taken the initiative to include a training component in the rollout of Universal Service. There has also been a move to include a greater weighting of IT in the school curriculum and equip all schools with Computer laboratories and broadband connections.

C. Higher Level Objectives to which the Project Contributes

23. Contributes to Saint Lucia's economic growth by increasing access, quality and affordability to broadband connections. Broadband networks have a transformational social and economic impact. Recent research published under the World Bank IC4D09 flagship report¹⁰⁹, for example shows that a 10 percent increase in broadband penetration in developing countries can have an impact of close to 1.4 percent increase in GDP per capita¹¹⁰. This also has additional economic and social impact: (i) there is evidence that higher rates of ICT penetration are associated with greater levels of exports¹¹¹; and (ii) employment is generated (a recent study¹¹² concludes that if Latin American countries were to increase broadband penetration to its potential, they could create almost 400, 000 new jobs).

24. Contributes to Saint Lucia's objective of fostering integration within the Caribbean region. Saint Lucia's competitiveness largely depends on leveraging economies of scale established with other Caribbean countries as well as collaborating with other countries to increase the competitiveness of the region. A main component of that integration is the telecommunications connectivity, especially broadband that will allow Saint Lucia to establish trade and information networks with other countries through existing regional backbones like CKLN. This is a key step towards the ultimate goal of opening up to the global international

¹⁰⁹ See <http://go.worldbank.org/DMY979SNP0>.

¹¹⁰ See <http://www.worldbank.org/ict> to access these and many other relevant publications and studies.

¹¹¹ Telecommunications Infrastructure and Economic Development: A Simultaneous Approach; Lars-Hendrick Röller & Leonard Waverman, American Economic Review, 2001

¹¹² Katz, R., Estimating Broadband Demand and its Economic Impact in Latin America (2009), available at <http://unpan1.un.org/intradoc/groups/public/documents/gaid/unpan036761.pdf>

market. Access to international markets is a crucial step for local companies that need to expand internationally. Increased competitiveness of the private sector would also have various benefits for Saint Lucia, including increased employment opportunities, investment and technical expertise. It would also generate more tax revenues for the country.

25. Contributes to emergency national plans with a more resilient regional infrastructure and an emergency communications network that allows the government to be more responsive. Saint Lucia has a geographic location that has made the country suffer from natural disasters like the Hurricane Tomas in 2010. In those situations, high levels of official responsiveness and coordination are essential to save lives. CARCIP will contribute to that aim by providing Saint Lucia with an emergency communications network that facilitates and improves government current procedures and service delivery. Also, support for broadband backbone networks provided under CARCIP will create alternative routes for regional traffic, which will enhance the resilience of the regional networks in the face of frequent natural disasters.

26. Supports the consolidation of a regional IT industry environment that allows for the creation of new businesses. Local businesses are the engine for a country not only because they bring revenues in the form of taxes but also because they generate job opportunities and therefore create wealth. CARCIP aims to support Saint Lucia and its neighbors in that endeavor so that an innovative and entrepreneurial community that allows incubation of local companies. This will in turn improve the attractiveness of Saint Lucia as a destination for IT business. In addition to the interventions at the country level, support will also be provided at the regional level for the harmonization of IT industry skills, certification and accreditation programs to ensure the region exploits economies of scale in attracting investment to this growing new industry.

27. Improves government efficiency and transparency and access to service allowing the development of e-government and e-society applications. CARCIP seeks also to enlarge the government infrastructure to connect and equip government offices in order to facilitate their procedures and thereby ease the access of citizens to information. This initial phase of CARCIP seeks to constitute the grounds on which e-applications (e-government and e-society solutions) would rely making Saint Lucia progress and narrowing the Digital Divide.

II. PROJECT DEVELOPMENT OBJECTIVES

A. PDO

28. **The project development objective (PDO) of Saint Lucia CARCIP is fully consistent with the overall program development objective and seeks to increase access to regional broadband networks and advance the development of an ICT-enabled services industry in Saint Lucia and the Caribbean Region.**

29. The objective of CARCIP is expected to be achieved through: (a) targeted investments in ICT infrastructure that fills the gaps at the regional and domestic level, in partnership with the private sector and other development partners, where applicable; (b) creating an enabling environment that fosters competitive access to infrastructure and the creation of an IT/ITES and other applications industry; (c) enabling and supporting the creation of e-services, including e-

and m-government services; and (d) strengthening of institutional capacity/arrangements to ensure effective program implementation and outcomes.

B. Project Beneficiaries

30. CARCIP will benefit the citizens of Saint Lucia. The primary target groups of the project are the ICT services consumers (business and residential), IT/ITES and other knowledge-intensive businesses and employees, and e- and m-government services users. It is expected that: (a) ICT consumers in Saint Lucia will enjoy greater access to better quality and lower prices of ICT services, including high speed internet access; (b) the number of IT/ITES and other knowledge-intensive businesses and employees increase; and (c) the number of e- and m-government services increases and; thus, the quality of public services is enhanced.

C. PDO Level Results Indicators

Project Objective	Development	Outcome Indicators	At closing of Project
To increase access to regional broadband networks and advance the development of an ICT-enabled services industry in Saint Lucia and the Caribbean Region.		<ul style="list-style-type: none"> • Number of Internet Users • IT/ITES employment • Businesses receiving Support through the project • Direct project beneficiaries, (of which are female) 	<ul style="list-style-type: none"> • 51 • 5,500 • 20 • 9,000 (50%)

III. DETAILED PROJECT DESCRIPTION

A. Project components

31. CARCIP in Saint Lucia, in line with the overall Program, will have the following three components:

Component 1 – Connectivity (US\$3.5 million):

32. This component will support bridging priority connectivity gaps in Saint Lucia, and connect Saint Lucia with regional backbones through several subcomponents as detailed below:

- (a) ***Enabling environment (US\$ 0.35 million)*** – Technical Assistance and Capacity Building for: (i) the design of PPP frameworks consistent with those designed at the regional level, including validation of design/costs for the broadband infrastructure, (US\$0.15m); and (ii) design of enabling regulation harmonized at the regional level and provision of effective regulatory oversight in key technical areas including infrastructure sharing and open access for NTRC/Public Utilities (US\$ 0.2m).

- (b) **Broadband Backbone Network (US\$2.025 million)** – Support of government’s contribution to develop a high speed broadband backbone network to connect major populated centers to existing regional broadband networks, as well as increase cross-border connectivity with neighboring countries. The broadband backbone network would provide affordable regional connectivity to the entire population of Saint Lucia, will enhance the overall resilience of the regional network, and could be further leveraged as the primary backbone for a National Research and Education Network which would be linked to the Caribbean Regional Research and Education Network (C@ribNet), currently being deployed throughout the region, including Saint Lucia, and being coordinated and managed by CKLN. Financing of the connectivity infrastructure would be based on a competitive “least-cost” subsidy under a public-private partnership model, and payments would be triggered by demonstrated delivery of pre-defined “outputs”. The Project will support: (i) financial, legal and regulatory services to design and implement the “PPP” subsidy mechanism, including the tender documentation and tender process; (ii) consultant services for environmental screening; and (iii) the services of an independent verification agent to certify that winning bidders have fulfilled the “outputs” of their service agreements. The principles underlying this component include: (a) private-sector led supply of the infrastructure, supported by least-cost public subsidy, and (b) infrastructure shall be provided on non-discriminatory, open access and competitively neutral basis.
- (c) **Government Network (US\$1.1m)**: The backbone network could provide a unique opportunity for key government agencies (including Inland Revenue, post offices, schools, health facilities, police, security/emergency response agencies) to connect directly to each other through a virtual private network (VPN). Minimal support would be provided under the project to leverage funds from the USF in the form of Output based subsidies for improved connectivity in key rural health, police and other strategic locations where connectivity gaps remain, and for establishing this VPN. It is expected that similar private networks in the region will connect to each other to create a regional network that will improve communication between government agencies in the region. This is critical for the small and vulnerable islands in the region and in line with the regional integration agenda.

In view of the country’s recent experience with major hurricanes, it should be possible to leverage the network for reliable and fast national emergency communications, (possibly including mobile system, independent of terrestrial network but providing interoperability between key agencies such as fire, police and rescue departments). This could assist government to be responsive to emergencies/national disasters, and citizens to react efficiently to emergency notifications. It is expected that national emergency networks will interconnect at the regional level, enhancing the region’s response as a whole to natural disasters.

- (d) **Internet Exchange Point (US\$0.025 million)** – Technical support to establish an Internet Exchange Point (IXP) to allow Internet traffic to be channeled in a more efficient way by ensuring that traffic stays local without the need to transit through third party countries before coming back to Saint Lucia. This could result in improved access speeds and reduced latency as well as reduced costs to the consumer. Support could also include structuring of ownership and management of IXP, including development of Memorandum of

Understanding between IXP Partners. It is expected that Saint Lucia IXP will eventually be part of fully integrated Caribbean Regional IXP, which will ensure that traffic in the region remains regional, thus further reducing the cost of connectivity.

33. The bulk of the IDA funding will support connecting Saint Lucia and many locations within Saint Lucia to regional and global networks and is therefore regional in nature, with the only possible exception of the government network sub-activity (more details in Annex 2).

34. A Project Preparation Advance (PPA) was granted following request by the Government of Saint Lucia. Part of it will assist in an Audit of the current network, and support for design and preparation of draft RFPs for the PPP. Besides, the World Bank also secured limited grant funding through the Korean Trust Fund, which will assist Saint Lucia and other countries in the region with additional assessment of regional connectivity gaps, validate the costs and potential economic benefits, as well as further explore the PPP frameworks. This work will accelerate the implementation of the connectivity component of the program.

Component 2- ICT- Led Innovation (\$1.76 million)

35. This component will provide targeted support for human capacity building and business development to generate employment and strengthen the country's entrepreneurial base, complemented with a pilot eTransformation program to leverage regional ICT entrepreneurs for the deployment of a number of e-services. Activities to be funded will include:

- (a) **Technology/Business Incubation Services (\$0.56 million)** – Funds under this component would support the Government's efforts to nurture local innovation and develop a more sustainable entrepreneurial base by providing grant funding for business development/incubation aimed at promoting the creation of a new ICT-enabled industry in the country and the region as a whole. It will also provide technical assistance for the Business Incubation/Technology centers in the form of world class facilities for training and certification. The local ICT facilities are expected to form part of a regional network of ICT Centers and Business Incubators, which will position the region as an attractive destination for ICT business.

Eligibility criteria and selection processes for the grant share of project funding will be described in Business Incubation and Grants Manual.

- (b) **Skills Development and Certification Program (\$0.7 million)** – This component will complement on-going efforts by Government to prepare the youth for the job market (efforts through institutions such as the Sir Arthur Lewis Community College and the National Skills Development Centre and other accredited private institutions). The project will provide resources to train and certify youth on IT-related skills with regionally harmonized curricula (e.g. software/apps development, database management, web development) linking with businesses to ensure a market-driven approach that can generate jobs in this new industry and facilitating certification and mutual recognition of this certification at the regional level and possibly at the international level as well. The component will also include capacity building workshops.

The eligibility criteria and selection processes for the grant share of project funding under the above two sub-components will be described in Business Incubation and Training Grants Manual and supported by a dedicated grant manager

- (c) ***eTransformation (US\$0.5 million)*** This innovative sub-component will build on work currently being undertaken through EGRIP. The project will support a multi-purpose ID system (e-id), which will be used for all public services. It will also explore relevant mobile-based applications that can improve public service delivery. The applications developed will need to conform to regional standards on network architecture, interoperability, etc. to allow for a fully integrated regional communications network. Given that Saint Lucia is the only country that includes this specific activity, it is currently kept at a small amount and considered a pilot for the regional eTransformation Program to be later expanded and rolled out in other countries.

36. The ICT-led innovation component is therefore structured as three sub-components, one focused on facilities, the other one on skills development and accreditation and a final one focused on e-services on a pilot basis. This component forms an integral part of the Caribbean Region's strategy to position itself as a formidable destination for IT and IT-Enabled Services (ITES). The activities being funded under this component are therefore critical pieces, which aggregate to ensure that the regional objective is achieved. It is hence almost impossible to unbundle the activities based on their regional vs. national impacts.

Component 3 – Implementation Support (US\$0.74 million)

37. This component will support the following activities:

- (a) Strengthening of PCU
- (b) Hiring of Project Coordinator
- (c) Training for regulator/ministry and or PCU
- (d) Logistic support (PCs, office equipment, operating costs, audits, monitoring and evaluation (M&E), and communication support)

The Table below provides a tentative illustration of the estimated breakdown of the IDA funding into activities that link directly to the regional agenda, and those that can be seen as supporting the objective at the national level.

Saint Lucia			
Component 1			
	Activity	Regional Activities (US\$)1/	National Activities (US\$)1/
	Enabling Environment	350.000	
	Backbone Broadband Network	2.025.000	
	Government Network		1.100.000
	Support for IXP	25.000	
	Total	2.400.000	1.100.000
Component 2			

	Activity	Regional Activities (US\$)	National Activities (US\$)
	Technology/Business Incubation	374.000	186.000
	e-transformation	333.000	167.000
	Skills Development/Certification	700.000	
	Total	1,407,000	353,000
Component 3			
	Activity	Regional Activities (US\$)	National Activities (US\$)
	Implementation Support	740.000	

1/ Regional activities are jointly financed by national and regional IDA, while national activities are fully financed by national IDA.

B. Project financing

38. **Lending will be an Adaptable Program Loan.** The lending instrument is an Adaptable Program Loan (APL), which allows countries to join at different points in time, depending on interest and readiness. Financing for the program is expected to include a combination of several sources of financing: World Bank lending, donor grant funding, government own resources and substantial amounts of private sector investment.

39. **World Bank financing for Saint Lucia will be on the basis of an IDA credit (40 year loan, with 10 years grace period, zero interest rate, 0.75 percent service charge).** The total amount of IDA resources required for Saint Lucia-CARCIP is estimated at US\$6 million. Given that this is structured as a regional IDA operation, countries will be eligible to receive IDA resources beyond their country allocations, since regional projects typically count only 1/3 towards their national allocation and the other 2/3 come out of a special regional IDA pool. The World Bank will also continue to strive to engage in dialogue with donors to attract as much grant funding as feasible.

IV. IMPLEMENTATION ARRANGEMENTS

A. Project Administration Mechanism

40. The program requires a strong local implementation reach to ensure national oversight over borrowed resources and to ensure adequate coordination with the various initiatives being implemented at the national level.

41. At the working level, a full time Project Coordinator will be recruited, who would be responsible for coordinating among all the national stakeholders, leading the technical implementation team and working in tandem with the NTRC, relevant Ministries and Private sector, and the fiduciary agency - (PCU under the Ministry of Finance). The Project Coordinator would be based under the Ministry of Public Service, Information and Broadcasting, and will report directly to the Permanent Secretary of the Ministry.

42. Saint Lucia will leverage the existing PCU under the Ministry of Finance for all fiduciary activities under CARCIP. The Government will establish a project steering committee to ensure

adequate participation of the various government agencies involved in project implementation, including the Ministry of Public Service, the National Telecommunications Regulatory Commission (NTRC), the Ministry of Public Utilities, and the Ministry of Finance. Other stakeholders will be invited to participate in the steering committee, as the need may arise, notably the Ministries of Education, Health, Tourism, Commerce, NEMO, ECTEL, EGRIP, among others, and the private sector.

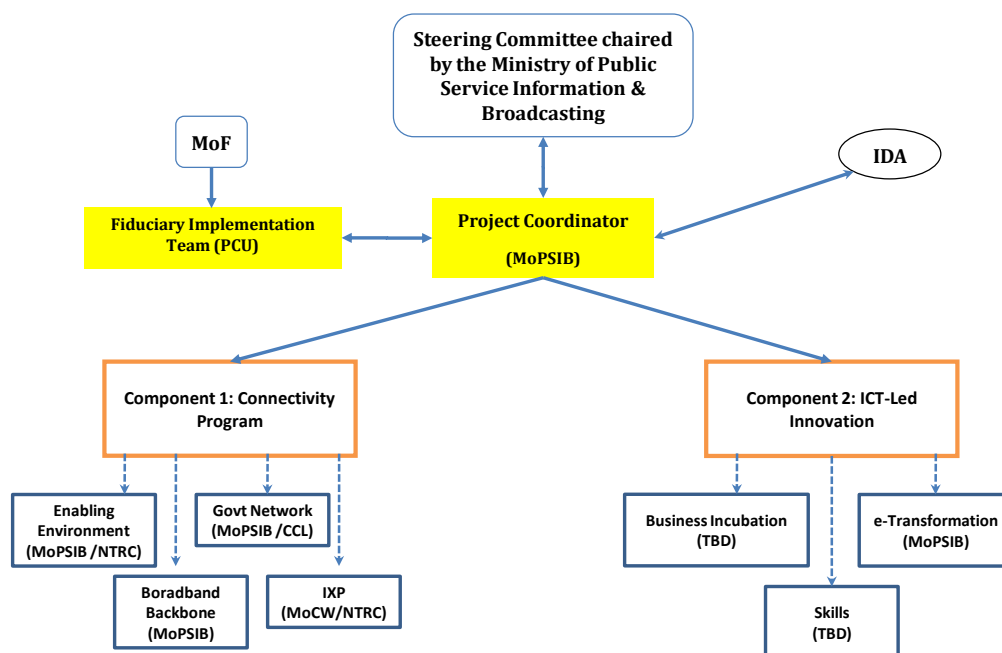
43. Using the PCU will minimize implementation costs. The PCU will be in charge of the day-to-day management of the project technical and logistical aspects, including the work program and coordinating with the relevant ministries and departments, procurement, financial management and monitoring and evaluation. A Project Implementation Manual will be prepared and ready before project effectiveness.

44. The implementation of each component will be accompanied technically by the respective Government agency where the greatest impact will be made. For the Component 1: Connectivity, the MoPS together with CCL will provide support on the Government Network subcomponent. The IXP subcomponent will be spearheaded by the Ministry of Public Service, Information and Broadcasting and NTRC. OB Subsidies will be managed by the MoPS and NTRC and the Emergency Communication network will include NEMO. Each of these Ministry/agencies will designate a focal person to liaise with the Project Coordinator and the PCU.

45. The following chart summarizes the implementation arrangements for Saint Lucia:

CARCIP Implementation Arrangements

National Level - SL



B. Financial Management and Disbursements

46. **Introduction.** Financial management of the Project funds in Saint Lucia will be undertaken by the PCU currently located within the Ministry of Finance, Economic Planning and National Development. The PCU has considerable experience with implementing the financial aspects of World Bank Projects in Saint Lucia. Its Financial Management performance has been Satisfactory.

47. **Conclusion.** An assessment of the financial management capacity of the PCU was undertaken in May-September 2011 and updated in January 2012. The conclusion is that once the Action plan proposed in this document is implemented, the financial management arrangements will meet the Bank's requirements under OP/BP10.02 and will be adequate to provide, with reasonable assurance, accurate and timely information on the status of the project implementation. The residual financial management risk is assessed as being Medium.

48. **Financial Management Risks Rating.**

	Risk Assessment				Risk Mitigation Measures	Residual Risk
	H	S	M	L		

	Risk Assessment				Risk Mitigation Measures	Residual Risk
	H	S	M	L		
Inherent Risk						
Country level		X			Although the FM risk at the country level is Substantial, there should be no impact on the project’s financial management arrangements.	M
Entity level			X			M
Program level			X			M
Overall Rating Inherent Risk			X			M
Control Risk						
Staffing		X			Dedicated accountant will be assigned to serve the project needs.	M
Budget				X		L
Accounting			X		.	M
Internal controls				X		M
Funds flow			X			M
Financial reporting			X		IFR format will be agreed-upon during the project preparation.	M
Auditing			X			M
Overall Control Risk			M			M
Residual Risk Rating			M			M

H = High; S = Substantial; M = Moderate; L = Low

49. **Use of Country Systems.** The Government of Saint Lucia has been striving to improve the overall performance of its public administration and financial management. While some of the country institutions, including the Director of Audit, have been traditionally strong, in the recent years significant effort has been mounted to enhance the quality of budget preparation and

execution processes. The Centralized PCU responsible for the implementation of the World Bank-financed projects works in close collaboration with the Treasury, Director of Budget, implementing ministries, and other governmental agencies and departments. Although it is staffed with external consultants and at present focuses exclusively on the implementation of the World Bank-financed projects, de facto, many of its activities are mainstreamed with those of the government. One significant remaining hurdle is represented by the fact that PCU accounting and payment processes are still not integrated into the government's IFMIS (SmartStream). A number of actions have already been taken and are planned to be taken within the next 18 months to close this gap. Design of the Financial Management arrangements for this project took into consideration these transitional arrangements, which are described below in the respective paragraphs.

50. **Personnel.** The PCU is currently staffed with three accountants, who are assisting existing projects. They are supervised by the PCU coordinator, who previously acted as the financial management specialist. As such, the PCU has sufficient staffing capacity to adequately serve the project needs.

51. **Accounting Policies and Procedures.** The PCU uses a designated accounting software (QuickBooks) to maintain existing projects accounts. Projects' accounting information is manually transferred into the government IFMIS (SmartStream) on a monthly basis. Recognizing the imperfection of this arrangement, the PCU has recently obtained a Viewer access to the SmartStream. It is expected that by June 30, 2012 it will have a Full access, allowing it to directly enter projects expenditures into the government's system. Once this arrangement is put in place and tried, it is planned that the Project's Designated Account will be linked to the consolidated fund of the Government of Saint Lucia, and the entire payment process will be transitioned into the SmartStream. Table below summarizes a sequence of proposed accounting arrangements for this project.

#	Date	Action	Accounting Arrangements	Payment Arrangements
1.	Project effectiveness of June 30, 2012	PCU is granted a Full access to SmartStream.	Detailed project records are kept in QuickBooks using a project specific Chart of Accounts. Cumulative project expenditures are transferred to the SmartStream by the PCU project accountant on a monthly basis.	Payments are processed through QuickBooks.
	June 30, 2013	4. Designated Account is linked to SL Consolidated	Project transactions are entered directly	Payments are processed through the

		Fund; 5. Gov't Chart of accounts is adjusted to include project classification; 6. Payments and accounting procedures are reviewed and agreed upon by the Treasury, MoF (Implementing Ministry) and the PCU; 7. Project Implementation Manual is adjusted to reflect changes described above.	into the SmartStream	SmartStream.
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Project transactions will be recorded as incurred, and all primary supporting documentation will be maintained to facilitate ex post reviews and the external annual audits. Such documents should be maintained for a minimum period of five years. The detailed accounting policies and procedures will be set forth in the updated Project Implementation Manual.

52. **Budgeting.** Project annual budgeting will be based on the cost tables, and will be updated according to the latest information as the implementation will rollout. The annual budgets will be prepared by the PCU in collaboration with the Implementing ministry, and submitted to the project TTL and Government of Saint Lucia for the final approval. The approved annual budget will be included in the budget estimates, entered into the accounting system and used for periodic comparison with actual results as part of the interim reporting.

53. **Internal Controls and Safeguard of Assets.** The updated Financial Management Manual will reflect the structure of the PCU, administrative arrangements, internal control procedures, including procedures for authorization of expenditures, maintenance of records, safeguard of assets (including cash), segregation of duties to avoid conflict of interest, regular reconciliation of bank account statements, bank signing mandate (to include at least two signatories), regular reporting to ensure close monitoring of project activities, as well as the flow of funds to support project activities. The project-specific information, i.e. the Chart of Accounts, the formats of the reports, etc. will be added as part of the Annexes to the Manual. Once changes described in paragraph 51 will take place, financial Management Manual will be updated accordingly.

54. Assets acquired by the project will be in the custody of the respective institutional departments, which will also keep copies of the supporting documentation. The PCU will maintain supporting records and balances. At least one annual physical inspection will be

undertaken by the implementing agency and PCU staff, preferably with the participation of the external auditors.

55. **Reporting Arrangements.** The PCU will be responsible for producing the Interim Financial Reports (IFRs) on a quarterly basis to be submitted to the Bank. The IFRs will provide required monitoring information and will be used for disbursement purposes. The IFRs will include a narrative outlining the major project achievements for the quarter, the project's sources and uses of funds, and necessary procurement tables. IFRs should be submitted to the Bank no later than 45 days after the end of each reporting period. The annual financial statements will include the project's sources and uses of funds, a detailed analysis of expenditures, a schedule of withdrawal applications presented during the year, a reconciliation of the Designated Account, the notes to the financial information and management representation letter. These reports will be prepared by the PCU and made available to the auditors after the end of each fiscal year.

Simultaneously with being submitted to the World Bank these reports will be submitted to the CTU, which will be responsible for monitoring the overall project implementation progress.

56. **Auditing Arrangements.** Project financial statements will be audited annually. As in most OECS countries, the Director of Audit is responsible for auditing of the public accounts of the country, including projects funded by international organizations. The Auditor General's Office has performed adequately in the past in terms of the quality of the audit reports provided and the timely delivery of annual audited financial statements for World Bank projects. Therefore, annual project financial statements will be audited in accordance with International Standards on Auditing issued by the International Organization of Supreme Audit Institutions (INTOSAI) and the World Bank's guidelines on auditing by the Office of the Auditor General. The auditors' terms of reference (ToRs) will be prepared by the project and cleared by the World Bank before the engagement of the auditor. The ToRs will include the audit of financial transactions, the review of the internal control structure and mechanisms and the review of the project's compliance with the terms of the financing agreement(s). The annual audit reports will be prepared in a format in accordance with ISA and World Bank guidelines, and they will include an opinion on the project financial statements, including Designated Account Reconciliation, review of the internal controls, review of the project's compliance with the terms of the financing agreement(s) and a management letter. The project's annual audit report will be required to be submitted to the World Bank for review no later than four months following the end of the fiscal year (April-March).

57. **Disbursement Arrangements.** The World Bank share of financing will be channeled through a Designated Account denominated in US Dollars, which will be opened by the PCU at the Bank of Saint Lucia. The PCU will operate a local currency account, to finance project expenditures in local currency, where funds from the US Dollars Designated Account will be periodically transferred (funds sufficient to cover no more than 30 days worth of expenditures). These accounts will be operated in accordance with the procedures and guidelines set forth in the Bank's Disbursement Guidelines.

58. Disbursement of the project proceeds would be transferred to the US Dollar denominated Designated Account managed by the PCU. Advances to the Designated Account would be made based on the forecast of the project eligible expenditures for a period of at least six months

based on Interim Financial Reports (IFRs). Supporting documentation for expenditures made from the Designated Account would also be based on IFRs. The IFRs will be submitted to the World Bank on a quarterly basis and no later than 45 days after the end of each quarter.

59. As eligible expenditures are incurred, the PCU will withdraw the amount to be financed by the World Bank from the Designated Account (US\$ or EC\$) in accordance with the financing percentages.

60. Reimbursement method of disbursement will also be available. The supporting documentation would also be IFRs and the pre-finance expenditures should clearly be identified in the reports if combined with supporting advances made to the Designated Account in same IFRs. The minimum application size for reimbursement should be US\$240,000. The Project will have a Disbursement Deadline Date (final date on which the Bank will accept applications for withdrawal from the borrower or documentation on the use of loan proceeds already advanced by the Bank) four months after the Closing Date. This "Grace Period" is granted in order to permit the orderly project completion and closure of the Credit Account via the submission of applications and supporting documentation for expenditures *incurred* on or before the Closing Date. Expenditures incurred between the Closing Date and the Disbursement Deadline Date are not eligible for financing, except as otherwise agreed with the Bank.

61. Project's disbursement arrangements will be set out in a separately prepared Disbursement letter.

Category	Amount of the Financing Allocated (expressed in SDR)	Percentage of Expenditures to be Financed (inclusive of Taxes)
(1) Goods, works, non-consulting services, consultants' services, Training and Operating Costs for the Project (except Part B.1 of the Project)	2,860,000	100%
(2) Business Incubation Grants or Training Grants for Business or Training Plans under Part B.1 of the Project	617,500	100% of the goods consultants' services and non-consultants' services financed by the respective Business Incubation or Training Grant
(3) Refund of Preparation Advance	422,500	Amount payable pursuant to Section 2.07 of the General Conditions
TOTAL AMOUNT	3,900,000	

Note: Eligibility criteria for Business Incubation and Training Grants will be described in a separately developed grants manual.

62. **Supervision arrangements.** As part of its project supervision missions, the World Bank will conduct risk-based financial management supervisions, at appropriate intervals. These will pay particular attention to: (i) project accounting and internal control systems; (ii) budgeting and financial planning arrangements; (iii) review of the Interim Financial Reports; (iv) review of audit reports, including financial statements and remedial actions recommended in the auditor's Management Letters; (v) disbursement management and financial flows, including counterpart funds, as applicable; and (vi) any incidences of corrupt practices involving project resources.

63. **Financial Management Action Plan.**

#	Proposed Action	Responsible Party	Date of Completion
1	Prepare a Project-specific Chart of Accounts.	PCU	Project signing
2	Update the Financial Management Manual (as part of the Project Implementation Manual).	PCU	Project effectiveness
3	Agree with the World Bank on a sample format of the IFR to be used for reporting and disbursement purposes.	PCU/WB	Project negotiations
4	Obtain a Full access to the SmartStream.	PCU/MoF	June 30, 2012.
5	Employ an external auditor.	PCU	Within six months following commencement of project implementation.

C. Procurement

64. **Applicable Guidelines:** Procurement for the proposed project would be carried out in accordance with: (i) The World Bank's "Guidelines: Procurement Under IBRD Loans and IDA Credits", dated January 2011; (ii) "Guidelines: Selection and Employment of Consultants by World Bank Borrowers" dated January 2011; (iii) the anticorruption guidelines of October 2005; and (iv) the provisions stipulated in the Legal Agreement. For each contract to be financed under the program, the different procurement methods or consultant selection methods, the need for pre-qualification, estimated costs, prior review requirements, and time frame are agreed between the Borrower and the Bank in the Procurement Plan. The Procurement Plan will be updated at least annually or bi-annually as required to reflect the actual project implementation needs and improvements in institutional capacity.

65. A General Procurement Notice (GPN) will be published in the United Nations Development Business (UNDB) and a national newspaper of broad circulation. The GPN gives a

description of the Goods and consulting services contracts to be procured under the project and invites all potential suppliers and consultants to express interest and request additional information from the implementing agency. The following will be published in UNDB (online), and a national newspaper of broad circulation as the corresponding bid documents become available: (i) Specific Procurement Notices (SPNs) for International Competitive Bidding (ICB) procurement packages; and (ii) Expression of Interest (EoI) for consulting assignments estimated to cost more than US\$ 200,000 equivalent per contract. In addition, the Procurement Plan (including all formal updates), SPNs and EoIs for all contracts as well as the results of contract awards will be published on the external website of UNDB online and in dgMarket. The Project Coordination Unit (PCU) for the St-Lucia consists of: (i) PCU Director; (ii) Project Management/M&E Specialist; (iii) three Procurement Specialists; (iv) two Financial Management Specialists; and (v) an Executive Assistant. The Director of the PCU reports to the Permanent Secretary of the Ministry of Finance, and provides necessary fiduciary and administrative support. The Procurement Specialists are responsible for preparing all procurement packages, procuring goods, and selecting and hiring consultants—following the Bank’s Guidelines for Procurement and Selection of Consultants. Currently, the PCU is implementing about 9 projects.

66. Assessment of the Capacity of the Implementation Unit. An assessment of the capacity of the implementation unit to implement procurement activities for the Project was carried out by the Bank in July 2011 and February 2012. The assessment reports indicated that the overall risk of the PCU carrying out procurement was “moderate”. The assessment reviewed the organizational structure of the PCU, and in particular, the procurement functions of the staff. The existing procurement team is headed by the PCU Coordinator, who has attended several trainings on the World Bank and other donors’ procurement procedures and has more than 10 years experience in donors’ procurement procedures. The team is comprised of two procurement officers and a procurement assistant who work on projects financed by several international agencies, including the World Bank. In regard to projects financed by the World Bank, the procurement should be conducted following the procurement guidelines and procedures of the World Bank. The assessment report has also identified the need for hiring one additional procurement staff and for additional training in order for the PCU to handle additional procurement activities and responsibilities with ICT and PPP procurement elements. An action plan was discussed during the mission and the recommendations below were agreed on with the

- (a) Submission to the World Bank of a revised chapter on procurement in the Project Implementation Manual, updating the procedures and responsibilities as well as flow of documentation;
- (b) Agreement with the World Bank on the initial summary procurement plan at project negotiation and update it annually or as needed; and
- (c) Training in procurement to be provided by the World Bank to the procurement team and other staff at the project launch.

At the end of the first year of implementation, the team will review the procurement capacity of the implementation unit and the functioning of procurement with a view toward making adjustments as necessary.

67. **The PCU will follow the Bank's anti-corruption guidelines, and will not engage the services of firms and individuals debarred by the Bank.** The listing of debarred firms and individuals is located at: <http://www.worldbank.org/html/opr/procure/debarr.html>

Anti-Corruption Guidelines. The Bank team intends to maintain customary oversight and will carry out prior review of all major contracts according to thresholds that will be regularly reviewed and adjusted as needed in the Procurement Plan. Initial thresholds are provided in this Annex. The following measures will be carried out to mitigate the risk of corruption:

- *Training of Fiduciary Staff:* Starting from the project launch and periodically thereafter customized to procedure and methods that would be required in the next 12-month period. This will include on-the-job training during supervision missions and regional training provided by the RPM office for the countries in the region;
- *Prior Review:* Intensive and close supervision by Bank procurement accredited staff. In addition, contract amendments will be subject to prior approval by the Bank;
- *Publication of Advertisements and Contracts:* All publications of advertisements and contract awards—will be done in accordance with the Guidelines requirements and published in the client connection system, on external websites, i.e. UNDB;
- *Debarred Firms:* Appropriate attention will be given to the need to ensure that debarred firms or individuals are not given opportunities to compete for Bank-financed contracts;
- *Complaints:* All complaints by bidders will be diligently addressed and monitored in consultation with the Bank;
- *Evaluation Committee:* The Bank will review and comment on the qualifications and experience of proposed members of the Evaluation committee(s) with a view to prevent the nomination of unqualified or biased candidates. All members will be required to sign a disclosure form (a sample will be included in the Operational Manual);
- *Monitoring of Contract Awards:* All contracts are required to be signed within the validity of the bids/proposals, and in case of prior review contracts, promptly after the no objection is issued. The Procurement Plan format shall include information on actual dates (of no objections and awards), and will be monitored for cases of delay—which will be looked at on a case-by-case basis to identify the causes. The e PCU will maintain up to date procurement records that will be readily available to auditors and all concerned Bank staff, including INT;
- *Monitoring of Payments:* All contracts shall include bank account information. The bank account shall be in the name of the same supplier/consultant that submitted the bid and awarded the contract.

68. **Prior review.** Intensive and close supervision will be provided by Bank procurement accredited staff. In addition, contract amendments will be subject to prior approval by the Bank.

69. **Thresholds:** Thresholds for the use of the procurement methods specified in the project procurement plan are identified in the table below, which also establishes the notional thresholds for prior review. The agreed procurement plan will determine which contracts will be subject to Bank prior review.

Expenditure Category	Contract Value (Threshold)	Procurement Method	Contracts Subject to Prior Review / Estimated Total Value Subject to Prior Review
	US \$ thousands		
1. Works	>3.0	ICB	All
	250-3.0	NCB	First contract of each year
	<250	Shopping	First contract
2. Goods			
	>250	ICB	All
	50-250	NCB	First contract of each year
	<50	Shopping	None
	Pursuant to 3.6 of the Consultant Guidelines	DC	All
3. Services			
-3.A Firms	>200 <200	QCBS QCBS, QBS, FBS, LCS, CQ, SSS	All First contract of each year and later TOR only
-3.D Individuals	>50 <50	Comparison of 3 CV SSS	All TOR only as specified in the PP.

70. **Procurement of Goods.** Goods procured under the project would include: (i) ICT Hardware and Software; (ii) office equipment; and (iii) office furniture through shopping. For large Goods contracts, the procurement will be carried out by using Standard Bidding Documents (SBDs) for Goods or Supply and Installation for all International Competitive Bidding (ICB). All NCB will be carried out as per the National Bidding Documents agreed with the Bank. Procurement through shopping will be carried out by comparing at least three quotations. Shopping of goods under the specific threshold (<\$100,000) will be carried out by comparing price quotations obtained from at least three suppliers.

71. **Procurement of Works.** Minor works could include refurbishing of the existing offices /building to accommodate ICT equipment and any small ancillary mechanical, electrical or air conditioning installation. The procurement will be carried out through minor civil works (Shopping) by comparing at least three quotations.

72. **Selection of Consultants.** Consultant services required under this project would support: (i) bridging the remaining gap in the regional broadband communication infrastructure (ii) creating enabling environment that will leverage the regional broadband infrastructure to foster employment; (iii) improvement of government and private sector efficiency and leveraging the regional broadband infrastructure; and (iv) implementation support, development and associated training. Consultant services to be financed from the Credit would be selected in accordance with the Bank Guidelines, and would include: (i) Quality and Cost Based Selections (QCBS); (ii) Selection based on Consultants Qualifications (CQ); (iii) Fixed Budget Selection (FBS); (iv) Least Cost Selection (LCS),and (v) Individual Consultants (IC). Selection over US\$ 200,000 should be advertised in: (i) Development Business (online version); (ii) in local media (one newspaper of national circulation or the official gazette); and (iii) an electronic portal of free access (CARICOM and/or OECS website) for expressions of interest. A short list of six firms would be drawn from among the qualified interested parties. Individual Consultants would be selected in accordance with Part V of the Consultant Guidelines.

73. **Training.** Procurement training for PCU staff and consultants will be conducted in accordance with a training program that will be submitted to the Bank for its agreement before implementation.

74. **Procurement Plan.** The Borrower has discussed with the Bank team and developed a procurement plan for project implementation, which provides the basis for the procurement methods. This plan has been agreed between the Borrower and the Project Team and is available at the PCU. It will also be available in the project's database and in the Bank's external website. The Procurement Plan will be updated annually or as required to reflect the actual project implementation needs and improvements in institutional capacity. The Bank team believes that the dates indicated in the procurement plan are realistic and the PCU will adhere to the dates.

75. **Frequency of Procurement Supervision.** In addition to the prior review supervision to be carried out from Bank offices, the capacity assessment of the Implementing Agency has recommended at least one post-review mission per year, when not less than 1 in 10 contracts should be reviewed. On the basis of this assessment, PCU capacity may be need to be strengthened by a dedicated senior procurement officer with ICT expertise.

76. **Details of the Procurement Arrangements Involving International Competition: Goods, Works, and Non Consulting Services.** The following table contains the list of contract packages to be procured following ICB and direct contracting.

Ref. No.	Contract (Description)	Estimated Cost (USD)	Procurement Method	P-Q	Domestic Preference (yes/no)	Review by Bank (Prior / Post)	Expected Bid-Opening Date
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	Broadband Network	2,025,000	ICB	No	No	Prior	8/15/2013
	Government Network (VPN)	1,000,000	ICB	No	No	Prior	2/15/2013
	Support for Pilot applications (equipment)	500,000	ICB	No	No	Prior	1/15/2013

77. **Consulting Services.** The following table contains the list of consulting assignments with short-list of international firms:

Ref. No.	Description of Assignment	Estimated Cost (US\$)	Selection Method	Review by Bank (Prior / Post)	Expected Proposal Submission Date
	Validation/Design/tendering of Broadband Network	210,000	QCBS	Prior	10/15/2012
	TA legal and regulatory safeguards for open access for NTRC/Public Utilities	150,000	QCBS	Prior	10/15/2012

D. Safeguards Policy Issues

78. The activities being financed under the Saint Lucia CARCIP are not expected to have any major negative social and environmental impact. Nevertheless, appropriate safeguards instruments are being prepared to ensure that all project activities meet the requirements of the relevant national legislation and international conventions to which Saint Lucia is a signatory, as well as World Bank Group environmental and social safeguard policies.

79. The exact locations of the backbone network have not been determined, and it is therefore premature to undertake a site-specific Environmental and Social Impact Assessment (ESIA) and a Resettlement Action Plan (RAP). Consequently, these will form part of the regional Environmental and Social Management Framework (ESMF) (consistent with national and regional laws, any applicable treaty concerning international waters, and OP/BP 4.01) and a Resettlement Policy Framework (RPF) consistent with OP/BP 4.12, which have been prepared. Prior to project appraisal, the ESMF and RPF have been reviewed by the World Bank and publicly disclosed in country as well as in the World Bank Infoshop. The purpose of the frameworks is: (i) to provide as much information as possible about potential environmental and social impacts (including possible land acquisition and resettlement) at the project's current state of preparation; (ii) to inform the project planning and design process by comparing the potential impacts of alternative locations, configurations, and construction techniques that are under consideration; and (iii) to describe the procedures for subsequent assessment of impacts and development of the appropriate impact management instruments (including associated mitigation measures) when the details of the project become available. These management instruments are likely to be an Environmental and Social Management Plan (ESMP) and Resettlement Action Plan (RAP).

80. Land acquisition issues will be assessed on a project-specific basis, and mitigation plans prepared accordingly. Due to the fact that specific program areas are unknown prior to appraisal, a Resettlement Policy Framework (RPF) has been prepared. The Program is not expected to impact indigenous peoples in any negative way, and therefore OP/BP 4.10 is not triggered. A determination of specific impacts will be made early during project implementation and corresponding Resettlement Action Plans, if applicable, will be prepared.

Annex 11: Technical Annex for Saint Vincent and the Grenadines CARCIP

SAINT VINCENT AND THE GRENADINES Caribbean Regional Communications Infrastructure Program (CARCIP)

Date: April 24, 2012 Country Director: Francoise Clottes Sector Director: Jose Luis Irigoyen Acting Sector Manager: Juan Navas-Sabater Team Leader: Mavis Ampah Project ID: P114963 Lending Instrument: APL	Sector(s): Telecommunications (50%), Information technology (50%) Theme(s): Regional integration (30%), Regulation and competition policy (30%), Infrastructure services for private sector development (40%) EA Category: B (Partial Assessment)				
Project Financing Data:					
Proposed terms: IDA Credit on regular terms, with maturity 40 years, including grace period of 10 years. <input type="checkbox"/> Loan <input checked="" type="checkbox"/> Credit <input type="checkbox"/> Grant <input type="checkbox"/> Guarantee <input type="checkbox"/> Other:					
Financing Plan					
Source	Total Amount (US\$6million)				
Borrower	Local	Foreign	Total		
Total	US\$1.5	US\$4.5	US\$6.0		
Recipient: Government of Saint Vincent and the Grenadines Saint Vincent and the Grenadines Responsible Agency: Ministry of Finance and Economic Planning Contact Person: Mrs. Laura Anthony Browne Telephone No.: (784)- 457-1746 Fax No.: (784) 456-2430 Email: cenplan@vincysurf.com					
Estimated Disbursements – APL 1A (Bank FY/US\$ m)					
FY	2013	2014	2015	2016	2017
Annual	0.35	1.60	1.80	2.00	.25
Cumulative	0.35	1.95	3.75	5.75	6.00
Project Implementation Period: Start August 1, 2012, End August 1 2016 Expected effectiveness date: August 1, 2012 Expected closing date: February 1, 2017					

Project Development Objective:

Saint Vincent and the Grenadines CARCIP is fully consistent with the overall program development objective and seeks to increase access to regional broadband networks and advance the development of an ICT-enabled services industry in Saint Vincent and the Grenadines and across the Caribbean Region.

Project description

Saint Vincent CARCIP will be structured in line with the overall program and will consist of the following three components:

1. **Component 1: Regional Connectivity infrastructure.** This component will support bridging priority regional connectivity gaps in Saint Vincent and the Grenadines through several subcomponents, including a high speed broadband backbone network which will provide affordable connectivity to the entire population of Saint Vincent and the Grenadines, possibly including a submarine link to connect the Grenadines islands and eventually link to the border with Grenada, and also connect the country to global networks such as the CKLN. The component will also support implementation of an Internet Exchange Point (IXP) for regional and national traffic, which will eventually be part of a fully integrated Caribbean Regional IXP and will ensure that traffic within Saint Vincent and the Grenadines and the region is localized, and thereby improve the efficiency of the Internet. The activities will be underpinned by a robust enabling environment, both at the national and regional level that will maximize the benefits of the infrastructure, which will be put in place.
 2. **Component 2: ICT-led innovation.** This component will provide targeted support for human capacity and business development assistance to nurture the regional IT and IT enabled services sector. Funds under this component would contribute to the development of ICT centers of excellence and the collaboration with the private sector for business development activities including incubation services, and targeted skills development and certification programs with regional harmonization. The activities will complement as well as conform to frameworks and standards being supported at the regional level.
 3. **Component 3: Implementation Support.** This component will provide resources for the strengthening and logistic support for PSIPMU to administer and coordinate the project's implementation. It will also support oversight arrangements and capacity building for key policy and regulatory institutions.
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Safeguard policies triggered?		
Environmental Assessment (OP/BP 4.01)		X Yes <input type="radio"/> No
Natural Habitats (OP/BP 4.04)		X Yes <input type="radio"/> No
Forests (OP/BP 4.36)		<input type="radio"/> Yes X No
Pest Management (OP 4.09)		<input type="radio"/> Yes X No
Physical Cultural Resources (OP/BP 4.11)		X Yes <input type="radio"/> No
Indigenous Peoples (OP/BP 4.10)		<input type="radio"/> Yes X No
Involuntary Resettlement (OP/BP 4.12)		<input type="radio"/> Yes X No
Safety of Dams (OP/BP 4.37)		<input type="radio"/> Yes X No
Projects on International Waters (OP/BP 7.50)		<input type="radio"/> Yes X No
Projects in Disputed Areas (OP/BP 7.60)		<input type="radio"/> Yes X No
Conditions and Legal Covenants:		
Financing Agreement Reference	Description of Condition/Covenant	Date Due
Article 4.01 (a)	Saint Vincent and the Grenadines to prepare and adopt a Project Implementation Manual.	Effective Date
Article 4.01 (b)	Saint Vincent and the Grenadines to appoint a Project coordinator and establish the Project Steering Committee.	Effective Date
Article 4.01 (c)	Saint Vincent and the Grenadines to enter into a Technical Agreement with CTU.	Effective Date
Section II.A.1 of Schedule 2	Saint Vincent and the Grenadines to ensure participation and adequate representation to the Regional Steering Committee.	Throughout Project implementation
Section II.B.4 of Schedule 2	Saint Vincent and the Grenadines to appoint the external auditors for the Project.	Six months after the Effective Date

I. INTRODUCTION

A. Country context

4. Saint Vincent and the Grenadines is one of the fastest growing economies in the CARIFORUM region. Saint Vincent and the Grenadines (SVG) is an archipelago in the Eastern Caribbean Sea comprising 32 islands and cays. Despite being the third smallest country in terms of land mass (390 km²) and GDP (US\$ 0.7 billion) and the fifth smallest in terms of population (109,000 inhabitants)¹¹³, it registered the fifth fastest growth in the CARIFORUM region for the period 2001-2010, averaging 3.01 percent growth in the GDP.

5. The growth has been spurred largely by sound macroeconomic policies, which have helped to cushion the effect of the economic crisis in 2008 and 2009. The Government's 2007

¹¹³ World Bank indicators 2010 (<http://data.worldbank.org/indicator>)

tax reform aimed at improving the fairness of distribution of the tax burden also consolidated tax incomes and provided tax relief to priority tourism related services, which in turn put Saint Vincent and the Grenadines in a better position to deal with developing trends in the global economy and allowed the country to gain competitiveness in the international environment, in particular as a leading destination for tourism in the Caribbean region.

6. Sound macroeconomic policies have been combined with a strong domestic growth strategy, which is easing the process of financing and doing business in the country. Government Revenue and Budget Expenditure continues to commit significant resources to initiatives including, business advisory, and skills development services, which target, in particular MSMEs in the country. Earlier reforms to improve the business environment have resulted in a reduction in the time to start a business by 9 percent (10 days compared to 15 days in Grenada and 47 days in Spain)¹¹⁴ while the cost to create a company has been reduced from 35.7 percent of the GNI per capita in 2005 to 21.2 percent of the GNI per capita in 2009, representing one of the sharpest cost reductions in the CARIFORM region (-14.5 percentage points).

7. The Government's Medium Term Strategy Paper (MTESP 2010-2012) focuses on widening the economic base of SVG, with an emphasis on diversification, both within the agricultural sector and in the economy as a whole to stimulate economic growth and generate employment. Through targeted interventions, the country's traditional mainstay of agriculture is gradually being complemented by improved growth in the services sector.

8. Significant challenges remain despite progress. The continuous reform efforts have already had significant social impact, and contributed to consolidating SVG's position as an upper-middle-income economy. But while the country's GNI per capita has increased from 5,520 in 2006 to US\$6,300 in 2010¹¹⁵, above that of the CARIFORUM region (US\$ 5,550)¹¹⁶ and it still lags behind that of Latin America and Caribbean (US\$7,169)¹¹⁷. Public sector debt¹¹⁸ continues to increase (2010 recorded a 4.9 percent over 2009) due largely to disbursements from the Caribbean Development Bank and the ALBA Bank to support various public sector development projects including Phase II of the Lowmans Bay Electricity Project, the continuation of the Basic Education Projects, support to LIAT, the Windward Highway Rehabilitation Project and the Student Loans Program. The estimated unemployment, and percentage of poor people, was still high at 18.8 percent and 30.2 percent respectively in 2008¹¹⁹, ranking Saint Vincent and the Grenadines 85st out of 182 countries on the UNDP's 2010 Human Development Index. The high dependence on the services sector including Tourism, also makes the economy vulnerable to external shocks as confirmed by the Prime Minister's 2011 Budget statement in which he states that "small island economies, especially those dependent on tourism such as in the Caribbean, are confronted with multiple economic, financial and fiscal challenges, owing to the fact that their principal source markets in the USA and Europe have been undergoing real difficulties due to the global recession and its consequential aftermath" and

¹¹⁴ World Bank indicators 2010 (<http://data.worldbank.org/indicator>)

¹¹⁵ World Bank Country At-a-Glance 2010 (<http://data.worldbank.org/country/st-vincent-and-the-grenadines>)

¹¹⁶ World Bank indicators 2010 (<http://data.worldbank.org/indicator>) Calculated as weighted average GNI per capita using population to weight

¹¹⁷ OECS Regional Partnership Strategy. World Bank 2010

¹¹⁸ Central government debt, represented 78.3 percent of total debt

¹¹⁹ OECS Regional Partnership Strategy. World Bank 2010

indeed this is evidenced by the reduction in tourist related revenues from US\$ 110 million to US\$ 87 million from 2007 to 2010.

9. Sustained growth depends on SVG's ability to anchor its growth agenda within a well-structured regional strategy. Saint Vincent and the Grenadines recognizes the importance of effective integration in the region. As a small island economy with a narrow economic base and highly vulnerable to external shocks and natural disasters, it is imperative that SVG is able to leverage possible synergies with other Caribbean countries and establish a common regional strategy that helps to increase the country's competitiveness and visibility in international markets. It is also essential to take advantage of economies of scale and share the fixed costs of a robust regional infrastructure. As part of the Commonwealth and a member of several regional and international organizations including the Organization of Eastern Caribbean States (OECS), the Caribbean Community (CARICOM), the Association of Caribbean States (ACS), the Organization of American States (OAS) and the United Nations (UN), SVG is already benefitting from shared resources including regional infrastructure, knowledge networks, and best practices. There is evidence to support the importance of regional integration, in particular for the smaller countries, which could individually spend between 5-30 percent of their GDP on addressing infrastructure gaps, in contrast with 1 percent of regional GDP.¹²⁰

10. International support will also be essential to support Saint Vincent and the Grenadines' investment plans. The challenging fiscal balance requires international support to relieve the country and permit Saint Vincent and the Grenadines to move ahead with its investment plans. This would definitely have an impact on the competitiveness of the country in the short, medium and long terms. First, its citizens and businesses would enjoy better public services and would gain in productivity. Second, the country would be more appealing to foreign investors, increasing its international visibility. Third, more employment would be generated and social opportunities would arise to integrate the more deprived sectors of the society. In short, this would enable the country to recover quickly from the economic crisis. The 16 percent increase in the Net official development assistance (ODA) per capita from 2008 to 2009 (up to \$285) is a positive trend that should be maintained in the coming years. ICTs are for Saint Vincent and the Grenadines a key lever for economic development and the success of the country's strategy will depend on an effective regional telecommunications market. Saint Vincent and the Grenadines has identified ICT as a lever for its transformation plans and wishes to improve the connectivity within the State and with other regional members as to establish the foundations for further ICT services. In that sense, establishing a harmonized regional telecommunications market is crucial to increase the competitiveness in the region in the ICT sector, the visibility of its IT companies and thereby turn the Caribbean countries into an IT and ITES destination for foreign investment, which will translate into local jobs and economic growth. Furthermore, it would allow accelerating the process to integrate Saint Vincent and the Grenadines into the knowledge and information society boosting the country's presence and competitiveness in the digital market.

B. Sectoral and institutional context

11. The Telecommunications sector plays a key role in the Saint Vincent and the Grenadines' economy. Telecommunications play a very important role for the country's economy, with

¹²⁰ AICD - ECOWAS's Infrastructure: A Regional Perspective, July 2010

revenues accounting for 7.9 percent of the GDP above the 4 percent of the GDP in Latin America & the Caribbean.¹²¹

12. The sector has experienced significant progress since 2001. The Telecommunications Act of 2001 and the establishment of the National Telecommunications Regulatory Commission's (NTRC) in 2001 marked the first steps towards the liberalization of the telecommunications sector. The objectives of the Act are: (a) open entry, market liberalization, and competition in telecommunications; (b) ensure policies and practices in relation to the management of telecommunications are in harmony with those of ECTEL; (c) the operation of a universal service regime so as to ensure the widest possible access to telecommunications at an affordable rate; (d) fair pricing and the use of cost-based pricing methods by telecommunications providers; (e) fair competition practices by telecommunications providers; (f) the introduction of advanced telecommunications technologies and an increased range of services; (g) the public interest and national security are preserved; (h) the application of appropriate standards in the operation of telecommunications; (i) the overall development of telecommunications in the interest of the sustainable development of Saint Vincent and the Grenadines. The establishment of the Eastern Caribbean Telecommunications Authority in May 4 2000 (together with Dominica, Grenada, Saint Kitts and Nevis, and Saint Lucia), was to support the member country policies under a global framework of open competition, universal service, fair pricing and the use of cost-based pricing methods by telecommunications providers..

13. The introduction of competition in the mobile telephony market has resulted in reduced prices and increased service penetration. The entrance of Digicel and A T & T in mobile telephony competing with Cable & Wireless has been crucial to increase coverage and penetration of this service. The percentage of the population covered by the mobile cellular networks¹²² in 2010 was 121 percent,¹²³ up from 80 percent in 2006. Consequent upon this, improvement in price reductions has been notable. The average price of the mobile cellular sub-basket was 4.5 percent of the GNI per capita in 2008, whereas it was 3.5 percent of the GNI per capita in 2010, which represents 1 percentage point decrease. The fixed telephony has been struggling with sustained penetration levels around 20 percent, which reflects a general shift towards mobile telephony.

14. Saint Vincent has made tremendous efforts in fixed broadband connectivity and internet access, which has resulted in astonishing results. Internet penetration achieved 69.6 percent in 2010; an impressive figure especially compared to the CARIFORUM region (22 percent¹²⁴) and not that far from developed countries like the US (78 percent). Fixed broadband penetration has also impressively grown at 22 percent CAGR from 2006 through 2010 achieving 11.43 percent that year, which positions Saint Vincent and the Grenadines above other CARIFORUM countries like Saint Lucia (10.69 percent), Grenada (10.12 percent), Trinidad and Tobago (10.81 percent) and Jamaica (4.32 percent). However, the country is still far from developed countries like the US, where the fixed broadband penetration was 26.34 percent in 2010¹²⁵. All these numbers reflect, on the one hand, the positive trend in Internet and broadband connectivity in

¹²¹ World Bank DDP Databases

¹²² ITU ICT Statistics

¹²³ ITU ICT Statistics

¹²⁴ Penetration calculated with population per country

¹²⁵ ITU ICT Statistics

Saint Vincent and the Grenadines, which translates in better access for its citizens and increases in productivity and competitiveness for local businesses. On the other hand, that they are the outcome of an effective ICT strategy that must be continued in the future.

15. Local businesses are leveraging improved connectivity to promote their services, especially in the tourism sector. Businesses in Saint Vincent and the Grenadines are increasingly finding it easier and more convenient to connect with their peers regionally and internationally. The international telecommunications traffic demand is expected to be 2,324 mbps in 2020¹²⁶, which represents a 50 percent CAGR growth starting in 2006, similar for example to Grenada's where the growth is around 52 percent CAGR. In terms of international connectivity, Saint Vincent and the Grenadines is currently served by two submarine cables: Eastern Caribbean Fiber System and Southern Caribbean Fiber. However, there may be the case for additional communications capabilities to support the increase in traffic not only for Saint Vincent and the Grenadines but that of other countries connected to those cables such as Grenada. International connectivity is crucial to increase the country's competitiveness in two directions: (i) to compete internationally; and (ii) the competitiveness of the country itself to attract foreign investment.

16. The Government is increasing efforts to further narrow the Digital Divide in Saint Vincent and the Grenadines through effective policies and reforms in the ICT sector. Saint Vincent and the Grenadines ranks 69 out of 181 under the Digital Opportunity Index (its DOI was 0.47), slightly better than the average for CARIFORUM countries (0.466¹²⁷) and aligned with other neighboring countries (Saint Lucia ranks 73 and Grenada ranks 71), but still far from other Latin American countries like Chile (41) or Argentina (54) and developed countries like the United States, who ranks 20¹²⁸. Additional efforts on ICT, especially in terms of connectivity, IT innovation, e-government and IT education are necessary to bridge that gap. These efforts would: (i) facilitate the integration of the population and electronic communication and transactions; (ii) increase the competitiveness of local businesses; (iii) enhance the local IT industry; (iv) foster the growth of the ICT sector (in 2009 ICT good exports accounted for 10.98 percent of the total goods exports, slightly above the figure of 10.9 percent for the Latin American & Caribbean region¹²⁹); and (v) gain presence in the international technology market. A coherent and sustained ICT strategy is crucial not only to narrow the digital divide with the developed countries but also within Saint Vincent and the Grenadines..

17. The NTRC is also working tirelessly to provide access to the citizens of Saint Vincent and the Grenadines. NTRC launched the Universal Service Fund in May 2009 and has been implementing projects which includes the provision of free Wi-Fi access across community centers and educational institutions; paid wi-fi access to national parks and selected beaches; and new emergency communications systems. These efforts aim to promote social and economic development and to provide Saint Vincent and the Grenadine's citizens and businesses with

¹²⁶ World Bank AXIOM/Terabit: *Eastern Caribbean Submarine Cable System – Detailed Feasibility Study*, 2006

¹²⁷ Simple average

¹²⁸ ITU's DOI has been designed to as a tool for tracking progress in bridging the digital divide and the implementation of the outcomes of the World Summit on the Information Society (WSIS). As such, it provides a powerful policy tool for exploring the global and regional trends in infrastructure, opportunity and usage that are shaping the Information Society. It has a focus on the adoption of new technologies, such as broadband and mobile Internet.

¹²⁹ World Bank, ICT At-a-glance http://devdata.worldbank.org/ict/vct_ict.pdf

access to communications and information. Despite the various licenses granted for fixed, mobile and internet telephony, further efforts in fostering competition are needed to attract and facilitate the entrance of additional operators and carriers. As of 2010, Cable and Wireless offered fixed and mobile telephony, data communications, internet and public telephony and Digicel offered mobile telephony. A third operator, Karib Cable, provided the country with fixed telephony, cable internet services¹³⁰

18. Saint Vincent and the Grenadines' government has a strong commitment to improve domestic communications and international connectivity within the Caribbean and global Regional communications network. Saint Vincent and the Grenadines' government has already launched a plan to install its national Internet Exchange Point (IXP) to route efficiently its domestic internet traffic, avoiding crossing third party countries. This will translate into better quality of service (reducing delays and latencies and increasing the speed) and lower costs (international bandwidth is more expensive) for the users. The IXP is also key because it will eventually be connected to a Caribbean Regional IXP network, support the regional integration strategy and allow faster and more reliable access to other Caribbean countries and to the international networks in general. The connectivity links will connect eventually with Grenada and regional domestic backbones such as CKLN also contributing to the ultimate goal of regional integration. The government has also a strong commitment to update their governmental communications and has focused on two aspects: (i) government backbone network; and (ii) IP-PBX (as a first step that will allow to improve current communications and reform current infrastructures)

19. Despite great improvements, Saint Vincent and the Grenadines still has to make a greater effort to make its ICT services globally competitive. The average ICT Price Basket decreased from 6.7 percent of the GNI per capita in 2008 to 4.6 percent of the GNI per capita in 2010; which represents 2.1 percentage points decrease. This decrease is one of the biggest in the CARIFORUM region. However, the difference with developed countries is still big. As an example, the average ICT Price Basket in the US was 0.5 percent of the GNI per capita in 2010¹³¹. In that sense, Saint Vincent and the Grenadines needs to continue fostering the competition and ensuring the necessary infrastructure are in place as to reduce connection costs and thereby the price for the end user. If prices are high and services are not affordable for citizens and businesses, ICT services' (basic and value-added) penetration will still be low compared to that of developed countries thereby impeding competitiveness, economic growth and social progress. Although fixed broadband penetration in Saint Vincent and the Grenadines is higher than Grenada and Saint Lucia, the cost for the service is still higher compared to the same countries. In 2010, the average price of the fixed broadband sub-basket was 7.9 percent of the GNI per capita in Saint Vincent and the Grenadines compared to 6.3 percent in Grenada and 6.8 percent in Saint Lucia.¹³²

20. Further progress in e-government is crucial to provide citizens and business with efficient and transparent services to modernize and improve the country's competitiveness in the region. A national e-government strategy would be necessary to boost the progress in this area. Its e-

¹³⁰ ECTEL

¹³¹ Data from ITU, Measuring the Information Society, 2011

¹³² Data from ITU, Measuring the Information Society, 2011

government development index value was 0.4355 in 2010, above the average of the CARIFORUM region (0.4301) and slightly behind the overall Latin America and the Caribbean region, whose e-government development index value was 0.4454. Notwithstanding, the gap with developed countries is wide. For example, the US' index value was 0.8510¹³³. The online services component¹³⁴ was 0.0443 compared to 0.3184 in the US and 0.34 in the Korean Republic (the leader of the ranking), which shows the need to continue investing in the government digitalization process. The telecom connectivity component¹³⁵ (0.1216 compared to 0.0947 average in the CARIFORUM region or 0.3184 in the US and 0.34 in the Korean Republic) shows Saint Vincent and the Grenadines' is on the right track in terms of infrastructure and services penetration but, at the same time, it is an indicator that present efforts must be sustained to allow the country to progress. The human capacity component¹³⁶ was 0.2697, aligned with the CARIFORUM average (0.2798), which shows that the country has competitive human resources. However, investing in education and especially in IT skills and training is necessary to differentiate its people and gain competitiveness in the ICT arena, identified as an economic diversification driver. Working on the three axes (on-line presence, infrastructure and human resources training) coordinately would have an intensified effect on the country.

21. Saint Vincent and the Grenadines' has identified an economic growth opportunity in the IT industry and is working to foster the entrepreneurial IT community. Saint Vincent and the Grenadines aims to boost the development of the IT industry by leveraging the efforts carried out in terms of connectivity and infrastructure. The IT entrepreneurial industry (mainly based on micro and small businesses), although still weak, has been identified as an economic driver and a lever to create job opportunities. However, efforts should not solely rely on providing infrastructure, policies of funding for new small companies, but also on tying this approach with one based on the articulated policy of attracting highly skilled locals to the IT labor market. Otherwise, the country would suffer from lack of supply in expertise and human capabilities and would not realize the development objectives of job creation and poverty reduction. Saint Vincent and the Grenadines must also leverage Caribbean regional integration to boost its IT community. Joining forces with regional partners to promote local IT companies as a destination for IT entrepreneurship would have an important effect on local efforts carried out in Saint Vincent and the Grenadines. It would also increase the exposure of its local business in the international and entrepreneurial markets.

¹³³ E-government development index value is an indicator calculated by the United Nations. It is a comprehensive scoring of the willingness and capacity of national administrations to use online and mobile technology in the execution of government functions. Mathematically, it is a weighted average of three normalized scores on the most important dimensions of egovernment, namely: scope and quality of online services, telecommunication connectivity, and human capacity.

¹³⁴ Online services component was based on a research survey with four sections corresponding to the four stages of e-government development. The first of these includes questions relating to attributes that would be considered typical of an emerging online presence, the second to an enhanced presence, the third to a transactional presence and the fourth to a connected presence.

¹³⁵ The telecommunication infrastructure index is a composite of five indicators: number of personal computers per 100 persons, number of Internet users per 100 persons, number of telephone lines per 100 persons, number of mobile cellular subscriptions per 100 persons and number of fixed broadband subscribers per 100 persons.

¹³⁶ The human capital index is a composite of two indicators: adult literacy rate and the combined primary, secondary, and tertiary gross enrollment ratio.

22. CARCIP is fully aligned with Saint Vincent and the Grenadines' development strategy. The program will support Saint Vincent and the Grenadines' objectives of leveraging the ICT sector to carry out transformation in the country; to improve service delivery in both the public and the private sectors; provide citizens with ICT skills and create jobs; which are core activities in the country's development agenda. Specifically, CARCIP aims at: (i) bridging the gaps in Saint Vincent and the Grenadines' broadband communications infrastructure; (ii) setting up the policies and regulatory frameworks to develop IT and ITEs industries as drivers to foster employment and economic growth; and (iii) supporting institutional development and capacity building to ensure and effective ICT strategic framework.

C. Higher Level Objectives to which the Project Contributes

23. Improved government efficiency and transparency and access to service allowing the development of e-government and e-society applications. CARCIP seeks to extend the government's communication infrastructure to connect and equip government offices in order to improve internal business processes, extend services to underserved communities, as well as access of citizens to information. Connectivity infrastructure is a critical first step for developing strategic e-applications (e-government and e-society solutions) to improve the lives of the average Vincentian.

24. Better communications infrastructure as a means to accelerate its integration within the CARIFORUM region. Information has become global, and faster access to it is a competitive advantage for any country. On the one hand, it allows its citizens to acquire faster and cheaper knowledge and information. On the other hand, it permits its business to increase its productivity and expand internationally. The first step for Saint Vincent and the Grenadines' is to integrate within the CARIFORUM region via a robust domestic telecommunications network that connects Saint Vincent and the Grenadines with regional backbones like CKLN, a key step towards the ultimate goal of opening to the global international market. Opening to international markets is a crucial step for local companies that need to expand internationally in order to continue growing and ICTs are one of the means to allow those businesses to reach overseas markets. Besides, the increase in competitiveness of the private sector would have various benefits for Saint Vincent and the Grenadines. It is anticipated that more employment opportunities would be created and the concomitant increase in private profitability would generate more tax revenues for the country.

25. Contributes to Saint Vincent and the Grenadines' economic growth by increasing access, quality and affordability to broadband connections. Broadband networks have a transformational, social and economic impact. Recent research published under the World Bank IC4D09 flagship report¹³⁷, for example shows that a 10 percent increase in broadband penetration in developing countries can have an impact of close to 1.4 percent in increase in GDP per capita¹³⁸. This also has additional economic and social impact: (i) there is evidence that higher rates of ICT penetration are associated with greater levels of exports¹³⁹; and (ii) employment is generated (a

¹³⁷ See <http://go.worldbank.org/DMY979SNP0>.

¹³⁸ See <http://www.worldbank.org/ict> to access these and many other relevant publications and studies.

¹³⁹ Telecommunications Infrastructure and Economic Development: A Simultaneous Approach; Lars-Hendrick Röllér & Leonard Waverman, American Economic Review, 2001

recent study¹⁴⁰ concludes that if Latin American countries were to increase broadband penetration to its potential, they could create almost 400, 000 new jobs). With knowledge of these benefits, plans for expansion in connectivity would not only include government facilities, but also extend to banks, retailers and households.

26. Contributes to emergency national plans with a more resilient regional infrastructure and an emergency communications network that allows the government to be more responsive. Saint Vincent and the Grenadines has a geographic location that has made the country suffer from natural disasters like the Hurricane Ivan in 2004. In those situations, high levels of official responsiveness and coordination are essential to save lives. CARCIP will contribute to that aim by providing Saint Vincent and the Grenadines with an emergency communications network that facilitates and improves government current procedures in order to have an integrated emergency response system (911), including fire, health and police stations. Also, support for broadband backbone networks provided under CARCIP will create alternative routes for regional traffic, which will enhance the resilience of the regional networks in the face of frequent natural disasters.

27. Supports the consolidation of an IT environment that allows the creation of new businesses. Local businesses are the engine of growth for a country, not only because they bring revenue in the form of taxes, but also because they generate job and create wealth at social and economic levels. CARCIP aims to support an innovative entrepreneurial community that facilitates incubation of local companies which would connect them with peer companies in the region through the entrepreneurial Caribbean network.

II. PROJECT DEVELOPMENT OBJECTIVES

A. PDO

28. **The project development objective (PDO) of Saint Vincent and the Grenadines CARCIP is fully consistent with the program development objective and seeks to increase access to broadband networks and advance the development of an ICT-enabled services industry in Saint Vincent and the Grenadines and the Caribbean.**

29. CARCIP is expected to facilitate achievement of the PDO through: (a) targeted investments in ICT infrastructure that fills the gaps at the regional and domestic level, in partnership with the private sector and other development partners, where applicable; (b) creating an enabling environment that fosters competitive access to infrastructure and the creation of an IT/ITES and other applications industry; (c) enabling and supporting the creation of e-services, including e- and m-government services; and (d) strengthening of institutional capacity/arrangements to ensure effective program implementation and outcomes.

B. Project Beneficiaries

30. CARCIP will benefit the citizens of Saint Vincent and the Grenadines. The primary target groups of the project are the ICT service consumers (business and residential), IT and IT Enabled Service providers and other knowledge-intensive businesses and employees, and e- and m-

¹⁴⁰ Katz, R., Estimating Broadband Demand and its Economic Impact in Latin America (2009), available at <http://unpan1.un.org/intradoc/groups/public/documents/gaid/unpan036761.pdf>

government services users. It is expected that: (a) ICT consumers in Saint Vincent and the Grenadines will enjoy greater access to better quality and lower prices of ICT services, including high speed internet access; (b) the number of IT/ITES and other knowledge-intensive businesses and employees will increase; and (c) the number of e- and m- government services increases and; thus, the quality of public services will be enhanced.

C. PDO Level Results Indicators

Project Development Objective	Outcome Indicators	At closing of Project
To increase access to regional broadband networks and advance the development of an ICT-enabled services industry in Saint Vincent and the Grenadines and across the Caribbean Region.	<ul style="list-style-type: none"> • Number of Internet Users • IT/ITES employment • Businesses receiving Support through the project • Direct project beneficiaries, (of which are female) 	<ul style="list-style-type: none"> • 42 • 3,000 • 30 • 5,000 (50%)

III. DETAILED PROJECT DESCRIPTION

A. Project components

31. CARCIP in Saint Vincent and the Grenadines, in line with the overall Program, will have the following three components:

Component 1 – Regional Connectivity Infrastructure (US\$3.45 million):

32. This component will support bridging priority connectivity gaps in Saint Vincent and the Grenadines and connect the country with neighboring countries and regional backbones through several subcomponents as detailed below:

- (a) **Enabling environment (US\$ 0.4 million)** – Technical Assistance and Capacity Building to
 - (i) validate design of PPP frameworks consistent with those designed at the regional level, including validation of design/costs for the broadband infrastructure, (US\$0.2m); and
 - (ii) design of enabling regulations harmonized at the regional level and provision of effective regulatory oversight in key technical areas including infrastructure sharing and open access for both the IXP and broadband network, and rural connectivity (US\$ 0.2m).
- (b) **Broadband Backbone Network (US\$2.430 million)** – With a landmass of approximately 390 km², SVG's strategy is to leverage its government broadband backbone to provide connectivity to all the islands, possibly including a submarine link to connect the Grenadines islands, and eventually link to the border with Grenada. Support under CARCIP will therefore focus on the development of a high speed broadband backbone network to connect major populated areas to existing regional broadband networks, as well as increase cross-border connectivity with neighboring Grenada. The broadband backbone network would provide affordable regional connectivity to the entire population of Saint Vincent and the Grenadines, including the smaller islands of Palm and Petit Saint Vincent, which could lead to more direct connectivity with neighboring Grenada, while enhancing

the overall resilience of the regional network. It would also extend to the new commercial city being planned by government (current airport location) and strategic seaport locations on the island. The network could be further leveraged as the primary backbone for a National Research and Education Network which would be linked to the Caribbean Regional Research and Education Network (C@ribNET), which is coordinated and managed by CKLN. Financing of the connectivity infrastructure would be based on a competitive “least-cost” subsidy under a public-private partnership model, and payments would be triggered by demonstrated delivery of pre-defined “outputs”. The Project will support: (i) financial, legal and regulatory services to design and implement the “PPP” subsidy mechanism, including the tender documentation and tender process; (ii) consultant services for environmental screening; and (iii) the services of an independent verification agent to certify that winning bidders have fulfilled the “outputs” of their service agreements. The principles underlying this component include: (a) private-sector led supply of the infrastructure, supported by least-cost public subsidy, and (b) infrastructure shall be provided on non-discriminatory, open access and competitively neutral basis.

- (c) **Government Network (US\$0.6 million)** The network could provide a unique opportunity for key government agencies (including Inland Revenue, seaport and the new airport, post offices, schools, health facilities including the diagnostic center in Georgetown, police, security/emergency response agencies) to connect directly to each other through a virtual private network (VPN). The government has already committed significant resources (about EC\$ 5.7m) to improve connectivity in some 107 primary and secondary schools. Minimal support estimated at around \$0.5 m under the project would leverage funds from the USF in the form of output based subsidies for improved connectivity in key rural health, police and other strategic locations, including tourism where connectivity gaps remain, and for establishing this VPN. The government would like to procure an IP based PBX as a first phase of this Program. The PBX will require some minimal upgrade of the current network infrastructure and software to improve government communications. It is expected that private networks developed at the national level will connect to each other to create a regional network that will improve communication between government agencies in the region. This is critical for the small and vulnerable islands in the region and in line with the regional integration agenda.
- (d) **Internet Exchange Point (US\$0.02 million)** – Support to the Saint Vincent and the Grenadines IXP to facilitate regional and local interconnection of Internet traffic, allowing it to be channeled in a more efficient way by ensuring that traffic stays local without the need to transit third party countries before coming back, and thereby avoiding payment of high international bandwidth costs. This could result in improved access speeds and reduced latency as well as reduced costs to the consumer. Support includes equipment as well as structuring of ownership and management of IXP. It is expected that the Saint Vincent and the Grenadines’ IXP will eventually be part of a fully integrated Caribbean Regional IXP which will ensure that traffic in the region remains regional, thus further reducing the cost of connectivity and increasing the quality of service.

IDA financing under this sub-component will therefore include: (i) technical assistance and capacity building; (ii) catalytic funding for the physical broadband infrastructure on the

basis of performance based financial incentives and competitive fund allocation processes; and iii) limited government connectivity.

The bulk of the IDA funding will support connecting SVG and many locations within SVG to regional and global networks and is therefore regional in nature, with the only possible exception of the government network sub-activity (more details in Annex 2).

33. The Government of Saint Vincent requested a Project Preparation Advance (PPA), part of which will assist in the preparation of the PPP Framework and will support preparation of draft RFPs, in order to speed up implementation. The team has, in parallel-secured limited grant funding through the Korean Trust Fund, which will assist Saint Vincent and other countries in the region to assess connectivity gaps, and costs and potential economic benefits of addressing the gaps. This grant would complement work anticipated to be undertaken under the Project.

Component 2- ICT- Led Innovation (US\$2 million)

34. While there is a gradual increase in the number of Micro and Small IT businesses operating in Saint Vincent and the Grenadines, for the most part, the entrepreneurial base of the IT/ICT sector continues to be weak. Promising local entrepreneurs often lack technical and business expertise to allow them to nurture innovative ideas. This component will provide targeted support for human capacity building and business development, as well as finance selected IT and IT enabled SMEs. The objective is to stimulate growth of the IT/IT Enabled services industry and position Saint Vincent and the Grenadines and the rest of the region as attractive destinations for IT and IT enabled business.

35. This component will support the following activities:

(a) **Technology/Business Incubation (US\$1.4 million)** – Support for the incubation of businesses in the IT or IT enabled services industry. The support could be in the form of Business incubation grants to small IT start-up companies in SVG and neighboring countries to acquire appropriate technical, management, financing or market knowledge skills, as well as technical assistance to assist them to access global incubation network support. The Government of Saint Vincent and the Grenadines has already established an ICT Center of Excellence at the National Center for Technological Innovation in the Diamond Industrial Estate, which could be one of the primary beneficiaries of this support. Funds under this component would therefore support the Government's efforts to develop more sustainable ICT Centers of Excellence, by providing support for business development/incubation aimed at strengthening ICT-enabled industry in the region with clear synergies among the various participating countries, and with robust facilities for training, and certification, to ensure that the mutual recognition of accreditation foreseen under activity (b) can be effectively implemented. Both the ICT Center of Excellence and the National Center for Technological Innovation (NCTI) are expected to form part of a regional network of innovation centers that will position the region as an attractive destination for ICT business. The project will also provide support for a Business Incubator Manager.

(b) **Skills Development and Certification Program (US\$0.6 million)** – This component will provide a training grants program to public and/or private institutions to train trainers as well

as professionals, in key niche areas for IT/ITES development in Saint Vincent and the Grenadines with a specific focus on new graduates. The Project resources will complement ongoing efforts of the NCTI, which is already providing training and certification to young graduates in IT – related skills (e.g. software/apps development, database management, web development), and will support conformity to regionally harmonized curricula. Support under the project will be for conducting a globally benchmarking assessment of IT and ITES skills and certification for IT graduates, as well as the development of a training of trainers program for IT and ITES skills. The support will facilitate the mutual recognition of this certification at the regional level and possibly at the international level as well.

36. The ICT-led innovation component is therefore structured as two sub-components, one focused on facilities and business support, and the other on skills development and accreditation respectively. The eligibility criteria and selection processes for the grant share of project funding under this component will be described in Business Incubation and Training Grants Manual and supported by a dedicated grant manager. This component forms an integral part of the Caribbean region’s strategy to position itself as a formidable destination for IT and IT Enabled services. The activities being funded under this component are therefore critical pieces, which aggregate to ensure that the regional objective is achieved. It is almost impossible to unbundle the activities based on their regional vs. national impacts.

Component 3- Implementation Support (US\$0.55 million)

37. This component will support project management, fiduciary and M&E activities, and will include:

- (a) Establishment and hiring of core Project implementation staff. The Government will hire under the Credit a Project Coordinator to support project supervision. The fiduciary aspect of the project will be handled by the Public Sector Implementation Program Management Unit (PSIPMU) within the Ministry of Finance and Economic Planning (formerly the implementation unit for Bank’s projects in Saint Vincent), but that there may be need to provide additional resources to strengthen their capacity as determined by the FM and Procurement Assessments.
- (b) Logistic support for Division of Telecommunications and PSIPMU (PCs, office equipment, operating costs, audits, monitoring and evaluation (M&E), and communication support).
- (c) Development of Project Implementation Manual (PIM)

The Table below provides a tentative illustration of the estimated breakdown of the IDA funding into activities that link directly to the regional agenda, and those that can be seen as supporting the objective at the national level.

Saint Vincent and the Grenadines			
Component 1			
Activity		Regional Activities (US\$)1/	National Activities (US\$)1/
Enabling Environment		400.000	
Backbone Broadband Network		2.430.000	
Government Network			600.000

Component 2	Support for IXP	20,000	
	Total	2,850,000	600,000
	Activity	Regional Activities (US\$)	National Activities (US\$)
	Technology/Business Incubation	934,000	466,000
Component 3	Skills Development/Certification	600,000	
	Total	1,534,000	466,000
	Activity	Regional Activities (US\$)	National Activities (US\$)
	Implementation Support	550,000	

1/ Regional activities are jointly financed by national and regional IDA, while national activities are fully financed by national IDA.

B. Project financing

38. **Lending will be an Adaptable Program Loan.** The lending instrument is an Adaptable Program Loan (APL), which allows countries to join at different points in time, depending on interest and readiness. Financing for the program is expected to include a combination of several sources of financing: World Bank lending, donor grant funding, government own resources and substantial amounts of private sector investment.

39. **World Bank financing for Saint Vincent and the Grenadines will be on the basis of an IDA credit (40 year loan, with 10 years grace period, zero interest rate, 0.75 percent service charge).** The total amount of IDA resources required for Saint Vincent and the Grenadines-CARCIP is estimated at US\$ 6 million. Given that this is structured as a regional IDA operation, countries will be eligible to receive IDA resources beyond their country allocations, since regional projects typically count only 1/3 towards their national allocation and the other 2/3 come out of a special regional IDA pool. The World Bank will also continue to strive to engage in dialogue with donors to attract as much grant funding as feasible.

IV. IMPLEMENTATION ARRANGEMENTS

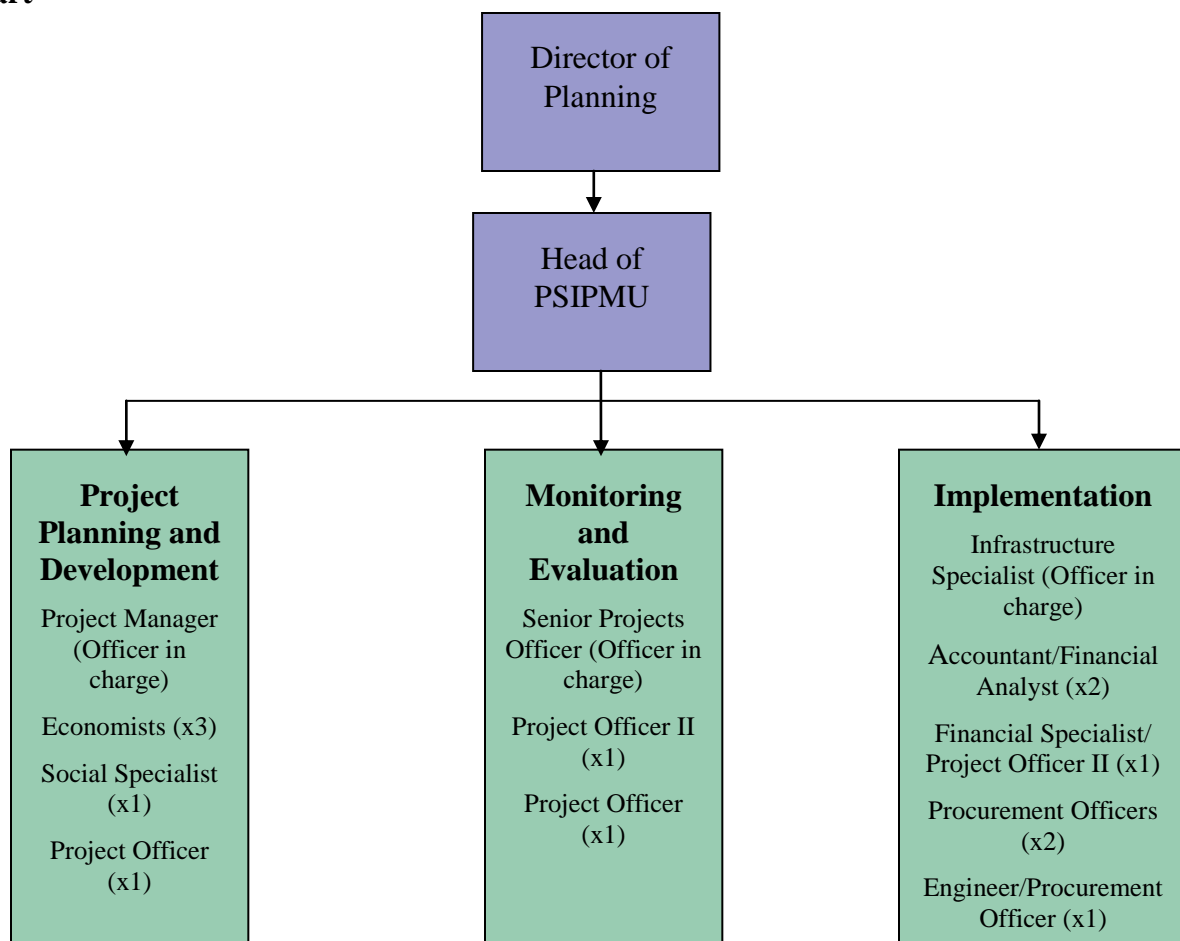
A. Project Administration Mechanism

- B. The program requires a strong local implementation reach to ensure national oversight of the resources and adequate coordination with the various initiatives being implemented at the national level.
- C. Saint Vincent and the Grenadines will leverage the existing Public Sector Investment Management Unit (PSIPMU) in the Central Planning Division of the Ministry of Finance and Economic Planning for all fiduciary activities under CARCIP. Within the PSIPMU there are dedicated Units with fiduciary, and Monitoring and Evaluation responsibilities, each reporting to the Head of the PSIPMU. The PSIPMU Organizational Chart is depicted in figure 1 below:

- D. Using the PSIPMU will minimize implementation costs. The Unit will be in charge of the day-to-day management of the project's technical and logistical aspects, including the work program and coordinating with the relevant ministries and departments, procurement, financial management and monitoring and evaluation. At the working level, the Central Planning Division (CPD) will hire a project coordinator who would be responsible for coordinating among all the national stakeholders, working in tandem with the technical implementation team, the NTRC, NCTI, relevant Ministries and the Private sector.

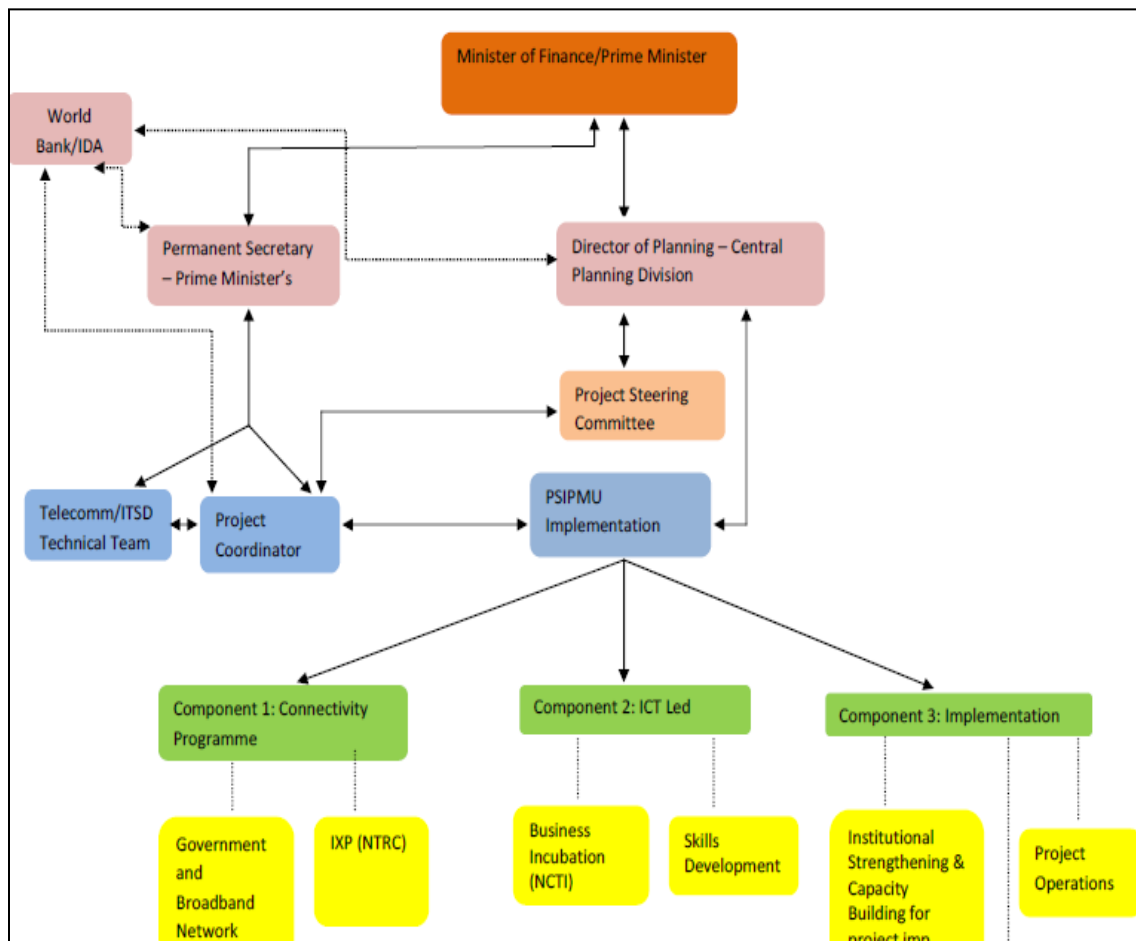
The Government will establish a project steering committee to ensure adequate participation of the various government agencies involved in project implementation, including the Division of Telecommunications, Science and Technology within the Prime Minister's Office, the National Telecommunications Regulatory Commission (NTRC), National Center for Technological Innovation (NCTI) the Ministry of Finance and Economic Planning and the Center for Enterprise Development (CED) and the private sector. Other stakeholders could also be invited to participate in the steering committee as necessary, notably the Ministries of Education and Health. The Steering Committee will also include selected Private Sector representatives. A Project Implementation Manual (PIM) will be prepared to guide the operations and implementation of the project. The approved PIM is a condition of project effectiveness.

Figure 1 – Public Sector Investment Program Management Unit (PSIPMU) Organizational Chart



40. The implementation of each component will be led by the respective Government agency where the greatest impact will be made. For the Component 1: Connectivity, the Division of Telecommunications will provide support on the Government Network and the IXP subcomponent by the NTRC. For Component 2: ICT-Led Innovation, the project will coordinate with the NCTI for the Business Incubation, and Skills Development.

41. The following chart summarizes the implementation arrangements for Saint Vincent and the Grenadines:



E. Financial Management and Disbursements

42. **Introduction. Introduction.** The Project Coordination Unit (PCU) responsible for the fiduciary functions of World Bank funded projects, including the OEDP, and the PCU for European Development Fund (EDF) funded operations, were merged into the PSIP Management Unit during the fourth quarter of calendar year 2010. This new structure has three main sections: Project Planning and Development, Monitoring & Evaluation, Implementation. The Finance & Procurement section has three accountants/financial specialists and two procurement officers. The WB portfolio managed by the PSIPMU includes the Regional Disaster Vulnerability Reduction; the Hurricane Tomas ERL and the OECS Education Development Projects. An assessment of the financial management capacity of the PCU was undertaken in May-September 2011 and updated in January 2012.

43. **Conclusion.** The conclusion is that once the Action plan proposed in this document is implemented, the financial management arrangements will meet the Bank's requirements under OP/BP10.02 and will be adequate to provide, with reasonable assurance, accurate and timely information on the status of the project implementation. The residual financial management risk is assessed as being Medium.

44. Financial Management Risks Rating.

	Risk Assessment				Risk Mitigation Measures	Residual Risk
	H	S	M	L		
Inherent Risk						
Country level		X			Although the FM risk at the country level is Substantial, there should be no impact on the project’s financial management arrangements.	M
Entity level			X			M
Program level			X			M
Overall Rating Inherent Risk			X			M
Control Risk						
Staffing		X			Dedicated Accountant will be assigned to serve the project needs	M
Budget			X			M
Accounting			X		.	M

	Risk Assessment				Risk Mitigation Measures	Residual Risk
	H	S	M	L		
Internal controls		X			Project Financial Management manual will provide detailed description of procedures and controls to be followed by the project.	M
Funds flow			X			M
Financial reporting			X			M
Auditing			X		An auditor with experience and qualifications to the Bank will be recruited not later than four months after effectiveness.	M
Overall Control Risk			M			M
Residual Risk Rating			M			M

H = High; S = Substantial; M = Moderate; L = Low

45. **Staffing.** The PSIPMU is currently staffed with 3 accountants/financial analysts and 1 financial specialist, who are serving existing projects. These persons have extensive experience of working with the donor-financed projects.

46. **Accounting Policies and Procedures.** The project will use the existing accounting software (Peachtree)) to maintain the project accounts. The software will allow for the tracking of inflows by funding source, and outflows by: (i) project component; (ii) funding source; (iii) disbursement category. Based on this information relevant financial reports can be prepared. The Chart of Accounts is being drafted, and will be finalized by the project signing. While preparing accounting and financial information transactions will be recorded as incurred, and all primary supporting documentation will be maintained to facilitate ex post reviews and the external annual audits. Such documents should be maintained for a minimum period of five years. The detailed accounting policies and procedures will be set forth in the updated project Implementation Manual.

47. The vote account at the Accountant General department will be reconciled quarterly with the project records to ensure that information in Smartstream, the Government financial management and accounting system, is up-to-date and accurate.

48. **Budgeting.** Project annual budgeting will be based on the cost tables, and will be updated according to the latest information as the implementation will rollout. The annual budgets will be prepared by the PSIPMU and submitted to the project Task Team Leader and the Government of

SVG for approval. The approved annual budget will then be entered into the accounting system and used for periodic comparison with actual results as part of the interim reporting.

49. **Internal Controls and Safeguard of Assets.** The updated Financial Management Manual will reflect the structure of the implementing unit, administrative arrangements, internal control procedures, including procedures for authorization of expenditures, maintenance of records, safeguard of assets (including cash), segregation of duties to avoid conflict of interest, regular reconciliation of bank account statements, bank signing mandate (to include at least two signatories), regular reporting to ensure close monitoring of project activities, as well as the flow of funds to support project activities. The project-specific information, i.e. the Chart of Accounts, the formats of the reports, etc. will be added as part of the Annexes to the Manual.

50. Assets acquired by the project will be in the custody of the respective institutional departments, which will also keep copies of the supporting documentation. The implementing unit will maintain supporting records and balances. At least one annual physical inspection will be undertaken by the implementing agency and PSIP staff, preferably with the participation of the Auditing Department.

51. In the past internal controls weaknesses have been observed in the implementation of projects managed by the PSIPMU. As such, it would be critical to ensure that updated Financial Management Manual provides needed guidance, and that its positions are adhered to by the PSIPMU staff.

52. **Reporting Arrangements.** The PSIPMU will be responsible for producing the Interim Financial Reports (IFRs) on a quarterly basis to be submitted to the Bank. The IFRs will provide required monitoring information. The IFRs will include a narrative outlining the major project achievements for the quarter, the project's sources and uses of funds, and necessary procurement tables. IFRs should be submitted to the Bank no later than 45 days after the end of each reporting period. The annual financial statements will include the project's sources and uses of funds, a detailed analysis of expenditures, a schedule of withdrawal applications presented during the year, a reconciliation of the Designated Account, the notes to the financial information and management representation letter. These reports will be prepared by the PSIPMU and made available to the auditors after the end of each fiscal year.

Simultaneously with being submitted to the World Bank these reports will be submitted to the CTU, which will be responsible for monitoring the overall project implementation progress.

53. **Auditing Arrangements.** Project financial statements will be audited annually in accordance with International Standards on Auditing issued by the International Organization of Supreme Audit Institutions (INTOSAI) and the World Bank's guidelines on auditing. Qualified independent audit firm acceptable to the World Bank will be hired to conduct project audits. The auditors' terms of reference (ToRs) will be prepared by the project and cleared by the World Bank before the engagement of the auditor. The ToRs will include the audit of financial transactions, the review of the internal control structure and mechanisms and the review of the project's compliance with the terms of the financing agreement(s). The annual audit reports will be prepared in a format in accordance with ISA and World Bank guidelines, and they will include an opinion on the project financial statements, including Designated Account

Reconciliation, review of the internal controls, review of the project's compliance with the terms of the financing agreement(s) and a management letter. The project's annual audit report will be required to be submitted to the World Bank for review no later than four months following the end of the fiscal year (January-December).

54. **Disbursement Arrangements.** The World Bank share of financing will be channeled through a Designated Account denominated in US Dollars, which will be opened by the PSIPMU at the Bank of Saint Vincent and the Grenadines. The PSIPMU will operate a local currency account, to finance project expenditures in local currency, where funds from the US Dollars Designated Account will be periodically transferred (funds sufficient to cover no more than 30 days worth of expenditures). These accounts will be operated in accordance with the procedures and guidelines set forth in the Bank's Disbursement Guidelines.

55. Disbursement of the project proceeds would be transferred to the US Dollar denominated Designated Account managed by the PSIPMU. Payments to the Designated Account would be made based on the Statements of Expenditures (SOEs) prepared by the project.

56. As eligible expenditures are incurred, the PSIPMU will withdraw the amount to be financed by the World Bank from the Designated Account (US\$ or EC\$) in accordance with the financing percentages.

57. Reimbursement and direct methods of disbursements will also be available. The minimum application size for reimbursement should be US\$240,000. The DA ceiling will be set at US\$1,200,000. Detailed disbursement arrangements will be set in a separately prepared Disbursement Letter. The Project will have a Disbursement Deadline Date (final date on which the Bank will accept applications for withdrawal from the borrower or documentation on the use of loan proceeds already advanced by the Bank) four months after the Closing Date. This "Grace Period" is granted in order to permit the orderly project completion and closure of the Credit Account via the submission of applications and supporting documentation for expenditures *incurred* on or before the Closing Date. Expenditures incurred between the Closing Date and the Disbursement Deadline Date are not eligible for financing, except as otherwise agreed with the Bank.

58. **Supervision arrangements.** As part of its project supervision missions, the World Bank will conduct risk-based financial management supervisions, at appropriate intervals. These will pay particular attention to: (i) project accounting and internal control systems; (ii) budgeting and financial planning arrangements; (iii) review of the Interim Financial Reports; (iv) review of audit reports, including financial statements and remedial actions recommended in the auditor's Management Letters; (v) disbursement management and financial flows, including counterpart funds, as applicable; and (vi) any incidences of corrupt practices involving project resources.

Category	Amount of the Credit Allocated (expressed in SDR)	Percentage of Expenditures to be Financed (inclusive of Taxes)
(1) Goods, works, non-consulting services, and	2,190,000	100%

consultants' services for the Project (except Part B.2 of the Project)		
(2) Business Incubation Grants or Training Grants for Business or Training Plans under Part B.2 of the Project	1,010,000	100% of the goods, consultants' services and non-consulting services financed by the respective Business Incubation Grant or Training Grant
(3) Refund of Preparation Advance	700,000	Amount payable pursuant to Section 2.07 of the General Conditions
TOTAL AMOUNT	3,900,000	

Note: Eligibility criteria for Business Incubation and Training Grants will be specified in a separately developed grants manual.

59. **Financial Management Action Plan.**

#	Proposed Action	Responsible Party	Date of Completion
1	Prepare a Project-specific Chart of Accounts.	PSIPMU	Project signing
2	Update the Financial Management Manual (as part of the Project Implementation Manual).	PSIPMU	Project effectiveness
3	Agree with the World Bank on a sample format of the IFR.	PSIP/WB	Project negotiations
4	Assign one of PSIP accountants to support this project.	PSIPMU	Project effectiveness
5	Employ an external auditor.	PSIPMU	Within six months following the inception of project implementation.

F. Procurement

66. **Applicable Guidelines.** Procurement for the proposed project would be carried out in accordance with: (i) The World Bank's "Guidelines: Procurement Under IBRD Loans and IDA Credits", dated January 2011; (ii) "Guidelines: Selection and Employment of Consultants by World Bank Borrowers" dated January 2011; and (iii) the provisions stipulated in the Legal

Agreement. For each contract to be financed under the program, the different procurement methods or consultant selection methods, the need for pre-qualification, estimated costs, prior review requirements, and time frame are agreed between the Borrower and the Bank in the Procurement Plan. The Procurement Plan will be updated at least annually or bi-annually as required to reflect the actual project implementation needs and improvements in institutional capacity.

67. **A General Procurement Notice (GPN) will be published in the United Nations Development Business (UNDB) and a national newspaper of broad circulation.** The GPN gives a description of the Goods and consulting services contracts to be procured under the project and invites all potential suppliers and consultants to express interest and request additional information from the implementing agency. The following will be published in UNDB (online), and a national newspaper of broad circulation as the corresponding bid documents become available: (i) Specific Procurement Notices (SPNs) for International Competitive Bidding (ICB) procurement packages; and (ii) Expression of Interest (EoI) for consulting assignments estimated to cost more than US\$ 200,000 equivalent per contract. In addition, the Procurement Plan (including all formal updates), SPNs and EoIs for all contracts as well as the results of contract awards will be published on the external website of UNDB online and in dgMarket.

68. **Assessment of the Capacity of the Implementation Unit.** An assessment of the capacity of the implementation unit to implement procurement activities for the Project was carried out by the Bank in February 2012. The overall risk for procurement under the project was determined to be “moderate” at the time. This determination was based on the assessment along with a consideration of the environment for conducting procurement under the proposed project. Currently the PSIPMU is implementing four World Bank funded projects and having two procurement officers who are qualified engineers. At the end of the first year of implementation, the team will review the procurement capacity of the implementation unit and the functioning of procurement with a view toward making adjustments as necessary. The assessment reviewed: (i) the procurement processes being carried out by the implementation unit; and (ii) the interaction between the various staff responsible for procurement, financial management and project management. It was noted that the PSIPMU was established as a centralized facility to manage several Bank/IDA funded projects/credits.

69. **The PSIPMU will follow the Bank’s anti-corruption guidelines, and will not engage the services of firms and individuals debarred by the Bank.** The listing of debarred firms and individuals is located at: <http://www.worldbank.org/html/opr/procure/debarr.html>

70. **Anti-Corruption Guidelines.** The Bank team intends to maintain customary oversight and will carry out prior review of all major contracts according to thresholds that will be regularly reviewed and adjusted as needed in the Procurement Plan. Initial thresholds are provided in this Annex. The following measures will be carried out to mitigate the risk of corruption:

- *Training of Fiduciary Staff:* Starting from the project launch and periodically thereafter customized to procedure and methods that would be required in the next 12-month

period. This will include on-the-job training during supervision missions and regional training provided by the RPM office for the countries in the region;

- *Prior Review:* Intensive and close supervision by Bank procurement accredited staff. In addition, contract amendments will be subject to prior approval by the Bank;
- *Publication of Advertisements and Contracts:* All publications of advertisements and contract awards—will be done in accordance with the Guidelines requirements and published in the client connection system, on external websites, i.e. UNDB;
- *Debarred Firms:* Appropriate attention will be given to the need to ensure that debarred firms or individuals are not given opportunities to compete for Bank-financed contracts;
- *Complaints:* All complaints by bidders will be diligently addressed and monitored in consultation with the Bank;
- *Evaluation Committee:* The Bank will review and comment on the qualifications and experience of proposed members of the Evaluation committee(s) with a view to prevent the nomination of unqualified or biased candidates. All members will be required to sign a disclosure form (a sample will be included in the Operational Manual);
- *Monitoring of Contract Awards:* All contracts are required to be signed within the validity of the bids/proposals, and in case of prior review contracts, promptly after the no objection is issued. The Procurement Plan format shall include information on actual dates (of no objections and awards), and will be monitored for cases of delay—which will be looked at on a case-by-case basis to identify the causes. The PSIPMU will maintain up to date procurement records that will be readily available to auditors and all concerned Bank staff, including INT;
- *Monitoring of Payments:* All contracts shall include bank account information. The bank account shall be in the name of the same supplier/consultant that submitted the bid and awarded the contract.

71. **Prior review.** Intensive and close supervision by Bank procurement accredited staff. In addition, contract amendments will be subject to prior approval by the Bank. Prior review requirements (thresholds can be modified after having the capacity assessment of the PSIPMU) are shown in the table below.

72. **Thresholds:** Thresholds for the use of the procurement methods specified in the project procurement plan are identified in the table below, which also establishes the notional thresholds for prior review. The agreed procurement plan will determine which contracts will be subject to Bank prior review.

Expenditure Category	Contract Value (Threshold)	Procurement Method	Contracts Subject to Prior Review / Estimated Total Value Subject to Prior Review
	US \$ thousands		
1. Works	>3.0	ICB	All

	250-3.0	NCB	First contract of each year
	<250	Shopping	First contract
2. Goods			
	>250 50-250	ICB NCB	All First contract of each year
	<50	Shopping	None
	Pursuant to 3.6 of the Consultant Guidelines	DC	All
3. Services			
-3.A Firms	>200 <200	QCBS QCBS, QBS, FBS, LCS, CQ, SSS	All First contract of each year and later TOR only
-3.D Individuals	>50 <50	Comparison of 3 CV SSS	All TOR only as specified in the PP.

73. **Procurement of Goods.** Goods procured under the project would include: (i) ICT Hardware and Software; (ii) office equipment; and (iii) office furniture through shopping. For large Goods contracts, the procurement will be carried out by using Standard Bidding Documents (SBDs) for Goods or Supply and Installation for all International Competitive Bidding (ICB) Bidding of NCB will be carried out through national bidding documents agreed and approved by the Bank. Shopping of goods under the specific threshold (<\$100,000) will be carried out by comparing price quotations obtained from at least three suppliers.

74. **Procurement of Works.** Minor works could include refurbishing of the existing offices /building to accommodate ICT equipment and any small ancillary mechanical, electrical or air conditioning installation. The procurement will be carried out through minor civil works (Shopping) by comparing at least three quotations.

75. **Selection of Consultants.** Consultant services required under this project would support: (i) bridging the remaining gap in the regional broadband communication infrastructure (ii) creating enabling environment that will leverage the regional broadband infrastructure to foster employment; (iii) improvement of government and private sector efficiency and leveraging the regional broadband infrastructure; and (iv) implementation support, development and associated training. Consultant services to be financed from the Credit would be selected in accordance with the Bank Guidelines, and would include: (i) Quality and Cost Based Selections (QCBS); (ii) Selection based on Consultants Qualifications (CQ); (iii) Fixed Budget Selection (FBS); (iv) Least Cost Selection (LCS), and (v) Individual Consultants (IC). Selection over US\$ 200,000 should be advertised in: (i) Development Business (online version); (ii) in local media (one

newspaper of national circulation or the official gazette); and (iii) an electronic portal of free access (CARICOM and/or OECS website) for expressions of interest. A short list of six firms would be drawn from among the qualified interested parties. Individual Consultants would be selected in accordance with Part V of the Consultant Guidelines.

76. **Training.** Procurement training for PSIPMU staff and consultants will be conducted in accordance with a training program that will be submitted to the Bank for its agreement before implementation.

77. **Procurement Plan.** The Borrower has discussed with the Bank team and developed a procurement plan for project implementation, which provides the basis for the procurement methods. This plan has been agreed between the Borrower and the Project Team and is available at the PSIPMU. It will also be available in the project's database and in the Bank's external website. The Procurement Plan will be updated in agreement with the Project Team annually or as required to reflect the actual project implementation needs and improvements in institutional capacity. The Bank team believes that the dates indicated in the procurement plan are realistic and the PSIPMU will adhere to the dates.

78. **Frequency of Procurement Supervision.** In addition to the prior review supervision to be carried out from Bank offices, the capacity assessment of the Implementing Agency has recommended at least one post-review mission per year, when not less than 1 in 10 contracts should be reviewed.

79. **Details of the Procurement Arrangements Involving International Competition: Goods, Works, and Non Consulting Services.** The following table contains the list of contract packages to be procured following ICB and direct contracting.

Ref. No.	Contract (Description)	Estimated Cost (USD)	Procurement Method	P-Q	Domestic Preference (yes/no)	Review by Bank (Prior / Post)	Expected Bid-Opening Date	Comments
	Broadband Network	2,430,000	ICB	No	No	Prior	03-30-14	

80. **Consulting Services.** The following table contains the list of consulting assignments with short-list of international firms:

Ref. No.	Description of Assignment	Estimated Cost (US\$)	Selection Method	Review by Bank (Prior / Post)	Expected Proposal Submission Date	Comments
	Design of broadband infrastructure	200,000	QCBS	Prior	06-25-12	
	TA legal and regulatory safeguards for open access	200,000	QCBS	Prior	10-30-12	

G. Safeguards Policy Issues

79. The activities being financed under the Saint Vincent and the Grenadines CARCIP are not expected to have any major negative social and environmental impact. Nevertheless, appropriate safeguards instruments are being prepared to ensure that all project activities meet the requirements of the relevant national legislation and international conventions to which Saint Vincent is a signatory, as well as World Bank Group environmental and social safeguard policies.

80. The exact locations of the backbone network, and possible cross-border link between Saint Vincent and the Grenadines and Grenada have not been determined, and it is therefore premature to undertake a site-specific Environmental and Social Impact Assessment (ESIA) and a Resettlement Action Plan (RAP). Consequently, these will form part of the regional Environmental and Social Management Framework (ESMF) (consistent with /BP 4.01) and a Resettlement Policy Framework (RPF) consistent with OP/BP 4.12, which have been prepared. Prior to project appraisal, the ESMF and RPF have been reviewed by the World Bank and publicly disclosed in country as well as in the World Bank Infoshop. The purpose of the frameworks is: (i) to provide as much information as possible about potential environmental and social impacts (including possible land acquisition and resettlement) at the project's current state of preparation; (ii) to inform the project planning and design process by comparing the potential impacts of alternative locations, configurations, and construction techniques that are under consideration; and (iii) to describe the procedures for subsequent assessment of impacts and development of the appropriate impact management instruments (including associated mitigation measures) when the details of the project become available. These management instruments are likely to be an Environmental and Social Management Plan (ESMP) and Resettlement Plan (RAP).

81. Land acquisition issues will be assessed on a project-specific basis, and mitigation plans prepared accordingly. Due to the fact that specific program areas are unknown prior to appraisal, a Resettlement Policy Framework (RPF) has been prepared. The Program is not expected to impact indigenous peoples in any negative way, and therefore OP/BP 4.10 is not triggered. A determination of specific impacts will be made early during project implementation and corresponding Resettlement Action Plans, if applicable, will be prepared.