1. **Country and Sector Background**

**Sector issues**

1. This section highlights the main regional and sector issues that are relevant to the countries covered by the program. More details, particularly with regards to country specific issues, are provided in the Country Technical Annexes.

2. **Some reforms have been accomplished but the Region is still suffering from an Access and Price Deficit**. At the policy, legal and institutional levels for the eleven (11) countries covered by this Central African Backbone (CAB) Program, most countries have updated or are in the process of finalizing new sector policies (i.e. Cameroon and CAR in 2006, Chad in 2007, Congo and DRC in 2009), nine (9) countries have established separate regulatory authorities, nine (9) countries have two or more mobile operators, and four (4) countries have partially privatized their incumbent telecom operators. In terms of access and affordability of ICT services, each country covered by the program is in a different stage of development. However, most of the countries are lagging behind not only the world average but also the Sub-

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1 Data sources for this section: International Telecommunication Union (ITU) or WB ICT4D database.
2 The CAB Program is open to Cameroon, CAR, Chad, Congo, DRC, Equatorial Guinea, Gabon, Niger, Nigeria, Sao Tome y Principe and Sudan.
3 Including Cameroon, CAR, Chad, DRC, Gabon, Niger, Nigeria, Sao Tome and Principe.
4 Including Cameroon, CAR, Chad, Congo, DRC, Gabon, Niger, Nigeria, Sao Tome and Principe, and Sudan.
5 Including, Equatorial Guinea, Niger, Sao Tome and Principe, and Sudan.
Saharan Africa (SSA) average. The countries covered by the Program are suffering from an access and price deficit:

(a) Fixed teledensity is well below the SSA average (1.24 VS. 1.81 lines per 100 people in 2007)

(b) Mobile teledensity varies widely among the countries, however several of them still lag well-behind SSA average

<table>
<thead>
<tr>
<th>Mobile teledensity (per 100 people)</th>
<th>2007</th>
<th>Mobile teledensity (per 100 people)</th>
<th>2007</th>
</tr>
</thead>
<tbody>
<tr>
<td>World</td>
<td>49.79</td>
<td>Equatorial Guinea</td>
<td>43.35</td>
</tr>
<tr>
<td>Sub-Saharan Africa</td>
<td>22.79</td>
<td>Gabon</td>
<td>87.88</td>
</tr>
<tr>
<td>Cameroon</td>
<td>24.48</td>
<td>Niger</td>
<td>6.34</td>
</tr>
<tr>
<td>Central African Rep.</td>
<td>2.99</td>
<td>Nigeria</td>
<td>27.30</td>
</tr>
<tr>
<td>Chad</td>
<td>8.53</td>
<td>Sao Tome and Principe</td>
<td>19.05</td>
</tr>
<tr>
<td>Congo</td>
<td>35.42</td>
<td>Sudan</td>
<td>19.36</td>
</tr>
<tr>
<td>DRC</td>
<td>10.56</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(c) The cost for Internet service is much higher in the CAB targeted countries ($ 67) compared to SSA average ($ 43) and the world average ($ 21) in 2007.

(d) International bandwidth tariffs for landlocked countries are up to 50 times higher than countries connected to competitive fiber-optic submarine cables (i.e. Chad and CAR are exclusively using satellites). Volume buyers in countries with access to global fiber-optic networks can buy international bandwidth at a much lower tariff. The international Internet bandwidth per person for CAB eligible countries is also well-below average.

<table>
<thead>
<tr>
<th>International Internet bandwidth (bps per person)</th>
<th>2007</th>
<th>International Internet bandwidth (bps per person)</th>
<th>2007</th>
</tr>
</thead>
<tbody>
<tr>
<td>World</td>
<td>2731.33</td>
<td>Equatorial Guinea</td>
<td>..</td>
</tr>
<tr>
<td>Cameroon</td>
<td>10.95</td>
<td>Gabon</td>
<td>150.36</td>
</tr>
<tr>
<td>Central African Rep.</td>
<td>0.37</td>
<td>Niger</td>
<td>2.26</td>
</tr>
<tr>
<td>Chad</td>
<td>18.58</td>
<td>Nigeria</td>
<td>4.68</td>
</tr>
<tr>
<td>Congo</td>
<td>0.16</td>
<td>Sao Tome and Principe</td>
<td>75.94</td>
</tr>
<tr>
<td>DRC</td>
<td>..</td>
<td>Sudan</td>
<td>18.29</td>
</tr>
</tbody>
</table>

3. **High cost structure restricts trade.** The isolation and high cost structure of Central African economies have held back the availability of affordable telecommunications infrastructure. Without access to low price and high quality telecommunications services, it is very costly for countries to trade with each other and with the rest of the world (opportunities to create jobs, expand production of goods and services are limited).
4. **Incomplete liberalization negatively affects the sector.** Several Central African countries have implemented reforms to reduce the cost of access through policy/regulatory reform and market liberalization in various ICT sub-sectors. However, incomplete liberalization (and lack of infrastructure) has allowed telecommunications operators in some instances to use their dominant position to keep prices artificially high for various ICT services such as international bandwidth, mobile and access to Internet.

5. **Limited and non-competitive access to existing submarine cable leads to high prices and constrained demand throughout the region.** Only one submarine cable along the West African Coast (SAT-3/WASC) built in 2002 can provide reliable and high quality international connectivity for most CAB Countries (with the exception of Sudan which has access to several submarine cables). Access to the submarine cable and therefore international capacity has been limited to founding partners/ operators (mainly incumbent operators) who also control the price of capacity. However, significant interest from financiers and private sector operators (mainly mobile operators which are now dominant in Africa) is leading to the development of several West African Submarine projects that are expected to be operational in 2010 (see Africa maps in Annex 1). Competition for the provision of international capacity via submarine cable backbone is expected to increase access to, and significantly decrease the cost of, international bandwidth. The CAB Program focuses on terrestrial connectivity infrastructure and will complement one or several submarine cable projects currently under preparation. The presence of several alternative submarine cable projects under preparation enhances the viability of the CAB.

6. **The absence of 21st century backbone infrastructure at the national level is a further key constraint.** Most telecommunication operators do not have broadband terrestrial networks and rely on expensive and poor quality satellite connectivity to link cities at the national level. Several projects for the region have been proposed in the past, but none have materialized due to a combination of factors including poor or inadequate regulatory, policy and investment climates, the complexity of a multi-country investment project and related concerns about financial sustainability. Recently, existing operators (fixed and mobile) and public authorities began to explore new business models that could foster the deployment of such infrastructure at the national level. These new infrastructure could be developed through a PPP (public funding to complement private financing when the risk-return profile is unattractive and overall operation managed by the private sector) under competitive pricing and open-access principles. Such national backbones would connect the capital and secondary cities (narrowing the urban-rural divide). Operators and service providers could then provide affordable and better quality ICT and eGovernment services to the citizens. Central African countries have realized that without cross-border initiatives, the individual countries may not be in a position to achieve low-cost broadband access and therefore may not be in a position to advance their growth agenda and overall global competitiveness. Landlocked countries in Central Africa are especially

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6 For the purposes of this project, backbone infrastructure refers to a collection of high-capacity fiber optic or point-to-point wireless (e.g., microwave) links between main populated areas, both within countries and between countries, which serve as the basis on which telecom operators provide voice and data services. The text at some points will make the distinction between: **national backbone** networks (within countries), **regional backhaul** networks (between neighboring countries, terrestrial networks), and **regional backbone** networks (between the region and the rest of the world, e.g., undersea cables).

7 Open access is broadly defined as an equal opportunity for operators and service providers to have unfettered access to given infrastructure or services under similar terms and conditions.
disadvantaged as they need to interconnect with incumbents or national long distance operators in intermediary countries to carry traffic to the landing point and often pay high prices in the process. Effective cross-border links and supporting regulatory frameworks are therefore critical for the region as a whole.

7. **ICT sector context in CAB APL1A countries (Cameroon, Central Republic and Chad),** all countries have a dedicated Telecom Ministry, have established an independent telecom regulator and are currently revising their sector legislation to transpose the CEMAC Directives for electronic communications services which are in-line with good international practices and consistent with the CAB project design (Cameroon and CAR are using the CAB Project Preparation Facility to finance this specific activity – harmonization and adaption of legal and regulatory framework to establish CAB networks). The sector structure and issues in CAB APL1 countries can be described as follow:

8. **Cameroon sector structure.**

   (a) In Cameroon, out of a total population of 18 million in December 2007, the number of main fixed lines in operation was 188,691 and the number of mobile subscriptions was 4.5 million, representing a fixed teledensity of 1.02 percent and a mobile teledensity of 24.45 percent.

   (b) Cameroon has currently one state-owned incumbent telecommunications operator (CAMTEL). CAMTEL is currently providing fixed and mobile services (including CDMA network for fixed, mobile and Internet services and an unused GSM mobile license) and wholesale services (long-distance services on a fiber-optic backbone to private mobile operators; limited wholesale for International connectivity via the submarine cable – SAT3- for the mobile operators and ISPs). CAMTEL currently retains a monopoly over long-distance and is the main provider of most international bandwidth. Following the failed privatization transaction of CAMTEL in 2008 and based on the opportunities created by the CAB project, the Government has opted to transform CAMTEL into two separate retail and wholesale operators and to introduce private sector participation into the newly created entities. The CAB project will support the PPP process for the new entities and ensure consistency with the CAB regional network.

   (c) Only two private mobile operators (Orange and MTN) are operating in Cameroon and represent more than 95% of overall subscriber base at year-end 2007. The mobile operators also provide broadband Internet services (WiMAX). The Cameroonian mobile market is characterized by high per-minute prices and a lower user penetration than its GDP per capita would suggest. Under the Project Preparation Facility (PPF) for CAB in Cameroon, a consultancy financed by the PPF is currently supporting the award of a new mobile license to a private operator. This should provide significant fiscal revenues for the Government and put considerable pressure on existing operators to lower tariffs.

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8 E.g. the new CEMAC Directives are promoting competition (removing all exclusivities), infrastructure sharing, open access, and convergence for ICT services.

(a) In CAR, out of a total population of 4.3 million in December 2007, the number of main fixed lines in operation was 5,000 and the number of mobile subscriptions was 0.35 million, representing a fixed teledensity of 0.12 percent and a mobile teledensity of 7.99 percent.

(b) SOCATEL, the incumbent fixed operator, is a 100% state owned enterprise (France Cable radio/France Télécom exited SOCATEL two years ago and bought a stand-alone mobile license). SOCATEL is a “distressed operator” with chronic operating losses given its low market share in a competitive sector (about 1% of the overall subscribers for the telecom fixed and mobile segments). Funded by the CAB PPF, a consultancy is currently identifying restructuring options and recommendations for SOCATEL. This study will ensure consistency with CAB Project and that Government exit from operations in the Telecom sector. The Project will support SOCATEL “restructuring”.

(c) Four (4) private mobile/GSM operators (Orange, Orascom, Moov and Nationlink) are currently providing mobile and broadband Internet services in CAR (more than 25 towns are covered by existing mobile as of December 2007; broadband services is only provided in the capital city).

(d) 100% of the domestic and international traffic is carried by satellites.

(e) In 2008, the telecom sector contributed 5% of the overall GDP and was growing at about 40% per annum. The Telecom sector is the most significant fiscal contributor for the country and it attracted more than USD40m FDIs in 2008 (and the same amount has been planned in 2009 by mobile operators).

10. Chad Sector Structure.

(a) In Chad, out of a total population of 10.8 million in December 2007, the number of main fixed lines in operation was 13,000 and 5,000 CDMA (operated by SOTEL) and the number of mobile subscriptions was 1.1 million, representing a fixed teledensity of 0.17 percent and a mobile teledensity of 10.26 percent.

(b) SOTEL, the fixed incumbent operator is 100% state owned. SOTEL accounts for about 2 % of the overall telecom fixed and mobile subscribers in Chad. SOTEL provides fixed and mobile services (including CDMA network for fixed, mobile and Internet services and GSM network for additional mobile license). SOTEL is a distressed operator with chronic operating losses. The Government is pursuing SOTEL restructuring prior to the launch of the privatization transaction (to be supported by the CAB Project).

(c) Only two private mobile operators (Zain and Tigo) provide mobile services in Chad. SOTEL, Tigo and some small private ISPs provide Internet services in Chad.
Background on the Central Africa Backbone Program

11. **Prefeasibility study.** A prefeasibility study has been conducted by a specialized international firm in CAB APL1 countries that demonstrates the economies of scale and cost efficiencies that a regional and fully integrated end-to-end backbone infrastructure network would bring about. The study further demonstrates the financial and technical feasibility of the CAB Program and recommends the implementation of CAB Phase 1 involving Cameroon, CAR and Chad. The study forms the basis for the design and framework for the CAB project intervention. The CAB network, as designed, is a regional telecommunications network made up terrestrial fiber connections to submarine fiber optical cable systems linking several Central African countries and providing the region with a digital broadband access to the global fiber network. In addition to the build-out of approximately 2,200 km of new fiber optic infrastructure, the planned broadband backbone would leverage the 1000 km existing fiber optic infrastructure laid along the oil pipeline between Kribi (Cameroon) and Doba (Chad). The study developed nine scenarios, the traffic demand and flows for the targeted countries and has set key principles (CAB network is to be a shared infrastructure promoting an open access regime and owned and operated according to Public-Private Partnership (PPP) principles).

12. **CEMAC heads-of-state Declaration.** In May 2007, based on the findings of the study, the CEMAC heads-of-states adopted a Declaration calling for the establishment of the CAB under open-access and PPP principles and asked for Donors’ intervention. In line with the Regional Integration Assistance Strategy (RIAS) and national CAS/PRSP, the World Bank Group (World Bank and IFC) and the African Development Bank have provided technical assistance to CEMAC and Central African Countries to conduct preparatory studies. Regional and National technical committees have been set-up since 2007. In parallel, the World Bank has participated, as an observer, to the elaboration of the 2008 CEMAC Directives on Electronic Communications Services in-line with sector good practices and the CAB project as designed.

13. **New regional telecom operator(s).** The CAB structure calls for the establishment of new regional telecom operator(s) for reselling international, regional, national capacity to existing national operators and service providers at discounted rates compared to current pricing in the targeted countries. As such, the CAB network will increase competition for the provision of international and national capacity (new alternative infrastructure, fiber optic backbone, competing with satellite and microwave connectivity).

14. **Key principles.** Key principles have been defined in the study and have to be endorsed by all participating countries in order to be eligible for World Bank financing. They include: promoting open access regimes, developing wholesale markets and promoting PPP -see Annex 1. To keep some flexibility, given the difference of all eligible countries in terms of sector structure, level of development and access, operational and financial situation of the respective State Owned Enterprises, the detailed arrangements in terms of ownership and management will be defined at the country-level.
15. **Role of the government.** Governments will focus on providing the right incentives for infrastructure and services to reach areas unattractive for the private sector on a purely commercial basis. Government participation through the financing of segments of the CAB backbone will be used to buy-down the cost of capital and therefore the prices that could be charged to consumers to recover the investment (regulatory mechanisms will be set-up to ensure that lower costs will be passed to the consumer). Additional government support may take the form of a government participation in the new legal entity created for the build-out of the backbone networks (such as through contribution of existing assets), guarantees, subordinated debt, ensuring rights of way, and/or commitment to purchase certain capacity on the network for a given time period.

16. **Role of the private sector.** The private sector will participate in financing, and will install, maintain and operate the CAB network. The capital and financing structure will be a blend of public and private sector. The inclusion of the private sector and profit sharing can bring several benefits including: (i) access to private finance; (ii) reduced operational risk for public sector; (iii) faster delivery of capital projects; (iv) project management skills and; (v) entrepreneurship and innovation. The PPP structure will share the risks and rewards between the government and the private companies.

**CAB PPP Structure and financing**

17. The design and ownership structure of the PPP will (i) maximize the use of private financing (or minimize the use of public financing); (ii) ensure feasibility and attractiveness of the transaction; and (iii) secure open access to regional connectivity infrastructure and ensure competitive, reasonable tariff of international, regional and national capacity.

18. New legal entities will be formed for the purposes of owning and operating the CAB networks. This will take the form of a consortium including the private operators, private financers’, incumbent operators and/ or governments. The private sector will install and maintain the CAB Networks. A contract will be set between the private sector and the existing public telecommunications operators on the management of the national backbones (the new structure could also be leveraged to manage these networks). Final ownership distribution will be based on the amount of private financing mobilized and final contributions made by the Governments.

19. The IFC is playing a role as part of the World Bank Group’s support to the CEMAC and to Governments as they finalize an optimal structure for the public-private partnership that ensures the feasibility and attractiveness of the transaction. If needed IFC may also assist in mobilizing funding or assist investors.

20. **Financing CAB (Phase 1) Connectivity Infrastructure.** Cost for the connectivity infrastructure component of the CAB (Phase 1) project is estimated at approximately $69 million (not including the cost of support to the enabling environment, which represents an additional $17m) and will be financed from multiple sources. The project will support investment for the CAB network in Cameroon, CAR and Chad to complement the existing 1000 km fiber-optic network already installed next to the oil pipeline which is to be integrated in the future CAB.
The new investment is expected to be financed by the private sector (operators and financial institutions) and by the three Governments under CAB APL1. The estimated cost structure and preliminary financing plan (backed by supporting financial analysis done as part of the prefeasibility study) of the connectivity infrastructure component of CAB 1 is detailed in the table below.

**CONNECTIVITY INFRASTRUCTURE COST STRUCTURE AND FINANCING**

<table>
<thead>
<tr>
<th>Cost structure</th>
<th>$ Million</th>
</tr>
</thead>
<tbody>
<tr>
<td>Equipment Costs including installation</td>
<td>55.2</td>
</tr>
<tr>
<td>Right of use of the fiber laid next to the oil pipeline</td>
<td>1.7</td>
</tr>
<tr>
<td>Environmental studies and Resettlement costs</td>
<td>2.1</td>
</tr>
<tr>
<td>Project structuring, Start-up expenses and pre-operating expenses</td>
<td>4.9</td>
</tr>
<tr>
<td>Contingencies</td>
<td>5.0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>69.0</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Financing Plan</th>
<th>$ Million</th>
</tr>
</thead>
<tbody>
<tr>
<td>IDA</td>
<td><strong>40.0</strong></td>
</tr>
<tr>
<td>Trust funds</td>
<td>1.8</td>
</tr>
<tr>
<td>Commercial debt</td>
<td>10.0</td>
</tr>
<tr>
<td>Private Equity/ off-take agreements</td>
<td>17.2</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>69.0</strong></td>
</tr>
</tbody>
</table>

In addition, the AfDB is working on financing complementary backbone infrastructure in the three countries; however, the cost and design of this additional infrastructure is not included in the CAB (Phase 1) project. As structured, the World Bank CAB Program and CAB APL1 will not be affected if the AfDB financing does not materialize.

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9 In order to establish the CAB network, the use of the fiber optic network laid next the oil pipeline has been bought in 2007/8 by the Governments of Cameroon and Chad from the oil Consortium.
21. **Private sector interest.** The structure as recommended has been presented to all public and private operators in APL1 countries (but also in other eligible countries). Despite the economic and financial crisis, all operators\(^{10}\) have confirmed their strong interest in the venture since CAB will lower significantly their operating cost and provide new opportunities for additional network coverage. Several operators have announced that they will explore the opportunity to contribute financially, and some international commercial banks have also expressed an interest.

2. **Objectives**

The development objective of the Central Africa Backbone Program is to extend the geographical reach, usage and to reduce prices of regional broadband network services.

3. **Rationale for Bank Involvement**

22. This section summarizes the rationale for Bank involvement from a regional perspective. More details, particularly with regards to country-specific issues, are provided in the Country Technical Annexes.

23. **The World Bank Group (WBG) is well placed to contribute in the context of a multiple development partners’ effort.** The WBG has been involved in the CAB program since 2005. The Declaration of the CEMAC heads-of-state adopted in May 2007 called explicitly for WBG financial support for the implementation of the CAB program\(^{11}\). The overall program has been formulated with other key stakeholders and DFIs (the AfDB joined the initiative in 2007 and is providing parallel financing for the CAB Program; the African Union is also playing an important role in facilitating inter-governmental cooperation and policy harmonization, in conjunction with the CEMAC).

24. **The WBG has an analytical work program, an active policy dialogue and lending activities in the ICT sector in most eligible countries.** Also, the WBG (i.e. PPIAF) has financed several backbone studies focusing on business, commercial and financing structure options (CAR, Chad and Cameroon in 2007; Equatorial Guinea, Gabon, Congo and DRC in 2009) that are directly linked to the CAB program. The Bank has an active ICT policy dialogue in all CAB eligible countries. The WB Team, as an honest broker, has helped maintain a very constructive and unique dialogue between all parties (governments, regulators, public and private operators) and has participated to the preparation and adoption of the new CEMAC Directives for the sector. Finally, the IFC has been providing financing to the main private telecom operators (that should become the main users) in CAB eligible countries (e.g. Celtel/Zain,\(^{10}\) To provide a comparison to the US$30million, the project aim to raise from the private sector, more than US$40 million has been invested in the Telecom sector in CAR (same amount expected in 2009). However, without key principles as set in the CAB project (shared infrastructure, open access and co-financing from CAB APL1), no operator could develop such infrastructure in CAR.

\(^{11}\) The World Bank has also received an official request from the CEMAC Commission to support the preparation and the financing of the CAB Project (in coordination with AfDB, grants have been mobilized in 2008 for CAB preparation).
Orange, MTN, Millicom). This gives a comparative advantage of the WBG in infrastructure financing and in the policy and regulatory interventions.  

25. **CAB fits well with WBG’s Regional Integration Assistance Strategy for Africa (RIAS), particularly within the framework of the Africa Action Plan.** The Bank’s RIAS discussed at the Board in April 2004, identified advances in ICT as one of the three emerging positive trends in the 21st Century for Africa, and highlight its role for the Regional connectivity objective. CAB will strengthen and implement partnerships at the regional level (including regulatory harmonization) and will support for both ECCAS and CEMAC objective of creating a unified economic space in Central Africa.

26. CAB also addresses key Millennium Development Goals including:

a. **MDG 1, Targets 1 & 2 (Eradicate extreme poverty and hunger).** Significant evidence exists to support the assertion that sustained growth is key to poverty reduction. A large number of recent econometric studies suggest that the quantity and quality of telecommunications infrastructure may be connected to growth. The recent cross-country growth analysis across 120 developed and developing countries indicates that the broadband provide a 1.38 percentage point GDP increase for each 10 percent points increase in broadband subscribers. At the microeconomic level, ICT provides farmers, workers and entrepreneurs opportunities to reduce transaction costs (increase revenues of local population), increase market coverage and improve competitiveness.

b. **MDG 8, Targets 14 through 18 (Global Partnership for Development).** This MDG reaffirms the need to support the special needs of landlocked countries (Target 14) and to cooperate with the private sector to “make available the benefits of new technologies, especially information and communications” (Target 18). People living outside the capital city and in remote areas tend to be poor and socially isolated. They lack information relevant to their particular situation and thus have difficulty interacting with other community members or other communities. ICTs, such as radio, telephone and email, can be of great value in bringing people together, bridging geographic distances and providing relevant information to the poor. The correlation across countries of the Human Development Index (HDI) and the Networked Economy Index (NEI) is above 0.8, suggesting a link between welfare and the use of ICT in developing countries.

27. **Country ownership and commitment is strong.** There is considerable interest among governments in the region to address the existing sector constraint and develop an efficient Central Africa telecommunications market as key to promoting regional integration, economic

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12 The proposed approach is coherent with the WBG Strategy for ICT Sector Development in the region, (Connecting Sub-Saharan Africa, 2005) that recommend addressing incomplete sector liberalization and lack of infrastructure to leverage ICT for economic and social development..


growth and development of member states. The CEMAC heads-of-state have adopted a Declaration in 2007 to implement this Program as a key tool for Regional Integration and Growth. Significant technical and financial resources have been mobilized by the countries and the CEMAC Commission to accelerate the CAB implementation.

4. Description

Providing broadband connectivity in Central Africa to all capital cities, main secondary cities and establishing redundancy linkages is estimated at about $700m for the following eleven (11) Central African countries: Cameroon, CAR, Chad, Congo, DRC, Equatorial Guinea, Gabon, Nigeria, Niger, Sao Tome and Principe and Sudan.

The World Bank Central African Backbone (CAB) Program will contribute a portion of the overall cost for broadband connectivity in Central Africa through the connection of capital cities and establishment of redundancy links for the ten countries mentioned above. The proposed amount of IDA and IBRD contribution for the CAB Program is $215m over the ten-year period. The CAB Program is aiming at leveraging additional $97.8m from the private sector.

Other development partners are included in the process. The African Development Bank has been closely involved with the preparation of the CAB Program. The AfDB will provide parallel financing to extend the network beyond the capital cities and has also financed several preparatory studies for the CAB Program. Missions and respective project preparation are done jointly. It is expected that other Donors will provide approximately the same level of financing as the World Bank (about $200 million). The African Union is also playing an important role in facilitating inter-governmental cooperation and policy harmonization, in conjunction with the CEMAC.

World Bank financed CAB Program

The CAB Program will finance activities included in the following three components:

(i) **Enabling environment.** The program will provide technical assistance to implement a strategy of effective regional connectivity, to promote further sector liberalization and to resolve market efficiency gaps including the reform of selected state-owned enterprises.

(ii) **Connectivity.** The program will catalyze and leverage private investment for the deployment of regional and national backbone infrastructure to link at competitive prices all capital and major cities in Central Africa.

(iii) **eGovernment applications.** In selected countries, the program will support the deployment of selected key eGovernment applications and services making use of improved connectivity in order to increase government efficiency.

The first phase of the CAB proposed for IDA financing will cover Cameroon, Central African Republic and Chad. The first Phase will be structured as a vertical APL to cover first the technical assistance to strengthen the enabling environment and prepare the PPP structure for the establishment of the CAB (CAB APL1A) then a subsequent phase will focus on financing the connectivity infrastructure of the CAB (CAB APL1B).
To establish the CAB infrastructure in Cameroon, CAR and Chad (that will utilize the existing 1000km fiber-optic backbone laid next to the oil Chad-Cameroon oil pipeline), approximately $40m will be directly contributed from the CAB APL1 and additional $27.8m will be mobilized from the private sector (private equity, off-take agreements and commercial debt). As structured, the World Bank CAB Program will not be affected if the AfDB financing does not materialize.

The IFC is playing a key role as part of the World Bank Group’s support to the CEMAC and to Governments as they finalize an optimal structure for the public-private partnership (PPP). The structure of the PPP will be designed to (i) maximize the use of private financing (or minimize the use of public financing); (ii) ensure feasibility and attractiveness of the transaction; and (iii) secure open access to regional connectivity infrastructure and ensure competitive, reasonable tariff of international, regional and national capacity. If needed IFC may also provide part of the private financing.

Subsequent phases will reach the Board based on the readiness of countries applying for support under the Program as well as availability and eligibility of IDA/IBRD financing. Countries that have already expressed interest for subsequent phases include Congo Republic, DRC, Equatorial Guinea (IBRD), Gabon (IBRD) and STP.

<table>
<thead>
<tr>
<th>CAB APL1A</th>
<th>CAB APL18 (est.)</th>
<th>CAB APL2+ (est.)</th>
<th>Total CAB Program</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>IDA</td>
<td>IDA</td>
<td>IDA</td>
<td>IDA</td>
<td></td>
</tr>
<tr>
<td>Enabling Environment*</td>
<td>20.0</td>
<td>27.8</td>
<td>47.8</td>
<td>47.8</td>
</tr>
<tr>
<td>Connectivity (Infrastructure)</td>
<td>37.1</td>
<td>100.0</td>
<td>137.1</td>
<td>97.8</td>
</tr>
<tr>
<td>eGovernment</td>
<td>1.2</td>
<td>15.0</td>
<td>16.2</td>
<td>-</td>
</tr>
<tr>
<td>Project management</td>
<td>5.0</td>
<td>8.9</td>
<td>13.9</td>
<td>-</td>
</tr>
<tr>
<td>Total</td>
<td>26.2</td>
<td>37.1</td>
<td>151.7</td>
<td>97.8</td>
</tr>
</tbody>
</table>

5. **Project Financing (CAB APL1A)**

Source: International Development Association (IDA) 26.20

Total 26.20

6. **Implementation**

A. **Partnership arrangements**

28. Following the Connect Africa Summit held in Kigali in November 2007, the AfDB has been closely involved with the preparation of the CAB Program. The AfDB is providing parallel financing on the CAB Program. AfDB has also financed several preparatory studies and has leveraged grants from partner institutions for this specific program. Missions and respective project preparation are done jointly. While the World Bank is financing the necessary adaptation of the enabling environment in the ICT sector and the main broadband infrastructure to the
capital cities (extension from the existing fiber optic cable laid next to the oil pipeline to N’Djamena and Bangui, the extension from Ndjamena to Nigeria and extensions from Cameroon existing network to neighboring countries like Equatorial Guinea and Nigeria), the AfDB is focusing on redundancy routes and economic zones (from Bangui to Bria – economic zone; from Ndjamena to Abéché) and eGovernment activities. As structured, the World Bank CAB Program and CAB APL1 will not be affected if the AfDB financing does not materialize.

29. It is expected that the AfDB will provide approximately the same level of financing as the World Bank for the overall CAB Program.

B. Institutional and implementation arrangements

30. In May 2007, the CEMAC heads-of-state adopted a Declaration calling for the establishment of the backbone and asking donors to provide financing for the CAB implementation. In line with the heads-of-state declaration the CEMAC Commission oversees and coordinates the overall preparation of the program with various stakeholders and donors for this specific project.

31. To date CAB APL1 countries have established: (i) an Inter-Ministerial Committee involving sector ministers, (ii) an Expert Commission involving three representatives from each country participating CAB Phase 1, and one representative from the following institutions: the World Bank, the AfDB, the CEMAC, the Economic Community of Central African States (ECCAS) and the ITU; (iii) national technical committees involving representatives from the government, the regulatory agency, the public and private operators and users groups (all technical studies conducted at national and regional level have and will benefit from their support).

32. Under the Secretariat of the CEMAC Commission (coordination unit for regional studies), the above institutions have mobilized and are managing several consultancies to finalize the technical aspects related to the establishment of the CAB (including consultancy on technical specifications, consultancy on legal and financial aspects, and consultancy on environment and social framework).

33. In order to integrate all eligible countries as soon as possible under the CAB Program, the CEMAC and the Inter-Ministerial committee and the Expert Commission have agreed the following: (i) Active dissemination prefeasibility and ongoing studies to all stakeholders; (ii) finalization of all CAB prefeasibility studies for Congo, DRC, Equatorial Guinea and Gabon by June 2009 (ongoing); (iii) Ongoing structuring of CAB network will allow integration of additional CAB financed network (but will take into the specific of each country).

34. For each individual CAB APL1 country, the sector Ministry will be responsible for the overall coordination, implementation, and supervision of the project. For each activity concerned, the sector Ministry, through its Project Coordination Unit (PCU), will consult with and delegate to the relevant agencies and ministries. The implementation arrangements involve three organizational levels: (i) a Project Steering Committee (Comité de Pilotage) will be
responsible for providing advice regarding cross-sectoral issues; (ii) the Project Coordination Unit will be responsible for project implementation, coordination of activities and fiduciary management; and (iii) for Cameroon, a CAB Technical Committee that will provide technical input for the development of the regional backbone.

C. Monitoring and evaluation of outcomes/results

35. Monitoring and evaluation of CAB Program will be embedded in the various components of the project, and technical assistance provided through the project will include support for M&E. The arrangements for results monitoring are specified for each participating country in the relevant Country Technical Annex. Moreover, at the regional level, an IDF grant (CEMAC - Strengthening capacity in the Telecom & IT sector - IDF Grant P109923) has been approved and is providing short term Technical assistance to adequately monitor regional Telecom and IT Activities and to develop a common Monitoring & Evaluation (M&E) system shared by all CEMAC Member States. The CAB project will benefit from the new M&E system.

7. **Sustainability**

<table>
<thead>
<tr>
<th>Component</th>
<th>Sustainability</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Component : Enabling environment at the regional and national levels</strong></td>
<td>Technical assistance is being provided to improve sustainability through capacity building within the Ministry and regulator.</td>
</tr>
<tr>
<td><strong>Component: eGovernment and flagship ICT applications</strong></td>
<td>Sustainability is ensured through PPP arrangements or by targeting beneficiary agencies where commercialization can be achieved for cost-recovery purposes or where significant cost savings can be realized.</td>
</tr>
</tbody>
</table>

8. **Lessons Learned from Past Operations in the Country/Sector**

36. The program incorporates lessons learned from other regional horizontal APLs and projects that provide support across countries within a common framework. Regional Programs reviewed include operations in Africa and outside the region, such as the Regional Communication Infrastructure Program (RCIP) as well as the Southern Africa Power Market Program.

   a. For example, the RCIP1 operations for Kenya, Burundi and Madagascar were reviewed by the World Bank Quality Assurance Group (QAG) as part of the eighth quality at entry assessment exercise (QEA8). While the assessment concluded that overall quality at entry was “Satisfactory”, it identified a number of areas which could be improved. In particular, “weak implementation and capacity across participating countries” was identified as a key constraint to accelerating implementation.

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15 This specific activity is included in Cameroon only for CAB APL1countries.
Contrary to RCIP, resources from on-going projects and the Project Preparation Facility have been recently used to step-up World Bank project implementation capacity before CAB Program and CAB APL1A goes to the Board (PPFs have been recently provided to CAR, Cameroun and Chad). All countries has already fully benefited from this support and are expected to meet project readiness criteria by appraisal. Also, CAB APL1 structured as a vertical APL will enable to phase infrastructure investment when the enabling environment is reinforced. Finally, the “eGovernment and ICT flagship applications” component is not included as such as a core component in the Regional project. It is expected that few CAB program eligible countries will include this specific component.

b. **Political support to sustain regional operations.** Regional projects like RCIP and CAB are complex due to the large number of participating countries. The endorsement of the CAB Program by the heads-of-state of the CEMAC Region during the May 2007 summit in Ndjamena has been very beneficial for the establishment of institutions to coordinate and oversee the CAB program at the national and regional levels (overall coordination given to the CEMAC Commission). To date, these institutions have proven to be efficient in moving forward key consultancies to structure the regional project (accepting to act cooperatively to develop CAB as a regional flagship). Also, the project benefits from the political endorsement and support of the Secretariat of the Africa Union and the African Development Bank (providing parallel financing).

c. **Stronger Regional approach.** The CAB program unlike RCIP has developed upfront a more integrated approach to increase all eligible countries. The CAB project is aiming at the establishment of one Regional operator and is strongly anchored in the regional political and economic agenda of the CEMAC, the ECCAS and the AU.

37. **IDA Mid-term review of the IDA 14 pilot program for regional projects and IEG review for Bank-wide Regional projects** highlight that (i) the World bank intervention facilitate the needed combination of global expertise and strong national level policy engagement and as a member of the Bank Group provides a valuable platform on which to build further regional integration efforts and also facilitate private investment and co-financing for many regional infrastructure programs; (ii) effective regional integration depends on countries harmonizing national policies. The CEMAC Head of States declaration and the collaboration between the CAB eligible countries, the World Bank, AfDB, AU, CEMAC, ECCAS and ITU has strengthen the overall commitment to implement the key project for the Region. Also, the project has benefited from the IFC involvement to increase attractivity and feasibility of CAB structuring.

9. **Safeguard Policies (including public consultation)**

38. The proposed Environmental Category is B.
39. The physical components of this Program will mostly be limited to the establishment of the regional backbone which consists of terrestrial networks (e.g. fiber-optic cables laid next to main national roads), rural networks, and landing stations, in the few cases where the latter might be required. The risks associated with the kind of infrastructure financed under this Program are generally low, and the project is therefore assigned to environmental category B under OP 4.01.

40. The ESMF and the RPF have been prepared, reviewed by the Bank and publicly disclosed prior to appraisal in all countries participating in CAB APL1A. They are available at the InfoShop. Specific costed Environmental Management Plans (EMP) and Resettlement Action Plans (RAPs) will be prepared as necessary for the terrestrial facilities during project implementation, in line with the ESMF and RPF, once the exact locations of those facilities have been identified. The institutional responsibilities for preparing the various safeguards instruments would lie with the implementing agency of each participating country. These agencies will be assisted by consultants financed by the project. Any specific required action for some of the Civil Works will be taken into account during project implementation.

41. Since the CAB APL1 project will only finance fiber-optic cables laid next to main national roads (no rural networks and landing stations will be financed by CAB APL1), OP 4.10 for indigenous peoples, OP 4.36 for Forests and OP 4.11 for Cultural Property will not be triggered.

<table>
<thead>
<tr>
<th>Safeguard Policies Triggered by the Project</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environmental Assessment (OP/BP 4.01)</td>
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<td>Natural Habitats (OP/BP 4.04)</td>
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<td>Pest Management (OP 4.09)</td>
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<td>Involuntary Resettlement (OP/BP 4.12)</td>
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<td>Indigenous Peoples (OP/BP 4.10)</td>
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<tr>
<td>Forests (OP/BP 4.36)</td>
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<td>Safety of Dams (OP/BP 4.37)</td>
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<tr>
<td>Projects in Disputed Areas (OP/BP 7.60)*</td>
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</tr>
<tr>
<td>Projects on International Waterways (OP/BP 7.50)</td>
<td></td>
<td>[X]</td>
</tr>
</tbody>
</table>

10. List of Factual Technical Documents


2. CEMAC Head of States Declaration on CAB, May 2007

11. Contact point
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* By supporting the proposed project, the Bank does not intend to prejudice the final determination of the parties’ claims on the disputed areas
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