TECHNICAL COOPERATION ABSTRACT (TC-ABSTRACT)

REGIONAL

I. BASIC INFORMATION

Country/Region:	Mexico	
TC Name:	Development of a methodology for the economic valuation of spectrum bands in Mexico	
TC Number:	ME-T1268	
Team Leader/Members:	Felix Gonzalez Herranz, Team Leader (IFD/ICS); Mario Sangines (IFD/ICS); Lorena Cano (IFD/ICS); Enrique Iglesias (IFD/ICS); and Cecilia Bernedo (IFD/ICS).	
Date of TC Abstract authorization:	May, 2014	
TC Taxonomy	Client Support (CS)	
Reference Letter:	IDBdocs# 38788382	
Donors providing funding:	TBD	
Beneficiary	Instituto Federal de Telecomunicaciones (IFT)	
Executing Agency and contact name:	Institutional Capacity of the State (IFD/ICS); Felix Gonzalez Herranz.	
IDB Funding Requested:	**IDB:**	US$ 190,000
Local counterpart funding	**Local:**	US$ 0
	Total:	**US$ 190,000**
Execution period:	12 months	**Disbursement period:** 15 months
Required start date:	June, 2014	
Types of consultants:	Firm	
Prepared by Unit:	Institutional Capacity of the State (IFD/ICS)	
Unit of Disbursement Responsibility:	IFD/ICS	
TC Included in Country Strategy:	Yes	
TC included in CPD:	No	

GCI-9 Sector Priority: The current Sector Strategy: "Institutions for Growth and Social Welfare" identifies improving innovation and productivity as a major area where the Bank can help the Region overcome the challenges that hinder growth and social welfare. To this end, the IDB will work towards strengthening institutions, and has specifically recognized the need to improve policies and governmental action in the ICT sector (par.5.21 of the referred Sector Strategy). It is also worth remarking that the Sector Strategy: "Support Competitive Global and Regional Integration", identifies bridging the digital divide as one of the Bank's priorities to promote integration, placing specific emphasis on promoting broadband infrastructure. Consistent with these Strategies, the Bank has been working in the design and implementation of a Broadband Platform to accelerate the penetration rate

and usage of broadband services in the Region.

II. OBJECTIVE AND JUSTIFICATION

2.1 The importance of mobile broadband in the development of societies and economies and its consequential financial weight have brought increasing pressure on governments and regulators to make increasingly large portions of spectrum available to meet its outstanding growth. In purely financial terms, the value of a discrete block of spectrum can be established by putting it up for a bid and seeing how much anyone is willing to pay for it. This is the broad principle behind auctions, but the building blocks of spectrum value are as much political and socioeconomic as they are purely financial. If each country's economic, social and political conditions are considered, spectrum valuation becomes highly situational and variable.

2.2 This is particularly important in the case of Mexico where the mobile broadband demand is expected to grow exponentially thanks to the increasing penetration of mobile devices such as tablets and smartphones and also thanks to the programs that the Government of Mexico (GoM) is pushing such as the project Red Pública Compartida, a wholesale mobile network that will operate in the 700 MHz band, one of the most valued bands. Also, there is a Constitutional mandate to guarantee the optimal use of the 2.5GHz band under universal access and non-discriminatory principles.

2.3 **Objective.** The objective of the proposed TC will be to define a methodology for the economic valuation of spectrum bands, as well as for the estimation of the value of such spectrum bands. This methodology will allow the regulator to determine realistic and competitive fees, as well as reference values for tendering processes, based on the particular social, economic, political and regulatory conditions in Mexico. Additionally, this tool will also contribute to a more efficient and effective spectrum management process.

III. DESCRIPTION OF ACTIVITIES/ COMPONENTS AND BUDGET

3.1 **Component 1: Analysis of the spectrum in Mexico.** This component will finance an assessment of the current situation of spectrum in Mexico in order to have an idea of the starting point. It will consider strengths and weaknesses of the current spectrum management (e.g. structure of the frequency allocation tables) and valuation along with the needs in that regard. Moreover, the study will also assess other inputs towards the Component 3 such as market structure, investment regulations or political history.

Main outputs	Main results
Study containing the assessment of the current situation of spectrum in Mexico	Clear understanding of how spectrum is valued today in Mexico

3.2 **Component 2: Characterization of the mobile broadband demand in the different states of Mexico.** This component will finance a study of the potential

mobile broadband demand in Mexico characterizing the demand per type of region (e.g., urban, semi-urban, rural) and then, for each state, according to at least three variables: (i) income level; (ii) population density (low, medium, high); and (iii) geography. The characterization may incorporate other variables as appropriate.

Main outputs	Main results
Study containing the characterization of the demand in Mexico per state	Clear understanding of the potential mobile broadband demand in Mexico

3.3 **Component 3: Benchmarking of the methodologies used elsewhere.** This component will finance a benchmarking exercise of methodologies and procedures that are being used to determine the value and economic valuation of spectrum in different countries of the world (emphasizing Latin America and the Caribbean). Reference countries will be selected based on their similarities with Mexico (e.g., economic and social conditions, demand levels).

Main outputs	Main results
Study containing a list and description of spectrum valuation methodologies in different countries	Understanding of existing options for spectrum valuation

3.4 **Component 4: Development of a proposal of the methodology for spectrum valuation in Mexico.** This component will finance the development of methodologies and processes that will define the spectrum value, (taking into account the results of the previous Components) and its application to calculate the estimated value of each of the bands. It is important to note that the methodology should not be unique for all bands. A customized methodology for the bands indicated by the Instituto Federal de Telecomunicaciones (IFT) according to their frequency allocation table is expected. Additionally, it is mandatory that any assumption made has to be fully explained and supported.

3.5 This component will also finance the development of recommendations on: (i) the most suitable approach towards licensing (e.g., bidding based on best economic offer, bidding based on coverage obligations with a social value equivalent to the estimated economic value, mix of the two); and (ii) in the case of bidding based on economic offer, the most suitable licensing model for each of the bands (ascendant, descendant) to guarantee that there is enough participation in the bidding process.

3.6 Additionally, this component will finance a study on the spectrum secondary market including: (i) the principles that should orchestrate this market; and (ii) the necessary regulatory adjustments.

Main outputs	Main results
Study containing: (i) the valuation methodology for all the spectrum bands in Mexico; (ii) the value of each of the bands according to the methodology; and (iii) the most suitable licensing approach for each band and if economic-based, the best licensing model	Better valuation of the spectrum bands in Mexico
Report with the analysis of the spectrum secondary market including governing principles and regulatory adjustments	Better management of the spectrum secondary market

3.7 **Component 5: Development of a tool to perform the calculations.** This component will finance the development of a tool to calculate the valuation of the different spectrum bands. It will have several input variables (according to the previous Components), the logic engine to perform the computation and the desired outputs. The format of the tool will have to be agreed with the IFT.

Main outputs	Main results
Tool to calculate the valuation of the different bands	Better valuation of the spectrum bands in Mexico

3.8 **Component 6: Dissemination of the results.** This component will finance the activities to disseminate the results of the project. The activities will include a publication and an event in Mexico.

Main outputs	Main results
Publication with the outputs of Components 1, 2, 3 and 4	Better understanding of spectrum allocation by telecom stakeholders in Mexico
Event to present the results	

Table 3.1: Indicative Budget

Activity/Component	Description	IDB/Fund Funding (US$)	Counterpart Funding	Total Funding (US$)
Component 1	Analysis of the spectrum in Mexico	10,000	-	10,000
Component 2	Characterization of the mobile broadband demand in the different states of Mexico	35,000	-	35,000
Component 3	Benchmarking of the methodologies used elsewhere	20,000	-	20,000
Component 4	Development of the methodology for spectrum valuation in Mexico	55,000	-	55,000
Component 5	Development of a tool to perform the calculations	55,000	-	55,000
Component 6	Dissemination of the results	15,000	-	15,000
	TOTAL	**190,000**		**190,000**

IV. EXECUTING AGENCY AND EXECUTION STRUCTURE

4.1 As per the request of the Instituto Federal de Telecomunicaciones (IFT), the technical cooperation will be executed by the Institutional Capacity of the State Division (IFD/ICS), which will operate in coordination with the staff of the IFT (the telecommunications and broadcasting regulatory body in Mexico and main counterpart). The request from the IFT to have the Bank as the executing agency is due to two reasons. First, to leverage the outreach that the Bank has internationally especially for the benchmark exercise where not only a literature review is necessary but also specific interviews and direct contacts are desirable. Secondly, to ensure that the Bank's knowledge in broadband spectrum management is also brought along the entire project lifecycle.

V. PROJECT RISKS AND ISSUES

5.1 There are two main risks associated to this project. The first one is the lack of coordination and communication with the IFT. This will be mitigated by the establishment of a project committee with personnel from both institutions and from the hired firm. The second risk is project implementation delays. This will be mitigated by establishing concrete results and outputs at the beginning of the project and maintaining a close and constant supervision by the project committee.

VI. EXCEPTIONS TO BANK POLICY

6.1 There are no exceptions to Bank policy.

VII. ENVIRONMENTAL AND SOCIAL CLASSIFICATION

7.1 Given the characteristics of the TC which revolves around a study, there are no social or environmental risks associated with it. This operation is classified as a Category "C" according to the classification toolkit of the Bank (see link: IDBdocs#38812465).