UNASUR

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# Integration Priority Project Agenda

## Progress Report

SOUTH AMERICAN INFRASTRUCTURE AND PLANNING COUNCIL

UNASUR

COSIPLAN

# IIRSA Technical Forum

# Technical Coordination Commitee

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CAF DEVELOPMENT BANK OF LATIN AMERICA

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## V Ordinary Meeting of COSIPLAN

## Montevideo, Uruguay - December 4, 2014

## NOTE

The information concerning the projects contained here is built on the data available in the COSIPLAN Project Information System (PIS) (www.iirsa.org/proyectos) as of September 18, 2014. The content of such system is updated on a regular basis by the UNASUR member countries.

The maps in this document have been prepared by IIRSA Technical Coordinating Committee (CCT) as a technical and general reference work tool. Borders, colors, denominations, or other information shown in them are used exclusively for illustration purposes, and are not to be understood as a judgment, opinion or other on the legal status of a territory or as recognition of borders by the institutions that make up the CCT.

## MAP LEGEND

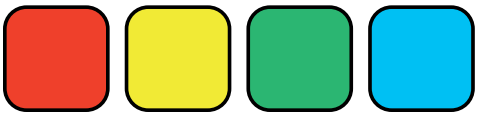
### PROJECTS

- Road
- Rail
- Navigability
- Electric Transmission Line
- Telecommunications Line
- Oil/Gas Pipeline
- Ring Road
- Ring Railway
- Ports
- Airport
- Electricity Generation
- Environmental Management Program
- Multimodal Transportation
- River Navigability
- River
- Gas Project
- Inland Port
- Telecommunications Infrastructure
- Thermal Power Station
- Tunnels
- Bridge
- Border Crossings
- Logistic Center

### GEOGRAPHIC LEGEND

- Country capital
- City
- Country Borders
- Existing roads
- Existing Rail Tracks
- Main Hydrography
- Area of Influence of the Integration and Development Hub

## PROJECT LIFE CYCLE STAGES

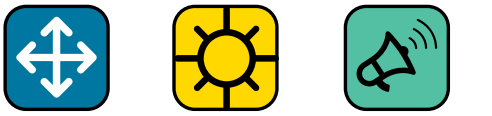


Profiling | Pre-Execution | Execution | Completed

## INTEGRATION AND DEVELOPMENT HUB


Amazon Hub | Andean Hub | Guianese Shield Hub | Paraguay-Paraná Waterway Hub | Capricorn Hub | MERCOSUR-Chile Hub | Central Interoceanic Hub | Peru-Brazil-Bolivia Hub | Southern Hub

## SECTOR



Transport | Energy | Communications

## SUBSECTOR

River | Sea | Rail | Air | Road | Border Crossing | Multimodal | Energy Interconnection | Energy Generation | Communications Interconnections

## SOURCE OF FINANCING

Public | Private | Public/ Private

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# INTRODUCTION

This Third Report on the Integration Priority Project Agenda (API), provided for in the COSIPLAN-IIRSA Work Plan 2014, is intended for submission to the consideration of the UNASUR South American Infrastructure and Planning Council (COSIPLAN) and for the general public. The report outlines the results of the work carried out by the countries in implementing the structured projects, and presents the evolution of the API projects as well as an overall assessment of the Agenda.

Chapter A presents a brief overview of the origins of API and the strategic approach adopted for its set-up and the monitoring of project progress through the Continuous Monitoring System (CMS). In addition, there is a section that describes the actions carried out during this year to enhance the quality and standardization of the API project data and to better communicate their progress and outcomes.

Chapter B provides an analysis of the progress made by the API projects between 2013 and 2014. Six dimensions have been selected for this purpose: i) number of projects and estimated investment amount; ii) project progress by life cycle stages between 2013 and 2014; iii) project breakdown by sector, subsector, and type of works; iv) sources of financing; v) territorial scope; and vi) technical characteristics. For each of these dimensions, an analysis is made of a series of variables derived from the following sources: (i) updated information in the COSIPLAN Project Information System as of September 18, 2014; (ii) the API Progress Report 2013; and (iii) the results of the Meetings of the Executive Technical Groups on the Nine Integration and Development Hubs to Update the COSIPLAN Project Portfolio and the Integration Priority Project Agenda (API) held in April 22 through 24, 2014, in the city of Bogotá, Colombia.

Chapter C and the subsequent chapters detail the technical characteristics, current status and progress of each one of the 31 API structured projects, classified according to the different Integration and Development Hubs to which they belong.

The Integration Priority Project Agenda (API) is the result of a key decision adopted in 2011 by the UNASUR South American Infrastructure and Planning Council (COSIPLAN) with the aim of encouraging the process of South American physical integration in a sustainable manner. API is the culmination of a number of convergent efforts made between 2000 and 2010 in the field of cooperation, dialogue, and agreements between the South American countries towards planning the infrastructure in the territory with a shared regional vision. As from 2011, these efforts have been recognized and incorporated into the new UNASUR COSIPLAN institutional framework.

## *A. THE INTEGRATION PRIORITY PROJECT AGENDA WITHIN THE PHYSICAL INTEGRATION OF SOUTH AMERICA PROCESS*

API is made out of 31 structured and 100 individual strategic projects with a high impact on the physical integration and the socioeconomic development of the region, involving an investment amount estimated at US$21,172.6 million. The components of this Agenda are not isolated but "structured projects" because they strengthen physical connectivity networks that are regional in scope. Their purpose is to enhance existing synergies and solve deficiencies in the infrastructure in place in the different Integration and Development Hubs so as to improve connectivity in them. These projects are made up of one or more projects within the COSIPLAN Project Portfolio that are known, for the purposes of this Agenda, as "individual projects."

The actions to be taken in the territory as pursued by API go far beyond infrastructure works, since they embrace from the start the concept of economic, environmental and social sustainability, in line with the objectives of UNASUR and as explicitly referred to in the Strategic Action Plan (PAE) 2012-2022, designed and adopted in 2011 by the twelve Member States of COSIPLAN. Thus, the Agenda recognizes the need to make headway with other aspects of the territorial planning process for the purpose of enhancing the environmental management of the territory, adding production integration and logistics components, harmonizing regulatory and legal aspects, and improving the local impact of infrastructure.

In addition, it is deemed essential to have information on the progress of the Agenda. Indeed, since the very approval of API, a concern shared by the COSIPLAN Member States was the need to have indicators showing the status of the projects and their evolution over time, i.e. their life cycle.

For such purpose, as part of the COSIPLAN-IIRSA Work Plans 2012 and 2013, the countries included the task of designing and implementing the Methodology for Scheduling the Life Cycle of the API Individual Projects. The initial premise was to keep the four project life cycle stages agreed upon by the governments in 2008, namely profiling, pre-execution, execution and completed.

Furthermore, the PAE includes the action of creating a permanent monitoring mechanism for the API projects (PAE Action 4.3), i.e. a system to record, from a regional perspective, the information on the project life cycle provided by the governments in the COSIPLAN Project Information System (PIS). In this regard, at the same time as the Methodology for Scheduling the Life Cycle was designed, progress was made in the development and implementation of the Continuous Monitoring System (CSM).

In 2013, the CMS module went online in the PIS and the countries started entering the data on the life cycle of the API individual projects directly into this tool. At present, this information is used to monitor the progress of the projects and identify any deviation, thus helping make decisions and solve any obstacle that may arise throughout the life cycle of these priority projects.

As part of the Work Plan 2014, the countries carried out specific actions intended to enhance the quality and standardization of the Portfolio and API project data, and to better communicate their progress and outcomes. This included the following: (i) the organization of the fields in the project files; (ii) specific descriptors by sector, subsector and type of works; (iii) results indicators for the projects already completed; (iv) the application of the Continuous Monitoring System (CMS) to the Project Portfolio; and (v) API progress indicators.

To carry out the enhancement and update tasks already mentioned, a number of functional and design adjustments were made to the COSIPLAN Project Information System (PIS). The PIS is one of the main tools of COSIPLAN to fulfill its mission of implementing the integration of the UNASUR Member Countries' regional infrastructure.

## B. PROGRESS IN THE API PROJECTS IN 2014

***Number of Projects and Estimated Investment Amount:*** The Agenda is made up of 31 structured projects and 100 individual projects for an amount estimated at US$ 21,172.6 million. These figures account for 17.3% of the total number of projects and 10.6% of the total amount involved in the COSIPLAN Project Portfolio in 2014, which includes 579 projects for a total amount of US$ 163,324.5 million. Since the inception of API in 2011, the estimated investment of its projects increased by 55.1%.

***Project Progress in 2014:*** More than a fourth of the API projects (27%) is at the execution stage, accounting for slightly less than half of the total investment in API (41.1%). On the other hand, almost half of the individual projects (46%) are at the pre-execution stage, the total investment of which amounts to half the total investment in API (50.2%). Furthermore, 16% of the projects are at the profiling stage and account for only 4.2% of the total estimated investment in API.

Regarding project progress in the last year, 36 projects (36%) made headway between stages or sub-stages of their life cycle. More than 90% of the API structured projects are likely to be completed by 2022, the time horizon set out for the Agenda. Most projects are bound to be completed between 2014 and 2018 (61%). The API individual projects that have already been completed are 11, with a total investment of US$ 951.3 million. Four of them were completed in 2014.

***Sector- and Subsector-Based Breakdown and Type of Works:*** Of all the API individual projects, 97% fall in the transport sector and account for an investment estimated at 91.3% of the total, while the other 3% falls in the energy sector and accounts for an estimated investment of 9.7%. Regarding the subsector-based breakdown of the API individual projects, road projects account for 30% of the Agenda and almost half of its total estimated investment amount (43.5%). River transportation projects, although representing in 2014 almost one quarter of the API projects, account for only 6.9% of the total estimated investment. Similarly, border crossing projects, which account for 6% in terms of number, represent only 2.6% in terms of the total investment. In turn, the rail projects (17% in terms of number), demand heavier investments (28%) because of the nature of the works involved.

***Source of Financing:*** The public sector is the main source of financing of the API individual projects (74.3%). The private sector through various contractual arrangements (15%) and public-private partnerships (10.7%) complete the picture. The public sources finance a little more than three fourths of the estimated investments in the transport sector (77%), whereas the public-private sources invest the most in the energy sector (54%).

***Territorial Scope:*** Seven structured projects are wholly located in the territory of one country; 17 of them are binational, and the other ones (seven projects) involve three or more countries.

***Technical Characteristics:*** According to the technical information of the API projects based on the data supplied by the countries in the COSIPLAN Project Information System, these projects involve:

- 1 freight and passenger airport
- 6,245.23 km of roads
- 7 main bridges and 148 complementary bridges
- 2 binational tunnels and 20 complementary tunnels
- 2 beltways
- 7,342.4 km of rails
- 8,950.1 km of waterways in 14 rivers and 2 lakes
- 6 river ports
- 4 sea ports
- 6 logistic centers
- 13 border crossings
- 1 1,500 km trunk gas pipeline
- 2 500-kV transmission lines along 624 km

## C. API BY INTEGRATION AND DEVELOPMENT HUB

The sections dealing with each Hub present a description of the Hub concerned, a map showing the location of the Hub and the area of influence of the API projects, and detailed information on the structured and individual projects including their estimated investment amounts, the countries involved, and the stage at which they are. These individual sections provide consolidated information on each Hub organized according to the following dimensions: i) life cycle stage; ii) subsector; iii) source of financing; and iv) technical specifications.

Next, the structured projects of each Hub are presented, emphasizing the following data: i) general indicators; ii) individual projects; iii) technical specifications of the structured project; iv) status of the structured project, and stage and estimated investment of the individual projects; v) the most significant advances made in the last year; vi) a map of the structured project; and vii) the rationale, proposal, and analysis and assessment of the project progress.

From the analysis of the API projects by Integration and Development Hub, the following observations can be derived:

In the **Amazon Hub**, there are 26 individual projects that make up three structured projects (estimated investment: US$ 3,285.5 million). API impacts on the development of the four countries in the Hub (Brazil, Colombia, Ecuador, and Peru) and its projects connect several waterways (Huallaga, Marañón, Morona, Ucayali, and Putumayo) linking the Amazon river basin to important coastal, sierra, and rainforest areas in Peru, Ecuador and Colombia. The Agenda includes road, sea, river and logistics centers projects that are likely to leverage four trimodal corridors connecting maritime terminals on the Pacific with the waterways feeding the Amazon basin.

In the **Andean Hub**, there are 11 individual projects that make up five structured projects (estimated investment: US$ 4,137.4 million). These API projects impact on the development of the five countries of the Hub (Bolivia, Colombia, Ecuador, Peru and Venezuela). Their aim is to enhance several major border crossings in the Hub, supplement the solutions devised for the roads in the corridor known as the Low-Altitude Corridor between Caracas and Quito, and improve the connections between Bogotá and its main port on the Pacific (Buenaventura). In addition, it is planned to improve navigation conditions on the Meta river and its related ports to open up new commercial routes between the central area of Colombia and eastern Venezuela.

In the **Capricorn Hub**, there are 18 individual projects that make up five structured projects (estimated investment: US$ 7,250.4 million). They are aimed at improving the bridges and border crossings in two important areas connecting Argentina and Bolivia; creating a bioceanic railway corridor between Paranaguá and Antofagasta; improving the connection of the Atlantic and Pacific oceans through Foz do Iguaçu for the benefit of Argentina, Brazil and Paraguay; and strengthening trade in energy among Argentina, Brazil and Paraguay through two transmission lines carrying 500-kV each.

In the **Guianese Shield Hub**, there are six individual projects that make up three structured projects (estimated investment: US$ 958.8 million). They are aimed at enhancing road connection between Caracas and Manaus; paving the still unsurfaced sections of the main connection between Brazil and Guyana; improving the routes interconnecting Ciudad Guayana (Venezuela) - Georgetown (Guyana) and Apura - Zanderij - Paramaribo (Suriname); and, finally, building a bridge linking Guyana and Suriname over the Corentyne river.

In the **Paraguay-Paraná Waterway Hub**, there are 16 individual projects that make up four structured projects (estimated investment: US$ 1,862.3 million). Most of these projects are aimed at improving navigation conditions on the rivers in the Plata Basin for the sake of the basin countries as well as of Bolivia. The purpose of the other projects is to complete the rail connections among Paraguay, Uruguay and Argentina, and to rehabilitate two rail connections in Uruguay that are linked to the waterway.

In the **Central Interoceanic Hub**, there are seven individual projects that make up four structured projects (estimated investment: US$ 460.1 million). Their purpose is to improve road, rail and air connections among Bolivia, Brazil, Paraguay

and Peru, all of them revolving around Bolivia. Four of the individual projects have been grouped together in the so-called Improvement of Road Connectivity in the Central Interoceanic Hub structured project for the purpose of enhancing Brazil-Bolivia road connection within the Hub. The other API projects from this Hub are intended to raise freight capacity at the Viru Viru Airport in Santa Cruz de la Sierra, Bolivia; improve the Infante Rivarola-Cañada Oruro border crossing between Bolivia and Paraguay; and develop a central bioceanic rail corridor in Bolivia.

In the **MERCOSUR-Chile Hub**, there are 15 individual projects that make up six structured projects aimed at improving the physical connectivity of the five countries in the Hub: Argentina, Bolivia, Brazil, Chile and Uruguay (estimated investment: US$ 3,131.8 million). The largest-size project is the Northeastern Argentina Gas Pipeline, which will provide a link between the gas reserves located in northern Argentina and in Bolivia with the Argentine Interconnected System of Trunk Gas Pipelines. The other projects have different objectives. Three of them are intended to have a positive effect on the Brazilian and Uruguayan cross-border development via a rail corridor, an international bridge, and the improvement of multimodal transport between the Merín (or Mirim) and dos Patos lakes. Finally, two projects contributing to the connectivity and border development between Argentina and Chile are included: Agua Negra Binational Tunnel, and Optimization of the Cristo Redentor Border Crossing System.

In the **Peru-Brazil-Bolivia Hub**, there is a single individual project making up a structured project: Porto Velho - Peruvian Coast Connection (estimated investment: US$ 85.4 million). With the completion of the Southern Interoceanic Highway in Peru in 2011, the road connection between Peru and Brazil through the Acre state became a reality. However, this connection is interrupted in the Rondônia state, since in order to get to other Brazilian localities either in the direction of Manaus, through Porto Velho and the Madeira waterway, or in the direction of the central-western and southeastern regions, it is necessary to cross the Madeira river in the small village of Abunã using a draft boat, which affects transport efficiency. Therefore, the structured project includes the construction of a 1.2-km long bridge over the Madeira river in the already-mentioned village to ensure uninterrupted integration by road.

## 1. BACKGROUND AND STRATEGIC APPROACH

The Integration Priority Project Agenda (API)[1] is the result of a key decision adopted in 2011 by the UNASUR South American Infrastructure and Planning Council (COSIPLAN)[2] with the aim of encouraging the process of South American physical integration in a sustainable manner. API is the culmination of a number of convergent efforts initiated within the framework of IIRSA[3] between 2000 and 2010 in the field of cooperation, dialogue, and agreements between the South American countries towards planning the infrastructure in the territory with a shared regional vision. As from 2011, these efforts have been recognized and incorporated into the new UNASUR COSIPLAN institutional framework [4].

One of the main tasks commissioned to the COSIPLAN by the Presidents at the IV Meeting of UNASUR (Georgetown, November 2010) was to identify and select a series of works that would impact powerfully on the integration and development of South America (Declaration of the IV Meeting of UNASUR, 2010). The objective of API is to "promote regional connectivity by building infrastructure networks for physical integration purposes, considering sustainable social and economic development criteria, and preserving the environment and the balance of ecosystems" (COSIPLAN Statutes, Article 4). To carry out this mandate from the highest political body in the South American integration process, the countries agreed upon four project selection criteria, which served as a starting point to set up the Agenda.[5] Such criteria are the following:

- **CRITERION 1:** The projects should belong to the COSIPLAN Project Portfolio[6] and be a priority in government action, and there should be a commitment to accomplish them (evidenced by the allocation of funds through multi-year financing programs, by the legislation passed, the budget measures taken, etc.).
- **CRITERION 2:** Feasibility studies should be available, or the country should have the funds allocated to start their execution.
- **CRITERION 3:** The projects should strengthen connectivity networks that are regional in scope, and involve cross-border synergies.
- **CRITERION 4:** There should exist an opportunity or a need for taking complementary actions intended to promote efficient service provision and the sustainable development of the territory, according to the characteristics and modality of each specific project.

Regarding the first criterion, the fact that the projects should belong to the COSIPLAN Project Portfolio proves that they were identified through the application of the Indicative Territorial Planning Methodology, and that they are in line with the portfolio structuring process (Integration and Development Hubs – Project Groups – Strategic Functions).[7] Furthermore, it reflects that the projects were already agreed upon by all the countries as regards their impact on regional integration. Equally important is that the projects should be a priority in government action, which means that they should be included in national or subnational development plans, sectoral policies and strategies, national budgets, national legislation, etc.[8]

[1] For more information on API, visit http://www.iirsa.org/api.asp

[2] For more information on COSIPLAN, visit http://www.iirsa.org/cosiplan.asp

[3] For more information on IIRSA, visit http://www.iirsa.org

[4] The main roots and foundations leading to the creation of API are found in IIRSA, where the South American countries started consistent and sustained work aimed at improving the connectivity and physical integration of the sub-region with an integral and sustainable development approach. One of the most significant outcomes of this work was the creation of the IIRSA Project Portfolio in the transport, energy and communications sectors as well as the creation of the Implementation Agenda Based on Consensus (AIC) 2005-2010.

[5] These criteria were approved at the Meeting of the COSIPLAN Coordinating Committee dated on April 28, 2011, in the city of Rio de Janeiro, Brazil. Later on, during the GTE meeting held in June in Bogotá, a final version was drafted taking into account the comments made by the countries (http://www.iirsa.org/gte_bogota_2011.asp).

[6] For more information on the COSIPLAN Project Portfolio, visit http://www.iirsa.org/cartera.asp

[7] For further information on the Indicative Territorial Planning Methodology (MPTI) and the Project Portfolio structuring, see COSIPLAN Project Portfolio Report 2014. For more information on the MPTI, visit http://www.iirsa.org/mpti.asp

[8] Consideration was also given to the possibility that project priority be based on bilateral or regional agreements or declarations.

The second criterion, i.e. the requirement that feasibility studies should have been carried out, is meant to include projects at an advanced preparation stage and having good finance and execution prospects vis-à-vis the implementation time frame established for the Agenda (2012-2022). Moreover, these studies provide accurate information about project resources and schedules. The countries also agreed to incorporate projects at the profiling stage, provided budget resources are allocated to conduct the required studies and their completion falls within the Agenda time frame. Furthermore, it was recognized that some projects would not be completed within this time frame but, due to the priority given to them by the governments involved, the countries agreed to their incorporation into API. Beyond these details, it is clear that the objective of API and its project selection criteria lies in its emphasis on result attainment.

The third criterion refers to the project potential for promoting regional territorial development by encouraging connectivity, eradicating bottlenecks, and adding missing links to existing networks. Similarly, cross-border synergy effects are expected to result from action coordination among the countries, thus ensuring that the API projects contribute to integration. This is why the Agenda incorporates the concept of structured projects, as explained below.

In line with this, the fourth criterion introduces the concept of Integration Territorial Programs (PTIs)[9], in the understanding that it is necessary to make headway with the identification of actions complementary to infrastructure implementation for the API projects that may so require. These programs will help leverage the impact of infrastructure on the development of the territories involved, while considering the economic, social and environmental aspects. PTIs are thus conceived of as programs for action in the territory that, together with the physical dimension of investments, pursue the integral development of the region.

The resulting Agenda was approved by the COSIPLAN Ministers at their Second Ordinary Meeting in 2011[10], and by the Presidents at the VI Meeting of UNASUR in 2012 [11]. Since then, API has deserved special attention by the Council.

## 2. MAIN FEATURES AND MONITORING MECHANISM

As already stated, API is made up of a limited number of strategic projects with a high impact on the physical integration and the socioeconomic development of the region. The components of this Agenda are not isolated but "structured projects." Structured projects strengthen physical connectivity networks that are regional in scope, with the purpose of enhancing existing synergies and solving deficiencies in the infrastructure in place. With regard to their geographical scope, the structured projects fall within the different Integration and Development Hubs and are precisely aimed at improving connectivity in such territories. They are made up of one or more projects within the COSIPLAN Project Portfolio that are known, for the purposes of this Agenda, as "individual projects." At present, API is made up of 31 structured projects and 100 individual projects, accounting for an estimated investment of US$ 21,172.6 million.

The actions to be taken in the territory as pursued by API go far beyond infrastructure works, since they embrace from the start the concept of economic, environmental and social sustainability, in line with the objectives of UNASUR. This is evident in the Strategic Action Plan (PAE) 2012-2022[12], designed and approved by the twelve governments of the UNASUR Member States in 2011. Thus, the Agenda recognizes the need to make headway with other aspects of the territorial planning process for the purpose of enhancing the environmental management of the territory, adding production integration and logistics components, harmonizing regulatory and legal aspects, and improving the local impact of infrastructure.

In this context, it is deemed essential to have information on the progress of these projects that are strategic for South American connectivity. Indeed, since the very approval of API, a concern shared by the COSIPLAN Member States was the need to have indicators showing the status of the projects and their evolution over time, i.e. their life cycle.

[9] For more information on the PTIs, visit http://www.iirsa.org/pti.asp

[10] Second Ordinary Meeting of COSIPLAN, November 30, 2011, Brasilia, Brazil, http://www.iirsa.org/Event/Detail?Id=182

[11] VI Meeting of UNASUR, November 30, 2012, Lima, Peru http://www.iirsa.org/Event/Detail?Id=212

[12] For more information on the PAE, visit http://www.iirsa.org/pae.asp

Within this framework, a technical proposal was submitted at the XIX Meeting of IIRSA National Coordinators[13]. According to its work approach, the countries were to become the leading actors in the design of the project life cycle schedule and implementation through a continuous project monitoring system with the technical support of the Technical Coordination Committee (CCT) for its development.

For such purpose, as part of the COSIPLAN-IIRSA Work Plans 2012 and 2013[14], the countries included the task of designing the Methodology for Scheduling the Life Cycle of the API Individual Projects. The initial premise was to keep the four project life cycle stages agreed upon by the governments in 2008, namely profiling, pre-execution, execution and completed[15]. Given the technical characteristics of the projects and the works involved, the pre-execution and execution stages of a project are the ones that take up most of the time in the project life cycle, a minimum of about 10 years (three to five years for the pre-execution stage, and seven to 10 years for the execution stage). This is why both stages were further broken down, in order to see the progress of a project more accurately.

Furthermore, the PAE includes the action of creating a permanent monitoring mechanism for the API projects (PAE Action 4.3), i.e. a system to record, from a regional perspective, the information on the project life cycle provided by the governments in the COSIPLAN Project Information System (PIS)[16]. In this regard, at the same time as the Methodology for Scheduling the Life Cycle was designed, progress was made in the development and implementation of the Continuous Monitoring System (CSM), with the following objectives:

- Provide clear information about the progress attained by the projects;
- Generate information to solve obstacles in project management;
- Supply information for decision making in relation to:
  - The financing of studies; and
  - The financing of works.

In 2013, the CMS module went online in the PIS and the countries started entering the data on the life cycle of the API individual projects directly into this tool. At present, this information is used to monitor the progress of the projects and identify any deviation, thus helping make decisions and solve any obstacle that may arise throughout the life cycle of these priority projects[17].

## 3. API IN 2014: INFORMATION UPDATE AND QUALITY IMPROVEMENT

As part of the Work Plan 2014, the countries carried out specific actions intended to enhance the quality and standardization of the Portfolio and API project data, and to better communicate their progress and outcomes. These lines of work were agreed upon at the GTE Meeting to Update the COSIPLAN Project Portfolio and API held in Bogotá, Colombia[18], and are described below.

[13] XIX Meeting of IIRSA National Coordinators, November 29, 2011, Brasilia, Brazil, http://www.iirsa.org/Event/Detail?Id=186

[14] The work carried out in 2012 is documented in the Progress Report on the CMS 2012, http://www.iirsa.org/Document/Detail?Id=3416, while the activities performed in 2013 are outlined in the Progress Report on the CMS 2013, http://www.iirsa.org/Document/Detail?Id=3718

[15] The classification of API project stages is as follows: Profiling: Background information is studied in order to assess the suitability and technical and economic feasibility of implementing the project idea. Pre-execution: This stage includes projects in the pre-feasibility, feasibility and investment phases. Execution: It refers to the set of activities required for physical construction, such as contract conclusion, purchase and set up of machines and equipment, miscellaneous installations, etc. Completed: Works are completed and become operational.

[16] For more information on the PIS, visit http://www.iirsa.org/sip.asp

[17] For more information on the development and implementation of the Methodology for Project Life Cycle Scheduling and the CMS as well as their links with the PIS, see Annex 2 of this document.

[18] GTE Meeting on the Nine Integration and Development Hubs to Update the COSIPLAN Project Portfolio and the Integration Priority Project Agenda (API), April 22 and 24, 2014, Bogotá, Colombia, http://www.iirsa.org/Event/Detail?Id=247

***Organization of the Fields in the Project Files:*** The information fields contained in the project files of the COSIPLAN Project Information System (SIP) were organized on the basis of internationally accepted project management dimensions: scope, cost and financing, and project status (deadlines). Furthermore, new information fields were included in each of these dimensions:

- Scope: The "related projects" and "descriptors by sector, subsector, and type of works" fields were added.
- Cost and financing: The "included in the national budget" and "year" fields were added to communicate the priority assigned to the project in the annual allocation exercise.
- Project status: The field "estimated date of completion" of the works was added.

***Specific Descriptors by Sector, Subsector and Type of Works:*** These descriptors help clearly identify the objectives of each individual project, report important technical features in an aggregate manner, and produce project indicators by country, Project Group, or Integration and Development Hub. These new information fields are divided into "primary" and "secondary" and apply to projects at the pre-execution and execution stages. The schedule agreed by the countries to enter the information for the descriptors in the PIS project files is the following:

- 2014: API and Anchor Projects at the pre-execution and execution stages
- 2015: Portfolio projects at the execution stage
- 2016: Portfolio projects at the pre-execution stage

***Results Indicators for Completed Projects:*** A new section including information fields that are specific to completed projects was incorporated. These new fields, which are also grouped into the scope, cost and financing, and deadlines dimensions, are: "completed projects results indicators by type of works" (descriptors), "final project investment in US$," "total cost of studies in US$," "start date of works," and "delivery date of works". The schedule agreed by the countries to enter the information for the fields specific to completed projects in the PIS project files is the following:

- 2014: API Projects and Anchor Projects
- 2015: The other Portfolio Projects

***Application of the Project Monitoring System (PMS) to the Project Portfolio:*** The PMS enables the recording of API project progress from a regional perspective and the generation of timely and reliable information for relevant government authorities to make decisions. Until 2013, this monitoring module was only available for the API projects. The countries agreed to gradually use the PMS for all the Portfolio projects according to the following schedule:

- 2014: Anchor Projects
- 2015: Projects at the execution stage
- 2016: Project at the pre-execution stage

***API Progress Indicators:*** Access to the information included in the PMS is limited, only available to National Coordinators and officials authorized by them. With the aim of informing the general public about the API progress and results, it was decided to make public, in the structured project files, the information about the progress of these projects as shown in the PMS.

To carry out the enhancement and update tasks already mentioned, a number of functional and design adjustments were made to the COSIPLAN Project Information System (PIS). The PIS is one of the main tools of COSIPLAN to fulfill its mission of implementing the integration of the UNASUR Member Countries' regional infrastructure. More in-depth information on the PIS and on the work done with this tool in 2014 is provided in Annex 2.

Finally, the results of the analysis of the structured projects by Integration and Development Hub are described in detail in the following chapter, which presents the API status as of September 18, 2014, and the progress made since October 4, 2013.

This chapter presents the evolution of the COSIPLAN Project Portfolio between 2004 and 2014, and the main indicators of the projects included in it. In addition, it provides a detailed analysis of the progress made by the API projects between 2013 and 2014[1], in six dimensions selected for this purpose: i) number of projects and estimated investment amount; ii) project progress; iii) breakdown by sector, subsector, and type of works; iv) sources of financing; v) territorial scope; and vi) technical characteristics.

## 1. NUMBER OF PROJECTS AND ESTIMATED INVESTMENT AMOUNT

At present, as shown in Table B.1, the Agenda made up of 31 structured projects and 100 individual projects for an amount estimated at US$ 21,172.6 million[2]. These figures account for 17.3% of the total number of projects and 10.6% of the total amount involved in the COSIPLAN Portfolio in 2014, which includes 579 projects for a total amount of US$ 163,324.5 million[3].

[1] The period of project evolution analysis is October 2013 to September 2014.

[2] There are six individual projects included in structured projects that were already completed when API was set up. The investment amounts of these projects are not included in the calculation of the investment estimated for all the API projects.

[3] Annex 1 presents the detailed list of the structured and individual projects that make up API. For information on the COSIPLAN Project Portfolio, see its 2014 Report.

Table B.1 • **List of API Projects**
(million US$)

| No. | Hub | API Structured Project Name | Countries Involved | Stage | Estimated Investment (million US$) |
|---|---|---|---|---|---|
| 1 | **AMA** | PAITA - TARAPOTO - YURIMAGUAS ROAD, PORTS, LOGISTICS CENTERS AND WATERWAYS | PE | 🟢 | 471.9 |
| 2 | **AMA** | CALLAO - LA OROYA - PUCALLPA ROAD, PORTS, LOGISTICS CENTERS AND WATERWAYS | PE | 🟢 | 2,761.8 |
| 3 | **AMA** | NORTHEASTERN ACCESS TO THE AMAZON RIVER | BR / CO / EC / PE | 🟡 | 52.8 |
| 4 | **AND** | CARACAS - BOGOTÁ - BUENAVENTURA / QUITO ROAD CORRIDOR | CO / EC / VE | 🟢 | 3,350.0 |
| 5 | **AND** | COLOMBIA - ECUADOR BORDER INTERCONNECTION | CO / EC | 🟢 | 227.7 |
| 6 | **AND** | COLOMBIA - VENEZUELA BORDER CROSSINGS CONNECTIVITY SYSTEM | CO / VE | 🟢 | 4.0 |
| 7 | **AND** | DESAGUADERO BINATIONAL BORDER SERVICE CENTER (CEBAF) | BO / PE | 🟢 | 40.2 |
| 8 | **AND** | AUTOPISTA DEL SOL EXPRESSWAY: IMPROVEMENT AND REHABILITATION OF THE SULLANA - AGUAS VERDES SECTION (INCLUDING TUMBES BYPASS) | PE | 🟢 | 515.5 |
| 9 | **CAP** | CONSTRUCTION OF THE SALVADOR MAZZA - YACUIBA BINATIONAL BRIDGE AND BORDER CENTER | AR / BO | 🟡 | 45.0 |
| 10 | **CAP** | ARGENTINA - BOLIVIA WEST CONNECTION | AR / BO | 🟡 | 477.0 |
| 11 | **CAP** | PARANAGUÁ - ANTOFAGASTA BIOCEANIC RAILWAY CORRIDOR | AR / BR / CH / PA | 🟡 | 5,102.2 |
| 12 | **CAP** | FOZ DO IGUAÇU - CIUDAD DEL ESTE - ASUNCIÓN - CLORINDA ROAD CONNECTION | AR / BR / PA | 🟡 | 774.2 |
| 13 | **CAP** | ITAIPU - ASUNCIÓN - YACYRETÁ 500-KV TRANSMISSION LINE | BR / PA | 🟢 | 852.0 |
| 14 | **GUY** | REHABILITATION OF THE CARACAS - MANAUS ROAD | BR / VE | 🟢 | 407.0 |
| 15 | **GUY** | BOA VISTA - BONFIM - LETHEM - LINDEN - GEORGETOWN ROAD | BR / GU | 🟢 | 250.0 |
| 16 | **GUY** | ROUTES INTERCONNECTING VENEZUELA (CIUDAD GUAYANA) - GUYANA (GEORGETOWN) - SURINAME (SOUTH DRAIN - APURA - ZANDERIJ - MOENGO - ALBINA), INCLUDING CONSTRUCTION OF THE BRIDGE OVER THE CORENTYNE RIVER | GU / SU / VE | 🔴 | 301.8 |
| 17 | **HPP** | IMPROVEMENT OF NAVIGATION CONDITIONS ON THE RIVERS OF THE PLATA BASIN | AR / BO / BR / PA / UY | 🟡 | 1,170.0 |
| 18 | **HPP** | PARAGUAY - ARGENTINA - URUGUAY RAILWAY INTERCONNECTION | AR / PA / UY | 🟡 | 577.3 |
| 19 | **HPP** | REHABILITATION OF THE CHAMBERLAIN - FRAY BENTOS RAILWAY BRANCH LINE | UY | 🟡 | 100.0 |
| 20 | **HPP** | NUEVA PALMIRA BELTWAY AND PORT ACCESS ROADS NETWORK | UY | 🟡 | 15.0 |
| 21 | **IOC** | PASSENGER AND CARGO HUB AIRPORT FOR SOUTH AMERICA (VIRU VIRU, SANTA CRUZ, INTERNATIONAL HUB AIRPORT) | BO | 🔴 | 20.0 |
| 22 | **IOC** | IMPROVEMENT OF ROAD CONNECTIVITY IN THE CENTRAL INTEROCEANIC HUB | BO / BR | 🟢 | 431.5 |
| 23 | **IOC** | INFANTE RIVAROLA - CAÑADA ORURO BORDER CROSSING | BO / PA | 🟢 | 1.9 |
| 24 | **IOC** | CENTRAL BIOCEANIC RAILWAY CORRIDOR (BOLIVIAN SECTION) | BO | 🟡 | 6.7 |
| 25 | **MCC** | NORTHEASTERN ARGENTINA GAS PIPELINE | AR / BO | 🟡 | 1,000.0 |
| 26 | **MCC** | CONSTRUCTION OF THE JAGUARÃO - RÍO BRANCO INTERNATIONAL BRIDGE | BR / UY | 🟢 | 93.5 |
| 27 | **MCC** | MULTIMODAL TRANSPORTATION IN THE LAGUNA MERÍN AND LAGOA DOS PATOS SYSTEM | BR / UY | 🟡 | 40.3 |
| 28 | **MCC** | MONTEVIDEO - CACEQUI RAILWAY CORRIDOR | BR / UY | 🟢 | 139.9 |
| 29 | **MCC** | OPTIMIZATION OF THE CRISTO REDENTOR BORDER CROSSING SYSTEM | AR / CH | 🟡 | 258.0 |
| 30 | **MCC** | AGUA NEGRA BINATIONAL TUNNEL | AR / CH | 🟡 | 1,600.0 |
| 31 | **PBB** | PORTO VELHO - PERUVIAN COAST CONNECTION | BR / PE | 🟢 | 85.4 |
| | | **TOTAL** | | | **21,172.6** |

Map B.1 • **API Projects**

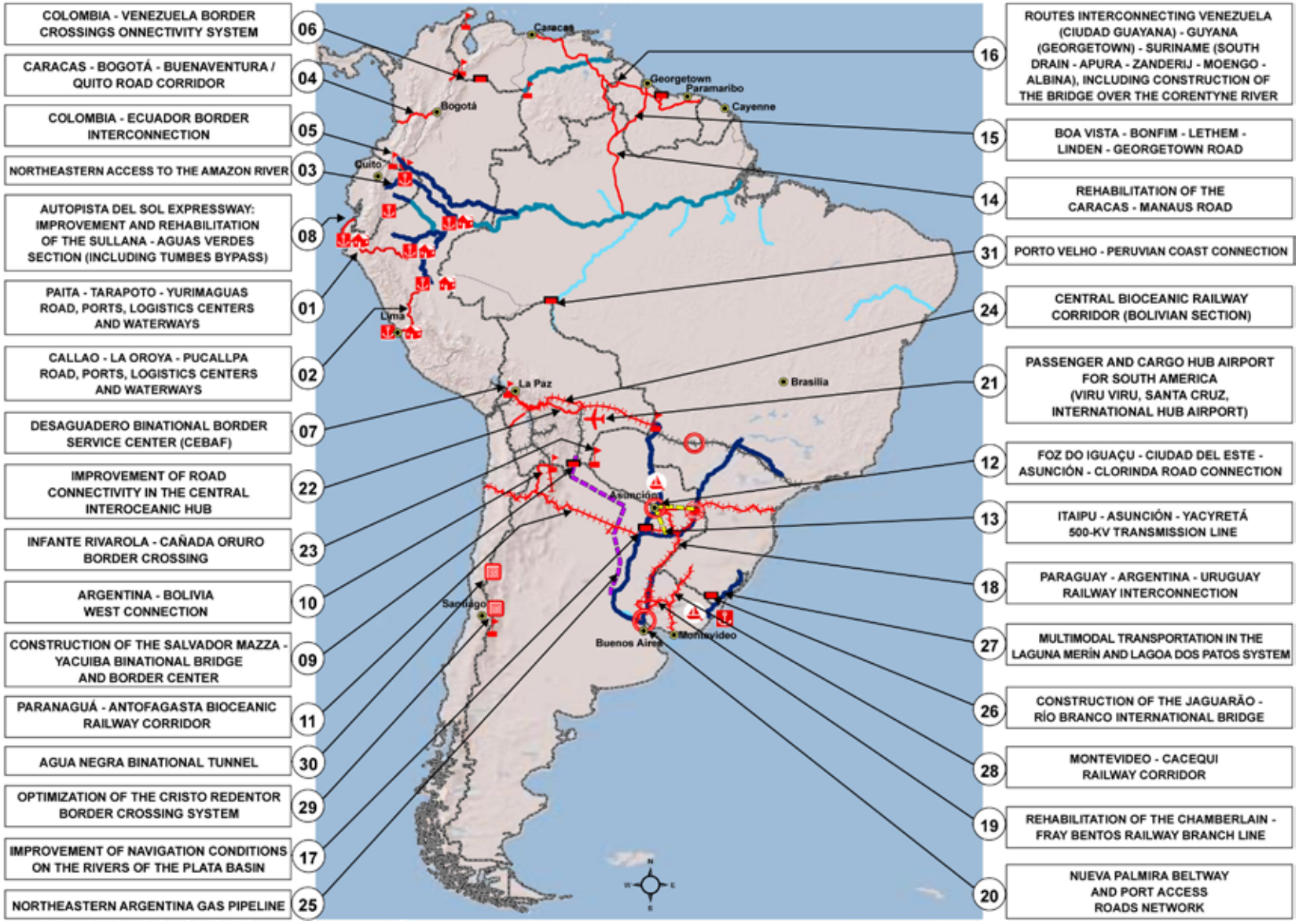
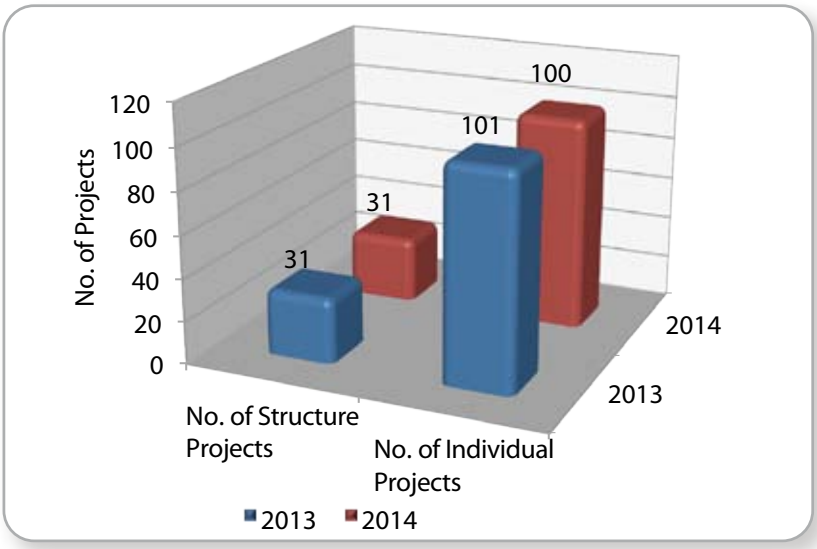


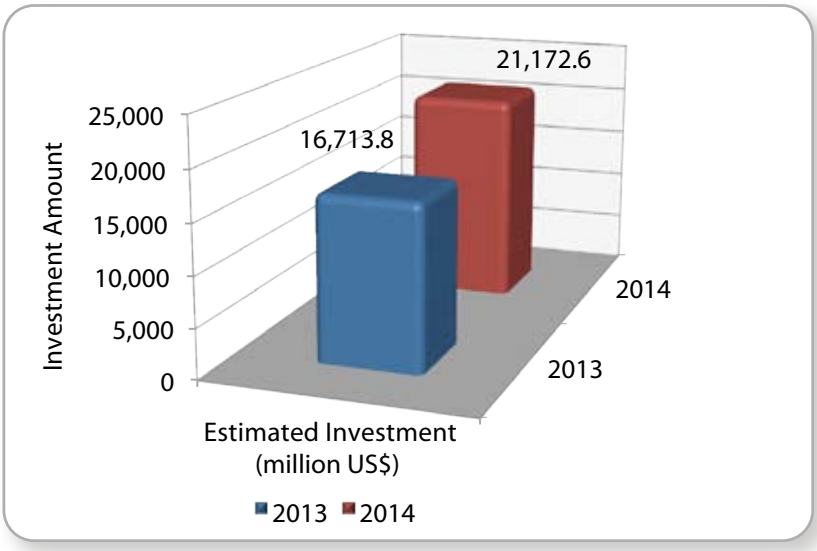
Figure B.1 shows the current data compared to last year's figures.

Figure B.1 • **Evolution of the API Projects – 2013-2014**

(number of projects and million US$)




The number of individual projects was reduced as a result of the elimination of an API project, the merging of two projects into one, and the incorporation of a new project into API.




The estimated investment rose by 26.7% between 2013 and 2014 due to updates made to the amounts of the projects on account of their evolution and the availability of more information about them.

Since the creation of API (2011), the estimated investment in these projects has risen by 55.1%. This change in the investment amounts results from regular information updates.

Table B.2 shows the change in the number of individual projects as well as in the estimated investment amount by Integration and Development Hub between 2013 and 2014.

Table B.2 • **Evolution of the API Individual Projects by Hub – 2013-2014**

(number of projects, million US$ and percentage)

| | **No. of Structured Projects** | | **% of Structured Projects** | | **No. of Individual Projects** | | **% of Individual Projects** | | **Investment Amount** (million US$) | | **% of Investment** (per Hub against the total) | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | **2013** | **2014** | **2013** | **2014** | **2013** | **2014** | **2013** | **2014** | **2013** | **2014** | **2013** | **2014** |
| **AMA** | 3 | 3 | 9.7 | 9.7 | 27 | 26 | 26.7 | 26.0 | 3,475.4 | 3,286.5 | 20.8 | 15.5 |
| **AND** | 5 | 5 | 16.1 | 16.1 | 12 | 11 | 11.9 | 11.0 | 3,694.1 | 4,137.4 | 22.1 | 19.5 |
| **CAP** | 5 | 5 | 16.1 | 16.1 | 18 | 18 | 17.8 | 18.0 | 4,233.0 | 7,250.4 | 25.3 | 34.2 |
| **GUY** | 3 | 3 | 9.7 | 9.7 | 6 | 6 | 5.9 | 6.0 | 958.8 | 958.8 | 5.7 | 4.5 |
| **HPP** | 4 | 4 | 12.9 | 12.9 | 15 | 16 | 14.9 | 16.0 | 1,566.6 | 1,862.3 | 9.4 | 8.8 |
| **IOC** | 4 | 4 | 12.9 | 12.9 | 7 | 7 | 6.9 | 7.0 | 460.2 | 460.1 | 2.8 | 2.2 |
| **MCC** | 6 | 6 | 19.4 | 19.4 | 15 | 15 | 14.9 | 15.0 | 2,240.3 | 3,131.8 | 13.4 | 14.8 |
| **PBB** | 1 | 1 | 3.2 | 3.2 | 1 | 1 | 1.0 | 1.0 | 85.4 | 85.4 | 0.5 | 0.5 |
| **TOTAL** | **31** | **31** | **100.0** | **100.0** | **101** | **100** | **100.0** | **100.0** | **16,713.8** | **21,172.6** | **100.0** | **100.0** |

As shown in the Table above, a project of the Amazon and Andean Hub was eliminated and another project was added to the Paraguay-Paraná Waterway Hub, reaching a total of 100 individual projects.

- Project AMA37-IMPROVEMENT OF NAVIGATION CONDITIONS ON THE IÇÁ RIVER was excluded from API, as it was incorporated into AMA38-IMPROVEMENT OF NAVIGATION CONDITIONS ON THE PUTUMAYO-IÇÁ RIVER.

- Project AND19-PUERTO CARREÑO BORDER CROSSING was excluded from the structured project COLOMBIA-VENEZUELA BORDER CROSSINGS CONNECTIVITY SYSTEM.

- Project HPP76-CONSTRUCTION AND REHABILITATION OF THE ARTIGAS-POSADAS RAILWAY was incorporated into the structured project known as PARAGUAY-ARGENTINA-URUGUAY RAILWAY INTERCONNECTION.

The detailed list of the structured and individual projects is shown in Annex 1.

## 2. PROJECT PROGRESS

### *A) PROGRESS IN THE API PROJECTS BY LIFE CYCLE STAGE*

The analysis of the 100 individual projects currently included in API by their life cycle stage (see Table B.3) shows that a fourth of them (27%) are in execution, accounting for slightly less than half of the total investment in the Agenda (44.1%). Furthermore, almost half of the individual projects (46%) are at the pre-execution stage, representing half of the total investment in API (50.2%).

The projects at the profiling stage account for 16% of the total number and only 4.2% of the total investment in API[4].

Table B.3 • **Status of the API Projects in 2014 by Life Cycle Stage**

(number of projects, million US$, and percentage)

| | Structured Projects | | Individual Projects | | Estimated Investment | |
|---|---|---|---|---|---|---|
| **Stage** | **No.** | **%** | **No.** | **%** | **Million US$** | **%** |
| **Profiling** | 2 | 6.0 | 16 | 16.0 | 879.0 | 4.2 |
| **Pre-execution** | 14 | 45.0 | 46 | 46.0 | 10,639.1 | 50.2 |
| **Execution** | 15 | 48.0 | 27 | 27.0 | 8,703.2 | 41.1 |
| **Completed*** | 0 | 0.0 | 11 | 11.0 | 951.3 | 4.5 |
| **TOTAL** | 31 | 100.0 | 100 | 100.0 | 21,172.6 | 100.0 |

Note: Amounts are estimated on the basis of the life cycle stage at which the API individual projects are.
The lists of the API individual projects at each stage can be found in Annexes 4 to 7.

*There are six individual projects included in structured projects that were already completed when API was set up. These projects, the investment amounts of which were not included in the total amount, are: AMA25, AMA16, AND13, CAP91, GUY42 and GUY43.

Table B.4 summarizes the distribution of the projects by life cycle and shows the ones that have not changed since late 2011.

Table B.4 • **API Projects by Life Cycle Stage**

(number of projects)

| | Profiling | Pre-Execution | Execution | Completed | TOTAL |
|---|---|---|---|---|---|
| API Projects in 2014 | 16 | 46 | 27 | 11 | 100 |
| No. of API projects that have not changed since 2011 | 8 | 23 | 9 | 3 | 43 |

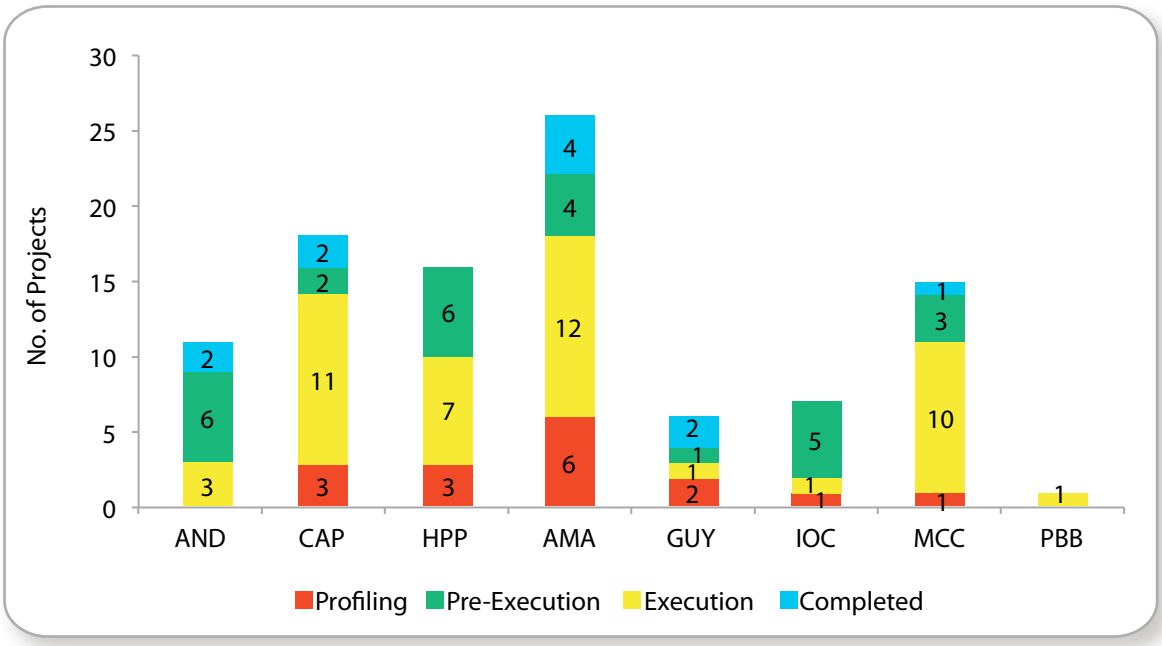
Table B.4 above shows, first, that 8% of the projects have remained stagnant at the profiling stage for several years now, and second, that half of the projects that are at the profiling and pre-execution stages have made no progress in the last three years.

[4] Since these projects are at the profiling stage, their amounts are likely to be reviewed and updated as progress is made in the feasibility studies.

In terms of the current status by Hub, as shown in Figure B.2 below, the Andean and the Paraguay-Paraná Waterway Hubs are the ones with the greatest number of projects in execution. In five of the eight Hubs there is at least one completed project. Finally, the Amazon Hub is the one with the highest percentage of projects at the profiling stage (23%).

Figure B.2 • **API Projects by Life Cycle Stage and by Hub**

(number of projects)




*B) EVOLUTION OF THE API PROJECTS BETWEEN 2013 AND 2014*

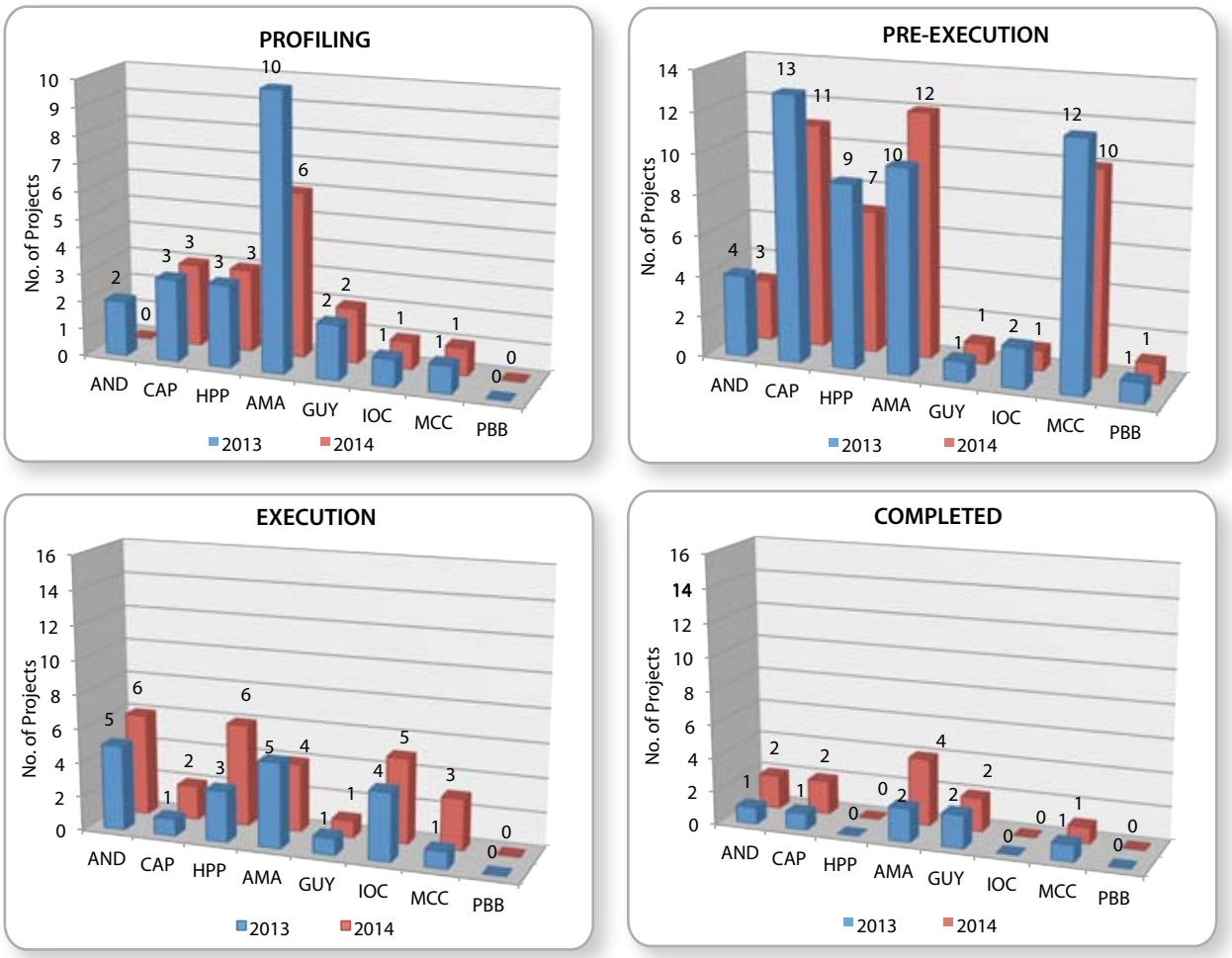
Figures B.3 and B.4 present the evolution of the API Projects between 2013 and 2014, the first one in an aggregate manner for all the Agenda, and the second one focusing on each Hub.

Figure B.3 • **Evolution of the API Projects between 2013 and 2014 by Life Cycle Stage**

(number of projects)

Figure B.4 • **Evolution of the API Projects between 2013 and 2014 by Life Cycle Stage and by Hub**

(number of projects)




On the basis of the change in stage of the projects from 2013 to 2014, the following can be stated:

**EVOLUTION OF THE API PROJECTS BETWEEN 2013 AND 2014**

- 71 projects remained at the same stage, with 15 of them showing progress in terms of sub-stages:
  - 16 remained at the profiling stage
  - 40 remained at the pre-execution stage with the following details:
    - 8 of them made progress between the different pre-execution sub-stages
    - 27 remained at the same sub-stage
    - 5 are not included in the analysis since no information in this regard is available
  - 15 remained at the execution stage with the following details:
    - 7 of them made progress between the different execution sub-stages
    - 7 remained at the same sub-stage
    - 1 is not included in the analysis since no information in this regard is available
- 21 projects showed a change in stage:
  - 4 moved on from the profiling to the pre-execution stage
  - 12 moved on from the pre-execution to the execution stage
  - 1 moved back from the execution to the pre-execution stage
  - 4 projects were completed

To sum up, 36 projects (36%) made progress between stages or sub-stages of their life cycle.

Table B.5 below shows the current status as of the date of this report regarding the distribution of the projects among the stages and sub-stages.

Table B.5 • **API Projects in 2014 by Life Cycle Stages and Sub-stages**

(percentage and number of projects)

| | PROJECT STAGES AND SUB-STAGES | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | PROFILING | PRE-EXECUTION[3] | | | | | EXECUTION | | | | COMPLETED |
| | 16.0% | 46.0% | | | | | 27.0% | | | | 11.0% |
| | (16) | (46) | | | | | (27) | | | | (11) |
| | Initial Status | Resources for studies | Studies underway | Approved studies | Permits granted | Resources for works | First quarter of works | Second quarter of works | Third quarter of works | Fourth quarter of works | Works handed over |
| % and No. of Projects (schedule completed)[1] | 62.5% | 37.0% | 15.2% | 13.0% | 13.0% | 10.9% | 66.7% | 18.5% | 7.4% | 0.4% | 100.0% |
| | (10) | (17) | (7) | (6) | (6) | (5) | (18) | (5) | (2) | (1) | (11) |
| % and No. of Projects (not scheduled)[2] | 37.5% | 10.9% | | | | | 0.4% | | | | 0% |
| | (6) | (5) | | | | | (1) | | | | (0) |

Notas:

[1] The values shown for each stage/sub-stage represent the percentage and number of the projects whose life cycle schedule has been completed. The total percentage (100%) is based on the total projects in each stage.

[2] The values shown for each stage represent the percentage and number of the projects whose life cycle schedule has not been completed. The total percentage (100%) is based on the total projects in each stage.

[3] According to the Project Life Cycle Scheduling Methodology (Annex 2), the scope of the pre-execution sub-stages is as follow:

- Resources for studies: This sub-stage will be deemed completed when the financial resources needed to carry out the studies are available and all the institutional arrangements to start such studies (e.g. awarding them through tender processes) have been made.
- Studies underway: Studies will be considered to be completed when the study representing the maximum level required for the project concerned to move to the "approved studies" sub-stage has been completed.
- Approved studies: This sub-stage will be deemed completed upon approval of all the studies required by the project.
- Permits granted: This sub-stage will be deemed completed only when all permits have been granted and/or all the institutional formalities required for the project to move to the execution stage have been carried out.
- Resources for works: This sub-stage will be deemed completed when the project has been allocated the financial resources for executing the works and the required institutional formalities have been carried out.

On the basis of the overall distribution of the projects among each stage and of their degree of progress within each sub-stage (Table B.5), the following conclusions can be drawn:

- In the case of the pre-execution stage, 17 of the 46 projects shown in the table are at an advanced level as their studies have been completed and approved, the permits have been granted, and the financing for the works has been secured.
- Three of the 27 projects at the execution stage are at an advanced level, i.e. more than half of the works involved have been completed.

### *C) API PROSPECTS*

Based on the data provided by the CMS for the 100 individual projects included in API, the prospects for progress over the next years are as follows:

**OF THE 16 INDIVIDUAL PROJECTS AT THE PROFILING STAGE:**
- 4 are expected to obtain the resources for their studies by the end of 2014
- 5 are expected to obtain the resources for their studies in 2015
- 1 is expected to obtain the resources for their studies in 2017
- 6 have no information available in this regard

**OF THE 46 INDIVIDUAL PROJECTS AT THE PRE-EXECUTION STAGE:**
- 15 are expected to complete such stage in 2014
- 17 are expected to complete such stage in 2015
- 8 are expected to complete such stage in 2016
- 1 are expected to complete such stage in 2017
- 5 have no information available in this regard

**OF THE 27 INDIVIDUAL PROJECTS AT THE EXECUTION STAGE:**
- 4 are expected to complete such stage in 2014
- 11 are expected to complete such stage in 2015
- 11 are expected to complete such stage as from 2016
- 1 has no information available in this regard

**OF THE 11 INDIVIDUAL PROJECTS THAT ARE ALREADY COMPLETED:**
- 6 were completed before API was launched (2011)
- 1 was completed in 2013
- 4 were completed in 2014

Tables B.6 and B.7 show the estimated year of completion of the API structured and individual projects, respectively.

Table B.6 • **Estimated completion year of the API Structured Projects**

(number and percentage of projects, estimated investment in million and percentage, per year)

| Estimated Completion Year | No. of Projects | % of Projects | Estimated Investment (million US$) | % of Estimated Investment |
|---|---|---|---|---|
| 2015 | 3 | 9.7 | 412.9 | 2.0 |
| 2016 | 5 | 16.1 | 737.3 | 3.5 |
| 2017 | 5 | 16.1 | 1,208.2 | 5.7 |
| 2018 | 6 | 19.4 | 3,938.5 | 18.6 |
| 2019 | 1 | 3.2 | 52.8 | 0.2 |
| 2020 | 4 | 12.9 | 3,037.0 | 14.3 |
| 2021 | 2 | 6.5 | 727.0 | 3.4 |
| 2022 | 3 | 9.7 | 7,702.2 | 36.4 |
| 2024 | 1 | 3.2 | 6.7 | 0.03 |
| 2040 | 1 | 3.2 | 3,350.0 | 15.8 |
| **TOTAL** | **31** | **100.0** | **21,172.6** | **100.0** |

Table B.7 • **Estimated completion year of the API Individual Projects**

(number of projects and percentage per year)

| Estimated Completion Year | No. of Projects | % of Projects |
|---|---|---|
| Completed | 11 | 11.0 |
| 2014 | 5 | 5.0 |
| 2015 | 11 | 11.0 |
| 2016 | 11 | 11.0 |
| 2017 | 23 | 23.0 |
| 2018 | 16 | 16.0 |
| 2019 | 2 | 2.0 |
| 2020 | 5 | 5.0 |
| 2021 | 2 | 2.0 |
| 2022 | 3 | 3.0 |
| 2024 | 1 | 1.0 |
| 2026 | 1 | 1.0 |
| 2040 | 1 | 1.0 |
| No information available | 8 | 8.0 |
| **TOTAL** | **100** | **100.0** |

As can be seen in Tables B.6 and B.7, more than 90% of the API structured projects are estimated to be finished before 2022, within the time horizon established for the Agenda. Most of them are expected to be completed between 2014 and 2018 (61%).

Clearly, the indicators above reveal how useful the CMS is for closely monitoring project progress. The information available in the system confirms that 36% of the API projects have made some progress in the last year, meaning that they have moved between stages and sub-stages.

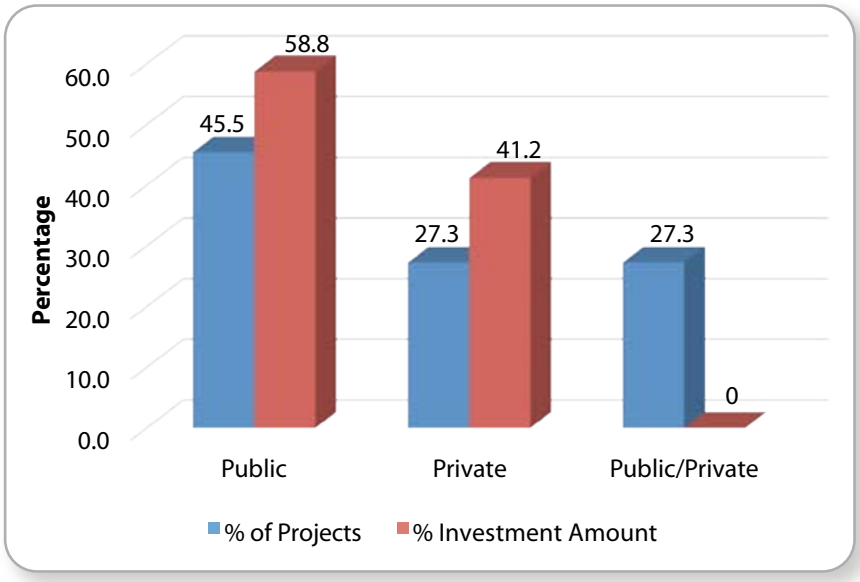
### *D) COMPLETED PROJECTS*

The API individual projects that have already been completed are 11, and their total investment has amounted toUS$951.3 million. Table B.8 below shows their distribution among the Hubs.

Table B.8 • **API Individual Projects Completed, by Hub**
(number of projects, estimated investment and percentage)

| Hub | No. of Projects | % of Projects | Estimated Investment (million US$) | % of Investment |
|---|---|---|---|---|
| ANDEAN | 2 | 18.2 | 4.1 | 0.4 |
| CAPRICORN | 2 | 18.2 | 555.0 | 58.3 |
| AMAZON | 4 | 36.4 | 387.2 | 40.7 |
| GUIANESE SHIELD | 2 | 18.2 | 0.0 | 0.0 |
| MERCOSUR-CHILE | 1 | 9.1 | 5.0 | 0.5 |
| **TOTAL** | **11** | **100.0** | **951.3** | **100.0** |

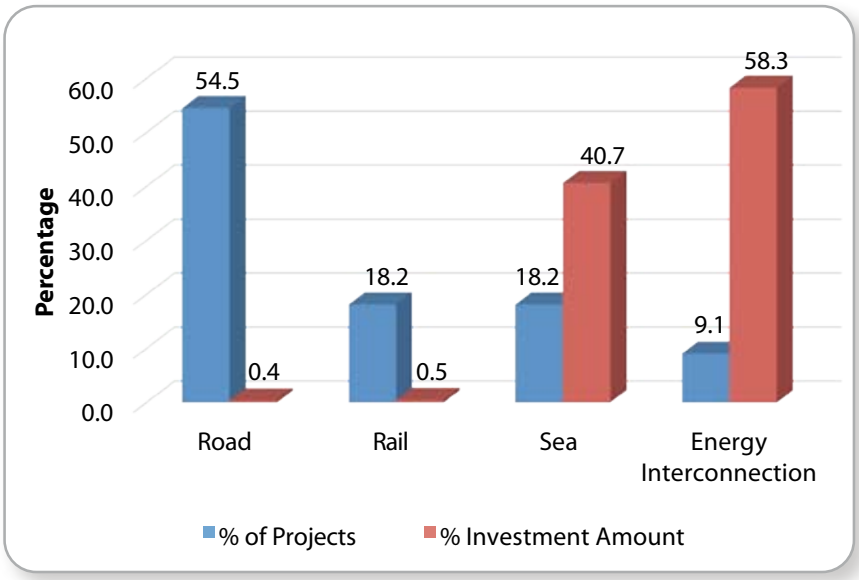
Figure B.5 • **Source of Financing of the API Projects already Completed**
(percentage of the number of projects and investment amount)




Most of the API projects already completed (five) were financed with public resources, while three projects were financed with private funds and another three, by public-private partnerships.

Figure B.6 • **Subsector-based breakdown of the API Projects already Completed**

(percentage of the number of projects and investment amount)




Road projects (six) account for more than half of the projects already completed; however, the total investment amount was devoted almost entirely to the sea transport and energy interconnection projects (40.7% and 58.3% respectively).

As for the completed projects, as mentioned, six of them were already finished before API was set up, but the decision to include them in the Agenda in spite of this fact prevailed because they complement the connectivity network involved in the structured project of which they form part. The projects completed this year are the following:

- AND91 - CONSTRUCTION OF THE NEW INTERNATIONAL RUMICHACA BRIDGE AND IMPROVEMENT OF THE EXISTING BRIDGE. This is a binational, Colombian-Ecuadorian project included in structured project COLOMBIA - ECUADOR BORDER INTERCONNECTION, and involved an investment of US$4,100,000.
- CAP67 - 500-KV TRANSMISSION LINE (ITAIPU - VILLA HAYES).This national project of Paraguay is included in structured project ITAIPU - ASUNCIÓN - YACYRETÁ 500-KV TRANSMISSION LINE, and its completion involved an investment of US$555,000,000.
- AMA24 - PAITA PORT. This national project of Peru is included in structured project PAITA - TARAPOTO - YURIMAGUAS ROAD, PORTS, LOGISTICS CENTERS AND WATERWAYS, and involved an investment of US$266,922,000.
- AMA67 - EL CALLAO MINERAL SHIPPING TERMINAL. This national, Peruvian project is included in structured project CALLAO - LA OROYA - PUCALLPA ROAD, PORTS, LOGISTICS CENTERS AND WATERWAYS and its completion involved an investment of US$120,300,000.

## 3. SECTOR AND SUBSECTOR-BASED BREAKDOWN AND TYPE OF WORKS

As shown in Table B.9, 97% of the API individual projects fall in the transport sector and demand an estimated investment of 91.3% of the total, while the other 3% fall in the energy sector and account for an estimated investment of 9.7%. Although the latter are few in number, they require a large investment on account of their size and technical characteristics.

Regarding the subsector-based breakdown of the API individual projects (Figures B.7 and B.8), road projects account for 30% of the Agenda and almost half of its total estimated investment amount (43.5%). River projects, even though in 2014 they represent almost one quarter of the API projects, only account for 6.9% of the total estimated investment in API. The same holds for border crossing projects, which account for 6% in terms of number but only 2.6% in terms of the total investment. As for rail projects (17% in number), they demand a considerable investment (28%) because of the nature of the works involved.

Figure B.7 • **API Subsector-based breakdown**

(percentage of the number of projects)

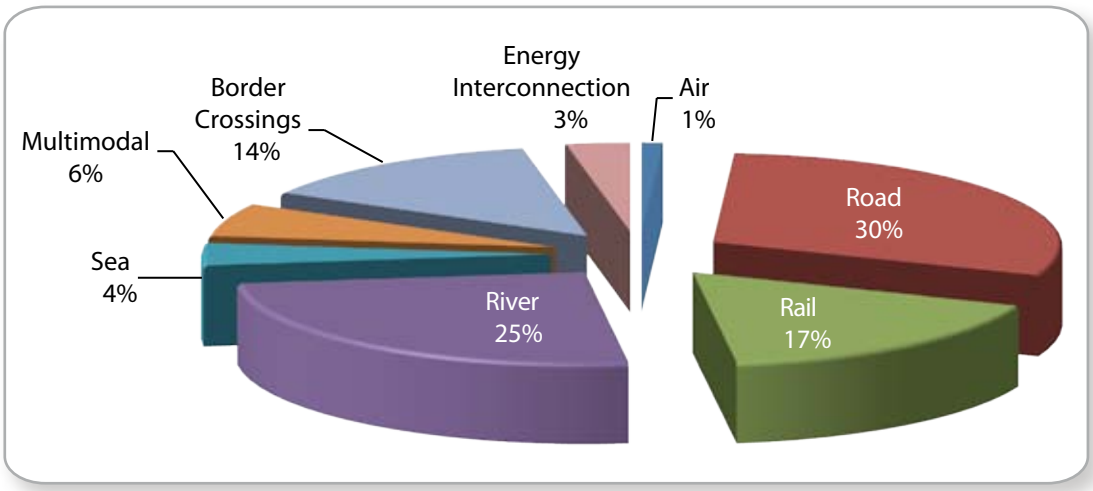



Figure B.8 • **API Subsector-based breakdown**

(percentage of the investment amount)

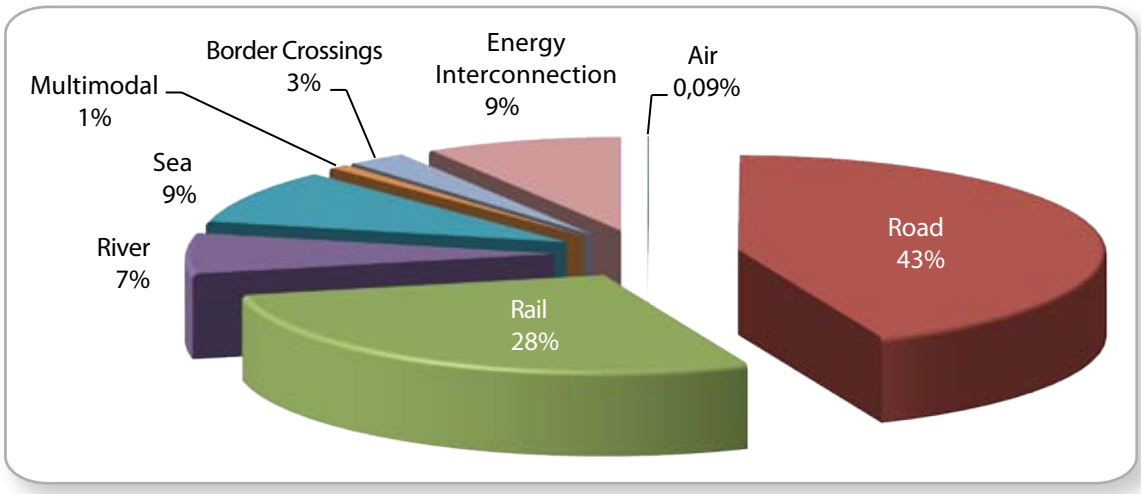



Table B.9 shows the subsector-based breakdown of the API individual projects by Hub.

Table B.9 • **API Subsector-based breakdown by Hub**

(number of projects and million US$)

| | TRANSPORT | | | | | | | | | | | | | | ENERGY | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Road | | Rail | | River | | Sea | | Multimodal | | Border Crossings | | Air | | Energy Interconnection | |
| | No. | Investment (million US$) | No. | Investment (million US$) | No. | Investment (million US$) | No. | Investment (million US$) | No. | Investment (million US$) | No. | Investment (million US$) | No. | Investment (million US$) | No. | Investment (million US$) |
| **AMA** | 6 | 896.0 | 0 | 0.0 | 10 | 249.0 | 4 | 1,975.5 | 6 | 165.9 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 |
| **AND** | 6 | 4,003.2 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 5 | 134.2 | 0 | 0.0 | 0 | 0.0 |
| **CAP** | 4 | 1,134.2 | 9 | 5,103.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 3 | 161.2 | 0 | 0.0 | 2 | 852.0 |
| **GUY** | 6 | 958.8 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 |
| **HPP** | 1 | 15.0 | 5 | 677.3 | 10 | 1,170.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 |
| **IOC** | 3 | 429.5 | 1 | 6.7 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 2 | 3.9 | 1 | 20.0 | 0 | 0.0 |
| **MCC** | 3 | 1,697.5 | 2 | 139.9 | 5 | 40.4 | 0 | 0.0 | 0 | 0.0 | 4 | 254.0 | 0 | 0.0 | 1 | 1,000.0 |
| **PBB** | 1 | 85.4 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 |
| **TOTAL** | **30** | **9,219.6** | **17** | **5,926.9** | **25** | **1,459.4** | **4** | **1,975.5** | **6** | **165.9** | **14** | **553.3** | **1** | **20.0** | **3** | **1,852.0** |

Both the data in Table B.9 and the detailed type of works presented in Annex 3 show that projects of the **road subsector** are mainly located in the Andean, Amazon, and Guianese Shield Hubs. Within this subsector, the projects involving the improvement and expansion of roads, the paving of new works, and the construction and rehabilitation of bridges prevail in number (26.7%, 23.3% and 23.3%, respectively), but the first of these types of works is the one that demands the largest investment (52.9% of the subsector total).

In the **rail subsector**, rail rehabilitation projects prevail in number (64.7% of the total), followed by new rail construction projects accounting for the remaining 35.3%. However, due to the type and magnitude of the works involved, rail construction projects represent 78.8% of the estimated investment in the subsector. Most of the rail projects are located in the Capricorn Hub.

As for the **river subsector**, the dominant projects concern the improvement of navigation conditions (76%) on waterways located in the Amazon and Paraguay-Paraná Waterway Hubs and require an investment estimated at 87.9%. In the case of the Paraguay and Paraná rivers, most projects aim at improving navigation conditions on the Plata basin, whereas in the case of the Amazon Hub, the purpose is to articulate several waterways (Huallaga, Marañón, Morona, Ucayali, and Putumayo) that connect the Amazon river basin with important areas of Peruvian, Ecuadorian and Colombian coast, sierra and rainforest.

Regarding the **sea subsector**, there are three projects with the objective of expanding and/or upgrading the land infrastructure of sea ports and a fourth project that involves the construction of a new port. All of these projects are located in the Amazon Hub.

As far as **border crossing** projects are concerned, infrastructure for the implementation of border control centers prevails. Thus, of the 14 border crossing projects, eight involve the creation of new infrastructure. Border crossing works requiring the largest investment amount (60%) are those aimed at expanding border control center capacity, which account for 42.9% of the total number of these projects. Most of these projects are located in the Andean and MERCOSUR-Chile Hubs.

With regard to **air transport**, there is only one project, which involves the expansion of the Viru Viru International Airport, located in Santa Cruz de la Sierra, Bolivia, and belonging to the Central Interoceanic Hub.

Concerning **multimodal projects**, all of them belong to the Amazon Hub and have the purpose of building logistics platforms in the main cargo origin and destination hubs in order to make the respective area's trade flows more efficient and reduce the logistics costs associated with transport.

Finally, as for **energy interconnection**, API includes only three individual projects in this category. Two of them fall in the Capricorn Hub and concern the construction of two 500-kV transmission lines (Itaipu-Villa Hayes and Yacyretá-Villa Hayes), while the other one, belonging to the MERCOSUR-Chile Hub, involves the construction of new energy interconnection facilities (the Northeastern Argentina Gas Pipeline). The latter accounts for more than half of the investment required by the three projects mentioned (54%).

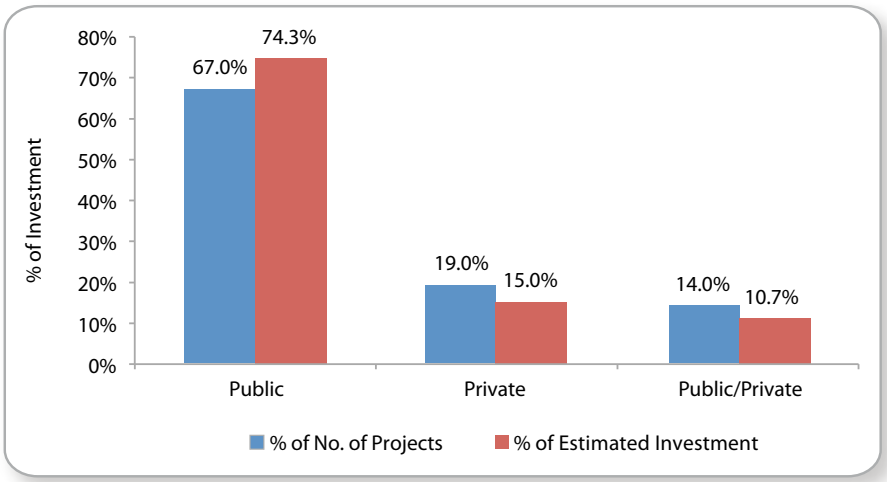
## 4. SOURCES OF FINANCING

In terms of the API financing sources, the public sector is the main source of investment. It is worth mentioning that the strategic importance of the API projects and the priority attached to them by the countries, by international organizations, and particularly by the CCT institutions (IDB, CAF and FONPLATA) are contributing to carrying out pre-investment studies and financing the works: taken together, the three institutions are financing the pre-execution or execution stage of 17 of the 31 API structured projects with an investment estimated at, approximately, US$ 2,190.8 million.

Figure B.9 shows the source of financing of the API individual projects in terms of their percentage of the number of projects and of the estimated investment.

Figure B.9 • **Sources of Financing of the API Individual Projects**

(percentage of the number of projects and of the estimated investment)




The main source of financing of the API individual projects is the public sector (74.3%). The private sector (15%) -under different contract arrangements- and public-private partnerships (10.7%) complete the picture.

Figure B.10 • **Sources of Financing of the API by Hub**

(number of projects)

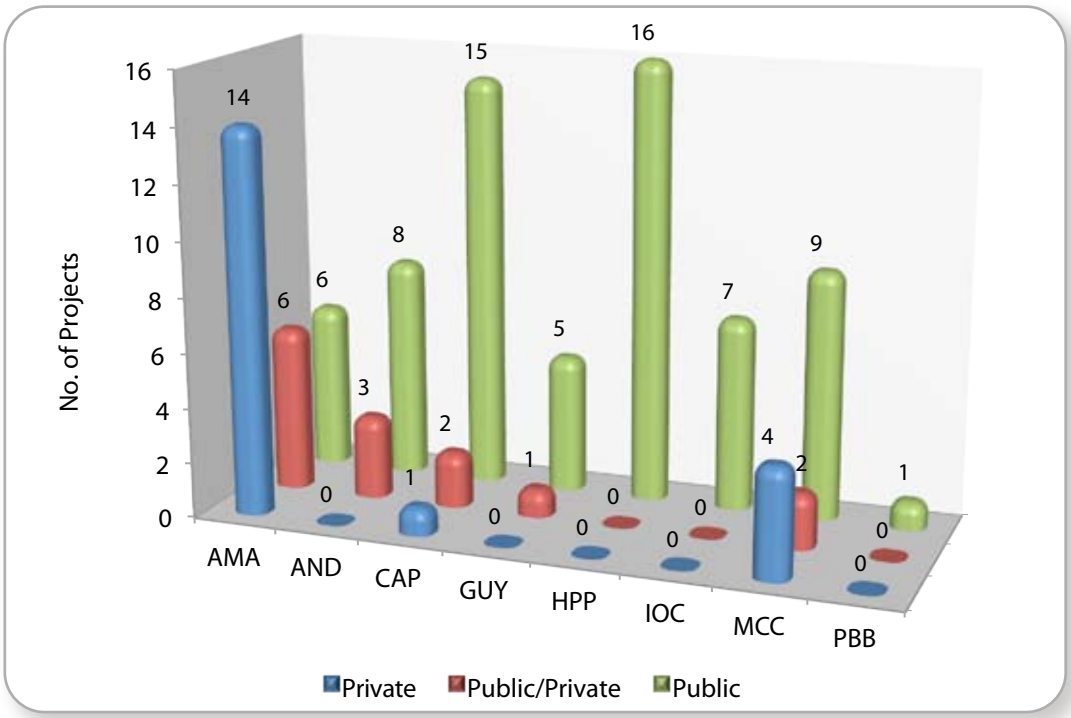
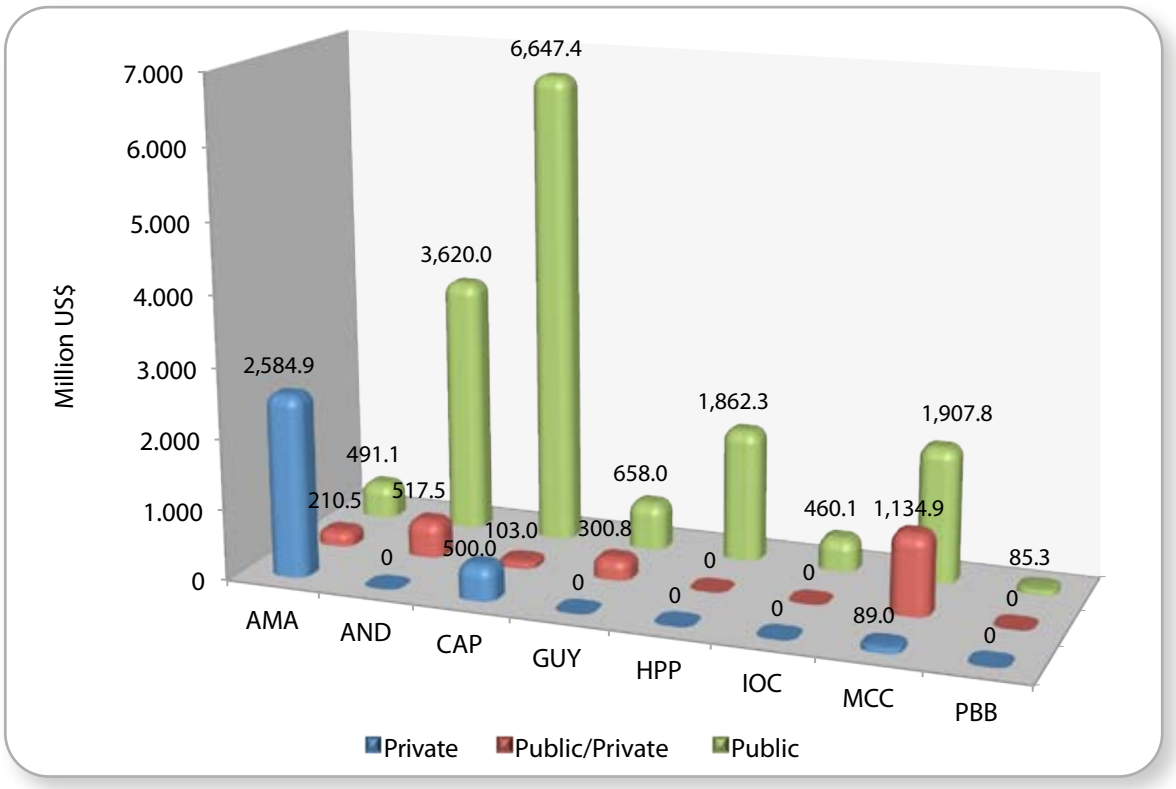


Figure B.11 • **Sources of Financing of the API by Hub**

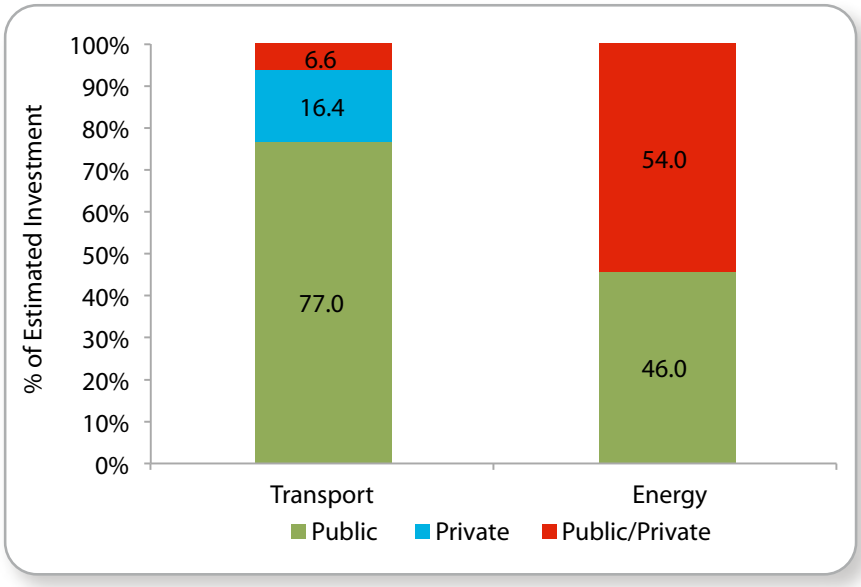
(million US$)




As shown in Figures B.10 and B.11, the Amazon Hub is the one with the greatest number of projects (53.8%) financed by the private sector, accounting for an investment estimated at about 68.4% of the total investment in the projects of this Hub included in API. Such projects are of a national scope (Peru), and fall in the river and sea subsectors (29%) and in the road and multimodal subsectors (21%). In the MERCOSUR-Chile Hub, 36.3% of the investment is financed by the public-private sector.

Figure B.12 • **Sources of Financing of the API by Sector**

(percentage of the estimated investment amount)



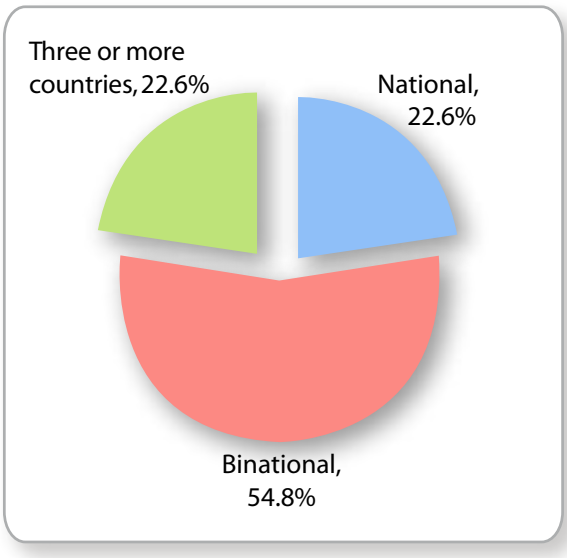

Public sources finance a little more than three fourths of the estimated investments in the transport sector (77%), while public-private sources invest the most in the energy sector (54%).

## 5. TERRITORIAL SCOPE OF THE PROJECTS

While the design and implementation of all the projects are the sole responsibility of the national authorities, binational and multinational projects demand greater coordination among the agencies in the different countries. It should be noted that all the countries participate in at least one structured project, either binational or tri-national[30]. Only when all the investments involved in the projects located in the territory of more than one country are executed as planned will the physical connectivity improvements pursued be achieved.

Figure B.13 • **Territorial Scope of the API Structured Projects**

(percentage of the number of projects)




Seven structured projects are wholly located in the territory of one country, 17 of them are binational, and the other seven involve three or more countries.

Second, as regards the territorial scope of the projects, it is also important to note that the degree of national involvement in the structured projects varies from country to country, as can be seen in Table B.10. One of the general characteristics of API as agreed upon by the countries at the time of its creation is that all the twelve countries should be represented in the Agenda and that it should reflect a balance of the projects proposed by each of them.

Table B.10 • **Distribution of the API Structured Projects by Country**

(number of projects)

| Country | No. of Structured Projects | No. of National Structured Projects | No. of Structured Projects Involving Two or More Countries | Hubs in which the Country is Involved |
|---|---|---|---|---|
| Argentina | 9 | 0 | 9 | CAP, HPP, MCC |
| Bolivia | 9 | 2 | 7 | AND, CAP, HPP, IOC, MCC |
| Brazil | 12 | 0 | 12 | AMA, CAP, GUY, HPP, IOC, MCC, PBB |
| Chile | 3 | 0 | 3 | CAP, MCC |
| Colombia | 4 | 0 | 4 | AMA, AND |
| Ecuador | 3 | 0 | 3 | AMA, AND |
| Guyana | 2 | 0 | 2 | GUY |
| Paraguay | 6 | 0 | 6 | CAP, HPP, IOC |
| Peru | 6 | 3 | 3 | AMA, AND, PBB |
| Suriname | 1 | 0 | 1 | GUY |
| Uruguay | 7 | 2 | 5 | HPP, MCC |
| Venezuela | 4 | 0 | 4 | AND, GUY |

[30] In fact, only Bolivia, Peru and Uruguay have national structured projects (Table B.10)

Third, the structured projects involving three or more countries belong to the Amazon, Andean, Capricorn, Guianese Shield, and Paraguay-Paraná Waterway Hubs.

## 6. TECHNICAL CHARACTERISTICS

As part of the Work Plan 2014, the countries carried out specific actions intended to enhance the quality and standardization of the Portfolio and API project data, and to better communicate their progress and outcomes. This resulted in the following: (i) the organization of the fields in the project files; (ii) specific descriptors by sector, subsector and type of works; (iii) results indicators for the projects already completed; (iv) the application of the Project Monitoring System (PMS) to the Project Portfolio; and (v) API progress indicators.

These descriptors help identify in standardized terms the objectives of each individual project, report important technical features in an aggregate manner, and produce project indicators by country, Project Group, or Integration and Development Hub. These new information fields are divided into "Primary" and "Secondary" and apply to projects at the pre-execution and execution stages (Annex 2).

The technical information on the API projects drawn from the data entered by the countries in the COSIPLAN Project Information System is presented below.

*1 FREIGHT AND PASSENGER AIRPORT*
The expansion of the airport involves the upgrade and construction of hangars and infrastructure for cargo storage and control.

*6,245.23 KM OF ROADS*
Road works involve paving, rehabilitation, and expansion of road capacity.

*7 MAIN BRIDGES AND 148 COMPLEMENTARY BRIDGES*
The construction, rehabilitation, and improvement of the main bridges cover a length of more than 2,400 m.

*2 BINATIONAL TUNNELS AND 20 COMPLEMENTARY TUNNELS*
One of them is 13 km long.

*2 BELTWAYS*
One extends along 46 km, while the other is 11 km long.

*7,342.4 KM OF RAILS*
Rehabilitation and construction of rail lines include the restoration of rail tracks, engineering structures and stations as well as the construction of a 600 m rail bridge with a freight yard.

*8,950.1 KM OF WATERWAYS IN 14 RIVERS AND 2 LAKES*
The improvement of navigation conditions includes depth-related works, the installation of aids to navigation and signs and markers, the dredging of more than 3,968,000 $m^3$ of sediments, the implementation of monitoring stations, the maintenance of waterways, improvement works in connection with locks, channel rectification and enlargement, and identification of obstacles to navigation.

*6 RIVER PORTS*
The works include extending piers by more than 1,000 m, the rehabilitation of existing infrastructure, the purchase of equipment, and the implementation of dams.

*4 SEA PORTS*

The works involve a 2000 m expansion of docks, the construction of a 33.5 hayard for containers and an access bridge, and the purchase of 43 cranes.

*6 LOGISTIC CENTERS*

The construction of these logistics centers includes storage centers, communications centers and mobile units, and the construction and improvement of approach roads.

*13 BORDER CROSSINGS*

These projects include the construction and optimization of border centers for passengers and cargo occupying more than 73 hectares, the design of a management control system, and the construction of bridges and approach roads.

*1 1,500-KM TRUNK GAS PIPELINE*

*2 500-KV TRANSMISSION LINES ALONG 624 KM*

# AMAZON HUB

## PROJECTS

STRUCTURED **3** INDIVIDUAL **26**

## ESTIMATED INVESTMENT

**3,286.5**
US$ Million

## BY SUBSECTOR

| | | | |
|---|---|---|---|
| 10 | 4 | 6 | 6 |
| 249.0 | 1,975.5 | 896.0 | 166.0 |

## BY SOURCE OF FINANCING

| | | |
|---|---|---|
| 6 | 14 | 6 |
| 491.7 | 2,584.9 | 210.5 |

# C. AMAZON HUB
# (BRAZIL, COLOMBIA, ECUADOR AND PERU)

The Amazon Hub includes a large region of northern South America between the Pacific and Atlantic oceans, crossed by the Amazon river and its tributaries. It is characterized by its large extension, diverse topography (coast, Andean area, rainforest), and low population density. The area of influence defined for the Hub covers 5,657,679 km$^2$, accounting for 50.5% of the total area of the countries that make it up.

The total population of the Amazon Hub is 61,506,049 inhabitants as of 2008, accounting for 22.2% of the total population of the countries that make it up. Furthermore, an average population density of 11 inhabitants per km$^2$ was estimated for the area of influence, which is a medium to low level overall due to a strong geographic dispersion. This indicator ranges from a maximum 104 inhabitants per km$^2$ in the Coast Region of Peru to a minimum of just over 2 inhabitants per km$^2$ in the territory of the state of Amazonas, in Brazil.

API includes projects from five of the seven project groups of this Hub: i) G2 - Access to the Napo Waterway, ii) G3 - Access to the Huallaga - Marañón Waterway, iii) G4 - Access to the Ucayali Waterway, iv) G6 - Amazon Waterway Network, and v) G7 - Access to the Morona - Marañón - Amazon Waterway.

Table C.1 shows the 26 individual projects that make up the three structured projects of the Amazon Hub incorporated into API. The estimated investments involved amount to US$3,286.5 million. These API projects impact on the development of the four countries in the Hub (Brazil, Colombia, Ecuador, and Peru) and, in general terms, connect several waterways (Huallaga, Marañón, Morona, Ucayali, and Putumayo) linking the Amazon river basin to important coast, sierra, and rainforest areas in Peru, Ecuador and Colombia. The Agenda includes road, port, river, and logistics centers projects that are likely to leverage four trimodal corridors connecting maritime terminals on the Pacific with waterways feeding the Amazon basin. These projects comply with the selection criteria set out for inclusion in the Agenda as well as with the strategic functions of the Hub's project groups involved in API.

Map C.1 • **API Projects - Amazon Hub**

## Table C.1 • API Projects - Amazon Hub

| # | Structured Project Name | No. of Individual Projects | Countries | API amount (million US$) | Stage | Code | Name of the Individual Projects | Countries Involved | PG | Project Stage | Amount (US$) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | PAITA - TARAPOTO - YURIMAGUAS ROAD, PORTS, LOGISTICS CENTERS AND WATERWAYS | 10 | PE | 471.9 | ● | AMA102 | CONSTRUCTION OF NEW YURIMAGUAS PORT | PE | G03 | ● | 43,730,000 |
| | | | | | | AMA16 | TARAPOTO - YURIMAGUAS ROAD* | PE | G03 | ● | 0 |
| | | | | | | AMA20 | PAITA LOGISTICS CENTER | PE | G03 | ● | 47,650,000 |
| | | | | | | AMA21 | YURIMAGUAS LOGISTICS CENTER | PE | G03 | ● | 15,000,000 |
| | | | | | | AMA24 | PAITA PORT | PE | G03 | ● | 266,922,000 |
| | | | | | | AMA25 | PAITA - TARAPOTO ROAD* | PE | G03 | ● | 0 |
| | | | | | | AMA40 | IMPROVEMENT OF NAVIGATION CONDITIONS ON THE HUALLAGA RIVER WATERWAY, BETWEEN YURIMAGUAS AND THE CONFLUENCE WITH MARAÑÓN RIVER | PE | G06 | ● | 33,000,000 |
| | | | | | | AMA41 | IMPROVEMENT OF NAVIGATION CONDITIONS ON THE MARAÑÓN RIVER WATERWAY, BETWEEN SARAMERIZA AND THE CONFLUENCE WITH UCAYALI RIVER | PE | G06 | ● | 11,000,000 |
| | | | | | | AMA44 | IQUITOS LOGISTICS CENTER | PE | G06 | ● | 15,000,000 |
| | | | | | | AMA56 | MODERNIZATION OF IQUITOS PORT | PE | G06 | ● | 39,550,000 |
| 2 | CALLAO - LA OROYA - PUCALLPA ROAD, PORTS, LOGISTICS CENTERS AND WATERWAYS | 11 | PE | 2,761.8 | ● | AMA104 | CONSTRUCTION OF NEW PUCALLPA PORT | PE | G04 | ● | 54,959,720 |
| | | | | | | AMA26 | IMPROVEMENT OF TINGO MARÍA - PUCALLPA ROAD | PE | G04 | ● | 438,352,770 |
| | | | | | | AMA30 | PUCALLPA INTERMODAL LOGISTICS CENTER | PE | G04 | ● | 15,000,000 |
| | | | | | | AMA31 | MODERNIZATION OF EL CALLAO PORT (NEW CONTAINER DOCK) | PE | G04 | ● | 704,835,670 |
| | | | | | | AMA32 | LIMA - RICARDO PALMA EXPRESSWAY | PE | G04 | ● | 242,000,000 |
| | | | | | | AMA43 | IMPROVEMENT OF NAVIGATION CONDITIONS ON THE UCAYALI RIVER WATERWAY, BETWEEN PUCALLPA AND THE CONFLUENCE WITH MARAÑÓN RIVER | PE | G06 | ● | 19,000,000 |
| | | | | | | AMA63 | IIRSA CENTER, SECTION 2: RICARDO PALMA - LA OROYA - TURN OFF TO CERRO DE PASCO / LA OROYA - HUANCAYO | PE | G04 | ● | 100,000,000 |
| | | | | | | AMA64 | IIRSA CENTER, SECTION 3: TURN OFF TO CERRO DE PASCO - TINGO MARÍA | PE | G04 | ● | 115,606,060 |
| | | | | | | AMA65 | EL CALLAO LOGISTICS ACTIVITIES ZONE (ZAL CALLAO) | PE | G04 | ● | 68,300,000 |
| | | | | | | AMA66 | EL CALLAO MULTI-PURPOSE NORTHERN TERMINAL | PE | G04 | ● | 883,482,448 |
| | | | | | | AMA67 | EL CALLAO MINERAL SHIPPING TERMINAL | PE | G04 | ● | 120,300,000 |
| 3 | NORTHEASTERN ACCESS TO THE AMAZON RIVER | 5 | BR – CO EC - PE | 52.8 | ● | AMA38 | IMPROVEMENT OF NAVIGATION CONDITIONS ON THE PUTUMAYO - IÇÁ RIVER | CO - EC - PE | G06 | ● | 15,000,000 |
| | | | | | | AMA39 | IMPROVEMENT OF NAVIGATION CONDITIONS ON THE MORONA RIVER | EC - PE | G06 | ● | 2,000,000 |
| | | | | | | AMA42 | MEJORAMIENTO DE LA NAVEGABILIDAD DEL RÍO NAPO | EC - PE | G06 | ● | 5,759,000 |
| | | | | | | AMA45 | IMPROVEMENT OF NAVIGATION CONDITIONS ON THE NAPO RIVER | EC | G07 | ● | 5,000,000 |
| | | | | | | AMA71 | MORONA FREIGHT TRANSFER PORT | EC | G02 | ● | 25,000,000 |

*These two individual projects were completed before the creation of API and incorporated into the Agenda because they supplement the connectivity network of the structured project.

Table C.2 · **API Projects – Amazon Hub by Life Cycle Stage**
(number of projects, million US$, and percentage)

| Project Stage | No. of Projects | % of Projects | Investment Amount | % of Investment Amount |
|---|---|---|---|---|
| Profiling | 6 | 23.1 | 166.7 | 5.1 |
| Pre-Execution | 12 | 46.2 | 662.2 | 20.1 |
| Execution | 4 | 15.4 | 2,070.4 | 63.0 |
| Completed (*) | 4 | 15.4 | 387.2 | 11.8 |
| **TOTAL** | 26 | 100.0 | 3,286.5 | 100.0 |

Note: Amounts are estimated on the basis of the life cycle stage at which the API individual projects are.

(*)There are two individual projects included in a structured project of this Hub that were already completed when API was set up. These projects are AMA25 and AMA 16 and their investment amounts (not included in the total) are US$273.6 and US$231.7 million, respectively.

Figure C.1 · **API Projects – Amazon Hub by Life Cycle Stage**
(% of number of projects and % of investment amount)

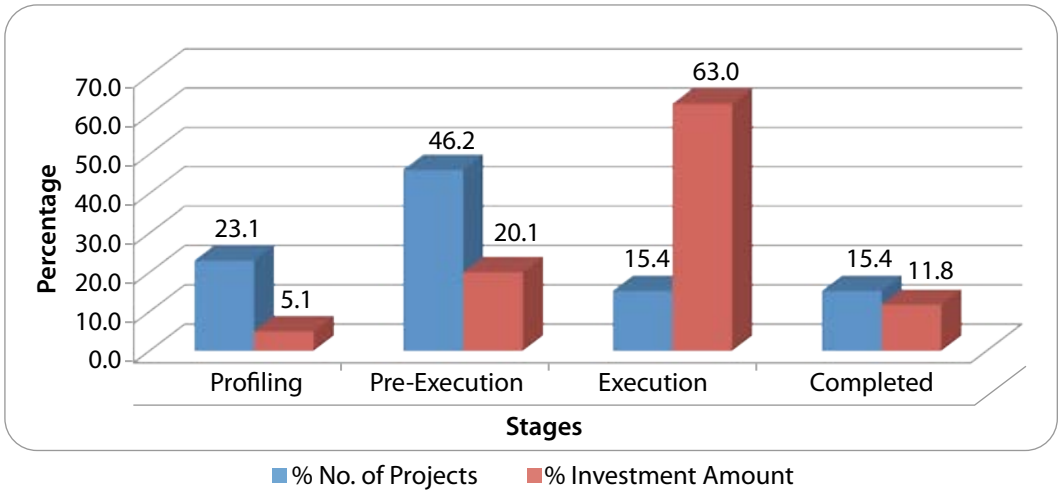



Figure C.2 · **API Projects – Amazon Hub by Sub-Sector**
(% of number of projects and % of investment amount)

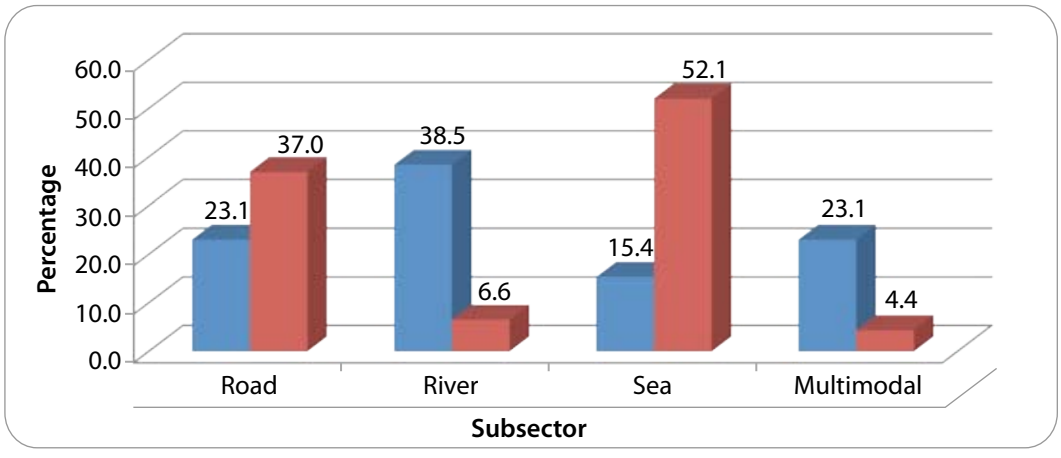


Figure C.3 • **API Projects – Amazon Hub by Source of Financing**

(% of number of projects and % of investment amount)

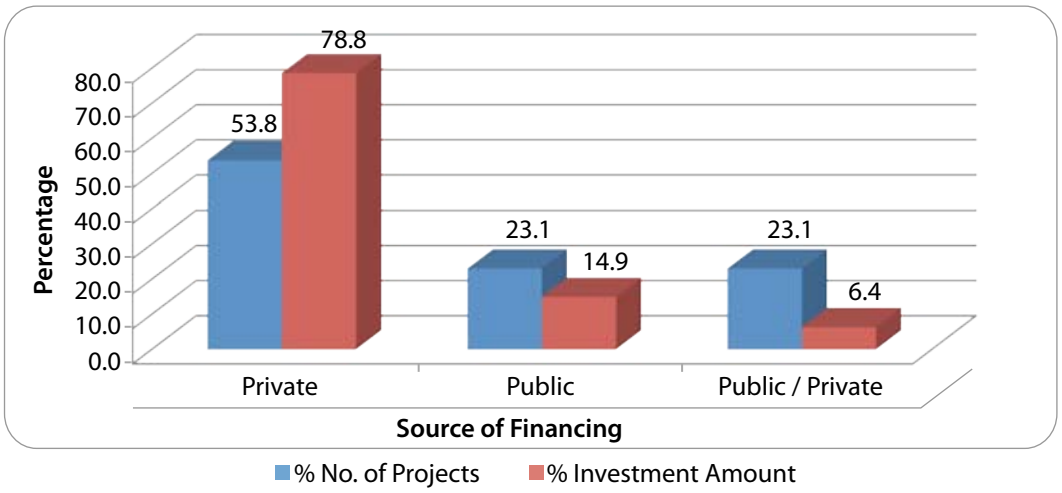



Table C.3 • **API Projects Technical Specifications – Amazon Hub**

The API projects in this Hub involve:

- Paving and rehabilitation of 1,811.2 km of roads (involving improvement and rehabilitation of the existing pavement, engineering structures, and drainage systems; slope stabilization; complete recoating of roads; widening of 29 roadbeds; and construction of four road bypasses, 10 pedestrian bridges in urban areas, and two roundabouts).
- Construction and improvement of 29.5 km of roads.
- Improvement of navigation conditions on 4,557 km of waterways (involving 8-foot deepening works; dredging of 3,065,000 m3 of sediments; natural self-dredging by implementing submerged panels; installation of signs, markers and aids to navigation; implementation of limnimetric stations; monitoring and maintenance of waterways; the study, design and construction of docks; maintenance and operation of docks; dock upgrade and protection works; identification of obstacles to navigation (bad passages); socio-environmental diagnostic studies; plans for the installation of signs, markers (aids to navigation); analysis of the vessels, transportation costs, logistics management, and bathymetry, etc.).
- Construction of four river ports (including the construction of six berths, a 180-m dock, a quay with five pontoons, and berth facilities; 12-m deepening works; a berth for passengers; a mobile crane; yards and warehouses for different kind of cargo; the upgrade of existing facilities; the purchase of equipment; the replacement of equipment; nighttime operations; a multi-purpose terminal; a dry bulk terminal; a dangerous cargo terminal; an area for container consolidation and deconsolidation; an administrative area; customs equipment; a harbor master's office; migration and phytosanitary controls; a logistics center; dredging works for river access; and repair of works in rivers).
- Construction of 25 km of approach roads to the river port.
- The modernization of four sea ports (involving the construction of a berth, two 300-m docks, a 960-m dock, a 200-m dock and its access bridge, and a dock and conveyor belt along 3 km; the modernization of seven docks and 16 berths; dock walls made of reinforced concrete; soil filling and improvement; a storage yard and a support operations area of 12 hectares; dredging to 13 m at the mooring station, access canal and maneuvering area; 12-m deepening works; 215,000 $m^2$ of warehouses and administration premises; purchase of a dock gantry crane for containers, two yard cranes, ten Super-post Panamax container cranes, 18 rubber tyred gantry (RTG) yard cranes, 12 electric yard cranes, other equipment required for the operations, and advanced safety systems; and dredging works in areas adjacent to the dock).
- The construction of 5 logistics transfer centers (involving a center for logistics activities, two storage centers, communications centers and mobile units, approach roads, and lanes).

## PAITA - TARAPOTO - YURIMAGUAS ROAD, PORTS, LOGISTIC CENTERS AND WATERWAYS

1

AMAZON

COUNTRIES 

SUBSECTOR 

ESTIMATED INVESTMENT **471,852,000**

SOURCE OF FINANCING 

PROJECT STAGE **EXECUTION**

LIFE CYCLE STAGES AND NUMBER OF PROJECTS 


ESTIMATED PROJECT COMPLETION DATE **AUGUST 2018**

| Code | Stage | Name of the Individual Projects | Countries Involved | Estimated Investment (en US$) |
|---|---|---|---|---|
| AMA102 | ● | CONSTRUCTION OF NEW YURIMAGUAS PORT | PE | 43,730,000 |
| AMA16 | ● | TARAPOTO - YURIMAGUAS ROAD | PE | 0 |
| AMA20 | ● | PAITA LOGISTICS CENTER | PE | 47,650,000 |
| AMA21 | ● | YURIMAGUAS LOGISTICS CENTER | PE | 15,000,000 |
| AMA24 | ● | PAITA PORT | PE | 266,922,000 |
| AMA25 | ● | PAITA - TARAPOTO ROAD | PE | 0 |
| AMA40 | ● | IMPROVEMENT OF NAVIGATION CONDITIONS ON THE HUALLAGA RIVER WATERWAY, BETWEEN YURIMAGUAS AND THE CONFLUENCE WITH MARAÑÓN RIVER | PE | 33,000,000 |
| AMA41 | ● | IMPROVEMENT OF NAVIGATION CONDITIONS ON THE MARAÑÓN RIVER WATERWAY, BETWEEN SARAMERIZA AND THE CONFLUENCE WITH UCAYALI RIVER | PE | 11,000,000 |
| AMA44 | ● | IQUITOS LOGISTICS CENTER | PE | 15,000,000 |
| AMA56 | ● | MODERNIZATION OF IQUITOS PORT | PE | 39,550,000 |

1

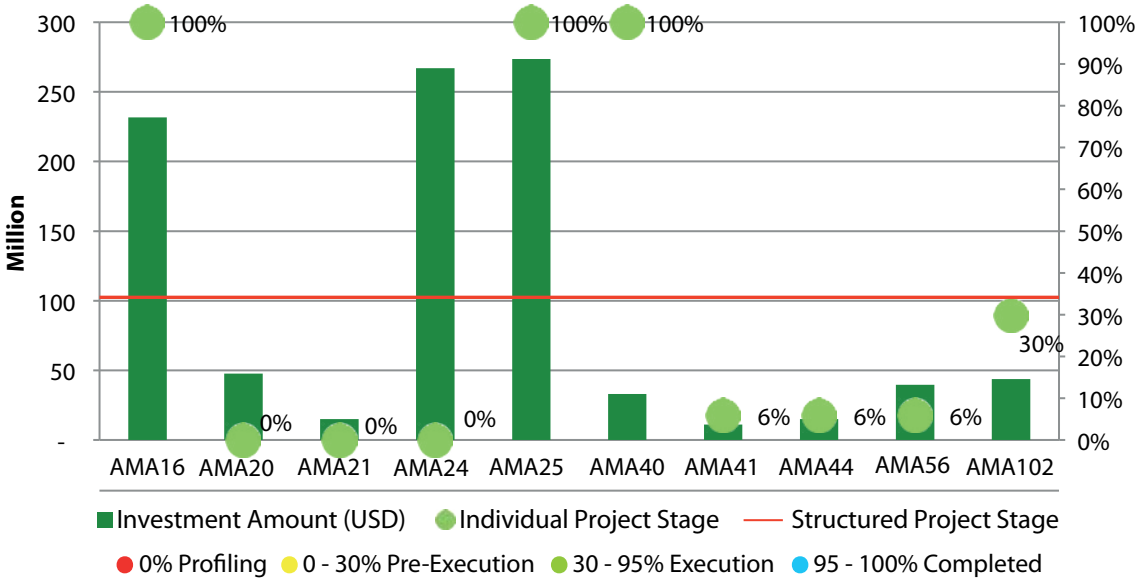
AMAZON

## PROJECT TECHNICAL SPECIFICATIONS

THE STRUCTURED PROJECT INVOLVES:

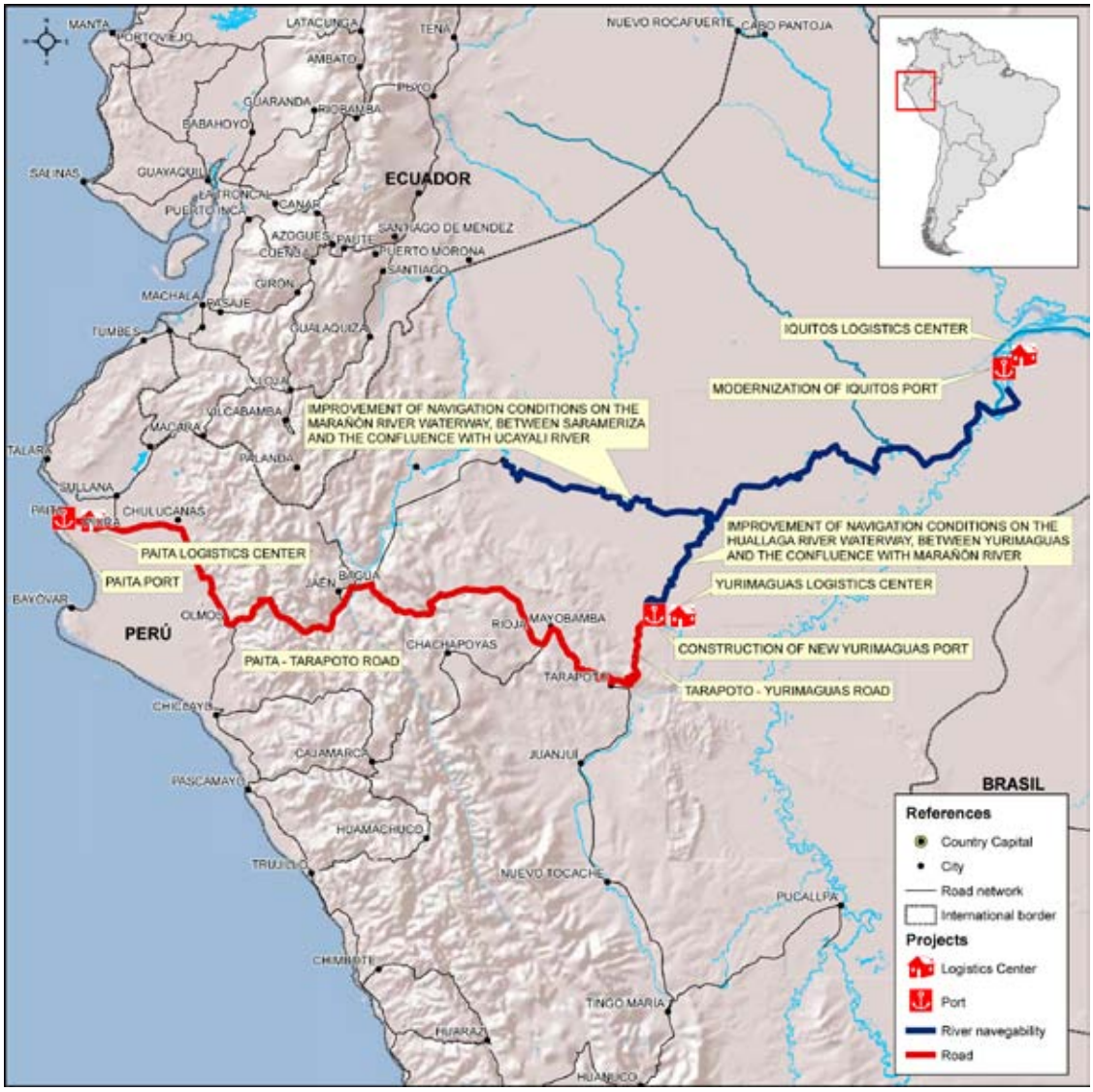
- Improvement of navigation conditions of 1,439 km of rivers (involving 8-foot deepening works, dredging of 2,200,000 $m^3$ of sediments, installation of signs, markers and aids to navigation, implementation of limnimetric stations, and monitoring and maintenance of waterways).
- Construction of one river port (involving the construction of three berths, a 180-m dock, and 10 km of approach roads; 12-m deepening works; a berth for passengers; a mobile crane; yards and warehouses; and replacement of equipment).
- Modernization of one sea port (involving the construction of a berth and a 300-m dock; 12-m deepening works; a 300-m dock for containers; dock walls made of reinforced concrete; soil filling and improvement; a storage yard and a support operations area of 12 hectares; dredging to 13 m at the mooring station, access canal and maneuvering area; purchase of a dock gantry crane for containers, two yard cranes and other cargo-moving equipment) and of one river port (involving dredging works for river access, repairs of works in rivers, upgrade of existing facilities, and purchase of equipment).
- Construction of 3 logistics transfer centers (involving a center for logistics activities, a storage center, communications centers and mobile units, approach roads, and lanes).
- Paving of 125 km of roads.
- Rehabilitation of 825 km of roads.

### STRUCTURED PROJECT CURRENT STATUS AND INDIVIDUAL PROJECTS STAGE AND ESTIMATED INVESTMENT




## LAST YEAR'S MAJOR DEVELOPMENTS

- Project PAITA PORT made 35% progress and has been completed.


ECUADOR
PERÚ
BRASIL
IQUITOS LOGISTICS CENTER
MODERNIZATION OF IQUITOS PORT
IMPROVEMENT OF NAVIGATION CONDITIONS ON THE MARAÑÓN RIVER WATERWAY, BETWEEN SARAMERIZA AND THE CONFLUENCE WITH UCAYALI RIVER
IMPROVEMENT OF NAVIGATION CONDITIONS ON THE HUALLAGA RIVER WATERWAY, BETWEEN YURIMAGUAS AND THE CONFLUENCE WITH MARAÑÓN RIVER
YURIMAGUAS LOGISTICS CENTER
CONSTRUCTION OF NEW YURIMAGUAS PORT
TARAPOTO - YURIMAGUAS ROAD
PAITA LOGISTICS CENTER
PAITA PORT
PAITA - TARAPOTO ROAD
References
Country Capital
City
Road network
International border
Projects
Logistics Center
Port
River navegability
Road

1

AMAZON

## RATIONALE

This project is structured to connect the coast, sierra and rainforest regions in the northern area of Peru with Brazil (Manaus) and, eventually, with the Atlantic ocean, with a view to promoting trade and complementarity among the different areas involved. The project is very significant since it is meant to streamline logistics in a large corridor that articulates densely populated areas such as the Piura Region with emerging, low population density areas in the rainforest. All the most dynamic cities on the northern coast of Peru may be linked to this Northern Branch of the Amazon Hub, which, in turn, connects the most densely populated department in the Peruvian sierra region (Cajamarca) with three departments located in the rainforest (Amazonas, San Martín, and Loreto).

Joint declarations by the Brazilian and Peruvian governments express their commitment to the development of the states concerned and their neighboring areas, and underscore the importance they attach to the promotion of trade through better regional connectivity and border development.

The Paita-Tarapoto-Yurimaguas road project is currently under concession; its rehabilitation and improvement works have been completed. The connection between the three areas (coast, sierra, and rainforest) has improved, facilitating exchange of production, trade and tourism. The infrastructure involved in this project is expected to improve accessibility for the benefit of the population as well as increase trade and opportunities to reach new markets in other countries under better conditions.

At present, there are regular regional transport vehicle flows in the Paita-Tarapoto-Yurimaguas road, especially in the Olmos turn-off-Tarapoto section, as traffic from the city of Chiclayo (sometimes originating in Lima) to Tarapoto, cities located along the way (Bagua, Moyobamba, Rioja) and connecting cities (Jaén, San Ignacio, Saramiriza) is significant. There is also river transportation, both of cargo and passengers, from Yurimaguas to Iquitos and intermediate locations.

The goal is that this structured project will operate as a multimodal corridor for international transportation to and from Brazil along the Amazon river. In the right conditions, this flow should be sequential and complementary, ensuring orderly and free-flowing transportation.

In relation to complementarity, the uneven economic and social development of the Peruvian regions and their production potential (the modern and industrialized coast, the extractive and/or agricultural activities in the sierra and rainforest areas) should be borne in mind. This project will ensure the complementarity of the roles played by the different regions.

Regarding border development, trade among border populated centers is expected to increase as a result of the operation of the five road axes for the integration of Peru and Ecuador, linked to the infrastructure involved in the project, as a multimodal corridor that would enable connection with Brazil. In order to attain this objective, logistics services in ports, roads and waterways must also be improved, for which purpose the Transport Logistics Services Development Plan has been implemented, which establishes the strategy to be used to minimize the costs associated with transport following a logistics corridor approach, including the operation of logistics centers or platforms along the IIRSA Norte corridor in areas adjacent to the ports of Paita, Yurimaguas and Iquitos.

As can be inferred from above, the implementation of this structured project seeks to ensure the viability of international transport between Peru and Brazil and its extension to the basins of both the Pacific and Atlantic oceans, as well as to reinforce the development of the northeastern region of Peru through the improvement of the links among its departments: the Paita-Yurimaguas road and the Huallaga, Marañón and Amazon waterways are the backbone of this macroregion, in which a network of national and regional highways and the tributaries of such rivers converge. This will also contribute to the development of the border areas, which calls for multi-sectoral, concerted actions mainly related to undertaking social projects.

The most important impacts of the development of the Paita-Yurimaguas infrastructure are associated with reduced travel times, increased traffic, and stimulated socioeconomic activities, particularly along the Tarapoto-Yurimaguas section, where farming areas devoted to the production of inputs for processed goods for export have grown considerably.

Thus, trade flows along this infrastructure are expected to include the transportation of the phosphates exploited at the Bayóvar mine, located in the Pacific coastal area of the department of Piura, to the agricultural production areas in Brazil, which are currently carried by sea. The trade flows in this direction would also incorporate the transport of the Manaus Industrial Free Trade Zone production inputs imported from Asian countries.

In the opposite direction, cargo transport flows would be associated with products from the Manaus industrial center to the markets located on the western Pacific coast of South America. These flows, however, will materialize only as long as transport costs are competitive and lower than now, which requires the prioritization of actions aimed at reducing transport logistics costs.

In the social domain, the Paita-Yurimaguas road has already a great impact on the northeastern region of Peru, particularly on areas that were poorly connected in the past but now are linked by a fist-rate highway, mainly the Tarapoto-Yurimaguas stretch. This has led to a considerable expansion of agricultural areas, primarily devoted to the production of palm hearts and of oil palms both for the Peruvian coastal markets and for export. This dynamism of the regional economy undoubtedly enhances the quality of life of the inhabitants of these areas and also facilitates access to the benefits of a globalized world.

The program of complementary actions is intended to have all district capitals (local governments) linked to the infrastructure involved in the project in the medium term (six years) at the most.

## PROPOSAL

This project links i) two road projects (Paita-Tarapoto and Tarapoto-Yurimaguas sections), which jointly make up what in Peru is known as the "Northern Amazon Corridor" or "IIRSA Norte Corridor;" ii) two projects concerned with the improvement of navigation conditions on waterways (Huallaga and Marañón); iii) the upgrade or relocation of three ports (Yurimaguas, Iquitos, and Paita); and iv) three logistics centers (Yurimaguas, Iquitos, and Paita).

The road, which runs from east to west, stretches from the city of Paita, on the Pacific, to the city of Yurimaguas, in the rainforest. In Yurimaguas, the road articulates with the rivers Huallaga and Marañón through a port. Farther east, across these rivers, it arrives at Iquitos city, aiming at reaching Manaus to promote overseas trade. The Paita-Yurimaguas Northern Amazon Corridor spans 955 km across the departments of Piura, Lambayeque, Cajamarca, Amazonas, San Martín and Loreto, which total an area of 542,727 km$^2$ (42% of the national territory) and a population of 6.4 million (22% of the country's population).

At present, there are two aspects limiting the navigability of the Amazonian waterways and rendering them less competitive, namely:

- Navigation conditions: inadequate channels, submerged tree trunks and branches, sand deposition on riverbeds, changes in the course of rivers, and lack of signs and markers.

- Informal river transport services.

In order to further a solution to these problems, feasibility and navigability studies have been conducted for the rivers with the greatest potential for the development of trade flows; such studies are being used as a basis for awarding concessions for the operation and maintenance of the waterways. Furthermore, a National Waterway Plan is being developed with the purpose of channeling investments into the efficient exploitation of this transport network.

The Paita port development consists in the enlargement, improvement and modernization of its facilities by the firm holding its concession, as this is the second major port in Peru and an important entry/exit point for cargo traffic on the northern coast of the country. The Yurimaguas port terminal needs to be relocated, since its present facilities cannot be expanded because they are in an urban area and the proposed location (20 km away) is better due to the characteristics of the river and the space available. The access road to the new port is almost finished.

In order to make trade flows more efficient and reduce the logistics costs associated with transport, new logistics platforms will be built in Paita and Yurimaguas (and, probably, also in Iquitos), which will be licensed to the private sector under a concession arrangement. In the case of Paita, basic engineering studies have been completed, including the design of civil works and equipment, whereas the studies for the Yurimaguas logistics platform need to be carried out.

## PROGRESS ANALYSIS AND ASSESSMENT

All the individual projects are included in the COSIPLAN Portfolio, and there is enough information to account for the priority assigned to these works in the plans of the Ministry of Transport and Communications (Intermodal Plan 2004-2023), the Transport Logistics Services Development Plan, the Strategic Plan 2012-2016 of the Transport and Communications Sector, and Peru's National Port Development Plan (designed by the Port Authority).

The Paita-Yurimaguas road corridor is completed (wearing course rehabilitation works on the Paita-Tarapoto section, and paving of the Tarapoto-Yurimaguas stretch), and some complementary works, such as the access road to the new port of Yurimaguas and the Tarapoto city bypass road, have been completed. At present, the Piura bypass road is being executed by the firm holding the concession.

The port of Paita has been handed over to a concessionaire. The first stage works to build a new container terminal started in June 2012, and were completed in June 2014, with an investment of US$152 million. These works include the construction of a 12-ha yard, a concrete 300-m marginal wharf, administrative premises and a workshop for maintenance works, as well as the installation of one rubber tyred gantry (RTG) crane and two rough terrain cranes (RTCs). Dredging operations (13 m deep) have been carried out, and three piles with fenders for vessels up to 55,000 DWT have been installed.

The concession for the construction of the new Yurimaguas port has been awarded, and in May 2014 the first-stage works, expected to take four years, were commenced. The works related to the approach road to the port (10 km) have been completed.

As far as the waterways are concerned, at present PROINVERSIÓN is responsible for the concession process to award the project known as "Improvement and Maintenance of the Navigation Conditions on the Ucayali, Huallaga, Marañón and Amazon Rivers," with an investment of US$63 million; the best proposal is expected to be defined during the fourth quarter of 2014. The project will be co-financed by the Peruvian State. The works, scheduled for commencement in 2016, will ensure commercial navigation conditions 365 days a year, eliminating the bad passages by dredging, removal of obstacles, communications systems and installation of signs and markers.

As for the logistics centers, a basic design study has been completed for the one planned for Paita, including its location and the determination of the necessary investments. No studies for the Yurimaguas and Iquitos centers are available.

The varying degrees of progress of the individual projects affect the operability of the structured project, as this poses an obstacle to seamless transport flows. While the road component has been completed, the ports and waterways works are yet to be executed. Once these implementation lags are overcome, transportation along this corridor is expected to be much better.

In Peru, environmental licenses and permits must be necessarily obtained prior to project implementation, including the approval of the environmental impact assessment studies before the project execution stage.

Even though no coordinating body has been expressly appointed to efficiently manage the structured project, the Budget and Planning Office, under the purview of the Peruvian Ministry of Transport and Communications, has been monitoring the progress of the individual projects and taking action to accelerate the process, even in a complex context, on the basis of the results of the Transport Logistics Services Development Plan.

## CALLAO - LA OROYA - PUCALLPA ROAD, PORTS, LOGISTICS CENTERS AND WATERWAYS

2

AMAZON

COUNTRIES 

SUBSECTOR 

ESTIMATED INVESTMENT **2,761,836,668**

SOURCE OF FINANCING 

PROJECT STAGE **EXECUTION**

LIFE CYCLE STAGES AND NUMBER OF PROJECTS 

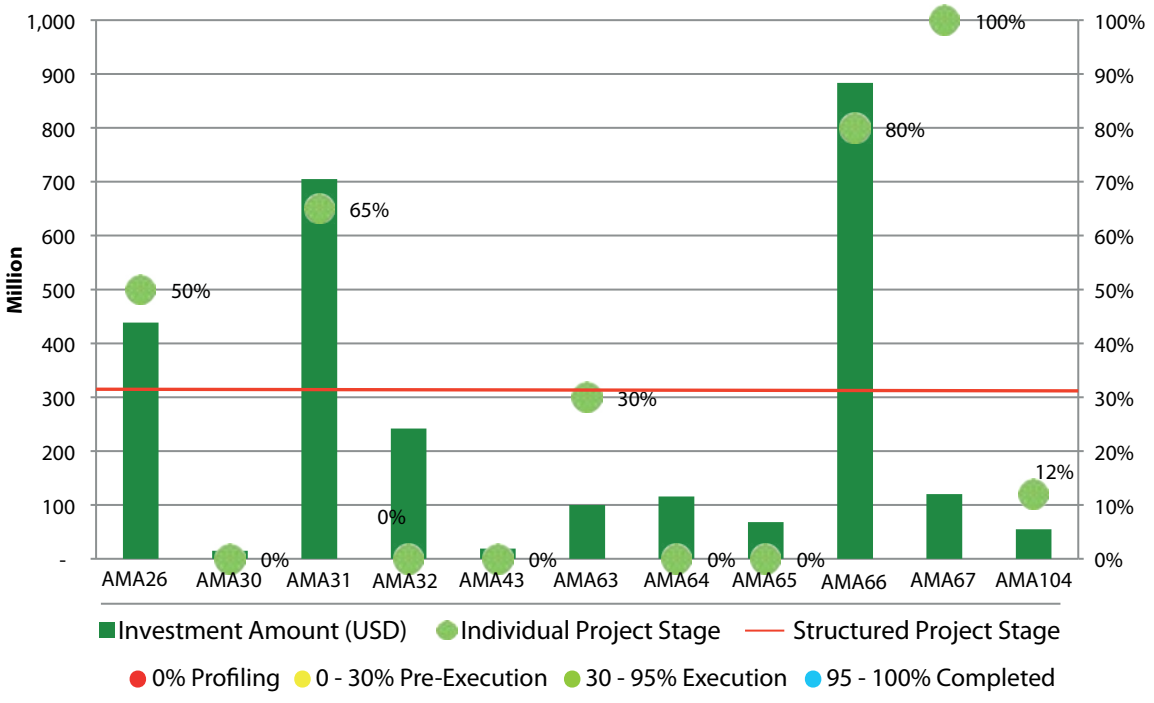

ESTIMATED PROJECT COMPLETION DATE **DECEMBER 2018**

| Code | Stage | Name of the Individual Projects | Countries Involved | Estimated Investment (en US$) |
|---|---|---|---|---|
| AMA104 | | CONSTRUCTION OF NEW PUCALLPA PORT | PE | 54,959,720 |
| AMA26 | | IMPROVEMENT OF TINGO MARÍA - PUCALLPA ROAD | PE | 438,352,770 |
| AMA30 | | PUCALLPA INTERMODAL LOGISTICS CENTER | PE | 15,000,000 |
| AMA31 | | MODERNIZATION OF EL CALLAO PORT (NEW CONTAINER DOCK) | PE | 704,835,670 |
| AMA32 | | LIMA - RICARDO PALMA EXPRESSWAY | PE | 242,000,000 |
| AMA43 | | IMPROVEMENT OF NAVIGATION CONDITIONS ON THE UCAYALI RIVER WATERWAY, BETWEEN PUCALLPA AND THE CONFLUENCE WITH MARAÑÓN RIVER | PE | 19,000,000 |
| AMA63 | | IIRSA CENTER, SECTION 2: RICARDO PALMA - LA OROYA - TURN OFF TO CERRO DE PASCO / LA OROYA - HUANCAYO | PE | 100,000,000 |
| AMA64 | | IIRSA CENTER, SECTION 3: TURN OFF TO CERRO DE PASCO - TINGO MARÍA | PE | 115,606,060 |
| AMA65 | | EL CALLAO LOGISTICS ACTIVITIES ZONE (ZAL CALLAO) | PE | 68,300,000 |
| AMA66 | | EL CALLAO MULTI-PURPOSE NORTHERN TERMINAL | PE | 883,482,448 |
| AMA67 | | EL CALLAO MINERAL SHIPPING TERMINAL | PE | 120,300,000 |

## PROJECT TECHNICAL SPECIFICATIONS

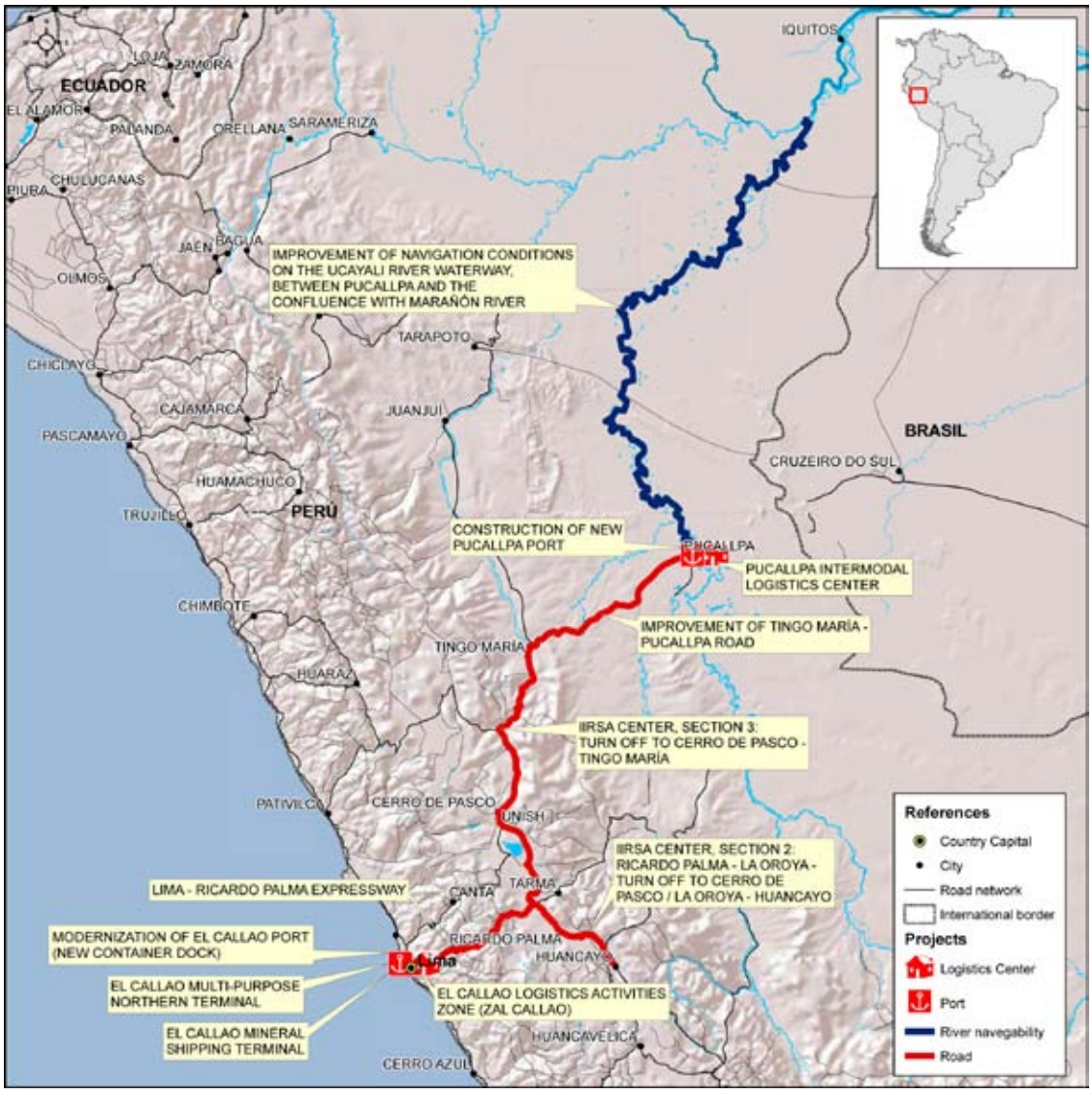
- Construction of a river port (involving a 180-m dock, three berths, a quay with five pontoons, nighttime operations, and warehouses for different kinds of cargo).
- Construction of 25 km of approach roads to the river port.
- Paving and rehabilitation of 861.2 km of roads (involving improvement and rehabilitation of the existing pavement; engineering structures; drainage systems; slope stabilization; complete recoating of roads; widening of 29 roadbeds; and construction of four road bypasses, 10 pedestrian bridges in urban areas, and two roundabouts).
- Construction of two logistics centers (including a storage center, communications centers and mobile units, approach roads, and lanes).
- Expansion of three sea ports (involving the construction of a 960-m dock, a 200-m dock and its access bridge, and a dock and conveyor belt along 3 km; the modernization of seven docks and 16 berths; 215,000 $m^2$ of warehouses and administration premises; ten Super-post Panamax container cranes and 18 rubber tyred gantry (RTG) yard cranes, 12 electric yard cranes, other equipment required for the operations, and advanced safety systems; dredging works in areas adjacent to the dock).
- Improvement of navigation conditions of a 1,248-km waterway (involving the dredging of 865,000 $m^3$ of sediments; natural self-dredging by implementing submerged panels; installation of signs, markers and aids to navigation; implementation of limnimetric stations; and monitoring and maintenance of the waterway).

### STRUCTURED PROJECT CURRENT STATUS AND INDIVIDUAL PROJECTS STAGE AND ESTIMATED INVESTMENT



## LAST YEAR'S MAJOR DEVELOPMENTS

- Projects LIMA - RICARDO PALMA EXPRESSWAY and IIRSA CENTER, SECTION 3: TURN OFF TO CERRO DE PASCO - TINGO MARÍA made 6% progress, having secured the resources needed for the pre-feasibility studies.
- Project EL CALLAO MULTI-PURPOSE NORTHERN TERMINAL made 15% progress, having completed the first quarter of the works.
- Project IMPROVEMENT OF TINGO MARÍA - PUCALLPA ROAD made 26% progress, having completed the second quarter of the works.
- Project EL CALLAO MINERAL SHIPPING TERMINAL made 50% progress and has been completed.



2

AMAZON

## RATIONALE

This project, also known as "Central Branch of the Amazon Hub," is structured in order to connect the coast, sierra and rainforest regions and to open up an access to Manaus (Brazil) and overseas markets, seeking to promote complementarity in the area of influence. On its coast, the Central Branch of the Amazon Hub includes the Lima-Callao conurbation, where Peru's metropolitan capital and its most important port (Callao) are located. This key node links the Central Road, running east-west, to cities and towns in the sierra, such as Oroya and Huancayo. Farther on, it connects with the roads that join the cities of Cerro de Pasco and Huánuco, in the sierras, with the denser link leading to the rainforest, between Tingo María and Pucallpa. In Pucallpa, the corridor connects with the city of Iquitos through the Ucayali river, the waterway with the most important cargo traffic in Peru. As with the Northern Branch of the Amazon Hub, this corridor aims at reaching the city of Manaus, a commercial destination, as well as overseas markets.

Joint declarations by the Brazilian and Peruvian governments express their commitment to the development of the states concerned and their neighboring areas, and underscore the importance they attach to the promotion of border development and trade.

Manaus is the most important industrial and trading hub in the Brazilian Amazon river basin. One of the purposes of the IIRSA Norte and IIRSA Sur interoceanic corridors is to attract part of the trade flows between Manaus and Asia across the Pacific ocean, capturing the traffic that currently uses the Panama Canal. This is contingent on the results of the cost-benefit analysis of both alternatives.

At present, there are unscheduled river transportation services between Iquitos and Manaus, provided mainly on demand.

Although the purpose of this structured project is to reach out to different destination markets of the Pacific basin through the Callao port as well as to Brazil and the Atlantic ocean through the Amazon river, it particularly seeks to connect the coast, sierra and central rainforest regions of Peru, taking into account the complementary nature of the production and consumption patterns of these regions. The central rainforest and sierra supply forestry, fruit and agricultural products to Lima and Callao, from where processed goods are carried to such region. Thus, the Callao-Pucallpa road corridor will facilitate the integration of the city of Lima-Callao, the main production and consumption center in Peru, with the central rainforest and sierra region of the country and farther on, by river, with the northern Amazonian area of Brazil.

The city of Lima, together with Callao, hosts approximately 30% of the country's population, 70% of its industrial production, and 52% of the government services, and also accounts for 55% of national income. This great production potential would serve as a factor to increase the flows of transport towards both eastern Peru and Brazil, which calls for improving transportation infrastructure at ports, roads, logistics platforms and waterways, as well as for implementing measures to reduce logistics costs.

The port of Callao is the most important one in Peru and on the western coast of South America. It is also the entry/exit point for the Central Amazon corridor regarding overseas destinations on one side and, on the other, the country's central region, as well as regarding the flows of inputs and industrial goods to and from the Manaus Industrial Free Trade Zone in Brazil.

The improvement of the Tingo María-Pucallpa road is having a highly positive impact on the populated centers in the area, as it facilitates the access of their agricultural, agro-industrial and forestry products to the markets in the central coastal and sierra regions of Peru as well as people's access to basic health care and education services, among others.

The Joint Declaration by the Presidents of Peru and Brazil dated August 2003 expressed "... their firm decision to implement the three Integration and Development Hubs of the Initiative for the Integration of Regional Infrastructure in South America (IIRSA) linking Peru and Brazil at the South American territory level —i.e. the Amazon, Central Interoceanic and Southern Interoceanic Hubs—, as they are deemed key in a regional market development and international integration strategy based on bioceanic interconnection." Furthermore, it reaffirmed "the importance

attached by both governments to the integrated development of the regional economies close to the border between the two countries, which decided to conduct studies on legal instruments and mechanisms that should facilitate the flow of people and vehicles, as well as cross-border flights and trade in the border area."

In the joint statement signed in Manaus in June 2010, emphasis was placed, among other topics, on cooperation regarding river navigation and on "conducting studies with a view to building a road to connect the cities of Pucallpa and Cruzeiro do Sul, paying special attention to its social and environmental impacts." Hence, it will be necessary first to account for the economic and, particularly, social and environmental feasibility of the project prior to proposing its implementation within the IIRSA API framework.

The improvement of navigation conditions on the Amazonian waterways will allow the movement of both tradable goods and passengers between the cities of Pucallpa and Iquitos as well as facilitate access to border areas that can only be reached through the Amazon tributaries. It will also be necessary to enhance transport services, mainly the vessels operating informally, so that they provide efficient and safe transportation.

In addition, the logistics services along the area of influence of the structured project should be improved as regards facilitating the flow of transport traffic and establishing logistics platforms in the main locations of cargo origin and destination: Callao and Pucallpa.

## PROPOSAL

This project articulates i) four highways (Lima-Ricardo Palma expressway; the road linking Ricardo Palma and the turn-off to Cerro de Pasco/La Oroya-Huancayo; the road connecting the turn-off to Cerro de Pasco and Tingo María; and the Tingo María-Pucallpa road); ii) one project related to the improvement of navigation conditions on the Ucayali river, from Pucallpa up to the confluence with the Marañón river; iii) four projects concerned with port terminal improvements (a new container dock at El Callao port, a mineral shipping terminal, El Callao multipurpose northern terminal, and Pucallpa port); and iv) two projects aimed at enhancing logistics in the area (El Callao Logistics Activities Zone and Pucallpa Intermodal Logistics Center). The purpose of this road axis is to link the cities of Lima and Manaus through a bimodal corridor.

Along its way, the 770-km long Callao-La Oroya-Pucallpa Road Corridor links the departments of Lima-Callao, Junín, Pasco, Huánuco and Pucallpa, which together account for a 244,000-km$^2$ area (19% of the national territory) and a population of 12.2 million (42% of the total population of the country).

## PROGRESS ANALYSIS AND ASSESSMENT

All the individual projects are included in the COSIPLAN Portfolio, and there is enough information to account for the priority assigned to these works in the plans of the Ministry of Transport and Communications (Intermodal 2004-2023) and in Peru's National Port Development Plan (designed by the Port Authority).

At present, the Lima-Pucallpa corridor is entirely paved. The current status of the road sections is the following:

Lima-Ricardo Palma Highway: The process of expropriation is posing obstacles to the construction of the additional lanes. The municipality of the city of Lima awarded the concession of project "New Roads in Lima," which comprises the enlargement of the Ramiro Prialé Expressway, in the Huachipa-Los Ángeles bridge section (19.5 km). For the Los Ángeles bridge-Ricardo Palma section (10 km), different alternatives for its alignment are being explored, as the area is densely populated.

Ricardo Palma-La Oroya-Cerro de Pasco Turn off: Under concession. Restructuring as well as grade-separated crossings, bypass roads and pedestrian bridges construction works will be carried out. The concessionaire has finished the technical files. The beginning of the works is significantly delayed due to difficulties in the handing over of the land where they will be undertaken, and are estimated to commence by late 2014.

Turn-off to Cerro de Pasco-Tingo María: (Co-financed) concession scheduled to be awarded. Wearing course rehabilitation works will be undertaken. The feasibility and final studies are being carried out in a single step with the purpose of shortening the time frame. Works are estimated to commence in 2017.

Tingo María-Pucallpa: (Co-financed) concession scheduled to be awarded. Reconstruction of the 25-km long damaged section along the Puente Chino-Aguaytía stretch (commencement: August 1, 2014) and upgrade of a 10-km section of the access to the city of Pucallpa to a four-lane road (commencement: May 1, 2014) are being carried out with public funds.

Regarding the port terminals works, progress is as follows:

Southern Container Dock: Under concession. In 2011, the first stage works were completed, and currently the port is operational. Commencement of the second stage works is being planned.

Multipurpose Northern Terminal: Under concession. Works of the first stage commenced in the fourth quarter of 2012, and are scheduled to be completed by the first quarter of 2016.

Mineral Shipping Terminal: Under concession. The construction of the new Dock was completed in February 2014, and the terminal is in operation.

As for the Pucallpa port terminal, the feasibility study is being updated, and the final report is being reviewed, open for observations. Once the feasibility study is approved, the (co-financed) concession process will be resumed.

As far as waterway works are concerned, project Improvement and Maintenance of the Navigation Conditions on the Ucayali, Huallaga, Marañón and Amazon Rivers is undergoing the concession award process, in charge of PROINVERSIÓN, for which an investment of US$63 million is estimated. The concession is scheduled to be awarded in the third quarter of 2014. The project will be co-financed by the Peruvian State. Works are expected to commence in 2016.

With regard to the El Callao Logistics Activities Zone project, the basic design study has been finished and coordinating efforts are being made to start the private-sector investment promotion process for the logistics activities zone to be built on the premises of the Callao Naval Base. Pre-investment studies as well as ensuring the viability of the project are needed to initiate the concession process.

The varying degrees of progress of the individual projects affect the operability of the structured project, as this poses an obstacle to seamless transport flows. The entire Lima-Pucallpa corridor is already paved with asphalt, but upgrading some sections to an expressway, rehabilitating some critical stretches, building bypass roads and constructing grade-separated crossings is still pending, as are the completion of ports and waterways development and a significant improvement of the Callao port access roads. Once these implementation lags are overcome, transportation along this corridor is expected to be much better.

## NORTHEASTERN ACCESS TO THE AMAZON RIVER

COUNTRIES 

SUBSECTOR 

ESTIMATED INVESTMENT **52,759,000**

SOURCE OF FINANCING 

PROJECT STAGE **PRE-EXECUTION**

LIFE CYCLE STAGES AND NUMBER OF PROJECTS 

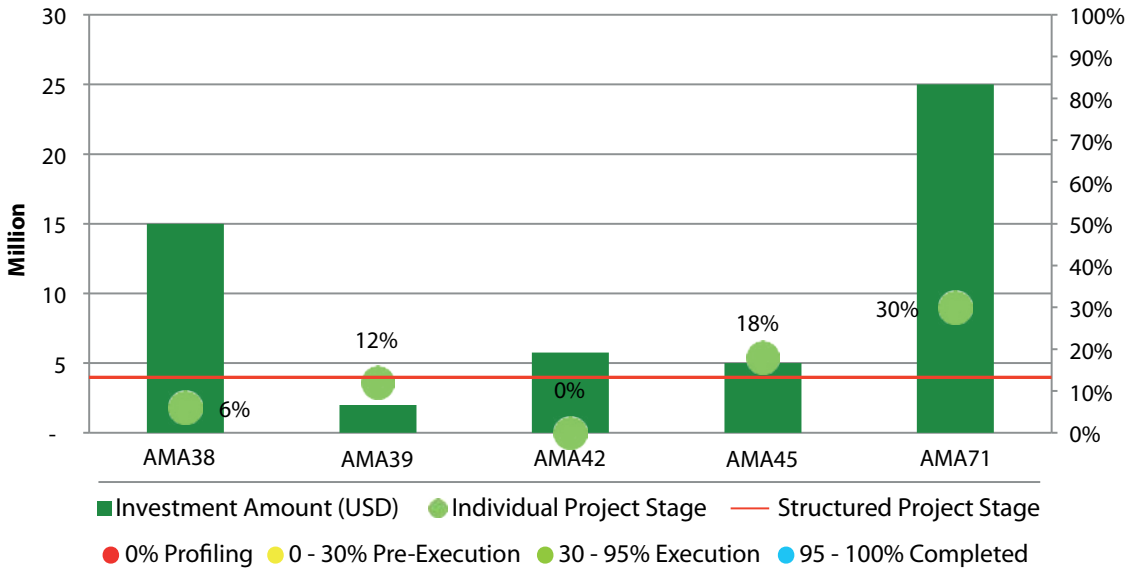

ESTIMATED PROJECT COMPLETION DATE **DECEMBER 2019**

| Code | Stage | Name of the Individual Projects | Countries Involved | Estimated Investment (US$) |
|---|---|---|---|---|
| AMA38 | 🟡 | IMPROVEMENT OF NAVIGATION CONDITIONS ON THE PUTUMAYO - IÇÁ RIVER | CO - EC - PE | 15,000,000 |
| AMA39 | 🟡 | IMPROVEMENT OF NAVIGATION CONDITIONS ON THE MORONA RIVER | EC - PE | 2,000,000 |
| AMA42 | 🔴 | IMPROVEMENT OF NAVIGATION CONDITIONS ON THE NAPO RIVER | EC - PE | 5,759,000 |
| AMA45 | 🟡 | MORONA FREIGHT TRANSFER PORT | EC | 5,000,000 |
| AMA71 | 🟡 | PROVIDENCIA PORT | EC | 25,000,000 |

## PROJECT TECHNICAL SPECIFICATIONS

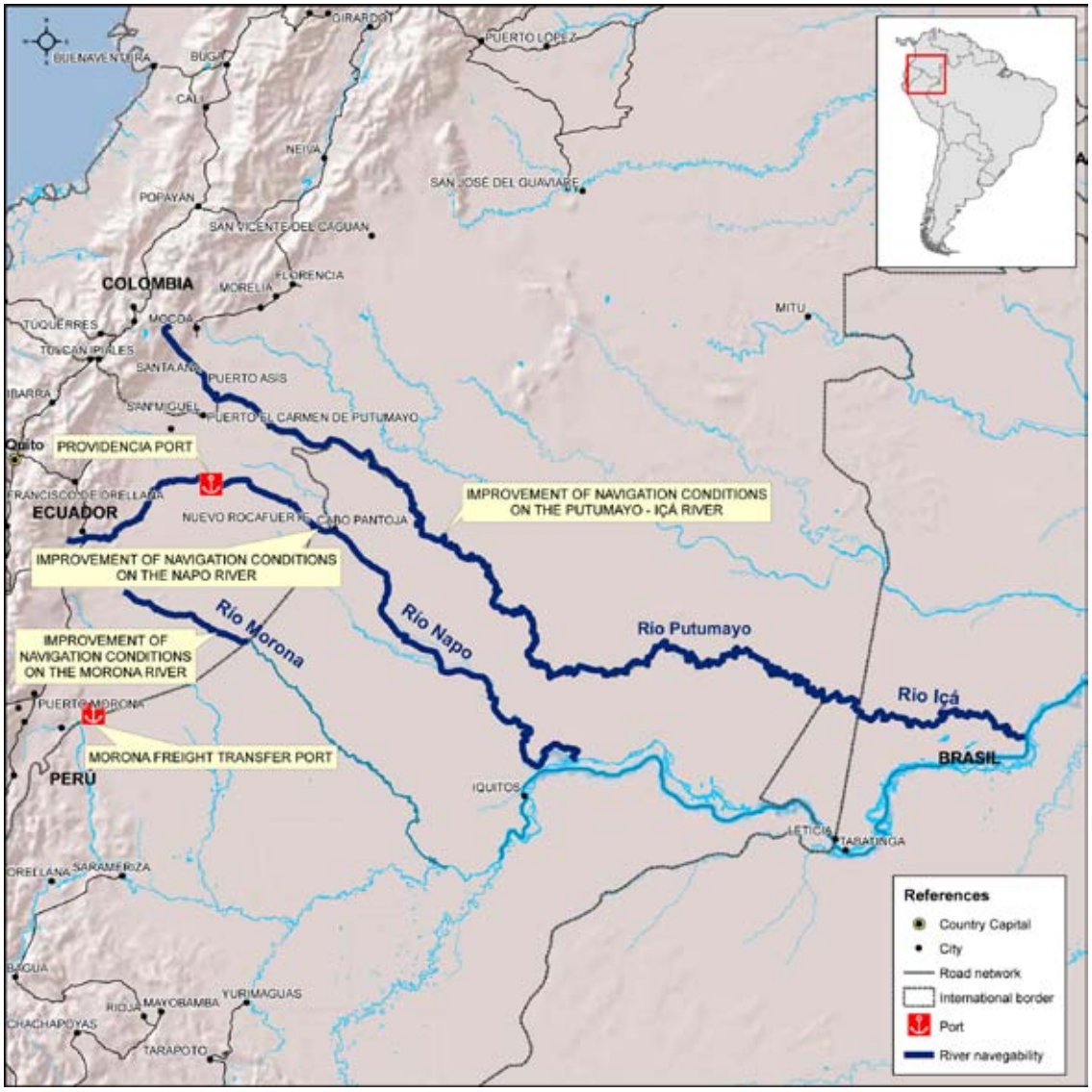
- Construction of a river port.
- Construction of a logistics transfer center (involving dock facilities, multi-purpose terminal, dry bulk terminal, dangerous cargo terminal, area for container consolidation and deconsolidation, administrative area, customs equipment, harbor master's office, migration and phytosanitary controls, and logistics center).
- Improvement of navigation conditions on 2,510 km waterways (involving the study, design and construction of a dock; dock maintenance and operation; dock upgrade and protection works; identification of obstacles to navigation (bad passages); socio-environmental diagnostic studies; plans for the installation of signs and markers (aids to navigation); and analysis of the vessels, transportation costs, logistic management, bathymetry, etc.).

### STRUCTURED PROJECT CURRENT STATUS AND INDIVIDUAL PROJECTS STAGE AND ESTIMATED INVESTMENT




## LAST YEAR'S MAJOR DEVELOPMENTS

- Project IMPROVEMENT OF NAVIGATION CONDITIONS ON THE MORONA RIVER made 12% progress, having completed the pre-feasibility studies.
- Project PROVIDENCIA PORT made 12% progress, thus securing the resources to commence the works.


BUENAVENTURA
BUGA
CALI
NEIVA
POPAYAN
SAN VICENTE DEL CAGUAN
SAN JOSE DEL GUAVIARE
PUERTO LOPEZ
COLOMBIA
MORELIA
FLORENCIA
MOCOA
TUQUERRES
SANTA ANA
PUERTO ASIS
SAN MIGUEL
PUERTO EL CARMEN DE PUTUMAYO
MITU
Quito
PROVIDENCIA PORT
ECUADOR
NUEVO ROCAFUERTE
CABO PANTOJA
IMPROVEMENT OF NAVIGATION CONDITIONS ON THE PUTUMAYO - IÇÁ RIVER
IMPROVEMENT OF NAVIGATION CONDITIONS ON THE NAPO RIVER
IMPROVEMENT OF NAVIGATION CONDITIONS ON THE MORONA RIVER
Rio Morona
Rio Napo
Rio Putumayo
Rio Içá
PUERTO MORONA
MORONA FREIGHT TRANSFER PORT
PERU
BRASIL
IQUITOS
LETICIA
TABATINGA
SARAMERIZA
YURIMAGUAS
MAYOBAMBA
RIOJA
CHACHAPOYAS
TARAPOTO
References
Country Capital
City
Road network
International border
Port
River navegability

3

AMAZON

## RATIONALE

This project seeks to tap into the complementarities of the different natural regions of Ecuador, Colombia, Peru and Brazil through the connection of the coast and Andean areas of Ecuador and Colombia with the vast Amazonia. The individual projects link east-to-west navigable bodies of water in Ecuador, Colombia and Peru, articulating with the Putumayo/Içá, Morona, and Napo rivers that connect farther on with the Solimões/Amazon river in the Brazilian territory, enhancing navigation on three waterways that are presently navigable only for limited draft vessels. The bimodal corridors resulting from the waterways being returned to navigable standards and the river terminals in operation aim at reaching the commercial market of the city of Manaus, without losing sight of the potential overseas markets. Manaus is the most important city of the Amazonia.

Accurate reference is made to the strengthening of connectivity networks and to the benefits of the cross-border synergies to be created as a result of the development of the Manta-Manaus axis, the Tumaco-Pasto-Mocoa hub, and the Morona river network. Furthermore, the following complementary actions intended to promote efficient service provision and the sustainable development of the territory are identified: i) to carry out a social and environmental analysis; ii) to prepare a socioeconomic assessment; iii) to conduct a study on cargo and passenger transport supply and demand; and iv) to design a river plan.

Moreover, the project will have an important impact on the communities living in its area of influence, as they have no other alternative in terms of transportation of goods and people.

At present, Ecuadorian border inhabitants are engaged in an emerging informal trade in products from the area as well as in mining activities to supply coastal communities living on the banks of the Napo, Putumayo, Santiago and Morona rivers.

However, there is significant trade in products from the petroleum industry, which promotes commerce. Regarding transport associated with the oil industry in Ecuador, an annual volume of 250,000 tons is estimated. Thus, the estimated marginal benefits derived from the savings generated by this river waterway project will result in more efficient operations and reduced costs.

As for the transportation of other goods, mainly foodstuffs, building materials, and tools and utensils, an annual volume of 30,000 tons is estimated.

The most important structural measures required are aimed at enhancing safety and efficiency in navigation and freight transfer through the improvement of river conditions, the availability of infrastructure for loading/embarkation and unloading/disembarkation of goods/passengers, and the definition or design of the types of vessels suited to the characteristics of the Amazonian rivers. All this will result in increased local and regional trade.

## PROPOSAL

This project comprises i) three individual projects concerned with the improvement of navigation conditions on the Putumayo/Içá, Morona and Napo rivers; and ii) two river terminals (the Providencia port and the Morona freight transfer port).

Among others, the following actions need to be taken in order to attain the objectives of these projects: establish general guidelines for fostering navigation in conformance with the regulations guaranteeing the multiple use of water resources as well as their integrated management; adopt measures providing incentives for the participation of the private sector; expand the associated logistics infrastructure; implement more stringent surveillance measures to prevent illegal and irregular activities with a view to improving navigation safety; conduct a survey of inland navigation companies; identify potential types of cargo; secure funding; and undertake works in relation to dredging, installation of signs, markers and aids to navigation, as well as construction, maintenance and upgrading works at the ports and terminals of the countries involved.

## PROGRESS ANALYSIS AND ASSESSMENT

All the individual projects belong to the COSIPLAN Portfolio.

In the case of the project related to the Morona river, there is a joint declaration by Ecuador and Peru to open new border crossings across the Santiago and Morona rivers. Within the framework of a non-reimbursable technical cooperation from the IDB, the study on the navigation conditions along the Morona river up to the confluence with the Marañón river is being conducted, and scheduled to be completed in the fourth quarter of 2014.

Regarding the project concerned with improving navigation conditions on the Napo river, studies will be carried out to complement the Peru-Ecuador binational analyses. At present, trips to Iquitos involving trade in Ecuadorian products are already made every forty-five days. Concerning the Peruvian stretch, a profiling study on the improvement and maintenance of the navigation conditions along the Napo river is scheduled to be undertaken as from the fourth quarter of 2015. This study will help define investment projects to ensure that both passengers and cargo can be transported efficiently, economically and safely along the river all year long.

Moreover, there are plans to carry out a study for increasing the navigability of the Putumayo-Içá river basin with the participation of Brazil, Colombia, Ecuador and Peru. This project is outlined in both Colombia's National Development Plan and Multi-Annual Investment Plan 2011-2014. The project involving the Içá river forms part of the studies conducted by the Western Amazon Waterway Administration of Brazil, and the Santo Antônio do Içá terminal project is included in the Brazilian Growth Acceleration Program (or PAC, its acronym in Portuguese). As most of the above-mentioned projects have been agreed upon on a binational basis, their associated studies and works are expected to be jointly conducted. Furthermore, regarding the navigation conditions on the Putumayo river, the Colombian Government is undertaking, via the National Institute of Roads (Instituto Nacional de Vías – INVÍAS), Phase II studies on the Navigation Conditions along such river (Peñasora-Puerto Asís-Puerto Leguizamo-Puerto Alegría), in which two components are being taken into account: the socio-environmental and the technical components. These studies started on March 29, 2012, and were expected to be completed by June 2013; however, data collection activities as well as socialization with the local community regarding its scope had to be postponed for public security reasons. Therefore, these deliverables are yet to be made available. Their purpose is to submit results with a view to enhancing navigability along the Peñasora-Puerto Alegría stretch (510 km). In Peru, negotiations are being held by the National Port Authority and the Ministry of Transport and Communications to enter into an interagency agreement concerning the preparation of a study at the profiling level with a view to providing port infrastructure in the town of Santa Rosa (located on the border with Brazil and Colombia). This project aims at providing port services in this border area as well as a logistics center in order to facilitate trade along the IIRSA Norte multimodal corridor.

As for the Providencia Port project, the relevant studies have been completed, and actions are being taken to obtain final acceptance of the project in order to issue a call for tender for the construction of this important river port, which will link the northeastern region of Ecuador with Manaus (Brazil).

# ANDEAN HUB

## PROJECTS

STRUCTURED **5** INDIVIDUAL **11**

## ESTIMATED INVESTMENT

**4,137.4**
US$ Million

## BY SUBSECTOR

| | |
|---|---|
| 6 | 5 |
| 4,003.2 | 134.2 |

## BY SOURCE OF FINANCING

| | |
|---|---|
| 8 | 3 |
| 3,620.0 | 517.4 |

# D. ANDEAN HUB
# (BOLIVIA, COLOMBIA, ECUADOR, PERU AND VENEZUELA)

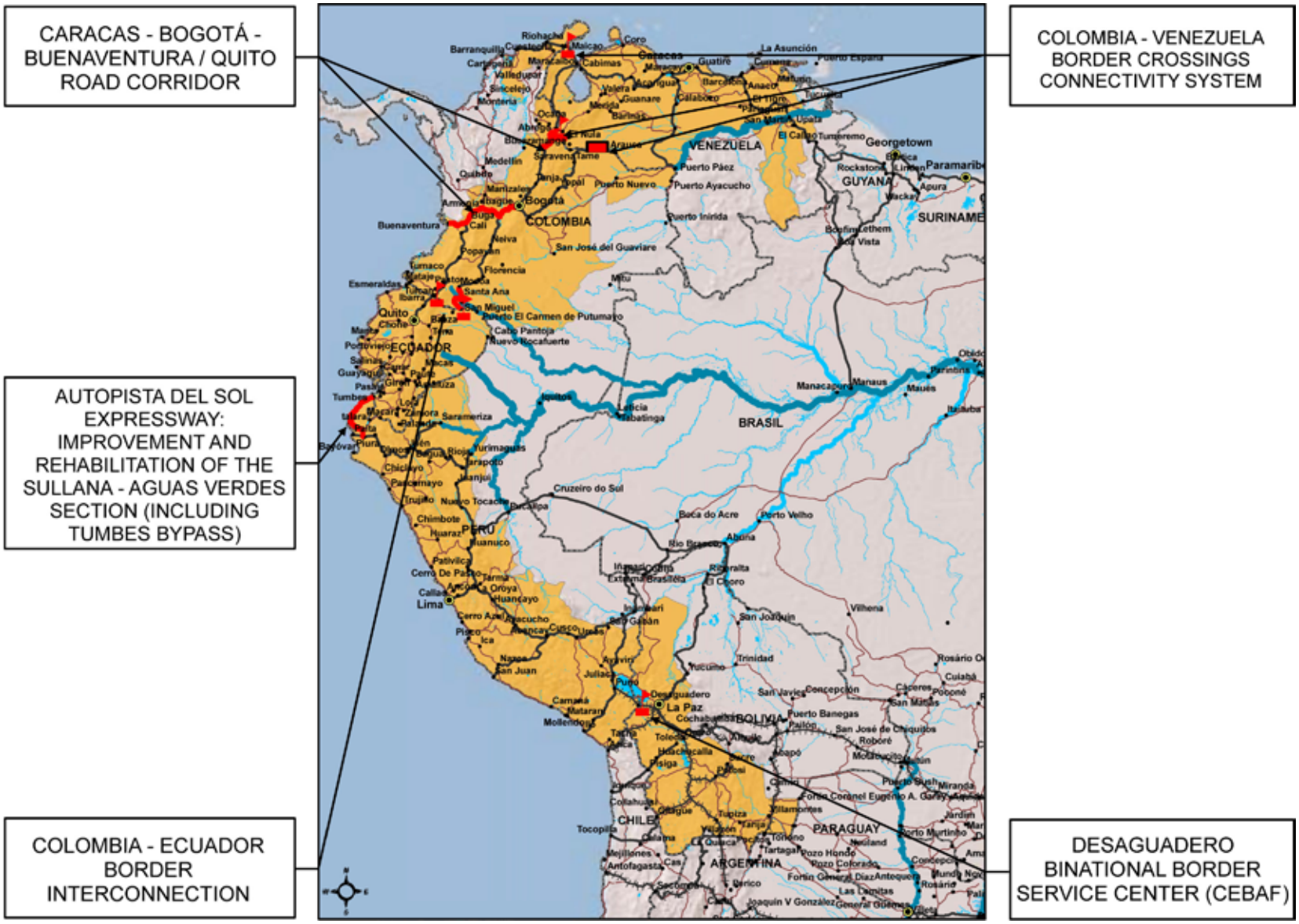
The Andean Hub features the two large north-south road corridors that connect the main cities of the countries that make it up (Bolivia, Colombia, Ecuador, Peru and Venezuela): the Pan-American Highway, which runs along the Andes in Venezuela, Colombia, and Ecuador, and along the Peruvian coast (connecting farther south with Chile); and the Marginal Highway of the Jungle, which skirts the Andes across the plains of Venezuela and the Amazon rainforest in Colombia, Ecuador, and Peru, then enters Bolivia through the Desaguadero border crossing on the Peruvian Southern Longitudinal Highland Highway, and reaches the Argentine border through Bolivian Route 1 (Villazón-La Quiaca). These longitudinal corridors are crossed by various transversal corridors (roads and rivers) that connect them with the Guianese Shield, Amazon, Peru-Brazil-Bolivia, and Central Interoceanic Hubs. The area of influence defined for the Andean Hub covers 2,845,658 km$^2$, accounting for 16% of the total area of the South American continent.

The total population was estimated at approximately 111,195,797 inhabitants in 2014 for the area of influence defined for the Andean Hub, accounting for 27.5% of the total population of South America. Furthermore, the area of influence reached an average population density of 39 inhabitants per km$^2$.

API includes projects from six of the 10 project groups of this Hub: i) G1 - Venezuela (Northern Plains Hub) - Colombia (Northern Zone) Connection; ii) G2 - Venezuela (Caracas) - Colombia (Bogotá) - Ecuador (Quito) (Existing) Road Connection; iii) G3 - Venezuela (Orinoco Apure Hub) - Colombia (Bogotá) III (Low-Altitude Corridor) Connection; iv) G5 - Conexión Colombia (Puerto Tumaco) - Ecuador (Puerto Esmeraldas - Guayaquil) - Perú (Ica); v) G6 - Colombia - Ecuador II (Bogotá - Mocoa - Tena - Zamora - Palanda - Loja) Connection; and vi) G8 - Peru - Bolivia (Huancayo - Ayacucho - Tarija - Bermejo) Connection.

Table D.1 shows the 11 individual projects that make up the five structured projects of the Andean Hub incorporated into API. The estimated investments involved amount to US$4,137.4 million. These API projects impact on the development of the five countries of the Hub (Bolivia, Colombia, Ecuador, Peru and Venezuela). In general terms, the projects face the difficulties posed by several major border crossings in the Hub; supplement the solutions devised for the roads in the corridor known as the Low-Altitude Corridor between Caracas and Quito; improve the connections between Bogotá and its main port on the Pacific; and, finally, involve the improvement of navigation conditions on the Meta river and its related ports to open up new commercial routes between the central area of Colombia and eastern Venezuela. These five structured projects comply with the selection criteria set out for inclusion in the Agenda, and are in line with the strategic functions of the Hub's project groups involved in API.

Map D.1 • **API Projects - Andean Hub**



## Table D.1 • **API Projects - Andean Hub**

| # | Structured Project Name | No. of Individual Projects | Countries | API amount (million US$) | Stage | Code | Name of the Individual Projects | Countries Involved | PG | Project Stage | Amount (US$) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 4 | CARACAS - BOGOTÁ - BUENAVENTURA / QUITO ROAD CORRIDOR | 2 | CO – EC – VE | 3,350.0 | ● | AND05 | BOGOTÁ - CÚCUTA ROAD CORRIDOR | CO | G02 | ● | 1,559,000,000 |
| | | | | | | AND07 | BOGOTÁ - BUENAVENTURA ROAD CORRIDOR | CO | G02 | ● | 1,791,000,000 |
| 5 | COLOMBIA - ECUADOR BORDER INTERCONNECTION | 4 | CO - EC | 227.7 | ● | AND31 | BINATIONAL BORDER SERVICE CENTER (CEBAF) AT SAN MIGUEL | CO - EC | G06 | ● | 25,000,000 |
| | | | | | | AND79 | IMPROVEMENT AND PAVING OF THE MOCOA - SANTA ANA - SAN MIGUEL ROAD SECTION | CO | G06 | ● | 133,629,000 |
| | | | | | | AND82 | IMPLEMENTATION OF THE BINATIONAL BORDER SERVICE CENTER (CEBAF) AT THE TULCÁN - IPIALES (RUMICHACA) BORDER CROSSING | CO - EC | G02 | ● | 65,000,000 |
| | | | | | | AND91 | CONSTRUCTION OF THE NEW INTERNATIONAL RUMICHACA BRIDGE AND IMPROVEMENT OF THE EXISTING BRIDGE | CO - EC | G02 | ● | 4,100,000 |
| 6 | COLOMBIA - VENEZUELA BORDER CROSSINGS CONNECTIVITY SYSTEM | 3 | CO - VE | 4.0 | ● | AND02 | BINATIONAL BORDER SERVICE CENTER (CEBAF) AT PARAGUACHÓN | VE | G01 | ● | 2,000,000 |
| | | | | | | AND13 | IMPROVEMENT OF JOSÉ ANTONIO PÁEZ BRIDGE* | CO | G03 | ● | 0 |
| | | | | | | AND81 | IMPROVEMENT OF THE BORDER CROSSINGS IN THE NORTHERN DEPARTMENT OF SANTANDER AND THE TÁCHIRA STATE | CO - VE | G02 | ● | 2,000,000 |
| 7 | DESAGUADERO BINATIONAL BORDER SERVICE CENTER (CEBAF) | 1 | BO - PE | 40.2 | ● | AND47 | DESAGUADERO BINATIONAL BORDER SERVICE CENTER (CEBAF) | BO - PE | G08 | ● | 40,231,927 |
| 8 | AUTOPISTA DEL SOL EXPRESSWAY: IMPROVEMENT AND REHABILITATION OF THE SULLANA - AGUAS VERDES SECTION (INCLUDING TUMBES BYPASS) | 1 | PE | 515.5 | ● | AND28 | AUTOPISTA DEL SOL EXPRESSWAY: IMPROVEMENT AND REHABILITATION OF THE SULLANA - AGUAS VERDES SECTION (INCLUDING TUMBES BYPASS) | PE | G05 | ● | 515,478,715 |

*This individual project was completed before the creation of API, and was incorporated into it because it complements the connectivity network of the structured project.

Table D.2 • **API Projects - Andean Hub by Life Cycle Stage**

(number of projects, million US$ and percentage)

| Project Stage | No. of Projects | % of Projects | Investment Amount | % of Investment Amount |
|---|---|---|---|---|
| Profiling | 0 | 0.0 | 0.0 | 0.0 |
| Pre-Execution | 3 | 27.3 | 92.0 | 2.2 |
| Execution | 6 | 54.5 | 4,041.3 | 97.7 |
| Completed (*) | 2 | 18.2 | 4.1 | 0.1 |
| **TOTAL** | 11 | 100.0 | 4,137.4 | 100.0 |

Note: Amounts are estimated on the basis of the life cycle stage at which the API individual projects are.

* There is one individual project in this Hub that was already completed when API was set up but is part of a structured project. This project is AND13, and its investment amount (not included in the total) is US$1.3 million.

Figure D.1 • **API Projects - Andean Hub by Life Cycle Stage**

(% of number of projects and % of investment amount)

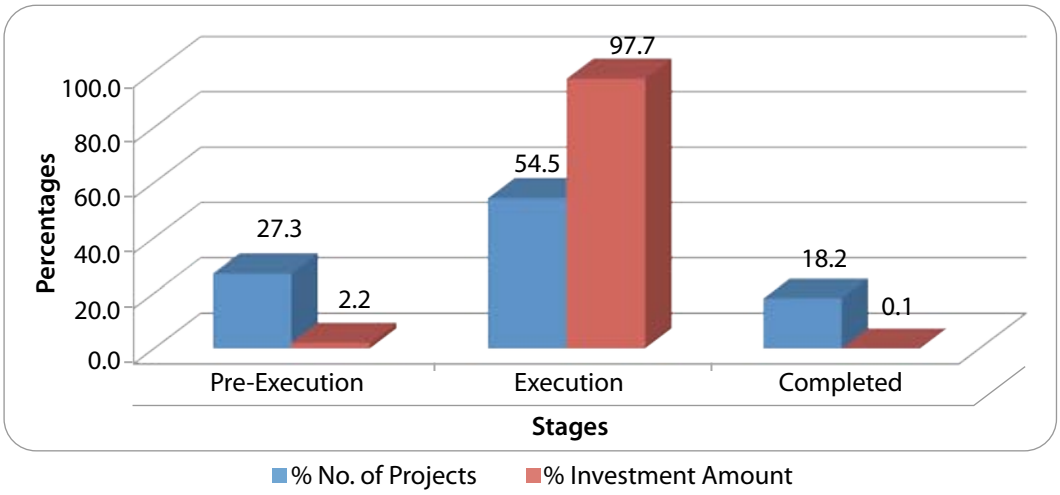



Figure D.2 • **API Projects - Andean Hub by Subsector**

(% of number of projects and % of investment amount)

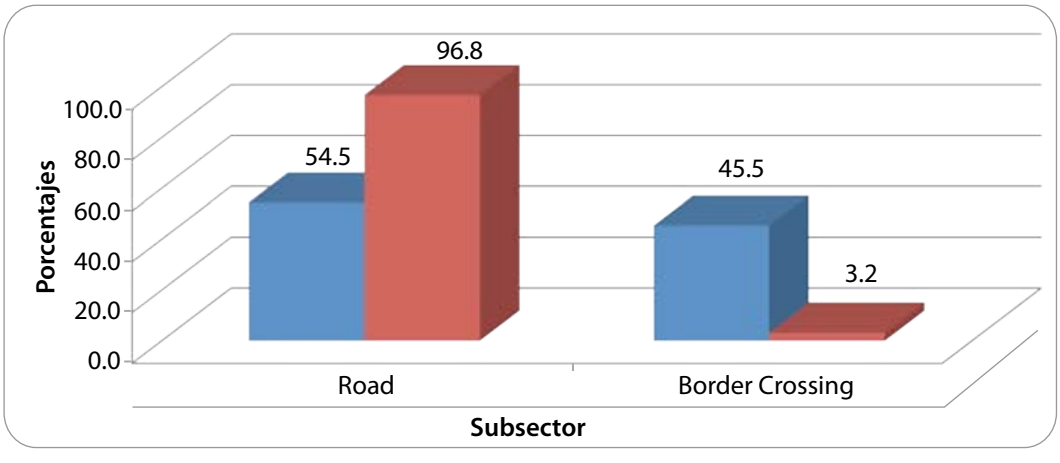


Figure D.3 • **API Projects - Andean Hub by Source of Financing**

(% of number of projects and % of investment amount)

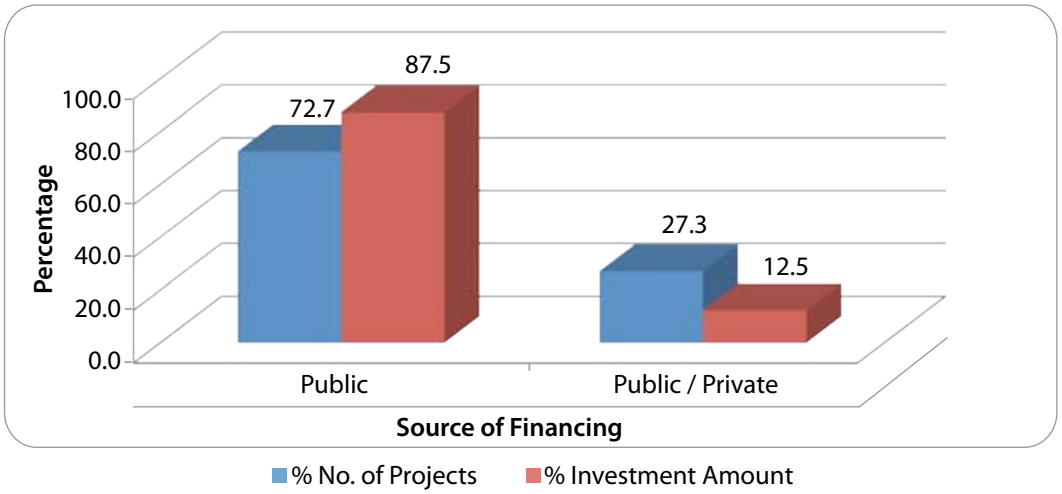



Table D.3 • **API Projects Technical Specifications - Andean Hub**

The API projects in this Hub involve:

- Paving, upgrade to four lanes, improvement, and rehabilitation of 1,603.03 km of roads, including tunnels, bridges, and a bypass.
- Construction of a 71.2-m long bridge.
- Improvement of an 80-m long and a 167.1-m long bridges.
- Construction of four binational border service centers, one of which involves building a total of 76.917 $m^2$, including seven loading docks.
- Improvement of border crossings.

## CARACAS - BOGOTÁ - BUENAVENTURA / QUITO ROAD CORRIDOR

COUNTRIES 

SUBSECTOR 

ESTIMATED INVESTMENT **3,350,000,000**

SOURCE OF FINANCING 

PROJECT STAGE **EXECUTION**

LIFE CYCLE STAGES AND NUMBER OF PROJECTS 


ESTIMATED PROJECT COMPLETION DATE **DECEMBER 2040**

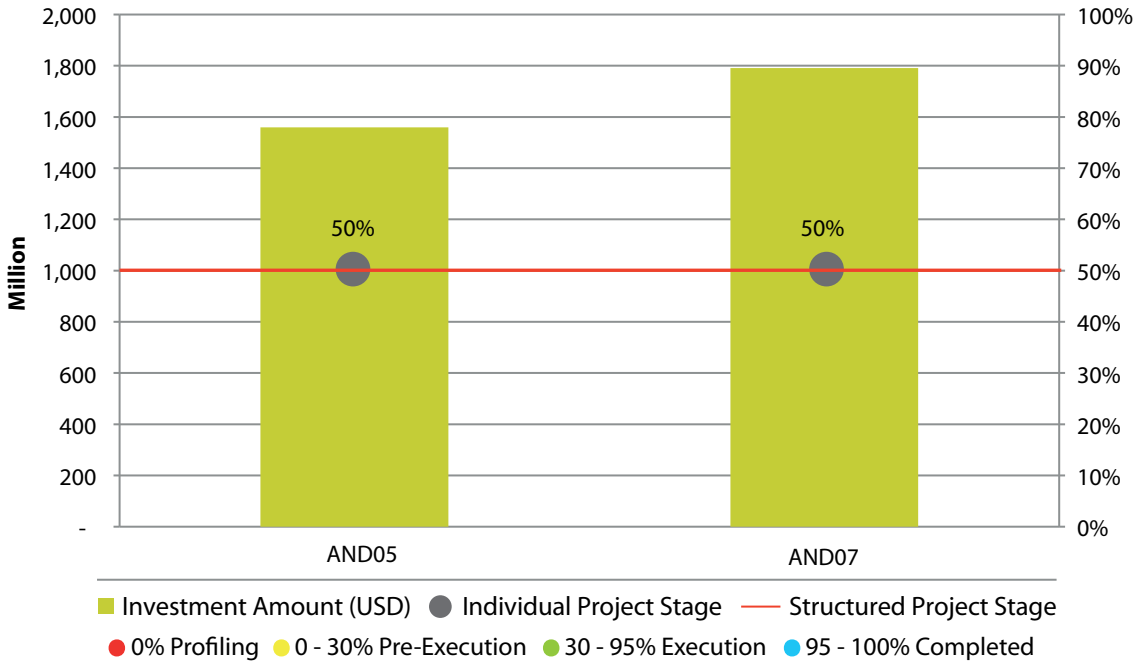
| Code | Stage | Name of the Individual Projects | Countries Involved | Estimated Investment (US$) |
|---|---|---|---|---|
| AND05 | ● | BOGOTÁ - CÚCUTA ROAD CORRIDOR | CO | 1,559,000,000 |
| AND07 | ● | BOGOTÁ - BUENAVENTURA ROAD CORRIDOR | CO | 1,791,000,000 |

## PROJECT TECHNICAL SPECIFICATIONS

THE STRUCTURED PROJECT INVOLVES:

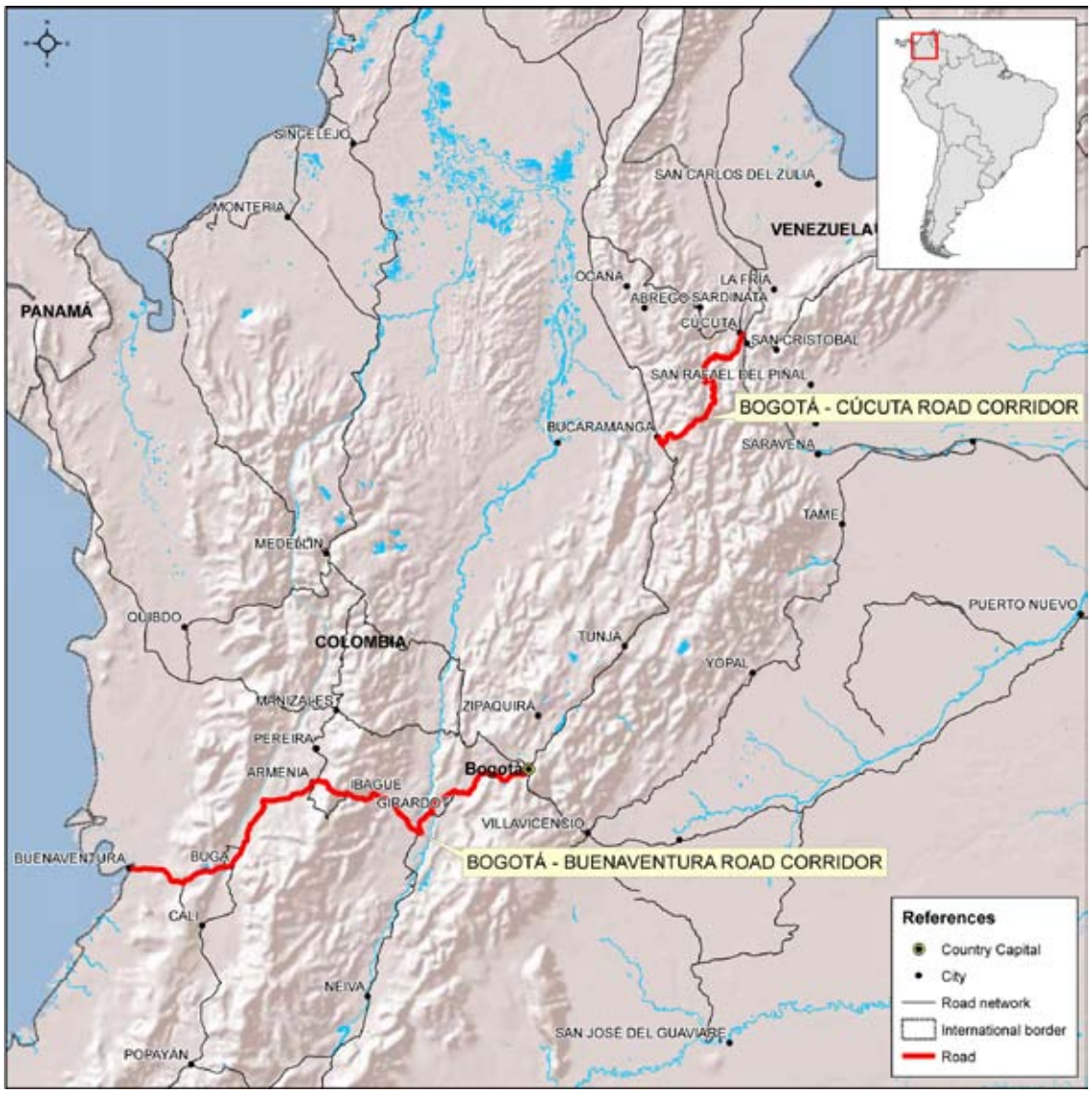
- Paving, upgrade to four lanes, and rehabilitation of 1,134 km of roads, including tunnels and bridges.

### ESTRUCTURED PROJECT CURRENT STATUS AND INDIVIDUAL PROJECTS STAGE AND ESTIMATED INVESTMENT




## LAST YEAR'S MAJOR DEVELOPMENTS

- Project BOGOTÁ - CÚCUTA ROAD CORRIDOR made 20% progress, thus completing the first quarter of works.


SINCELEJO
MONTERIA
PANAMÁ
SAN CARLOS DEL ZULIA
VENEZUELA
OCAÑA
LA FRIA
ABREGO SARDINATA
CÚCUTA
SAN CRISTOBAL
SAN RAFAEL DEL PIÑAL
BOGOTÁ - CÚCUTA ROAD CORRIDOR
BUCARAMANGA
SARAVENA
TAME
MEDELLÍN
QUIBDO
COLOMBIA
TUNJA
PUERTO NUEVO
YOPAL
MANIZALES
ZIPAQUIRA
PEREIRA
ARMENIA
IBAGUE
Bogotá
GIRARDOT
VILLAVICENSIO
BUENAVENTURA
BOGA
BOGOTÁ - BUENAVENTURA ROAD CORRIDOR
CALI
NEIVA
SAN JOSÉ DEL GUAVIARE
POPAYAN
References
Country Capital
City
Road network
International border
Road

4

ANDEAN

## RATIONALE

This structured project articulates the largest urban centers of Colombia, Ecuador, and Venezuela, and strengthens the main international road trade flows in the Andean Hub. In addition, this project as well as the Colombia - Venezuela Border Crossings Connectivity System project create important benefits and cross-border synergies, and strengthen regional connectivity networks. Moreover, the main complementary action identified for the Buenaventura port is the Logistics Activity Zone, while in the case of the Cúcuta-Bucaramanga road, some complementary actions in its area of influence have been proposed in order to mitigate the social and environmental impact. The approximate length of this corridor is 1,134 km.

## PROPOSAL

This structured project is made up of two individual projects: i) Bogotá - Buenaventura Road Corridor; and ii) Bogotá - Cúcuta Road Corridor. The purpose of the former, which involves a 520-km long corridor, is to improve connectivity between the central-western part of Colombia and the Buenaventura port —regarded as the most important port in the country in terms of the volume of cargo handled—, through the construction of a dual carriageway in the still single-carriageway stretches (almost 220 km) of the roads. On the other hand, the purpose of the second project, involving a total length of 614 km, is to reinforce economic relations among the urban centers of Ecuador, Colombia, and Venezuela through existing paved roads that form part of the Quito-Bogotá-Caracas corridor, and to improve connections in the northeastern area of Colombia by upgrading the existing corridor between the cities of Bogotá (Cundinamarca) and Cúcuta (Norte de Santander department) to four lanes.

## PROGRESS ANALYSIS AND ASSESSMENT

The two individual projects making up this structured project are included in the COSIPLAN Project Portfolio and are part of Colombia's National Development Plan 2010-2014 and Multi-Annual Investment Plan 2011-2014, and they are currently in execution.

The overall assessment of each one of the two individual projects to date is as follows:

Bogotá-Cúcuta Road Corridor: This corridor is subdivided in three progress fronts: Bogotá-Bucaramanga, Bucaramanga-Pamplona, and Pamplona-Cúcuta. The first and third ones are run under a concession contract, while the second is under a public works contract. Works already developed in the three of them include the construction of long four-lane stretches, the maintenance of existing lanes, and the repair of eight critical points following the winter wave.

Bogotá-Buenaventura Road Corridor: This corridor is subdivided into 13 progress fronts, nine of which are at the execution stage, three at the profiling stage, and one completed. To date, the completed section —the La Paila-Buga stretch— is a four-lane road in operation and under maintenance. Other stretches, such as Ibagué-Cajamarca-La Paila, Buga-Mediacanoa, and Citronela-Buenaventura port, will be included in the project to be awarded to a public-private partnership (the so-called fourth generation —4G— concessions). Execution of the works in the remaining stretches is progressing in a high percentage, as in the Calarcá-La Paila and Cisneros-Triana-Altos de Zaragoza sections.

## COLOMBIA - ECUADOR BORDER INTERCONNECTION

5

ANDEAN

COUNTRIES

SUBSECTOR

ESTIMATED INVESTMENT **227,729,000**

SOURCE OF FINANCING

PROJECT STAGE **EXECUTION**

LIFE CYCLE STAGES AND NUMBER OF PROJECTS 0 2 1 1

ESTIMATED PROJECT COMPLETION DATE **DECEMBER 2017**

| Code | Stage | Name of the Individual Projects | Countries Involved | Estimated Investment (US$) |
|---|---|---|---|---|
| AND31 | | BINATIONAL BORDER SERVICE CENTER (CEBAF) AT SAN MIGUEL | CO - EC | 25,000,000 |
| AND79 | | IMPROVEMENT AND PAVING OF THE MOCOA - SANTA ANA - SAN MIGUEL ROAD SECTION | CO | 133,629,000 |
| AND82 | | IMPLEMENTATION OF THE BINATIONAL BORDER SERVICE CENTER (CEBAF) AT THE TULCÁN - IPIALES (RUMICHACA) BORDER CROSSING | CO - EC | 65,000,000 |
| AND91 | | CONSTRUCTION OF THE NEW INTERNATIONAL RUMICHACA BRIDGE AND IMPROVEMENT OF THE EXISTING BRIDGE | CO - EC | 4,100,000 |

5

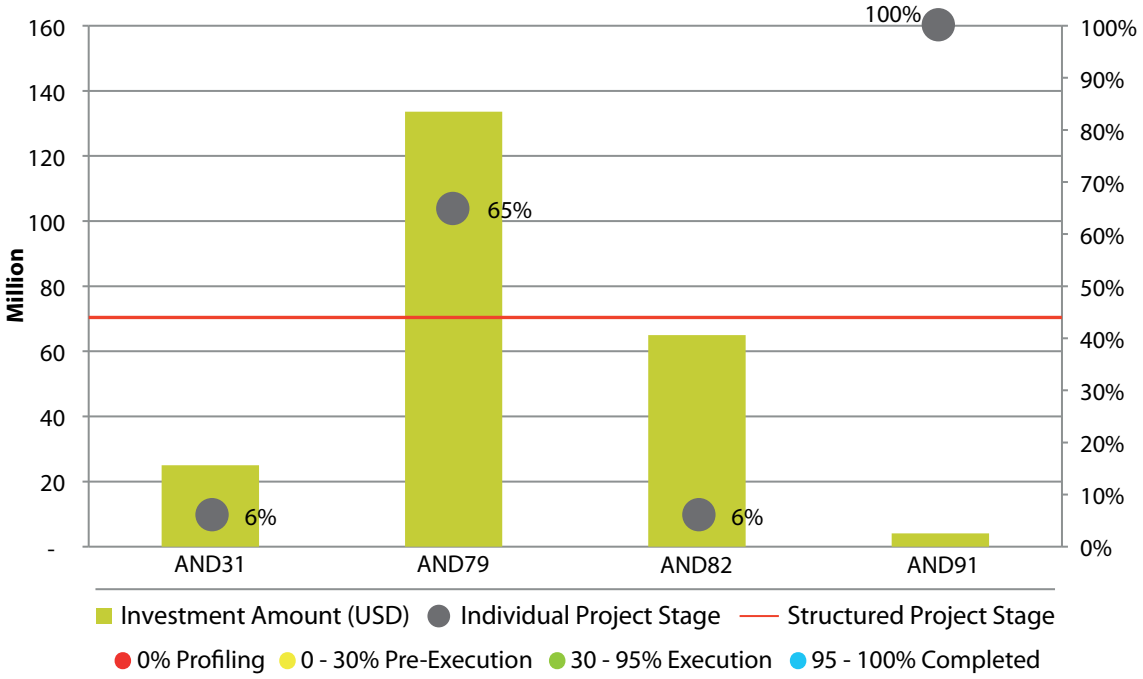
ANDEAN

## PROJECT TECHNICAL SPECIFICATIONS

THE STRUCTURED PROJECT INVOLVES:

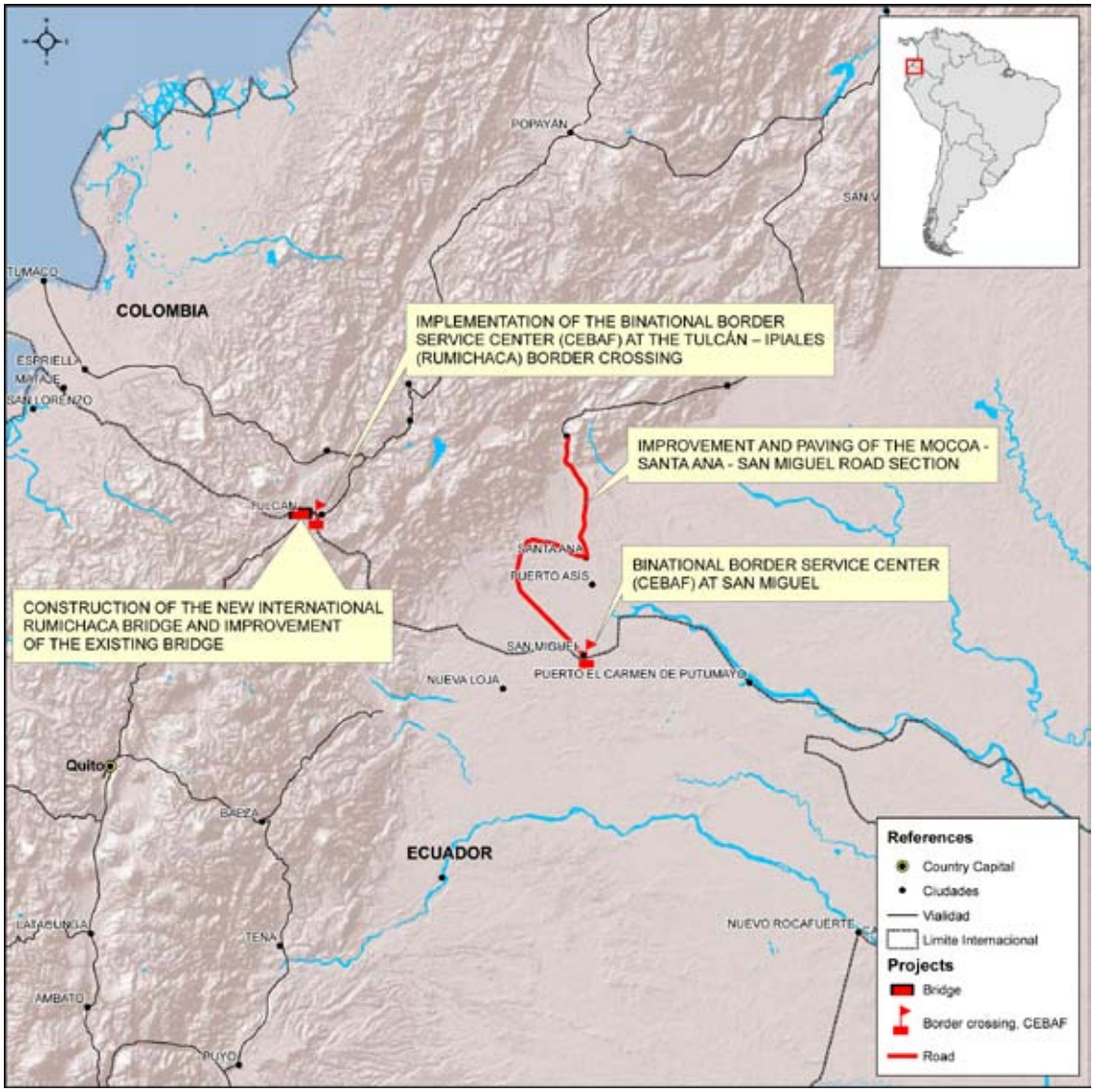
- Construction of two binational border service centers.
- Improvement and paving of 193.03 km of roads.
- Construction of a 71.2-m long bridge.
- Improvement of an 80-m long bridge.

### STRUCTURED PROJECT CURRENT STATUS AND INDIVIDUAL PROJECTS STAGE AND ESTIMATED INVESTMENT




## LAST YEAR'S MAJOR DEVELOPMENTS

- Project CONSTRUCTION OF THE NEW INTERNATIONAL RUMICHACA BRIDGE AND IMPROVEMENT OF THE EXISTING BRIDGE made 35% progress, and thus it is completed.
- Project IMPROVEMENT AND PAVING OF THE MOCOA - SANTA ANA - SAN MIGUEL ROAD SECTION made 15% progress, thus completing the second quarter of works.


POPAYAN
TUMACO
COLOMBIA
ESPRIELLA
MIRAFLORES
SAN LORENZO
IMPLEMENTATION OF THE BINATIONAL BORDER SERVICE CENTER (CEBAF) AT THE TULCÁN – IPIALES (RUMICHACA) BORDER CROSSING
IMPROVEMENT AND PAVING OF THE MOCOA - SANTA ANA - SAN MIGUEL ROAD SECTION
TULCÁN
SANTA ANA
PUERTO ASIS
BINATIONAL BORDER SERVICE CENTER (CEBAF) AT SAN MIGUEL
CONSTRUCTION OF THE NEW INTERNATIONAL RUMICHACA BRIDGE AND IMPROVEMENT OF THE EXISTING BRIDGE
SAN MIGUEL
NUEVA LOJA
PUERTO EL CARMEN DE PUTUMAYO
Quito
BAEZA
ECUADOR
LAGO AGRIO
TENA
NUEVO ROCAFUERTE
AMBATO
PUYO
References
Country Capital
Ciudades
Vialidad
Limite Internacional
Projects
Bridge
Border crossing, CEBAF
Road

## RATIONALE

This structured project is highly significant, as trade between Ecuador and Colombia ranks second in international trade by road within the Andean Hub; furthermore, the project helps complete the missing links in the corridor known as the "Low-Altitude Corridor" or "Alternative Corridor," linking Bogotá and Quito, and solves pending issues in the Ecuador-Colombia border crossings.

In the last decade, Colombia's export volume to Ecuador accounted for an average 0.8% of total Colombian exports, the largest volume reaching 1.1% in 2005 and the lowest, 0.6% in 2009. During the same period, Ecuador's export volume to Colombia accounted for an average 2.5% of total Ecuadorian exports, with the largest volume, 3.3%, in 2001 and the lowest one, 1.6%, in 2004. Most trade between Colombia and Ecuador is by road, accounting, on average, for 65% of Colombia's exports to Ecuador and 88% of Ecuador's exports to Colombia. In terms of volume, during the last decade Colombia's total exports grew by 5%, while Ecuador's total exports increased by 4%.

The volume of cargo traded between both countries —1.2 million tons on average— is significant, thus turning the Rumichaca border crossing, through which almost 100% of trade by road is funneled, into one of the most important border crossings in the Andean Community and in South America.

Given the currently substantial flow of trucks in both directions, the capacity of the Rumichaca border crossing has turned out to be limited in terms of both size and operational design, which creates freight transport and particular vehicle traffic congestion and, hence, delays, resulting in additional costs for international trade.

Moreover, as transfer of goods takes place on both sides of the border, foreign trade operators, carriers, customs agents and trading companies have to allow extra time for the transportation of goods to and from each country, which is indeed increasing.

All this has raised awareness as to the fact that road infrastructure, for example the width of the bridge, is a restriction. Taking into account what happens in other places of the continent where traffic flows are heavier, this should not be a problem if procedures are coordinated in a functional scheme in which the authorities from both countries may perform their functions in a comfortable and orderly way.

The condition of the facilities at the San Miguel border crossing is very dissimilar. On the Ecuadorian side, there is a National Border Service Center (CENAF) that was built only a few years ago with the idea of establishing a CEBAF on a 5.7-ha plot of land located 2,800 m away from the international bridge. These facilities are in reasonable good condition but underused, since most national institutions concerned with border control have not moved into them. Only immigration and customs controls are performed there, as formalities have to be carried out in Lago Agrio. On the Colombian side, the present facilities are provisional and rudimentary, since they are located on a stretch of land belonging to an Indian reservation; furthermore, an illegal settlement has gradually sprung up in the surroundings of the bridge. This border crossing forms part of the so-called Amazonian corridor, which, once completed, will reduce travel time between Quito and Bogotá.

The structured project will reinforce the connectivity networks between southern Colombia and the most important cities of Ecuador, creating significant benefits and cross-border synergies. In addition, an important opportunity for the development of logistics and production integration processes is identified.

One of the major conclusions that can be drawn from the bilateral trade balance is that if a solution is found to the issues that slow down trade, such as cargo transfer activities, the potential for growth and complementarity of both economies will bring about a remarkable level of economic integration.

The startup of the CEBAFs in Rumichaca and in San Miguel will have a high impact on the local system of each border locality in terms of infrastructure and services related to border crossing operations as well as of opportunities for local development and employment and income generation, aspects that are sought to be addressed under the Local Development Strategy. The specific goals are as follows:

- At the Rumichaca Border Crossing, take full advantage of the CEBAF startup in order to enhance competitiveness in the municipalities of Tulcán and Ipiales, by promoting structural actions and specific projects that contribute to the articulation of the border territories, new urban planning, the stimulation of the economic base, and the creation of local employment and income.

- At the San Miguel Border Crossing, create, in the short run, the minimum conditions necessary for the startup of operations of the CEBAF. In the medium term, ensure that the municipalities are ready to tap into the opportunities from the predictable increase in trade and transport through this border crossing.

## PROPOSAL

The projects in the Low-Altitude Corridor are: i) Improvement and Paving of the Mocoa - Santa Ana - San Miguel Road Section; and ii) Binational Border Service Center (CEBAF) at San Miguel. The other two projects are the implementation of the CEBAF at the Tulcán-Ipiales (Rumichaca) border crossing, on the one hand, and the construction of a new international Rumichaca bridge and the improvement of the existing bridge, on the other. The simultaneous implementation of the four projects will ease traffic congestion in Rumichaca, since some of the truck traffic will be diverted to San Miguel, where long-distance transport will have lower travel times than along the traditional corridor. On the other hand, the implementation of integrated controls will considerably reduce wait times at the Rumichaca border crossing, and will prevent the delays currently experienced at the Andean border crossings in economically consolidated areas from occurring in San Miguel.

## PROGRESS ANALYSIS AND ASSESSMENT

The four individual projects included in this structured project are part of the COSIPLAN Project Portfolio. One of them is currently at the execution stage, two are at the pre-execution stage, and the other one is completed. Their current status is as follows:

**COMPLETED**

Construction of the New International Rumichaca Bridge

Works started on March 7, 2013, with an addition made to the PANAVIAL contract in force, and its progress until September 30 accounts for 77.8%. Current works involve the mounting of connectors and complementary elements to form the deck of this 80-m long bridge. This will be followed by the bridge deck overlay, the approach roads on both sides of the border, the steel railings, and the respective signs. The new international Rumichaca bridge, including the maintenance and reinforcement works in the existing bridge, is scheduled to be operating by mid-December.

The New Rumichaca Bridge has been completed and opened in November 2013; the reinforcement works in the existing bridge have also been completed.

**AT THE EXECUTION STAGE**

Mocoa-Santa Ana-San Miguel Project

Mocoa-Santa Ana Section: Under the Plan 2,500 Program, the 25.51-km long Puerto-Asís-Santana-Puerto Caicedo stretch, the 6.07-km long Villagarzón-Mocoa stretch, and the 1.70-km long Convenio Mocoa-Ye-Urcusique stretch have been paved. At present, there is a works contract and a works supervision contract covering 42.61 km between Puerto Caicedo and Villagarzón. To date, paving and improvement works for an amount of $26,610 million have been completed along 15.64 km of the 20.89-km long Puerto Caicedo-Puerto Umbría stretch, and paving and improvement works for an amount of $32,008 million have been completed along 20.94 km of the 21.34-km long Puerto Umbría-Villagarzón stretch, including three of the six bridges planned for the section. Furthermore, 0.435 km has been paved with rigid concrete. Currently, the contracts are suspended.

The works supervision contract involves 71 km. Execution is subject to the effective operation of the respective subsidized tolls in each section with the purpose of securing the resources to finance the works. At present, there is a contract in force that involves a 43-km section, and paving and improvement works have been made (with an 80% progress) in the Puerto Caicedo-Villagarzón stretch.

Santa Ana-San Miguel Section: The Complementary Arterial Corridors for Competitiveness Program and the Priority Corridors for Prosperity Program provide for the paving of the 109-km long Puente San Miguel-Santana stretch of the Southern Corridor. Phase I of the Southern Corridor involves the paving of 78 km and the construction of 10 bridges; the works amount to $304,194,622,255, and the supervision —shared with the Marginal Highway of the Jungle— amounts to $11,769,019,376, and started on September 3, 2009. To date, eight bridges as well as improvement works along 61 km have been completed. Phase II of the Southern Corridor comprises the paving of 11 km and the construction of two bridges; the works amount to $10,912,191,080 and the supervision amounts to $2,879,695,098; the start date was August 27, 2012, and the expected completion date is October 26, 2014. Progress to date involves the paving of 0.5 km, the regular maintenance of 11 km, roadbed earthworks along 1.1 km, the improvement of 6.6 km, and the construction of two bridges.

**AT THE PRE-EXECUTION STAGE**

Construction and Implementation of the Binational Border Service Centers (CEBAFs) at Rumichaca and San Miguel

Pre-feasibility and preliminary design studies have already been prepared. The National Planning Department was awarded a non-refundable loan from the IDB. The exact location is yet to be defined in order to buy the plots of land required.

In addition, the IDB delivered the terms of reference to conduct the final studies and designs, which have to be validated by both countries. After the terms of reference are validated, the countries will decide on the consulting firm to be hired.

## COLOMBIA - VENEZUELA BORDER CROSSINGS CONNECTIVITY SYSTEM

6

ANDEAN

COUNTRIES

SUBSECTOR

ESTIMATED INVESTMENT **4,000,000**

SOURCE OF FINANCING

PROJECT STAGE **EXECUTION**

LIFE CYCLE STAGES AND NUMBER OF PROJECTS 0 1 1 1

ESTIMATED PROJECT COMPLETION DATE **APRIL 2015**

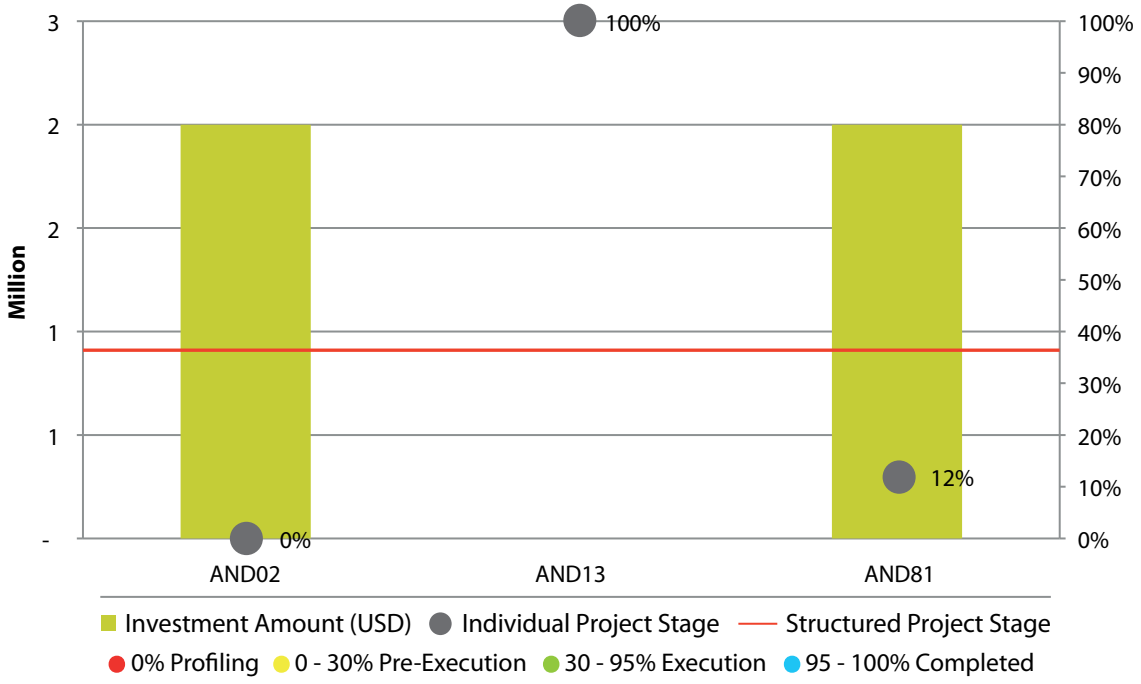
| Code | Stage | Name of the Individual Projects | Countries Involved | Estimated Investment (US$) |
|---|---|---|---|---|
| AND02 | ● | BINATIONAL BORDER SERVICE CENTER (CEBAF) AT PARAGUACHÓN | VE | 2,000,000 |
| AND13 | ● | IMPROVEMENT OF JOSÉ ANTONIO PÁEZ BRIDGE | CO | 0 |
| AND81 | ● | IMPROVEMENT OF THE BORDER CROSSINGS IN THE NORTHERN DEPARTMENT OF SANTANDER AND THE TÁCHIRA STATE | CO - VE | 2,000,000 |

## PROJECT TECHNICAL SPECIFICATIONS

THE STRUCTURED PROJECT INVOLVES:

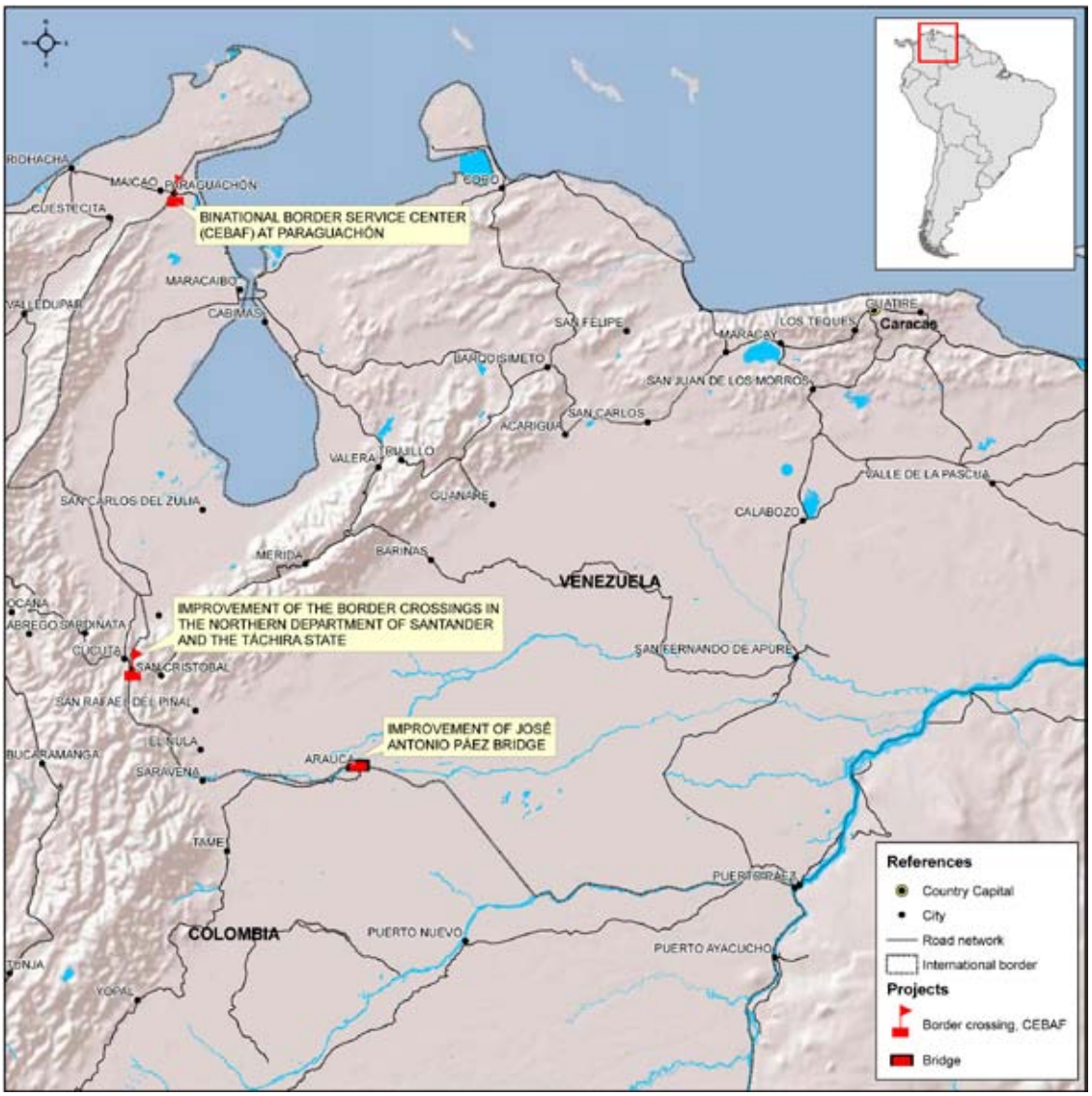
- Construction of a binational border service center.
- Improvement of a 167.1-m long bridge.
- Improvement of border crossings.

### STRUCTURED PROJECT CURRENT STATUS AND INDIVIDUAL PROJECTS STAGE AND ESTIMATED INVESTMENT




## LAST YEAR'S MAJOR DEVELOPMENTS

- Project IMPROVEMENT OF THE BORDER CROSSINGS IN THE NORTHERN DEPARTMENT OF SANTANDER AND THE TÁCHIRA STATE made 12% progress, thus moving on from the profiling to the pre-execution stage and completing the pre-feasibility studies.


BINATIONAL BORDER SERVICE CENTER (CEBAF) AT PARAGUACHÓN
IMPROVEMENT OF THE BORDER CROSSINGS IN THE NORTHERN DEPARTMENT OF SANTANDER AND THE TÁCHIRA STATE
IMPROVEMENT OF JOSÉ ANTONIO PÁEZ BRIDGE
VENEZUELA
COLOMBIA
Caracas
MAICAO
PARAGUACHÓN
MARACAIBO
CABIMAS
VALLEDUPAR
SAN FELIPE
BARQUISIMETO
ACARIGUA
SAN CARLOS
VALERA
TRUJILLO
GUANARE
SAN CARLOS DEL ZULIA
MERIDA
BARINAS
CALABOZO
VALLE DE LA PASCUA
LOS TEQUES
MARACAY
GUATIRE
SAN JUAN DE LOS MORROS
SAN FERNANDO DE APURE
CUCUTA
SAN CRISTOBAL
SAN RAFAEL DEL PIÑAL
EL SULA
SARAVENA
ARAUCA
TAME
PUERTO NUEVO
PUERTO AYACUCHO
PUERTO PAEZ
YOPAL
TUNJA
BUCARAMANGA
OCAÑA
ABREGO
SARDINATA
References
Country Capital
City
Road network
International border
Projects
Border crossing, CEBAF
Bridge

## RATIONALE

This structured project is designed to address existing problems, missing links and bottlenecks in the most important border crossings between Colombia and Venezuela, which concentrate the largest international trade flows by road in the Andean Hub. The border crossings included in this project are the following:

**1)** Binational Border Service Center (CEBAF) at Paraguachón: This border crossing, located between the Colombian department of La Guajira and the Bolivian state of Zulia, offers an alternative for bilateral trade, especially among the urban centers of northern Colombia and western Venezuela. At present, there are recently built premises of the National Integrated Customs and Tax Administration Service (SENIAT) in the village of Guarero, Venezuela, 6 km away from the border. Furthermore, a binational committee has been created at the request of the Presidential Commission on Integration and Border Affairs to evaluate the implementation of a single CEBAF on such premises. The road connection between northern Venezuela and Colombia needs that the Paraguachón border crossing meet the requirements established in the CAN agreements involving the construction of binational border service centers.

**2)** Improvement of the Border Crossings in the Northern Department of Santander and the Táchira State: The Cúcuta-San Antonio border crossing hosts substantial activity in terms of foreign trade in goods, passenger and freight vehicle traffic, and flows of people. The border crossings included in this project are the following:

i. La Unión bridge: This is an alternative customs office to the ones in Cúcuta and San Antonio. It involves mainly Colombian coal sold to Venezuela, in spite of the limited capacity of the bridge. In 2004, 575,000 tons of this type of good entered Venezuela from Colombia, while 17,000 tons of perishable products were carried in the opposite direction; the number of freight vehicles amounted to 134,000, carrying an average load of slightly more than 4 tons.

ii. Aguaclara-Guarumito-La Fría corridor, an alternative border crossing to the La Unión bridge: This road corridor, which plays a strategic role, will contribute to an increased trade by land between both countries and, most importantly, will help rationalize Colombia's coal exports though Lake Maracaibo and leverage agro-industrial development in La Fría by promoting exports to Colombia.

iii. El Escobal-Ureña border crossing: Here, the two countries are connected by the Francisco de Paula Santander International Bridge. The main Colombian goods released at this border crossing for export to Venezuela were coal (1 million tons, a figure that declined in 2005) and sugarcane (53,000 tons), according to data provided by Colombia's Customs Authorities.

iv. Tienditas: This is a potential place for the implementation of a new physical link between both countries.

v. Villa del Rosario-San Antonio del Táchira border crossing: These two cities are connected by the Simón Bolívar International Bridge. In 2004, some 750,000 tons were transported in the direction of Venezuela, 250,000 of which are domestic transits within Colombia between Villa del Rosario and Arauca, consisting basically of equipment for oil exploration and, to a lesser extent, of beverages and empty returnable containers. The bridge has a short span and one lane for each direction of travel. Beside it are the piles of the old bridge, which was damaged by the current of the river and subsequently closed, according to data provided by Colombia's Customs Authorities.

**3)** Improvement of José Antonio Páez Bridge: The purpose is to allow free-flowing traffic in the city of Arauca and to regularize the border crossing, which reduces transport costs and wait times for foreign trade goods originating in or bound to the inland and southwestern areas of the country.

The structured project includes the design of a development plan to implement the actions and infrastructure works involved.

Furthermore, as part of the complementary actions provided for, programs will be created to improve the quality of life of the population affected by border crossing activities by lowering general transportation costs. If this cost reduction brings about lower prices, it will benefit consumers of traded goods, enhance domestic production competitiveness, increase the transparency and quality of border controls —thus ensuring the integrity of fiscal, health and security policies—, and improve administrative efficiency —which promotes a similar behavior of the private sector—, among other favorable outcomes.

The challenges to this structured project are basically institutional, as great convergence efforts are required to implement integrated controls in the entire land connection system between Colombia and Venezuela.

## PROPOSAL

This structured project is made up of three individual projects: i) Improvement of the Border Crossings in the Northern Department of Santander and the Táchira State; ii) Binational Border Service Center (CEBAF) at Paraguachón; and iii) Improvement of José Antonio Páez Bridge. The first project is intended to improve all the crossings within the area of influence of the most important border crossing in the Andean Hub, i.e. Cúcuta-San Antonio, and consists in implementing integrated controls to facilitate the movement of people and goods. The second project aims at implementing a CEBAF at the border crossing connecting the Colombian and the Venezuelan Atlantic coasts. The third project involves the link currently missing to join Venezuela and Colombia through the Low-Altitude Corridor, with a view to formalizing activities at the border crossing; it seeks to improve the current conditions of the José Antonio Páez bridge and the access to the city of Arauca through the construction of a two-lane road, which will attract some of the traffic from the Cúcuta-San Antonio border crossing, alleviating congestion and reducing wait times.

## PROGRESS ANALYSIS AND ASSESSMENT

The individual projects are part of the COSIPLAN Project Portfolio. The Colombian projects are the following:

Las Tienditas International Bridge

The proposal is to build a new border crossing in the Tienditas-Río Táchira-Villa Silvania corridor at a place between the existing Simón Bolívar and Francisco de Paula Santander bridges in Cúcuta, Norte de Santander department, near the Colombian locality of Villa Silvania and the Venezuelan locality of Tienditas, following an agreement reached at the Meeting of Infrastructure Vice-Ministers held on July 14, 2011, and ratified at the Meeting of Foreign Relations Ministers held on August 2, 2013, in the city of Caracas.

The agreement involves building a 260-m long bridge with three lanes, two for vehicles and a central one for pedestrians and cyclists, including all the necessary access roads. At present, the formalities to sign the Inter-Administrative Agreement with the Venezuelan Government are underway. The Government of Venezuela will be responsible for the execution of the project, in accordance with the agreement reached by the parties. Thus, the consultancy studies and the works proper will be the responsibility of Venezuela. Works began on October 14, 2013, and will be completed in April 2015.

The amount of the Colombian contribution, equivalent to 50% of the total cost of the project and according to the preliminary information gathered so far, is 33,000,000,000 Colombian pesos, of which 6,000,000,000 Colombian pesos will have been invested throughout 2013. The remaining amount, i.e. 27,000,000,000 Colombian pesos, will be invested between 2014 and 2015, excluding the approximately 2-km long access road.

**Unión International Bridge**

Although there are no technical studies for this project, some pre-feasibility profiles already made indicate that the new bridge may have an approximate length of 160 m over the La Grita river, 5 km upstream of the existing bridge on the Cúcuta-Puerto Santander road, in the Norte de Santander department.

The new border bridge would facilitate trade between Colombia and Venezuela, especially for the coal industry. The estimated budget for the execution of this project amounts to 20,000,000,000 Colombian pesos, which will have to be distributed between the allocation periods 2014 and 2015.

**Improvement of José Antonio Páez Bridge:** Works were completed in August 2005.

## DESAGUADERO BINATIONAL BORDER SERVICE CENTER (CEBAF)

7

ANDEAN

COUNTRIES 

SUBSECTOR 

ESTIMATED INVESTMENT **40,231,927**

SOURCE OF FINANCING 

PROJECT STAGE **EXECUTION**

LIFE CYCLE STAGES AND NUMBER OF PROJECTS 


ESTIMATED PROJECT COMPLETION DATE **JANUARY 2016**

| Code | Stage | Name of the Individual Projects | Countries Involved | Estimated Investment (US$) |
|---|---|---|---|---|
| AND47 | ● | DESAGUADERO BINATIONAL BORDER SERVICE CENTER (CEBAF) | BO - PE | 40,231,927 |

7

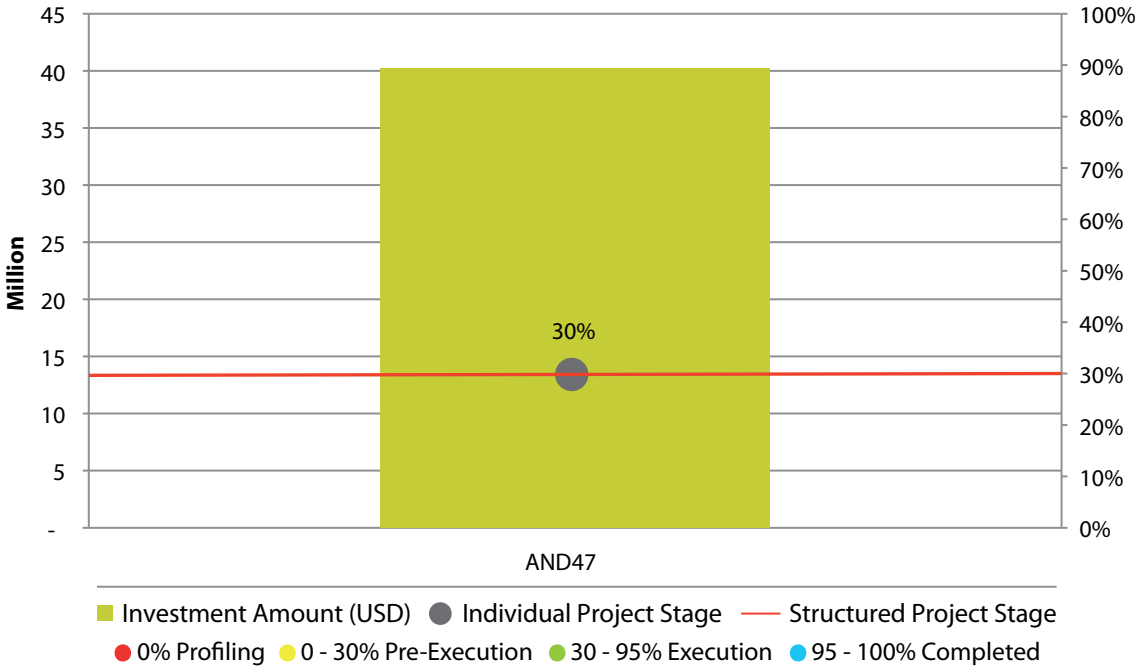
ANDEAN

## PROJECT TECHNICAL SPECIFICATIONS

THE STRUCTURED PROJECT INVOLVES:

- Construction of a total 76,917 $m^2$ binational border service center, including seven loading docks.

### STRUCTURED PROJECT CURRENT STATUS AND INDIVIDUAL PROJECTS STAGE AND ESTIMATED INVESTMENT




## LAST YEAR'S MAJOR DEVELOPMENTS

- Project DESAGUADERO BINATIONAL BORDER SERVICE CENTER (CEBAF) made 6% progress, and the resources for building the works have been secured.


PUERTO HEATH
INAMBARI
SAN GABAN
ABANCAY
CUSCO
URCOS
PERÚ
AYAVIRI
SAN BORJA
TRINIDAD
YUCUMO
JULIACA
PUNO
DESAGUADERO BINATIONAL BORDER SERVICE CENTER (CEBAF)
AREQUIPA
DESAGUADERO
La Paz
BOLIVIA
CAMANA
MATARANI
MOLLENDO
MOQUEGUA
COCHABAMBA
ILO
TACNA
ORURO
TOLEDO
AIQUILE
ARICA
HUACHACALLA
SUCRE
PISIGA
CHILE
IQUIQUE
COLLAHUASI
References
Country Capital
City
Road network
International border
Border crossing, CEBAF

7

ANDEAN

## RATIONALE

This individual project is located at the Peru-Bolivia border, 1.8 km away from where the Ilo-Desaguadero and Puno-Desaguadero roads, on the Peruvian side, and the La Paz-Desaguadero road, on the Bolivian side, converge (International Bridge). The purpose is to facilitate the flow of people, vehicles and goods, fostering bilateral as well as regional trade. In addition, complementary actions associated with the regulatory frameworks and with binationally-integrated border control operations have been identified.

As regards the road of the new international bridge, border controls in the area of Carancas, in the Peruvian territory, are currently performed in provisional facilities located in an easement area. These rudimentary conditions pose obstacles to smooth bilateral trade and tourism.

The opening of the new international bridge and the expected gradual closing of the "old" one has put on the agenda the urgent need for both countries to address the social issue in the town of Desaguadero on both sides, as the startup of the CEBAF has raised concerns among local residents as to the possibility that their way of life and border trade be destroyed.

It is worth mentioning that the Desaguadero border crossing is the most important one for trade between Peru and Bolivia.

## PROPOSAL

The project provides for the construction of adequate facilities and the implementation of integrated border control systems in line with Decision 502 agreed upon by the member countries of the Andean Community of Nations concerning the implementation of integrated control systems at their border crossings.

## PROGRESS ANALYSIS AND ASSESSMENT

This project belongs to the COSIPLAN Project Portfolio and was included in AIC 2005-2010.

After almost 10 years of negotiations, in August 2011 Peru and Bolivia agreed on the construction of a CEBAF in a single customs office located on the Peruvian territory, where the Bolivian officers will have all the necessary facilities to perform their duties pursuant to their national rules and the operational guidelines set out by the Board of Administrators.

The Board of Administrators was established in 2005, and has been gaining experience and knowledge in relation to the operation of integrated binational border controls. As of the date of this report, Peru has taken the following actions:

a. Purchase of a tract of land for the construction of the Desaguadero CEBAF.
b. Completion of a study on the alternative uses of the land adjacent to the CEBAF area.
c. Undertaking and approval of the Final Engineering Design Study on the Desaguadero CEBAF in accordance with the physical arrangement agreed upon. The Bolivian authorities have played an active role in this study within the framework of the Board of Administrators. The study was financed by the IDB.

In May 2014, the tender to carry out the works at the Desaguadero CEBAF was called, and the contract was awarded and signed in July. Construction works, carried out by Consorcio Binacional Sur, commenced on October 28, 2014, and the deadline for completion is 498 calendar days after such date.

The Desaguadero Binational Border Service Center will be built in the binational locality of Desaguadero on the Peruvian territory, and the Plurinational State of Bolivia will participate in its administration, as special space will be assigned for its relevant agencies, such as the National Service for Agricultural Health and Food Safety (Servicio Nacional de Sanidad Agropecuaria e Inocuidad Alimentaria – SENASAG), the National Customs of Bolivia, and the National Migration Service (Servicio Nacional de Migración – SENAMIG).

## AUTOPISTA DEL SOL EXPRESSWAY: IMPROVEMENT AND REHABILITATION OF THE SULLANA - AGUAS VERDES SECTION (INCLUDING TUMBES BYPASS)

8

ANDEAN

COUNTRIES 

SUBSECTOR 

ESTIMATED INVESTMENT **515,478,715**

SOURCE OF FINANCING 

PROJECT STAGE **EXECUTION**

LIFE CYCLE STAGES AND NUMBER OF PROJECTS 


ESTIMATED PROJECT COMPLETION DATE **NOVEMBER 2020**

| Code | Stage | Name of the Individual Projects | Countries Involved | Estimated Investment (US$) |
|---|---|---|---|---|
| AND28 | ● | AUTOPISTA DEL SOL EXPRESSWAY: IMPROVEMENT AND REHABILITATION OF THE SULLANA - AGUAS VERDES SECTION (INCLUDING TUMBES BYPASS) | PE | 515,478,715 |

8

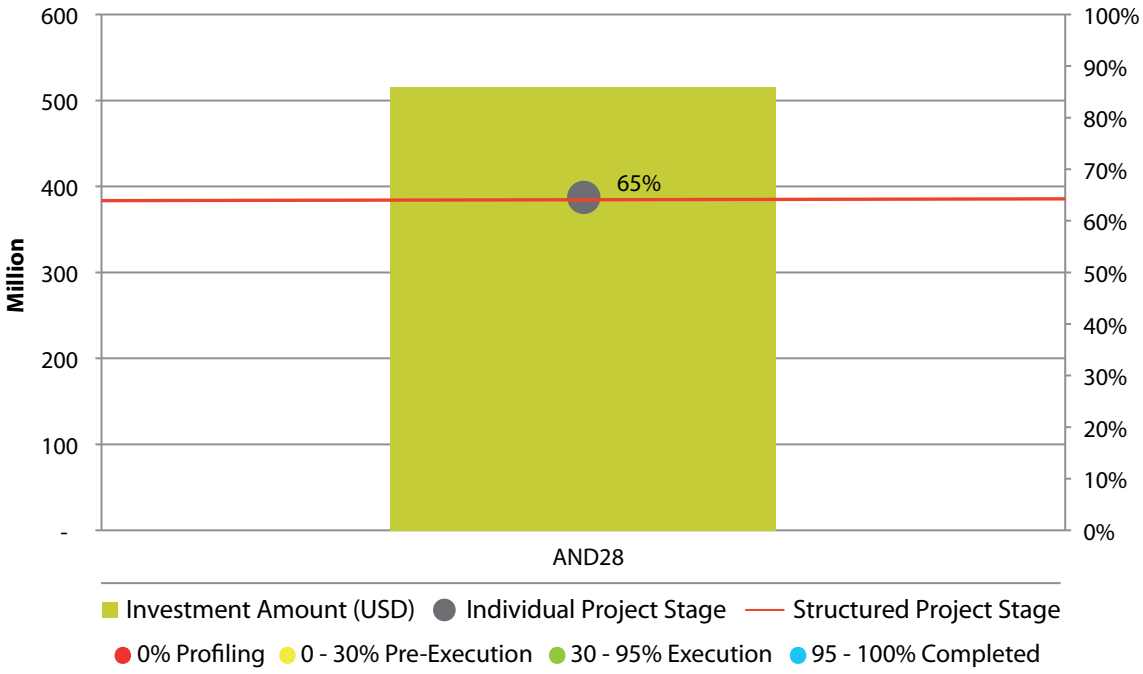
ANDEAN

## PROJECT TECHNICAL SPECIFICATIONS

THE STRUCTURED PROJECT INVOLVES:

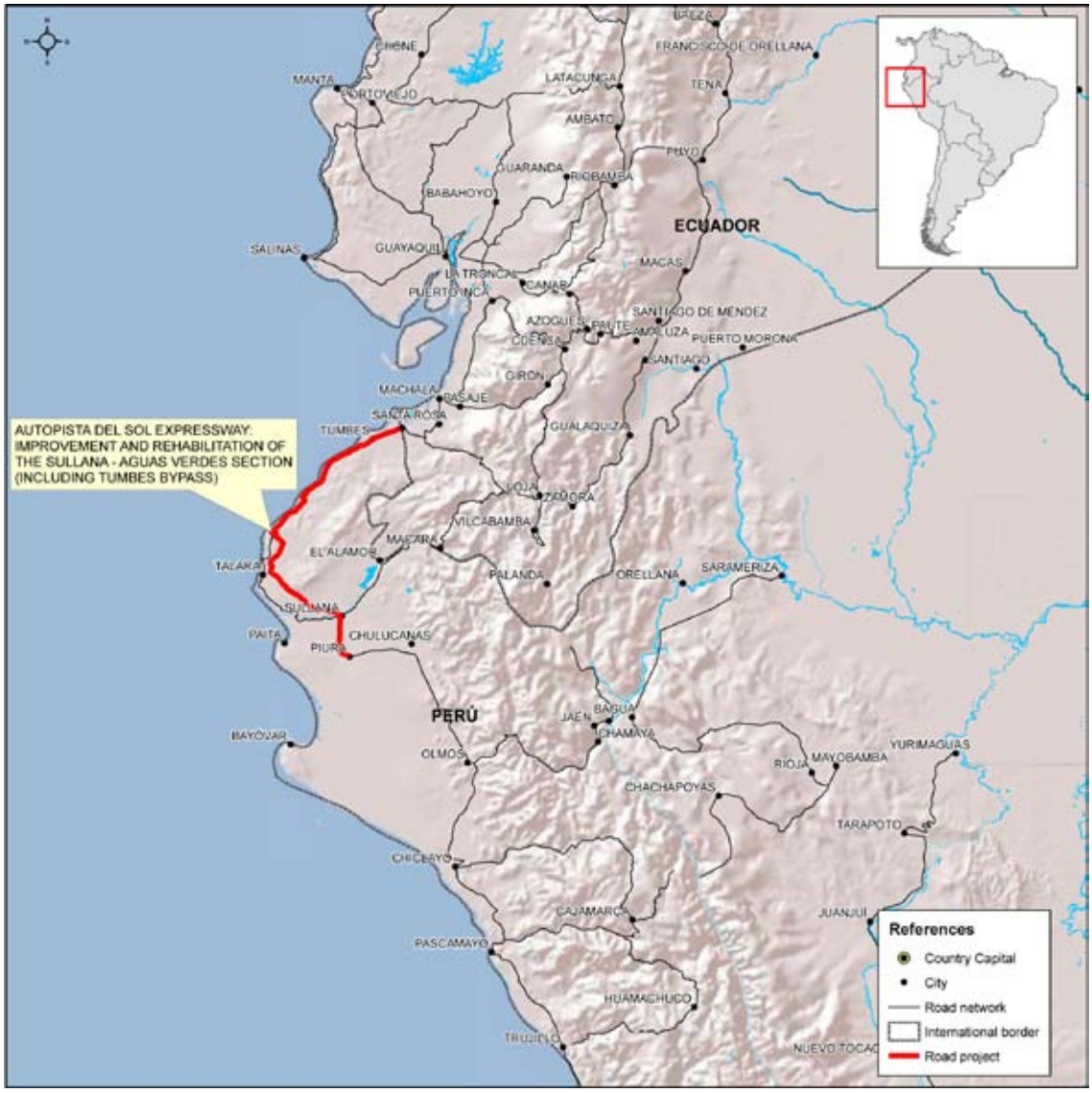
- Improvement and rehabilitation of 276 km of roads, including bridges and a bypass.

### STRUCTURED PROJECT CURRENT STATUS AND INDIVIDUAL PROJECTS STAGE AND ESTIMATED INVESTMENT




## LAST YEAR'S MAJOR DEVELOPMENTS

- Project AUTOPISTA DEL SOL EXPRESSWAY: IMPROVEMENT AND REHABILITATION OF THE SULLANA - AGUAS VERDES SECTION (INCLUDING TUMBES BYPASS) made 35% progress, thus completing the second quarter of works.


AUTOPISTA DEL SOL EXPRESSWAY. IMPROVEMENT AND REHABILITATION OF THE SULLANA - AGUAS VERDES SECTION (INCLUDING TUMBES BYPASS)
ECUADOR
PERÚ
ESMERALDAS
MANTA
PORTOVIEJO
LATACUNGA
AMBATO
TENA
FRANCISCO DE ORELLANA
PUYO
GUARANDA
RIOBAMBA
BABAHOYO
SALINAS
GUAYAQUIL
LA TRONCAL
CAÑAR
PUERTO INCA
MACAS
AZOGUES
CUENCA
PAUTE
AMALUZA
SANTIAGO DE MENDEZ
PUERTO MORONA
SANTIAGO
GIRON
MACHALA
PASAJE
SANTA ROSA
TUMBES
GUALAQUIZA
LOJA
ZUMORA
MILAGRO
MACARA
EL ALAMOR
TALARA
PALANDA
ORELLANA
SARAMIRIZA
SULLANA
PAITA
PIURA
CHULUCANAS
BAGUA
JAEN
CHAMAYA
BAYOVAR
OLMOS
YURIMAGUAS
RIOJA
MAYOBAMBA
CHACHAPOYAS
TARAPOTO
CHICLAYO
CAJAMARCA
JUANJUI
PACASMAYO
HUAMACHUCO
TRUJILLO
NUEVO TOCAC
References
Country Capital
City
Road network
International border
Road project

8

ANDEAN

## RATIONALE

This structured project is significant as it involves the most dynamic section of the most widely used road corridor of Peru, i.e. the North Pan-American Highway, which forms part of the structuring logistics corridor and is linked to one of the most important border crossings. This project is the most important one for connecting by land the north of Peru and the south of Ecuador in terms of trade; thus, it consolidates and enhances the regional connectivity network, creating significant cross-border synergies. Additionally, actions intended to harmonize transport-related standards are identified since there are still cargo transfer deficiencies at the border.

The Zarumilla-Aguas Verdes section, of continental importance, is part of the Pan-American Highway. At present, it caters for the greatest road traffic volume between Peru and Ecuador and, since the Peace Accords were signed, trade flows through the Road Axis No. 1 CEBAF have experienced a significant increase, as trade volumes grew by three times and annual vehicle traffic figures rose by five times. In 2010, the average daily traffic (ADT) in the Zarumilla-Aguas Verdes stretch was 1,365 vehicles in the direction of Huaquillas, Ecuador, 277 of which were trailer and semi-trailer trucks. Integrated controls at the Road Axis No. 1 CEBAF are helping add dynamism to transportation flows from and to Ecuador. Within the framework of the Binational Plan, both Peru and Ecuador have been implementing various multisectoral actions at the bilateral level to facilitate services and increase trade and tourism flows on the common border —with the purpose of enhancing living conditions in the border region— as well as to improve the road network and border control.

Some of the most important projects included in the Binational Plan involve five bilateral road axes; their objective is to create a land interconnection network that will serve as a basis for development in the common border area.

In 2011, total bilateral trade amounted to more than US$2.8 billion, with trade in non-oil products alone accounting for more than US$1.2 billion. As for freight traffic along the Aguas Verdes-Huaquillas border road section, in 2010 it reached an average of 547 tons per day in terms of inbound cargo and 296 tons per day in terms of outbound cargo.

In the case of the Paita Turn off-Sullana-Talara Turn off-Mancora-Aguas Verdes road (462.82 km), a five-year contract is in force since February 2010 to carry out maintenance works by service levels, in order to ensure improved conditions for traffic (regular and routine maintenance), with an investment of US$50.5 million.

## PROPOSAL

The alignment for this highway begins in the city of Sullana (Piura Department) and passes through the cities of Talara, Tumbes, and Zorritos; in Zorritos it divides into two branches: one going to Aguas Verdes, and the other being a newly constructed alternative road to access the new international bridge and its CEBAF.

The works are expected to be executed with public resources and include mainly the improvement and construction of bridges as well as the construction of a bypass road in the city of Tumbes. The project is part of the COSIPLAN Project Portfolio and is included in the Intermodal Transportation Plan (PIT) 2004-2023.

The Sullana-Aguas Verdes road is in good condition for traffic. Road capacity enhancement works are planned to be carried out with both public and private investments.

At present, the Caleta Grau (30 m) and Canoas (50 m) bridges are at the execution stage. Furthermore, as the final studies have been completed, the call for tender to carry out the works involving the Héroes del Cenepa (72 m), Abejal (45 m) and Pontón 1217 (10 m) bridges is being prepared. The final studies on the Bocapan (251 m) and Tumbes (60 m) bridges are underway, and calls for tender (of the final study plus works type) are soon to be issued for 23 bridges.

The Tumbes Bypass (18 km) project profile is underway and expected to be completed in February 2015.

The profile for the project to upgrade the Sullana-Turn-off to Talara-Tumbes-International Bridge (Border with Ecuador) 244-km long road to a four-lane road is expected to begin in the first quarter of 2015 and to be completed in December that same year.

# CAPRICORN HUB

## PROJECTS

STRUCTURED **5** INDIVIDUAL **18**

## ESTIMATED INVESTMENT

**7,250.4**
US$ Million

## BY SUBSECTOR

| | | | |
|---|---|---|---|
| 4 | 9 | 3 | 2 |
| 1,134.2 | 5,103.0 | 161.2 | 852.0 |

## BY SOURCE OF FINANCING

| | | |
|---|---|---|
| 15 | 1 | 2 |
| 6,647.4 | 500.0 | 103.0 |

# E. CAPRICORN HUB
# (ARGENTINA, BOLIVIA, BRAZIL, CHILE AND PARAGUAY)

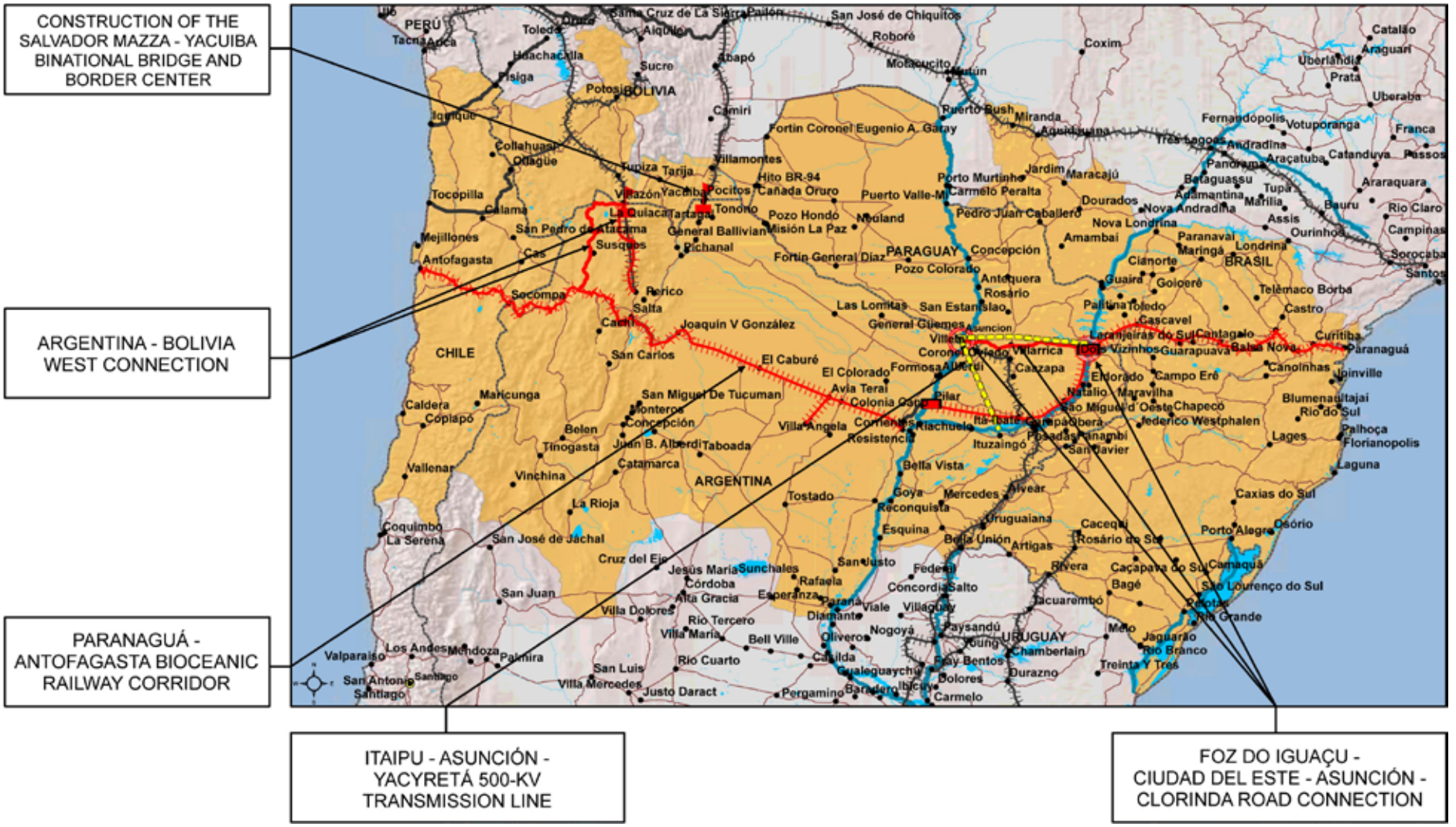
The Capricorn Hub comprises four homogeneous although differentiated regions: the Atlantic Coastal Region, formed by the states of Rio Grande do Sul, Santa Catarina and Paraná, and the southwestern Mato Grosso meso-region of the state of Mato Grosso do Sul, in Brazil; the Northeastern Region of Argentina, comprised by the provinces of Misiones, Corrientes, Formosa, Chaco, and the north of Santa Fe, together with the eastern region of Paraguay; the Northwestern Region of Argentina, formed by the provinces of Santiago del Estero, Tucumán, La Rioja, Catamarca, Salta, Jujuy and four municipalities of Córdoba; the western region of Paraguay and the departments of Santa Cruz, Tarija and Potosí, in Bolivia; and the Pacific Coastal Region, including the north of Chile (Regions I, II, and III: Tarapacá, Antofagasta, and Atacama, respectively).

The area of influence of this Hub covers approximately 2,798,318 km$^2$, accounting for 20.6% of the combined total area of the five countries that make it up. The population of the Capricorn Hub was approximately 49,899,979 in 2008, accounting for 19% of the sum of the total population of the countries that make it up. Furthermore, an average population density of almost 18 inhabitants per km$^2$ for the area of influence is estimated, which is a medium to low level overall, with a strong geographic dispersion.

The Agenda includes projects from four of the five project groups of this Hub: i) G1 - Antofagasta - Paso de Jama Border Crossing - Jujuy - Resistencia - Formosa - Asunción; ii) G2 - Salta - Villazón - Yacuiba - Mariscal Estigarribia; iii) G3 - Asunción - Paranaguá; and iv) G4 - Presidente Franco - Puerto Iguazú - Pilar - Resistencia.

Table E.1 shows the 18 individual projects that make up the five structured projects of the Capricorn Hub incorporated into API. The estimated investments involved amount to US$7,250.4 million. The projects are aimed at improving the bridges and border crossings in two important areas connecting Argentina and Bolivia; creating a bioceanic railway corridor between Paranaguá and Antofagasta; improving the connection of the Atlantic and Pacific oceans through Foz do Iguaçu for the benefit of Argentina, Brazil and Paraguay; and strengthening trade in energy among Argentina, Brazil and Paraguay through two transmission lines carrying 500-kV each. These projects comply with the selection criteria set out for inclusion in the Agenda and are consistent with the strategic functions of the Hub's project groups involved in API.

Map E.1 · **API Projects - Capricorn Hub**



## Table E.1 · API Projects - Capricorn Hub

| # | Structured Project Name | No. of Individual Projects | Countries | API amount (million US$) | Stage | Code | Name of the Individual Projects | Countries Involved | PG | Project Stage | Amount (US$) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 9 | CONSTRUCTION OF THE SALVADOR MAZZA - YACUIBA BINATIONAL BRIDGE AND BORDER CENTER | 1 | AR - BO | 45.0 | 🟡 | CAP10 | CONSTRUCTION OF THE SALVADOR MAZZA - YACUIBA BINATIONAL BRIDGE AND BORDER CENTER | AR - BO | G02 | 🟡 | 45,000,000 |
| 10 | ARGENTINA - BOLIVIA WEST CONNECTION | 3 | AR - BO | 477.0 | 🟡 | CAP11 | REHABILITATION OF JUJUY - LA QUIACA RAILWAY | AR | G02 | 🟡 | 62,000,000 |
| | | | | | | CAP50 | PAVING OF NATIONAL ROUTE No. 40, MINING CORRIDOR PATH (BORDER WITH BOLIVIA) | AR | G02 | 🟡 | 400,000,000 |
| | | | | | | CAP81 | LA QUIACA - VILLAZÓN BRIDGE AND BORDER CENTER | AR - BO | G02 | 🔴 | 15,000,000 |
| 11 | PARANAGUÁ - ANTOFAGASTA BIOCEANIC RAILWAY CORRIDOR | 9 | AR - BR - CH - PA | 5,102.2 | 🟡 | CAP20 | CASCAVEL - FOZ DO IGUAÇU BIOCEANIC RAILWAY CORRIDOR | BR | G03 | 🔴 | 324,000,000 |
| | | | | | | CAP23 | STUDY FOR THE OPTIMIZATION OF THE ÑEEMBUCÚ - BERMEJO NODE | AR - PA | G04 | 🟡 | 61,206,392 |
| | | | | | | CAP29 | CONSTRUCTION OF CIUDAD DEL ESTE - ÑEEMBUCÚ RAILWAY | PA | G04 | 🟡 | 2,800,000,000 |
| | | | | | | CAP37 | REHABILITATION OF THE C3 RAILWAY BRANCH LINE: RESISTENCIA - AVIA TERAI - PINEDO | AR | G01 | 🟡 | 104,000,000 |
| | | | | | | CAP38 | REHABILITATION OF THE C12 RAILWAY BRANCH LINE: AVIA TERAI - METÁN | AR | G01 | 🟡 | 212,000,000 |
| | | | | | | CAP39 | REHABILITATION OF THE C14 RAILWAY BRANCH LINE: SALTA - SOCOMPA | AR | G01 | 🟡 | 60,000,000 |
| | | | | | | CAP52 | RAILWAY BRIDGE WITH FREIGHT YARD (CIUDAD DEL ESTE - FOZ DO IGUAÇU) | BR - PA | G03 | 🔴 | 40,971,000 |
| | | | | | | CAP53 | BIOCEANIC RAILWAY CORRIDOR: PARANAGUÁ - CASCAVEL SECTION AND GUARAPUAVA - INGENIERO BLEY RAILWAY BYPASS | BR | G03 | 🟡 | 1,500,000,000 |
| | | | | | | CAP91 | BIOCEANIC RAILWAY CORRIDOR, CHILEAN SECTION (ANTOFAGASTA - SOCOMPA) * | CH | G01 | 🔵 | 0 |
| 12 | FOZ DO IGUAÇU - CIUDAD DEL ESTE - ASUNCIÓN - CLORINDA ROAD CONNECTION | 3 | AR - BR - PA | 774.2 | 🟡 | CAP07 | OPTIMIZATION OF THE CLORINDA - ASUNCIÓN NODE | AR - PA | G01 | 🟡 | 101,206,392 |
| | | | | | | CAP14 | NEW PUERTO PRESIDENTE FRANCO - PORTO MEIRA BRIDGE, WITH A PARAGUAY - BRAZIL INTEGRATED CONTROL AREA | BR - PA | G03 | 🟢 | 173,000,000 |
| | | | | | | CAP18 | CONCESSION FOR THE IMPROVEMENT OF ROUTES No. 2 AND 7 (ASUNCIÓN - CIUDAD DEL ESTE) | PA | G03 | 🟡 | 500,000,000 |
| 13 | ITAIPU - ASUNCIÓN - YACYRETÁ 500-KV TRANSMISSION LINE | 2 | BR - PA | 852.0 | 🟢 | CAP67 | 500-KV TRANSMISSION LINE (ITAIPU - VILLA HAYES) | PA | G03 | 🔵 | 555,000,000 |
| | | | | | | CAP68 | 500-KV TRANSMISSION LINE (YACYRETÁ - VILLA HAYES) | PA | G03 | 🟢 | 297,000,000 |

*This individual project has been completed and was incorporated into API because it complements the connectivity network of the structured project.

Table E.2 • **API Projects - Capricorn Hub by Life Cycle Stage**

(number of projects, million US$ and percentage)

| Project Stage | No. of Projects | % of Projects | Investment Amount | % of Investment Amount |
|---|---|---|---|---|
| Profiling | 3 | 16.7 | 380.0 | 5.2 |
| Pre-Execution | 11 | 61.1 | 5,845.4 | 80.6 |
| Execution | 2 | 11.1 | 470.0 | 6.5 |
| Completed (*) | 2 | 11.1 | 555.0 | 7.7 |
| **TOTAL** | 18 | 100.0 | 7,250.4 | 100.0 |

Note: Amounts are estimated on the basis of the implementation stage at which the API individual projects are.

* There is one project included in a structured project of this Hub that was already completed when API was set up. This project is CAP91 and its investment amount is not available.

Figure E.1 • **API Projects - Capricorn Hub by Life Cycle Stage**

(% of number of projects and % of investment amount)

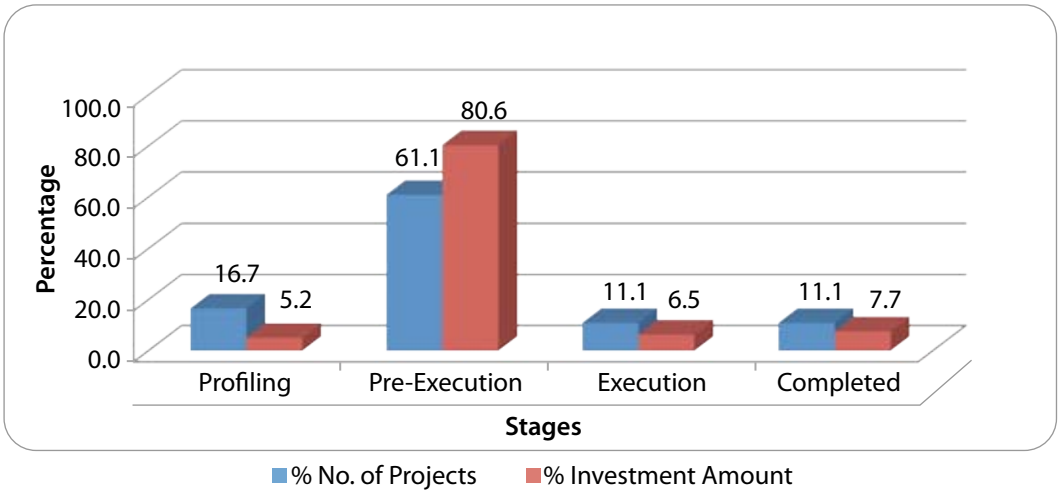



Figure E.2 • **API Projects - Capricorn Hub by Subsector**

(% of number of projects and % of investment amount)

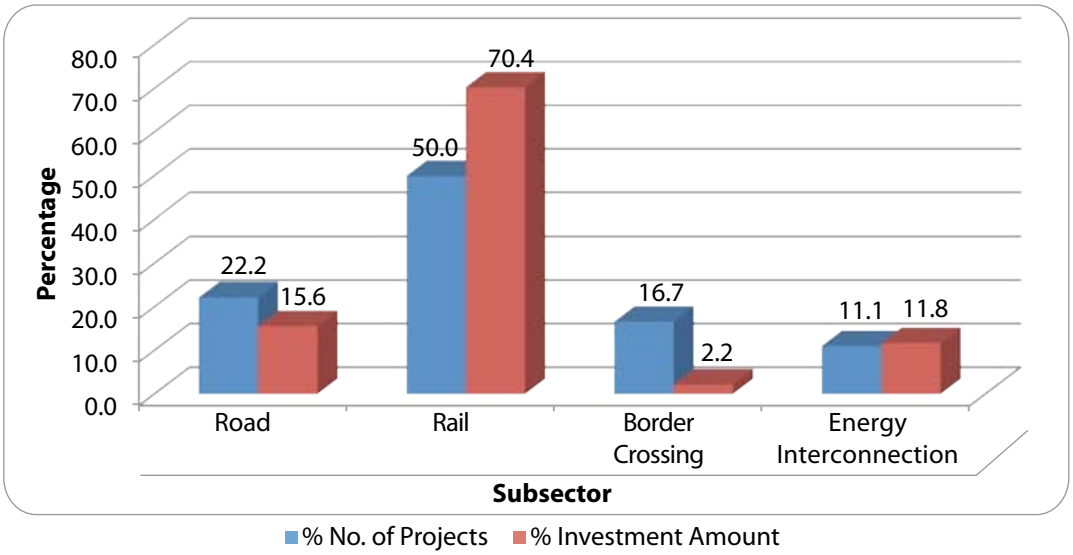


Figure E.3 • **API Projects - Capricorn Hub by Source of Financing**

(% of number of projects and % of investment amount)

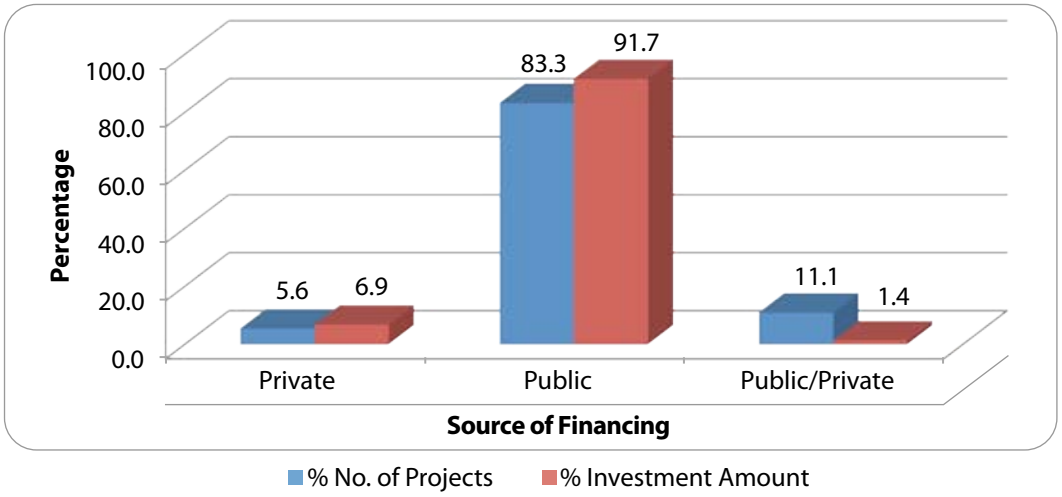



Table E.3 • **API Projects Technical Specifications – Capricorn Hub**

The API projects in this Hub involve:

- Construction of four bridges: one of them is 30-m long, another one is 760-m long, and another one is 600-m long and includes a freight yard.
- Improvement of a bimodal bridge.
- Construction of 9.7 km of approach roads.
- Construction of two border centers, one of them with an area of 24.8 ha.
- Construction of three rail corridors along a total of 1,224 km.
- Rehabilitation of five railway branch lines along a total of 2,149.4 km.
- Improvement of two roads along 297 km.
- Paving of 300 km of roads.
- Upgrade of a road interchange.
- Two 500-kV, 624-km long transmission lines.

## CONSTRUCTION OF THE SALVADOR MAZZA - YACUIBA BINATIONAL BRIDGE AND BORDER CENTER

COUNTRIES

SUBSECTOR

ESTIMATED INVESTMENT **45,000,000**

SOURCE OF FINANCING

PROJECT STAGE **PRE-EXECUTION**

LIFE CYCLE STAGES AND NUMBER OF PROJECTS 0 1 0 0

ESTIMATED PROJECT COMPLETION DATE **DECEMBER 2018**

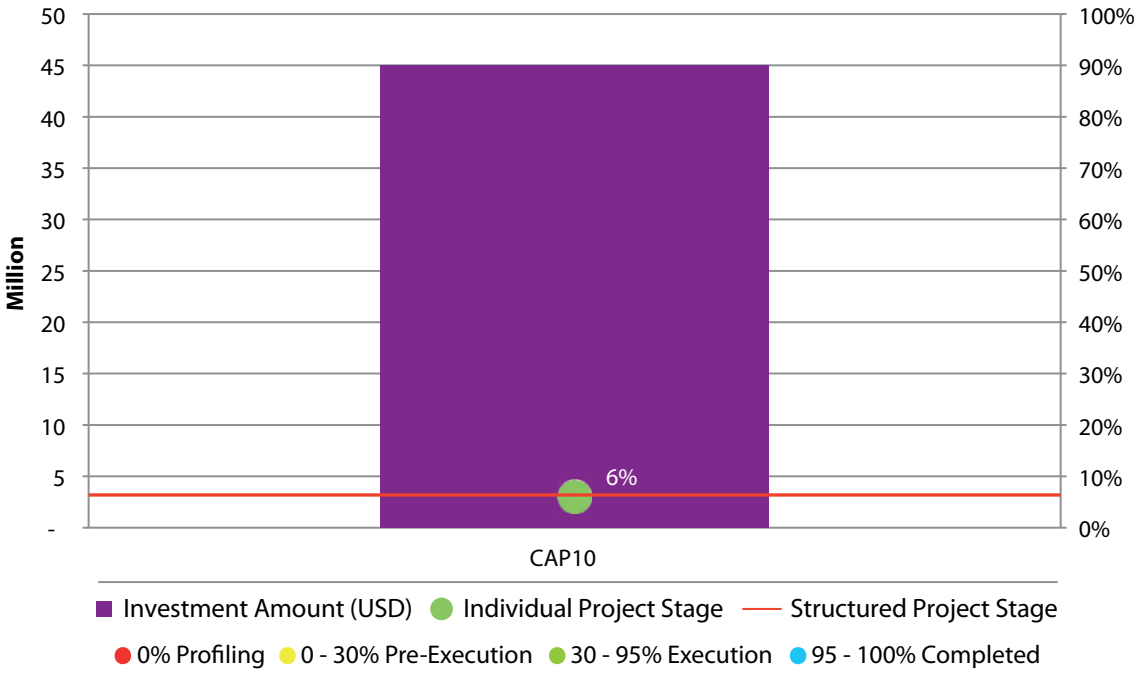
| Code | Stage | Name of the Individual Projects | Countries Involved | Estimated Investment (US$) |
|---|---|---|---|---|
| CAP10 | ● | CONSTRUCTION OF THE SALVADOR MAZZA - YACUIBA BINATIONAL BRIDGE AND BORDER CENTER | AR - BO | 45,000,000 |

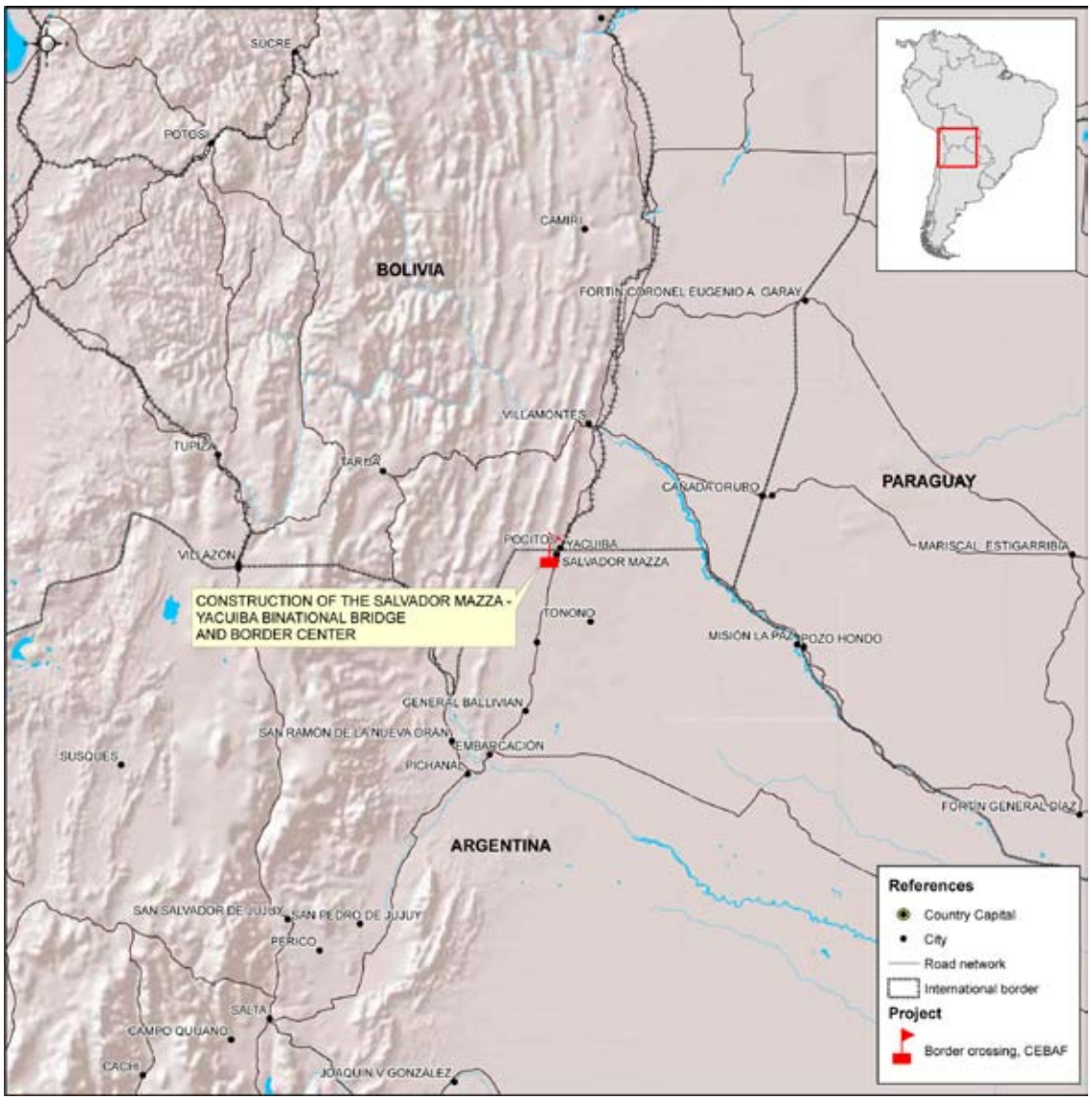
## PROJECT TECHNICAL SPECIFICATIONS

THE STRUCTURED PROJECT INVOLVES:

- Construction of a 30-m long bridge.
- Construction of a 24.8-ha border center.
- Construction of 9.7 km of approach roads.

### STRUCTURED PROJECT CURRENT STATUS AND INDIVIDUAL PROJECTS STAGE AND ESTIMATED INVESTMENT




SUCRE
POTOSI
CAMIRI
BOLIVIA
FORTIN CORONEL EUGENIO A. GARAY
VILLAMONTES
TUPIZA
TARIJA
CANADA ORURO
PARAGUAY
POCITOS
YACUIBA
SALVADOR MAZZA
MARISCAL ESTIGARRIBIA
VILLAZON
CONSTRUCTION OF THE SALVADOR MAZZA - YACUIBA BINATIONAL BRIDGE AND BORDER CENTER
TONONO
MISION LA PAZ
POZO HONDO
GENERAL BALLIVIAN
SAN RAMON DE LA NUEVA ORAN
EMBARCACION
SUSQUES
PICHANAL
FORTIN GENERAL DIAZ
ARGENTINA
SAN SALVADOR DE JUJUY
SAN PEDRO DE JUJUY
PERICO
SALTA
CAMPO QUIJANO
CACHI
JOAQUIN V GONZALEZ
References
Country Capital
City
Road network
International border
Project
Border crossing, CEBAF

9

CAPRICORN

## RATIONALE

This structured project consolidates the regional networks and favors cross-border synergies between Argentina and Bolivia.

At present, the border crossing has a 34-meter long, 8.3-meter wide international bridge that connects highly urbanized areas on both sides of the border. The cities located in the vicinity of this crossing are Salvador Mazza, in Argentina, and Yacuiba, in Bolivia, and the bridge is known as YASMA.

The construction of a new bridge seeks to come up with a solution to the existing serious difficulties at the border crossing between both countries and to ensure the smooth flow of international freight and passenger traffic as well as of pedestrians. The problem is that the current bridge is an urban road used for both local border traffic and international traffic.

The purpose is to solve such traffic congestion by ordering and articulating traffic flows between the border cities, taking into account territorial planning and the promotion of production and social activities in the region.

## PROPOSAL

The proposal includes constructing a new international bridge, implementing a border center and improving the approach roads. This border crossing is part of the main road corridor between Argentina and Bolivia, which consists of Argentine National Route No. 34 and Route No. 9 of the Bolivian Fundamental Road Network. These highways link the province of Salta, in Argentina, with the southeastern departments of Bolivia, particularly Santa Cruz de la Sierra, where the only improved transport corridor of Bolivia running to Cochabamba and La Paz begins.

The new bridge and the border center will be located near the current Salvador Mazza-Yacuiba bridge, which links Argentina and Bolivia. The future bridge will be accessed from National Route No. 34 (from Aguaray to the border with Bolivia).

## PROGRESS ANALYSIS AND ASSESSMENT

The only individual project of this structured project forms part of the COSIPLAN Project Portfolio and is included in the Argentine Strategic Territorial Plan and the Bolivian Development Plan. Furthermore, an exchange of notes between both countries was effected expressing support to the project. At present, the project is at the pre-execution stage.

A binational work group was created in order to take actions and follow up on the construction of the YASMA bridge, analyzing the building of a single customs office as proposed by Argentina, an issue being currently negotiated by both countries.

Moreover, a change of the route alignment at Yacuiba was agreed, for which purpose the Bolivian Road Administration reviewed the project of the new YASMA bridge as well as the plans for the approach roads.

For the project to be modified, an aerial topographic survey using LIDAR technology was conducted in May 2013. The National Road Directorate of Argentina is examining the results obtained. Afterwards, the Argentine authorities will meet in October with representatives of the Road Administration of Bolivia, and then will issue a call for tender to undertake the works in the last quarter of this year.

## ARGENTINA - BOLIVIA WEST CONNECTION

COUNTRIES

SUBSECTOR

ESTIMATED INVESTMENT **477,000,000**

SOURCE OF FINANCING

PROJECT STAGE **PRE-EXECUTION**

LIFE CYCLE STAGES AND NUMBER OF PROJECTS 1 2 0 0

ESTIMATED PROJECT COMPLETION DATE **DECEMBER 2021**

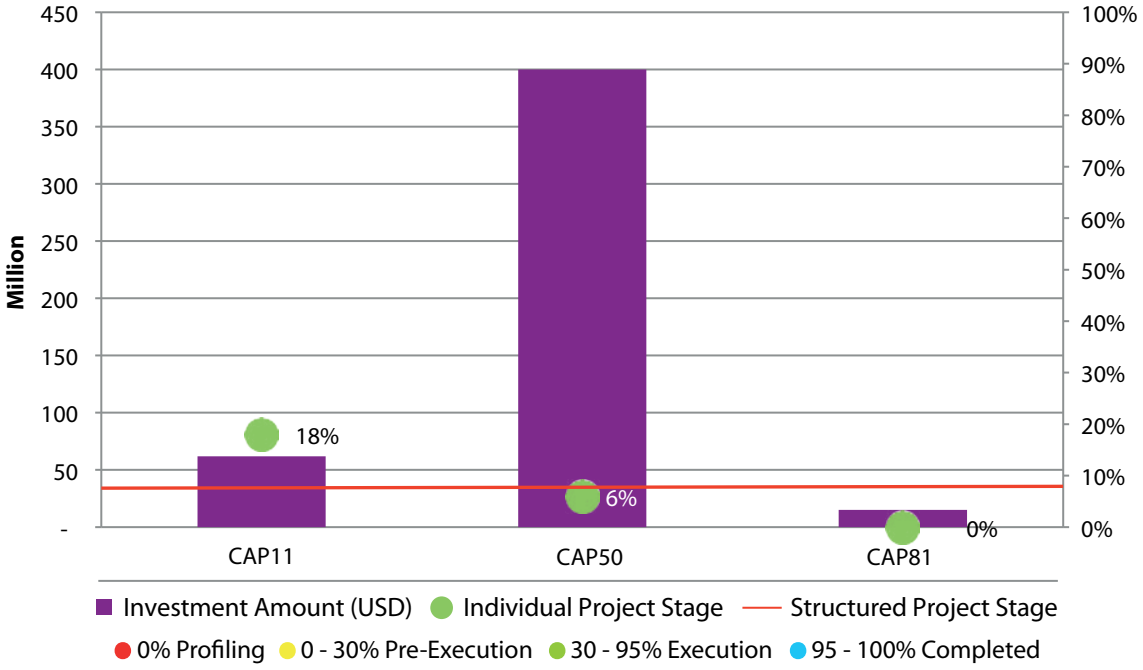
| Code | Stage | Name of the Individual Projects | Countries Involved | Estimated Investment (US$) |
|---|---|---|---|---|
| CAP11 | ● | REHABILITATION OF JUJUY - LA QUIACA RAILWAY | AR | 62,000,000 |
| CAP50 | ● | PAVING OF NATIONAL ROUTE No. 40, MINING CORRIDOR PATH (BORDER WITH BOLIVIA) | AR | 400,000,000 |
| CAP10 | ● | LA QUIACA - VILLAZÓN BRIDGE AND BORDER CENTER | AR - BO | 15,000,000 |

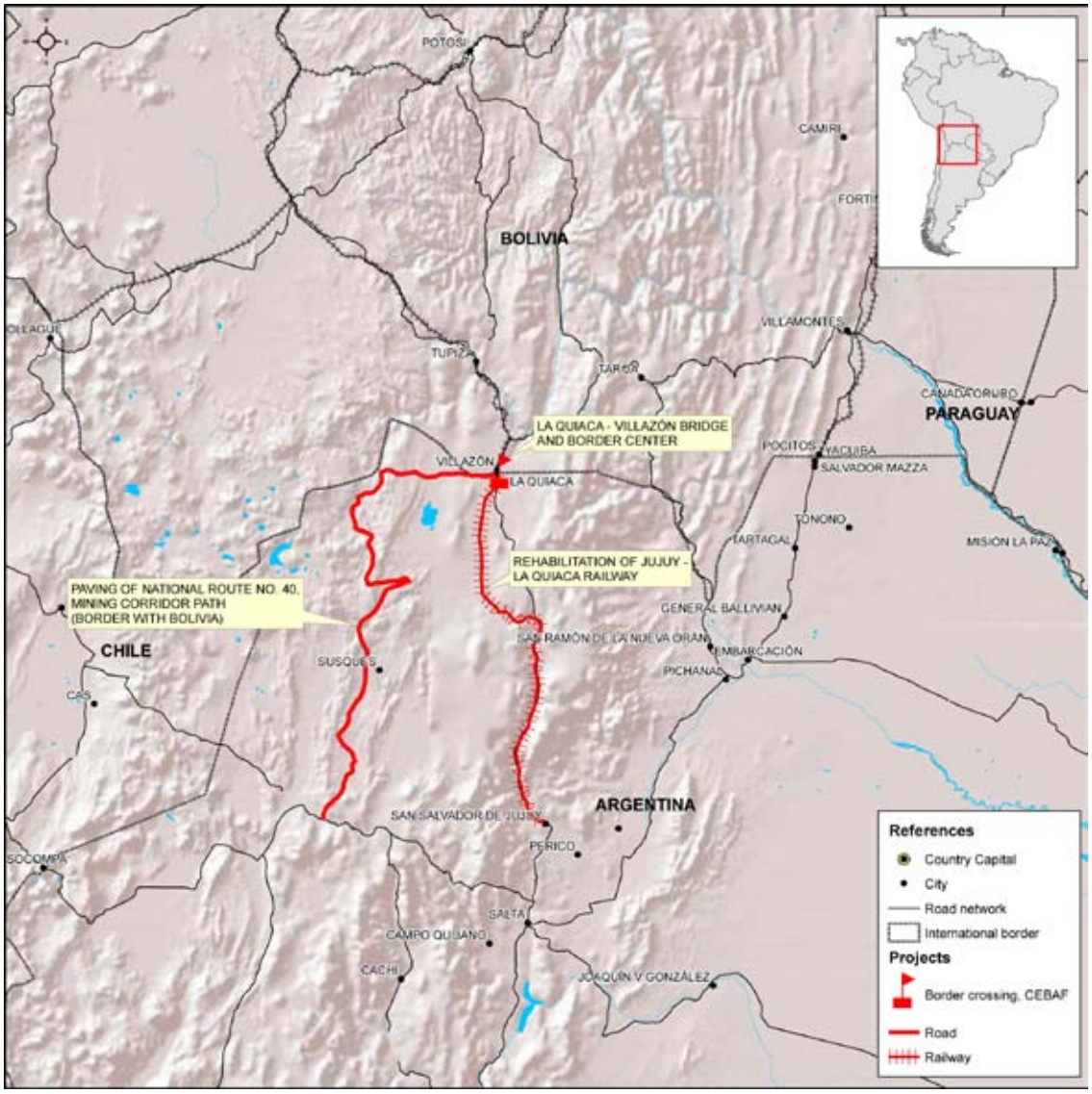
## PROJECT TECHNICAL SPECIFICATIONS

THE STRUCTURED PROJECT INVOLVES:

- Rehabilitation of 284 km of rail tracks.
- Paving of 300 km of roads.
- Construction of a bridge and a border center.

### STRUCTURED PROJECT CURRENT STATUS AND INDIVIDUAL PROJECTS STAGE AND ESTIMATED INVESTMENT




POTOSI
CAMIRI
BOLIVIA
VILLAMONTES
TUPIZA
TARIJA
CANADA ORURO
PARAGUAY
LA QUIACA - VILLAZÓN BRIDGE AND BORDER CENTER
POCITOS
YACUIBA
SALVADOR MAZZA
VILLAZÓN
LA QUIACA
TONONO
TARTAGAL
MISIÓN LA PAZ
REHABILITATION OF JUJUY - LA QUIACA RAILWAY
PAVING OF NATIONAL ROUTE NO. 40, MINING CORRIDOR PATH (BORDER WITH BOLIVIA)
GENERAL BALLIVIAN
SAN RAMÓN DE LA NUEVA ORAN
EMBARCACIÓN
CHILE
SUSQUES
PICHANAL
CAS
ARGENTINA
SAN SALVADOR DE JUJUY
PERICO
SOCOMPA
SALTA
CAMPO QUIJANO
CACHI
JOAQUÍN V GONZÁLEZ
References
Country Capital
City
Road network
International border
Projects
Border crossing, CEBAF
Road
Railway

10

CAPRICORN

## RATIONALE

The objective of this structured project is to solve the lack of efficient connectivity in the region, as the existing infrastructure has become a gridlock. The purpose is to turn the area into an integration node with a multimodal configuration, articulating and planning the use of the land, promoting the growth of production activities, and ordering traffic flows, thus preventing international freight trucks from entering border cities and towns.

The project will create significant synergies in terms of binational integration through the implementation of the individual projects included, covering a territorial strip that goes from the province of Jujuy in Argentina to the city of Oruro in Bolivia.

The implementation of this project will result in a smoother connection between the countries and shorter wait times on both sides of the border for freight and passenger traffic. Thus, the new alignment of National Route No. 40 in Argentina, the construction of a new bridge, the establishment of a border center, and the rehabilitation of the Jujuy-La Quiaca railway will help reverse the sprawl of the cities and towns adjacent to the current border crossing and alleviate vehicular and pedestrian traffic.

In addition, complementary actions are needed to properly serve the border strip, including border crossing infrastructure, management of the border service center, and the tapping of opportunities for the implementation of measures aimed at improving logistics and production integration, all this taking into account the preservation of the environment and any other significant territorial impact.

## PROPOSAL

This structured project is made up of the following individual projects:

- Rehabilitation of Jujuy - La Quiaca Railway;
- Paving of National Route No. 40, Mining Corridor Path (Border with Bolivia);
- La Quiaca (Argentina) - Villazón (Bolivia) Bridge and Border Center.

The railway route starts in the city of Jujuy and runs to the farthest northwestern town of Argentina —La Quiaca—, connecting with the town of Villazón in Bolivia through the current rail bridge. The route continues on the Bolivian territory up to Oruro. In addition, the new bridge and border center to be constructed would be close to the existing international bridge.

With regard to National Route No. 40 in the province of Jujuy (Mining Corridor Path), the new alignment starts in San Antonio de los Cobres, in the province of Salta (in the proximity of the border with the province of Jujuy), passes through a series of localities, and ends in La Quiaca (border with Bolivia).

## PROGRESS ANALYSIS AND ASSESSMENT

All the projects form part of the COSIPLAN Project Portfolio and are included in the Argentine Strategic Territorial Plan and the Bolivian National Development Plan. Each individual project is in a different phase —the rail rehabilitation project has completed its pre-feasibility study, the paving of National Route No. 40 project is at the pre-execution stage, while the alignment and bridge with border center project is at the profiling stage.

Therefore, it is advisable to conduct a comprehensive study to identify the stages for their implementation, follow-up and monitoring. In addition, it is expected that before the end of this year the Joint Technical Group will resume its meetings aimed at strengthening the technical dialogue on sectoral issues of common interest, particularly in relation to border integration, in order to coordinate actions with a view to improving connectivity.

## PARANAGUÁ - ANTOFAGASTA BIOCEANIC RAILWAY CORRIDOR

COUNTRIES

SUBSECTOR

ESTIMATED INVESTMENT **5,102,177,392**

SOURCE OF FINANCING

PROJECT STAGE **PRE-EXECUTION**

LIFE CYCLE STAGES AND NUMBER OF PROJECTS 2 6 0 1

ESTIMATED PROJECT COMPLETION DATE **JANUARY 2022**

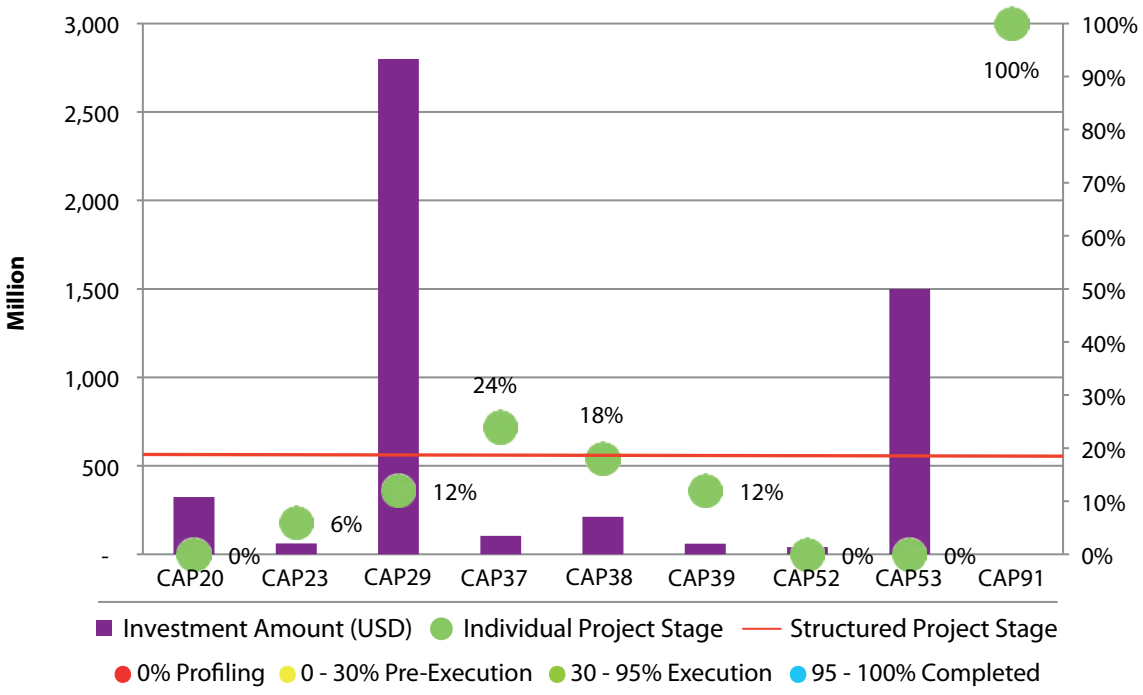
| Code | Stage | Name of the Individual Projects | Countries Involved | Estimated Investment (US$) |
|---|---|---|---|---|
| CAP20 | 🔴 | CASCAVEL - FOZ DO IGUAÇU BIOCEANIC RAILWAY CORRIDOR | BR | 324,000,000 |
| CAP23 | 🟡 | STUDY FOR THE OPTIMIZATION OF THE ÑEEMBUCÚ - BERMEJO NODE | AR - PA | 61,206,392 |
| CAP29 | 🟡 | CONSTRUCTION OF CIUDAD DEL ESTE - ÑEEMBUCÚ RAILWAY | PA | 2,800,000,000 |
| CAP37 | 🟡 | REHABILITATION OF THE C3 RAILWAY BRANCH LINE: RESISTENCIA - AVIA TERAI - PINEDO | AR | 104,000,000 |
| CAP38 | 🟡 | REHABILITATION OF THE C12 RAILWAY BRANCH LINE: AVIA TERAI - METÁN | AR | 212,000,000 |
| CAP39 | 🟡 | REHABILITATION OF THE C14 RAILWAY BRANCH LINE: SALTA - SOCOMPA | AR | 60,000,000 |
| CAP52 | 🔴 | RAILWAY BRIDGE WITH FREIGHT YARD (CIUDAD DEL ESTE - FOZ DO IGUAÇU) | BR - PA | 40,971,000 |
| CAP53 | 🟡 | BIOCEANIC RAILWAY CORRIDOR: PARANAGUÁ - CASCAVEL SECTION AND GUARAPUAVA - INGENIERO BLEY RAILWAY BYPASS | BR | 1,500,000,000 |
| CAP91 | 🔵 | BIOCEANIC RAILWAY CORRIDOR, CHILEAN SECTION (ANTOFAGASTA - SOCOMPA) | CH | 0 |

## PROJECT TECHNICAL SPECIFICATIONS

THE STRUCTURED PROJECT INVOLVES:

- Construction of three rail corridors running along a total of 1,224 km.
- Construction of a 600-m long bridge with freight yard.
- Rehabilitation of four railway branch lines running along a total of 1,865.4 km.
- Improvement of a bimodal bridge.

### STRUCTURED PROJECT CURRENT STATUS AND INDIVIDUAL PROJECTS STAGE AND ESTIMATED INVESTMENT




## LAST YEAR'S MAJOR DEVELOPMENTS

- Project REHABILITATION OF THE C14 RAILWAY BRANCH LINE: SALTA – SOCOMPA made 6% progress, thus completing its pre-feasibility studies.


PERÚ
La Paz
BOLIVIA
BRASIL
PARAGUAY
Asunción
CHILE
ARGENTINA
URUGUAY
Santiago
Buenos Aires
Montevideo
BIOCEANIC RAILWAY CORRIDOR. CHILEAN SECTION (ANTOFAGASTA – SOCOMPA)
REHABILITATION OF THE C14 RAILWAY BRANCH LINE: SALTA - SOCOMPA
REHABILITATION OF THE C12 RAILWAY BRANCH LINE: AVIA TERAI - METÁN
REHABILITATION OF THE C3 RAILWAY BRANCH LINE: RESISTENCIA - AVIA TERAI - PINEDO
CASCAVEL - FOZ DO IGUAÇU BIOCEANIC RAILWAY CORRIDOR
OPTIMIZATION OF THE ÑEEMBUCÚ - BERMEJO BRIDGE NODE
CONSTRUCTION OF CIUDAD DEL ESTE - PILAR RAILWAY
RAILWAY BRIDGE WITH FREIGHT YARD (CIUDAD DEL ESTE - FOZ DO IGUAÇU)
BIOCEANIC RAILWAY CORRIDOR: PARANAGUÁ - CASCAVEL SECTION AND GUARAPUAVA - INGENIERO BILEY RAILWAY BYPASS
References
Country Capital
City
Road network
International border
Projects
Railway
Bridge
Railway

11

CAPRICORN

## RATIONALE

The Paranaguá-Antofagasta rail corridor is often mentioned in joint statements issued by the presidents of the countries involved as an emblematic project for the regional infrastructure integration process.

This project aims at providing a multilateral rail connection for cargo transportation in the Capricorn Hub, linking the countries concerned from the Antofagasta port, in Chile, through the northern area of Argentina, Paraguay and the Brazilian territory, up to the Paranaguá port in Brazil.

The bioceanic corridor seeks to reduce the medium- and long-distance logistics costs and encourage trade. It will facilitate the exchange of goods between the eastern and western coasts of the continent, by enabling the transport of the increasing flows of imports and exports from and to South America, either through the Atlantic or the Pacific oceans. This access facilitation is expected to have a positive impact on the integration of logistics and production chains, especially those related to grain, meat and mineral processing.

The purpose of the project is to strengthen a connectivity network with a regional scope by integrating existing rail networks and consolidating a physical and operational single unit. In addition, it provides for complementary works and for other structural, regulatory, technical security and operational conditions required to ensure a continuous flow as well as an effective integration of all the sections.

In general, railway systems are old and in poor condition, which does not allow big trains to run. Therefore, this project is of great importance, as it will help increase rail-dependent economies of scale.

## PROPOSAL

The nine individual projects that constitute this structured project are aimed at rehabilitating rail lines, building stretches of track that represent missing links, and strengthening or upgrading the bridges and freight yards, resulting in a meter gage railway interconnecting the four countries and the Pacific and Atlantic oceans.

Three of the nine projects are located in Argentina and their purpose is to rehabilitate rail tracks, namely: i) Rehabilitation of the C3 Railway Branch Line: Resistencia - Avia Terai - Pinedo; ii) Rehabilitation of the C12 Railway Branch Line: Avia Terai - Metán; and iii) Rehabilitation of the C14 Railway Branch Line: Salta – Socompa.

Two projects involve the Brazilian territory: i) the construction of the Cascavel-Foz do Iguaçu stretch; and ii) the upgrade of the Paranaguá-Cascavel section and the construction of the Guarapuava-Engenheiro Bley rail bypass. One project is located in Chile: Bioceanic Railway Corridor, Chilean Section (Antofagasta - Socompa). Another one is in Paraguay: Construction of Ciudad del Este - Pilar Railway. There is a further project articulating Argentina with Paraguay: Optimization of the Ñeembucú Bridge - Bermejo River Node. Finally, another project joins Brazil and Paraguay: Railway Bridge with Freight Yard (Ciudad del Este - Foz do Iguaçu).

Additionally, it will be necessary to define and apply common parameters in all the countries for customs surveillance purposes, involving the most important operational patterns as well as actions aimed at improving regulatory, institutional and operational models. Thus, it is essential to work on a legal framework that should produce an adequate integrated operation scheme and smooth coordination mechanisms among the agencies in charge of the different sections that form part of the project.

The rehabilitation and improvement of the rail sections making up this corridor are included in the national plans of the countries concerned.

At the Sixth Meeting of the Working Group on the Rail Integration of the Atlantic-Pacific Bioceanic Corridor, a report on the studies funded by the Brazilian Development Bank (BNDES) was submitted for reference purposes only —i.e. it is not binding—, together with the progress on the sections in each country.

The first time that the Working Group on South American Rail Integration met as a subgroup —which was on September 12, 2014—, each country involved in the Corridor presented its report on the implementation of the project, and undertook to move forward in the definition of some pending issues related to the nodes connecting the Paraguayan section (the feasibility study of which is already completed) with Argentina and Brazil, as well as in operational and regulatory framework concerns.

Of the nine individual projects included, one is completed (the Antofagasta-Socompa section, in Chile), two are at the profiling stage, and the other six are at the pre-execution stage.

## FOZ DO IGUAÇU - CIUDAD DEL ESTE - ASUNCIÓN - CLORINDA ROAD CONNECTION

COUNTRIES

SUBSECTOR

ESTIMATED INVESTMENT **774,206,392**

SOURCE OF FINANCING

PROJECT STAGE **PRE-EXECUTION**

LIFE CYCLE STAGES AND NUMBER OF PROJECTS 0 2 1 0

ESTIMATED PROJECT COMPLETION DATE **DECEMBER 2020**

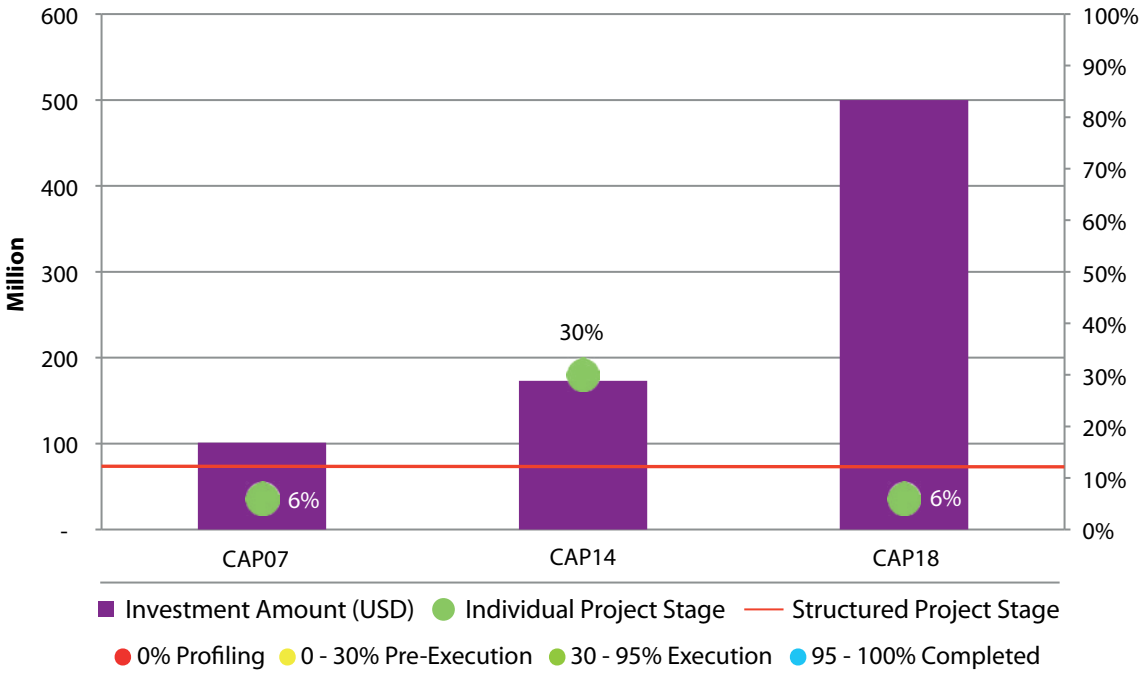
| Code | Stage | Name of the Individual Projects | Countries Involved | Estimated Investment (US$) |
|---|---|---|---|---|
| CAP07 | ● | OPTIMIZATION OF THE CLORINDA - ASUNCIÓN NODE | AR - PA | 101,206,392 |
| CAP14 | ● | NEW PUERTO PRESIDENTE FRANCO - PORTO MEIRA BRIDGE, WITH A PARAGUAY - BRAZIL INTEGRATED CONTROL AREA | BR - PA | 173,000,000 |
| CAP18 | ● | CONCESSION FOR THE IMPROVEMENT OF ROUTES No. 2 AND 7 (ASUNCIÓN - CIUDAD DEL ESTE) | PA | 500,000,000 |

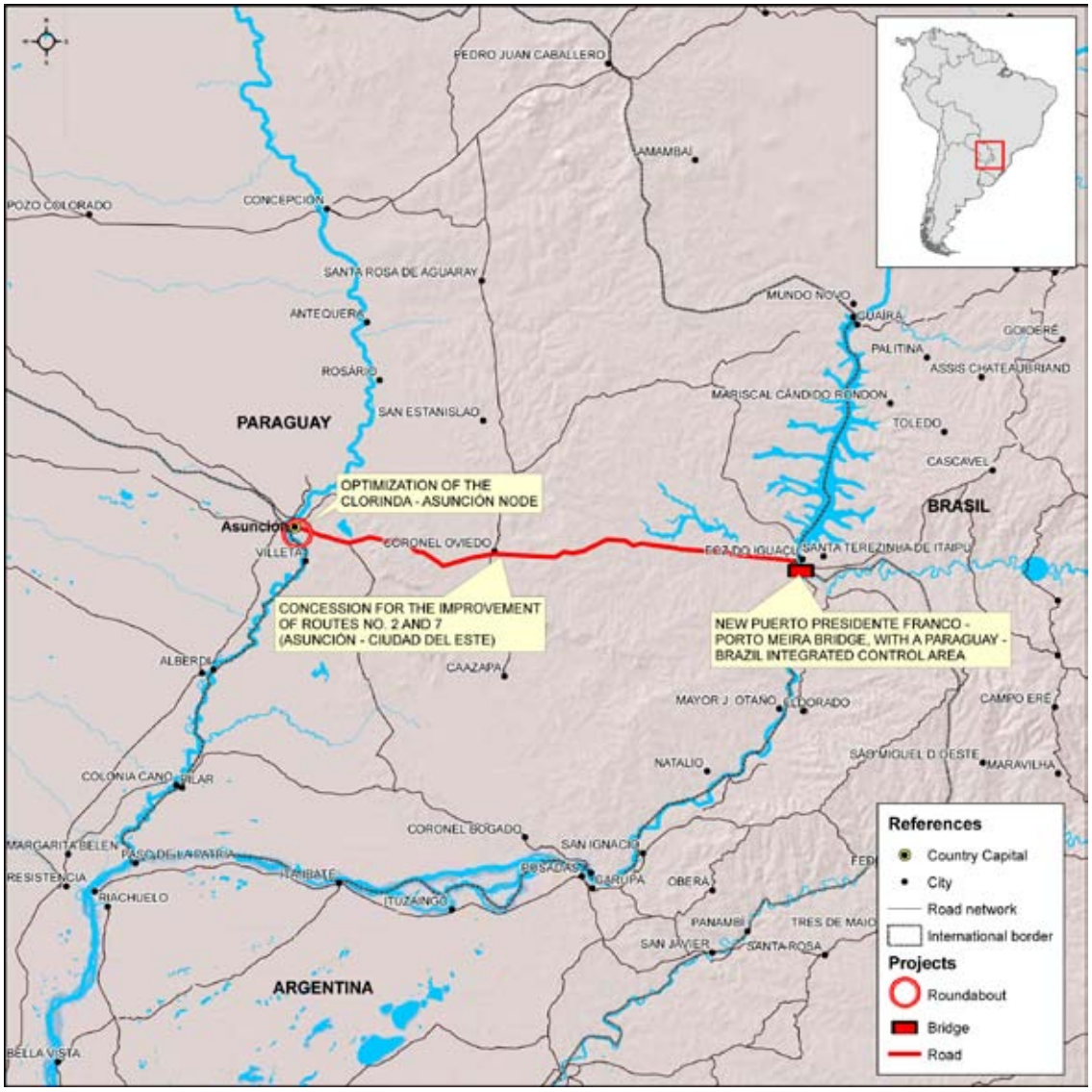
## PROJECT TECHNICAL SPECIFICATIONS

THE STRUCTURED PROJECT INVOLVES:

- Improvement of two routes along 297 km.
- Construction of a 760-m long bridge.
- Upgrade of a road interchange.

### STRUCTURED PROJECT CURRENT STATUS AND INDIVIDUAL PROJECTS STAGE AND ESTIMATED INVESTMENT




PEDRO JUAN CABALLERO
AMAMBAY
POZO COLORADO
CONCEPCION
SANTA ROSA DE AGUARAY
ANTEQUERA
ROSARIO
SAN ESTANISLAO
PARAGUAY
MUNDO NOVO
GUAIRA
GOIOERÊ
PALITINA
ASSIS CHATEAUBRIAND
MARISCAL CÂNDIDO RONDON
TOLEDO
CASCAVEL
BRASIL
OPTIMIZATION OF THE CLORINDA - ASUNCIÓN NODE
Asunción
VILLETA
CORONEL OVIEDO
FOZ DO IGUAÇU
SANTA TEREZINHA DE ITAIPU
CONCESSION FOR THE IMPROVEMENT OF ROUTES NO. 2 AND 7 (ASUNCIÓN - CIUDAD DEL ESTE)
NEW PUERTO PRESIDENTE FRANCO - PORTO MEIRA BRIDGE, WITH A PARAGUAY - BRAZIL INTEGRATED CONTROL AREA
ALBERDI
CAAZAPA
MAYOR J. OTAÑO
CAMPO ERÊ
SÃO MIGUEL D'OESTE
MARAVILHA
NATALIO
COLONIA CANO
PILAR
CORONEL BOGADO
SAN IGNACIO
MARGARITA BELEN
PASO DE LA PATRIA
RESISTENCIA
ITAPUA
POSADAS
OBERA
RIACHUELO
ITUZAINGO
PANAMBI
TRES DE MAIO
SAN JAVIER
SANTA ROSA
ARGENTINA
BELLA VISTA
References
Country Capital
City
Road network
International border
Projects
Roundabout
Bridge
Road

12

CAPRICORN

## RATIONALE

This structured project is fundamental to boost the economic activities between the metropolitan capital of Paraguay through the so-called Triple Frontier (Foz do Iguaçu, Ciudad del Este, Puerto Iguazú) up to the city of Clorinda, in Argentina. It therefore strengthens networks that are regional in scope and is instrumental in fostering regional connectivity and integration.

As for the structured project as a whole, there are important logistics and production integration opportunities to improve the quality of life of the population in the countries involved.

In this regard, this project seeks to enhance transportation in the Clorinda (Argentina), Asunción (Paraguay) and Paranaguá (Brazil) axis, which will cause a high impact on the integration of these cities with the southern and southeastern regions of Brazil. There is already an intense trade flow between the state of Paraná and Paraguay, the main production integration opportunities being those related to the seeds-fertilizers, capital goods, grain, and poultry production chains. The completion of the transmission line being constructed between the Itaipu hydroelectric dam and the capital of Paraguay is expected to enhance the integration of production chains, including energy-intensive industries.

Furthermore, from the city of Clorinda, located in the province of Formosa, the project connects to the west, through National Routes No. 11 and 81, with the Jama border crossing in the province of Jujuy, with the aim of getting into Chile (Iquique, Antofagasta and Mejillones ports) to export goods from the Pacific ocean.

It should be noted that the 193-km long Route No. 7 is a national road in Paraguay. It starts in the city of Coronel Oviedo and ends in Ciudad del Este at the Puente de la Amistad (Friendship Bridge), on the border with Brazil. On the west, in Coronel Oviedo, the name of the road changes and becomes National Route No. 2, ending in the city of Asunción. To the east, when it enters the Brazilian territory from Ciudad del Este, its name is BR-277 and is 132 km long. Along its sections, the highway has either two or four lanes.

## PROPOSAL

This project is made up of three individual projects located between Asunción and the border area of Foz do Iguaçu, in Brazil.

The goal of the first project is to devise an alternative to the crossroads in the Clorinda-Asunción Metropolitan Area node. Although the carrying capacity of the current bridge, known as San Ignacio de Loyola, is adequate for existing traffic, there is a concern about frequent congestion at both ends of the bridge.

The second project involves the construction of a second international bridge over the Paraná river to enhance the connection between Brazil and Paraguay, in addition to a border center for integrated control operations. The purpose is to contribute to the orderly growth of border cities and towns, enhance transportation systems, and improve border surveillance.

The third project is aimed at awarding the concession for the operation and improvement of the two busiest highways in Paraguay, located between Asunción and Ciudad del Este. These highways form part of the Asunción-Paranaguá corridor and will facilitate trade between Brazil and Paraguay.

The Optimization of the Clorinda - Asunción Node project forms part of the Argentine Strategic Territorial Plan, and its binational study will be funded through a contingent-recovery technical cooperation agreement entered into by both countries and FONPLATA. The contract with the company that was awarded the project, which is called Serman, was signed on March 6, 2014, at the Ministry of Public Works and Communications of the Republic of Paraguay. The time frame for completing the project is nine months.

The New Puerto Presidente Franco - Porto Meira Bridge project is included in the Brazilian Growth Acceleration Program (or PAC, its acronym in Portuguese), and a bilateral agreement concerning its implementation, which came into force on October 1, 2008, has been signed and approved by the Brazilian and Paraguayan congresses. The studies started in September 2007, and works are scheduled to be completed by April 2015.

In addition, the commencement of the studies for the improvement of Routes No. 2 and 7 is contingent on the approval of the Paraguayan Congress, which is currently considering the project.

## ITAIPU - ASUNCIÓN - YACYRETÁ 500-KV TRANSMISSION LINE

COUNTRIES

SUBSECTOR

ESTIMATED INVESTMENT **852,000,000**

SOURCE OF FINANCING

PROJECT STAGE **EXECUTION**

LIFE CYCLE STAGES AND NUMBER OF PROJECTS 0 0 1 1

ESTIMATED PROJECT COMPLETION DATE **AUGUST 2017**

| Code | Stage | Name of the Individual Projects | Countries Involved | Estimated Investment (US$) |
|---|---|---|---|---|
| CAP67 | ● | 500-KV TRANSMISSION LINE (ITAIPU - VILLA HAYES) | PA | 555,000,000 |
| CAP68 | ● | 500-KV TRANSMISSION LINE (YACYRETÁ - VILLA HAYES) | PA | 297,000,000 |

13

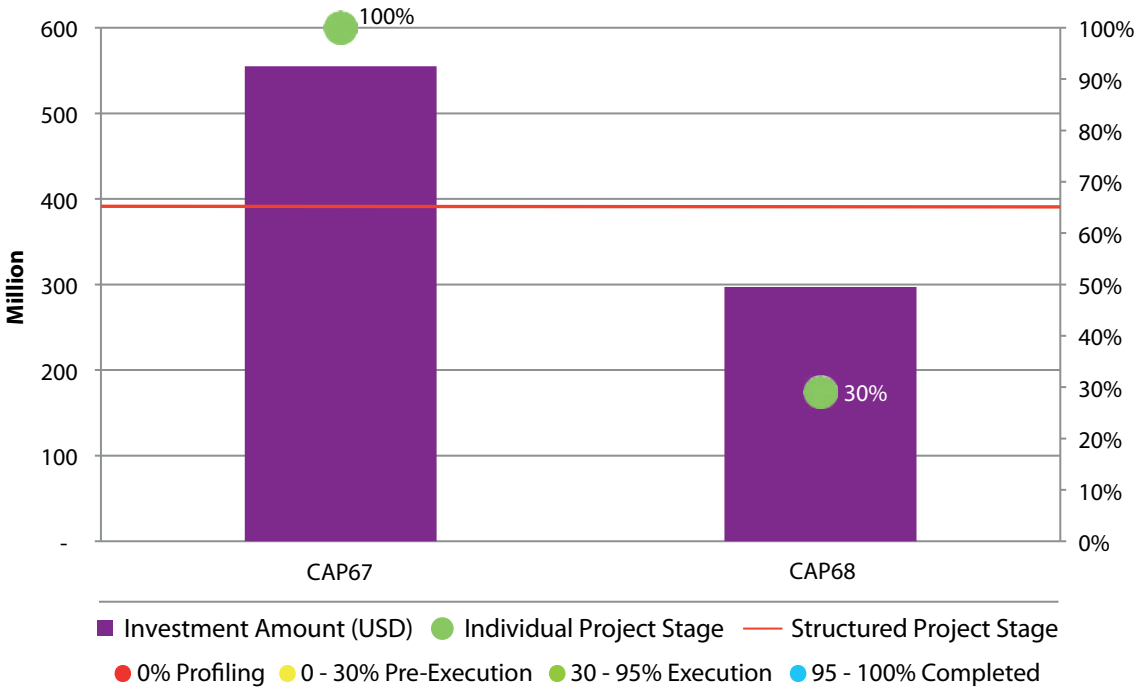
CAPRICORN

## PROJECT TECHNICAL SPECIFICATIONS

THE STRUCTURED PROJECT INVOLVES:

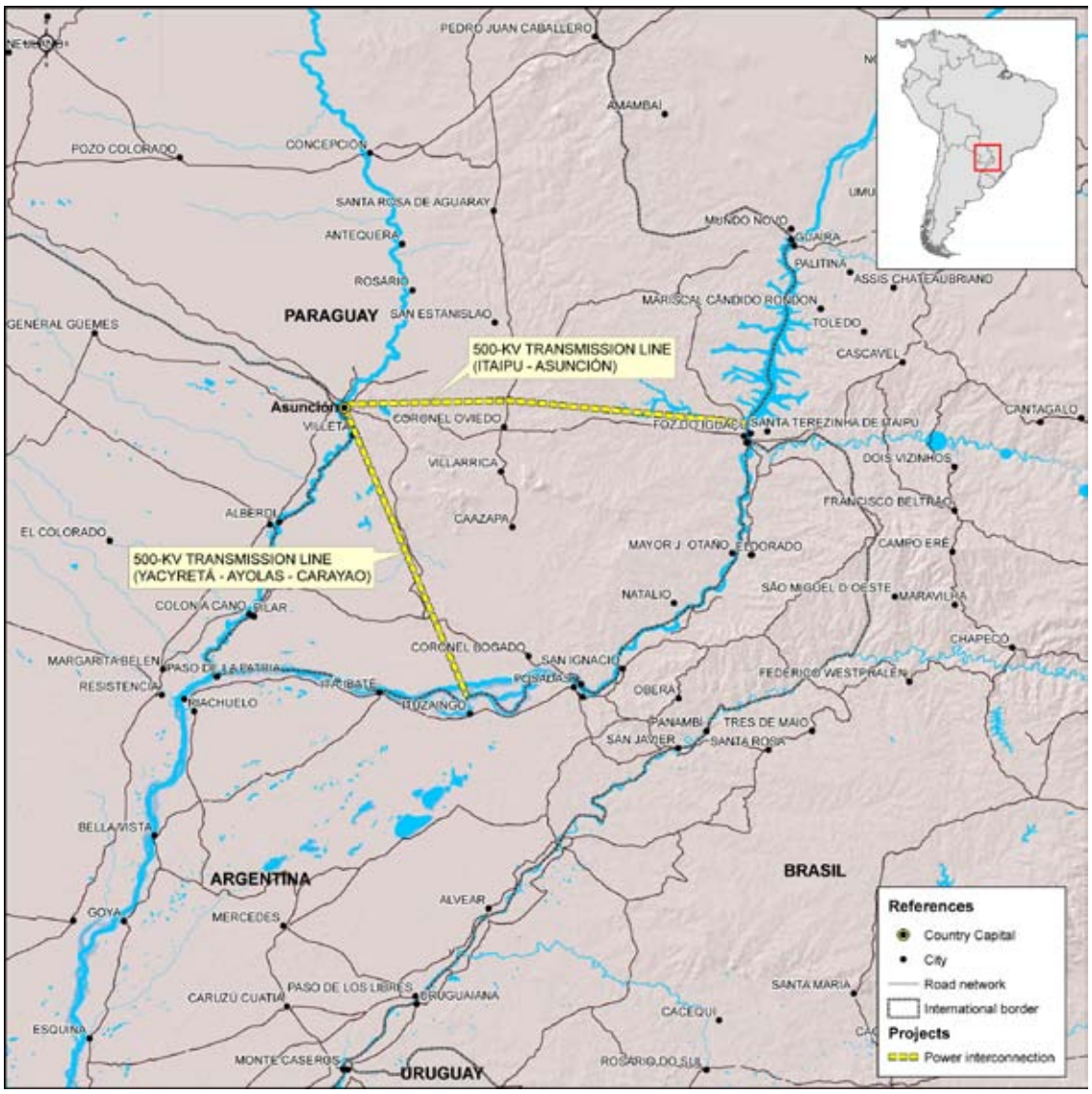
- Two 500-kV transmission lines along 624 km.

### STRUCTURED PROJECT CURRENT STATUS AND INDIVIDUAL PROJECTS STAGE AND ESTIMATED INVESTMENT




## LAST YEAR'S MAJOR DEVELOPMENTS

- Project 500-KV TRANSMISSION LINE (YACYRETÁ - VILLA HAYES) made 12% progress, securing the resources to commence the works.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POZO COLORADO
CONCEPCION
SANTA ROSA DE AGUARAY
ANTEQUERA
MUNDO NOVO
GUAIRA
PALITINA
ASSIS CHATEAUBRIAND
ROSARIO
PARAGUAY
SAN ESTANISLAO
MARISCAL CANDIDO RONDON
GENERAL GUEMES
TOLEDO
CASCAVEL
500-KV TRANSMISSION LINE
(ITAIPU - ASUNCION)
Asunción
VILLETA
CORONEL OVIEDO
FOZ DO IGUAÇU
SANTA TEREZINHA DE ITAIPU
CANTAGALO
VILLARRICA
DOIS VIZINHOS
FRANCISCO BELTRÃO
ALBERDI
CAAZAPA
EL COLORADO
MAYOR J. OTAÑO
EDORADO
CAMPO ERÊ
500-KV TRANSMISSION LINE
(YACYRETÁ - AYOLAS - CARAYAO)
NATALIO
SÃO MIGUEL D'OESTE
MARAVILHA
COLONIA CANO
PILAR
CHAPECO
CORONEL BOGADO
SAN IGNACIO
MARGARITA BELEN
PASO DE LA PATRIA
FEDERICO WESTPHALEN
RESISTENCIA
ITATIBATE
POSADAS
OBERA
ITUZAINGO
PANAMBI
TRES DE MAIO
SAN JAVIER
SANTA ROSA
BELLA VISTA
ARGENTINA
BRASIL
ALVEAR
GOYA
MERCEDES
SANTA MARIA
PASO DE LOS LIBRES
CARUZU CUATIA
URUGUAIANA
CACEQUI
ESQUINA
MONTE CASEROS
ROSARIO DO SUL
URUGUAY
References
Country Capital
City
Road network
International border
Projects
Power interconnection

13

CAPRICORN

## RATIONALE

This structured project supports networks with a regional scope, since it will substantially enhance power supply security in Paraguay as well as facilitate electricity exchange with Argentina through the 220-kV interconnection already in place between the cities of Clorinda (Argentina) and Guarambaré (Paraguay). Furthermore, the need for complementary actions in the regulatory field has been pointed out, with a view to facilitating trade in electric power between Argentina and Paraguay.

This project is in line with the Declaration of Intent issued by the Government of the Federal Republic of Brazil and the Government of the Republic of Paraguay over a technical cooperation for the development of the basic design of the 500-kV transmission line between the Itaipu-Right Bank Substation and the Limpio Substation in the city of Asunción, signed on June 28, 2007, in Asunción, as well as with the Joint Declaration of the Presidents of Brazil and Paraguay made on July 25, 2009, in Asunción.

The purpose of the 500-kV Transmission Line (Itaipu - Villa Hayes) project is to improve service quality and supply reliability, providing a solution to the low voltage of the grid that supplies the city of Asunción. The intention is to reduce the significant technical losses in transmission, which can be as high as 10% during peak hours. The transmission lines are currently operating at more than 85% of their capacity, and the power transformers of the interconnection with the Itaipu dam were already operating at full capacity in 2011. The purpose of the 500-kV Transmission Line (Yacyretá - Villa Hayes) project is to improve service quality and supply reliability by coming up with a solution to the low voltage of the grid, which will help reduce technical losses as high as 10% during peak hours. At present, the transmission lines are operating at more than 70% of their capacity, and the transformers are being used at almost full capacity.

## PROPOSAL

This structured project comprises two individual projects concerned with electric-power transmission lines: i) 500-kV Transmission Line (Itaipu - Villa Hayes); and ii) 500-kV Transmission Line (Yacyretá - Villa Hayes). The first line extends from the right bank of the Itaipu dam to the power station located in Villa Hayes, a city neighboring Asunción. The second line runs from Yacyretá (Ayolas) to the Villa Hayes power station.

## PROGRESS ANALYSIS AND ASSESSMENT

The Itaipu-Villa Hayes 500-kV transmission line project has been completed, the works having been handed over in October 2013. The Yacyretá-Villa Hayes 500-kV transmission line project is in the tendering process, and commencement of the works is scheduled for late 2014.

# GUIANESE SHIELD HUB

## PROJECTS

STRUCTURED **3** INDIVIDUAL **6**

## ESTIMATED INVESTMENT

**958.8**
US$ Million

## BY SUBSECTOR

6

958.8

## BY SOURCE OF FINANCING

5 — 1

658.0 — 300.8

# F. GUIANESE SHIELD HUB (BRAZIL, GUYANA, SURINAME AND VENEZUELA)

This Hub covers the eastern region of Venezuela (the states of Anzoátegui, Bolívar, Delta Amacuro, the Capital District, Nueva Esparta, Guárico, Miranda, Monagas, Sucre, and Vargas), Brazil's northern arc (the states of Amapá, Roraima, Amazonas, and Pará), and all of the territory of Guyana and Suriname. The area of influence defined for the Hub covers 4,002,555 km$^2$, accounting for 40.8% of the total area of the countries that make it up.

In 2008, the total population of the area of influence was estimated at 24,488,563 inhabitants, accounting for 11.2% of the total population of the countries that make up the Hub. Furthermore, the area of influence has an average population density of a little over 6 inhabitants per km$^2$. This indicator ranges from a maximum 4,830 inhabitants per km$^2$ in the Capital District of Venezuela to a minimum of almost 2 inhabitants per km$^2$ in the Brazilian state of Roraima. The region has one of the lowest population densities of the Integration and Development Hubs defined within the framework of API.
API includes projects from three of the four project groups of this Hub: i) G1 - Venezuela - Brazil Interconnection; ii) G2 - Brazil - Guyana Interconnection; and iii) G3 - Venezuela (Ciudad Guayana) - Guyana (Georgetown) - Suriname (Paramaribo) Interconnection.

Table F.1 shows the six individual projects that make up the three structured projects of the Guianese Shield Hub incorporated into API. The estimated investments involved amount to US$958.8 million. The projects are aimed at enhancing road connection between Caracas and Manaus; paving the still unsurfaced sections of the main connection between Brazil and Guyana; improving the routes interconnecting Ciudad Guayana (Venezuela) - Georgetown (Guyana) and Apura - Zanderij - Paramaribo (Suriname); and, finally, building a bridge linking Guyana and Suriname over the Corentyne river. The three projects comply with the selection criteria set out for inclusion in the Agenda, and their purpose is significantly in line with the strategic functions of the Hub's project groups involved in API.

Map F.1 • **API Projects - Guianese Shield Hub**


REHABILITATION OF THE CARACAS - MANAUS ROAD

BOA VISTA - BONFIM - LETHEM - LINDEN - GEORGETOWN ROAD

ROUTES INTERCONNECTING VENEZUELA (CIUDAD GUAYANA) - GUYANA (GEORGETOWN) - SURINAME (SOUTH DRAIN - APURA - ZANDERIJ - MOENGO - ALBINA), INCLUDING CONSTRUCTION OF THE BRIDGE OVER THE CORENTYNE RIVER

Table F.1 • **API Projects - Guianese Shield Hub**

| # | Structured Project Name | No. of Individual Projects | Countries | API amount (million US$) | Stage | Code | Name of the Individual Projects | Countries Involved | PG | Project Stage | Amount (US$) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 14 | REHABILITATION OF THE CARACAS - MANAUS ROAD | 1 | BR - VE | 407.0 | ● | GUY01 | REHABILITATION OF THE CARACAS - MANAUS ROAD | BR - VE | G01 | ● | 407,000,000 |
| 15 | BOA VISTA - BONFIM - LETHEM - LINDEN - GEORGETOWN ROAD | 3 | BR - GU | 250.0 | ● | GUY09 | LETHEM - LINDEN ROAD | GU | G02 | ● | 250,000,000 |
| | | | | | | GUY42 | BOA VISTA - BONFIM ROAD* | BR | G02 | ● | 0 |
| | | | | | | GUY43 | LINDEN - GEORGETOWN ROAD* | GU | G02 | ● | 0 |
| 16 | ROUTES INTERCONNECTING VENEZUELA (CIUDAD GUAYANA) - GUYANA (GEORGETOWN) - SURINAME (SOUTH DRAIN - APURA - ZANDERIJ - MOENGO - ALBINA), INCLUDING CONSTRUCTION OF THE BRIDGE OVER THE CORENTYNE RIVER | 2 | GU - SU VE | 301.8 | ● | GUY18 | ROUTES INTERCONNECTING VENEZUELA (CIUDAD GUAYANA) - GUYANA (GEORGETOWN) - SURINAME (APURA - ZANDERIJ - PARAMARIBO) | GU - SU VE | G03 | ● | 300,800,000 |
| | | | | | | GUY24 | CONSTRUCTION OF THE BRIDGE OVER THE CORENTYNE RIVER | GU - SU | G03 | ● | 1,000,000 |

* These two Individual projects were completed before the creation of API and incorporated into the Agenda because they supplement the connectivity network of the structured project.

Table F.2 • **API Projects - Guianese Shield Hub by Life Cycle Stage**

(number of projects, million US$ and percentage)

| Project Stage | No. of Projects | % of Projects | Investment Amount | % of Investment Amount |
|---|---|---|---|---|
| Profiling | 2 | 33.3 | 301.8 | 31.5 |
| Pre-Execution | 1 | 16.7 | 250.0 | 26.1 |
| Execution | 1 | 16.7 | 407.0 | 42.4 |
| Completed (*) | 2 | 33.3 | 0 | 0.0 |
| **TOTAL** | 6 | 100.0 | 958.8 | 100.0 |

Note: Amounts are estimated on the basis of the life cycle stage at which the API individual projects are.

(*) There are two individual projects that were completed before the creation of API, but are part of a structured project. These projects are GUY42 and GUY43, the investment amounts of which are not available.

Figure F.1 • **API Projects - Guianese Shield Hub by Life Cycle Stage**

(% of number of projects and % of investment amount)

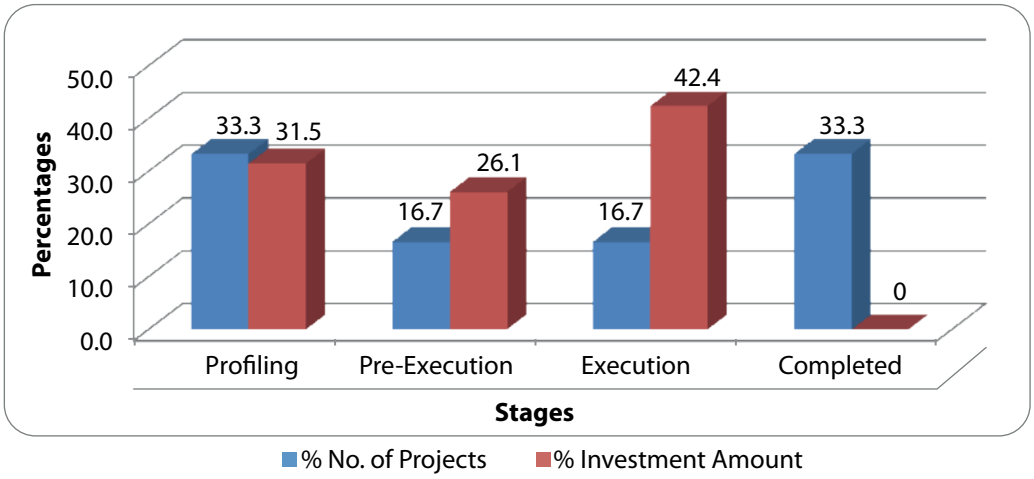



Figure F.2 • **API Projects - Guianese Shield Hub by Subsector**

(% of number of projects and % of investment amount)

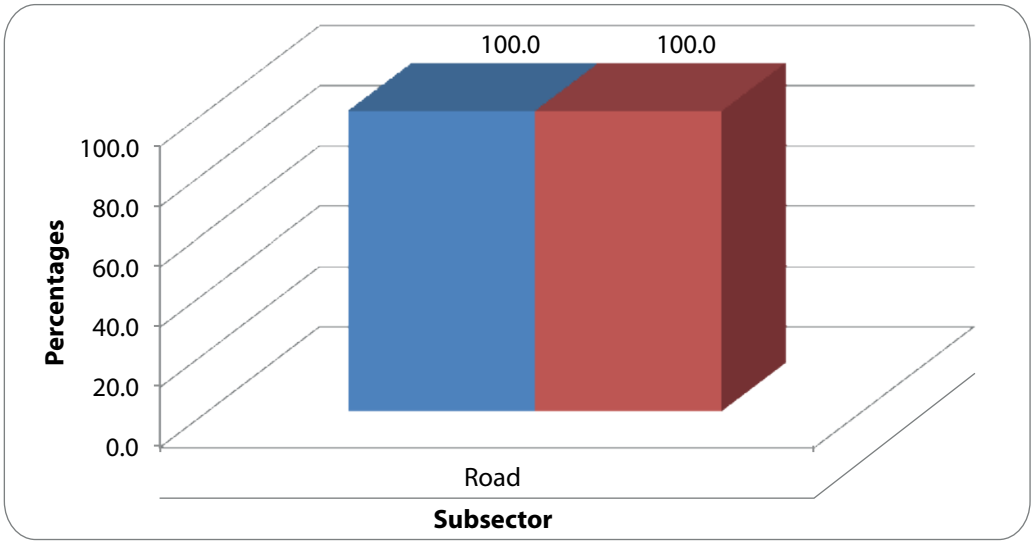


Figure F.3 • **API Projects - Guianese Shield Hub by Source of Financing**

(% of number of projects and % of investment amount)

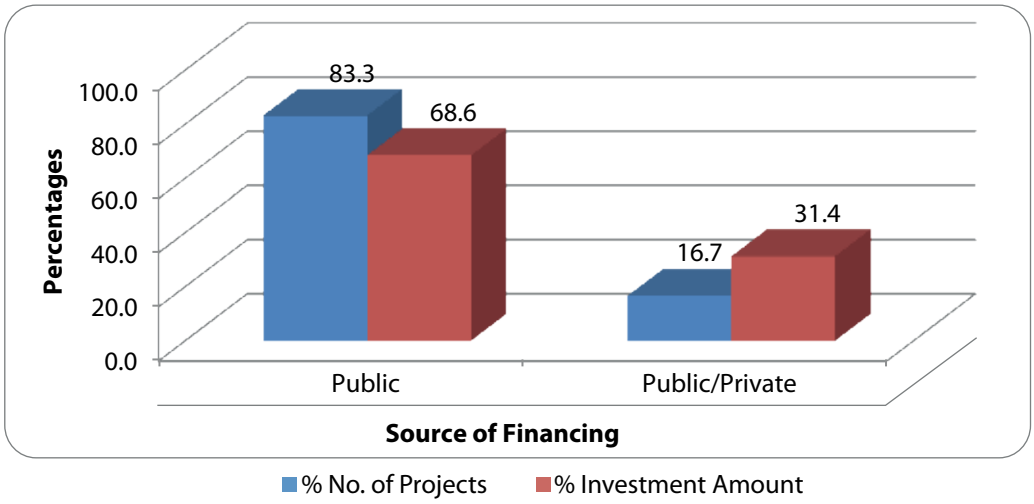



Table F.3 • **API Projects Technical Specification- Guianese Shield Hub**

The API projects in this Hub involve:

- Rehabilitation of two road corridors, one of which is 975-km long.
- Paving of 646.7 km of roads.
- Construction of a bridge.

## REHABILITATION OF THE CARACAS - MANAUS ROAD

COUNTRIES 

SUBSECTOR 

ESTIMATED INVESTMENT **407,000,000**

SOURCE OF FINANCING 

PROJECT STAGE **EXECUTION**

LIFE CYCLE STAGES AND NUMBER OF PROJECTS 


ESTIMATED PROJECT COMPLETION DATE **DECEMBER 2015**

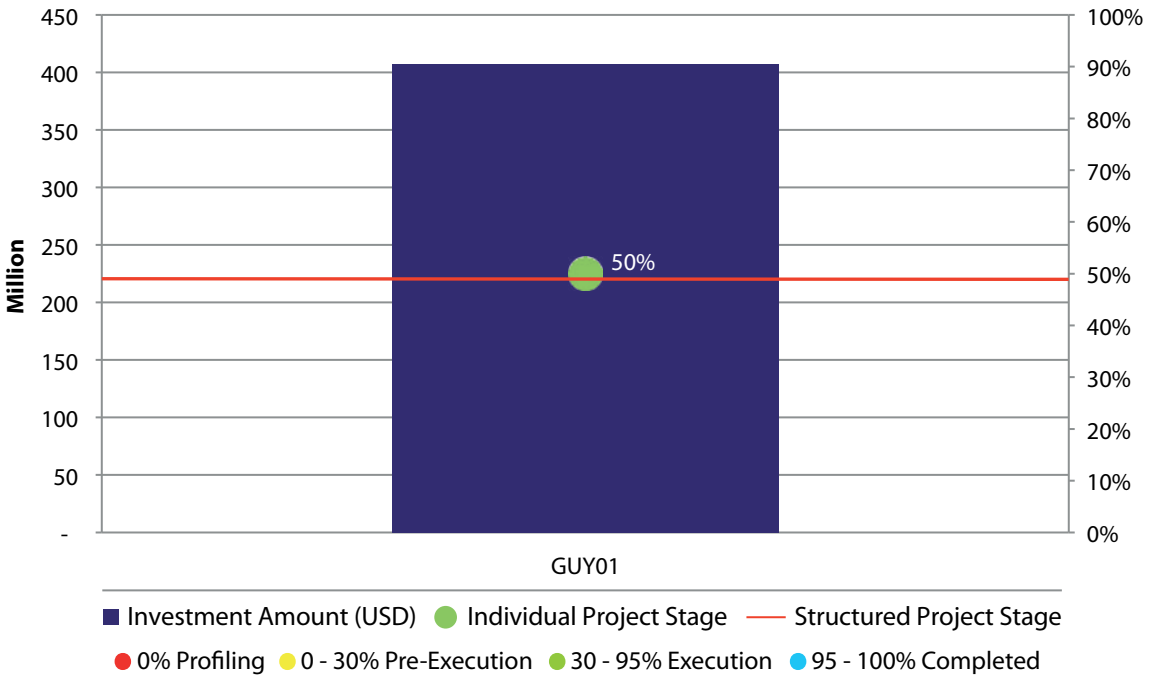
| Code | Stage | Name of the Individual Projects | Countries Involved | Estimated Investment (US$) |
|---|---|---|---|---|
| GUY01 | ● | REHABILITATION OF THE CARACAS - MANAUS ROAD | BR - VE | 407,000,000 |

## PROJECT TECHNICAL SPECIFICATIONS

THE STRUCTURED PROJECT INVOLVES:

- Rehabilitation of a 975-km long road corridor.

### STRUCTURED PROJECT CURRENT STATUS AND INDIVIDUAL PROJECTS STAGE AND ESTIMATED INVESTMENT




LA ASUNCION
CARUPANO
PUERTO ESPAÑA
CUMANA
GUATIRE
SAN FELIPE
MARACAY
Caracas
BARCELONA
BARQUISIMETO
SAN JUAN DE LOS MORROS
MATURIN
ACARIGUA
SAN CARLOS
ANACO
GUANARE
VALLE DE LA PASCUA
TUCUPITA
CALABOZO
EL TIGRE
CIUDAD GUAYANA
CIUDAD BOLIVAR
UPATA
SAN FERNANDO DE APURE
EL CALLAO
TUMEREMO
ARAUCA
VENEZUELA
Georgetown
BARTICA
NEW AMSTERDAM
PUERTO PAEZ
ROCKSTONE
LINDEN
NIEUW NICKERIE
PUERTO NUEVO
PUERTO AYACUCHO
Paramaribo
GREALLA
APURA
GUYANA
SURINAME
PUERTO INIRIDA
BETHEM
BOA VISTA
COLOMBIA
REHABILITATION OF THE CARACAS - MANAUS ROAD
MITU
BRASIL
References
Country Capital
City
Road network
International border
Project
Road
PERÚ
MANAUS
LETICIA

## RATIONALE

This project is significant on account of the importance of the Caracas-Manaus connection, as this is the only link between Venezuela and Brazil, running along the Brazilian federal longitudinal highway BR-174/AM/RR, through the BV-8 border (Santa Elena de Uairén), to the Venezuelan ports, mainly the one in Puerto Ordaz, along Trunk Road 10.

Route BR-174, which is 975-km long, runs from Manaus to Pacaraima, a Brazilian municipality located on the Brazil-Venezuela border. The territorial, socioeconomic and commercial development of the region benefited from its construction, which facilitated the movement of goods from/to their origin/destination, the mobility of people previously living in a quite isolated area, and a reduction in travel times and distances resulting in lower transport costs.

Thus, the works that need to be carried out in connection with the above-mentioned road are of major importance in the national and regional context, as the corridor will induce sustainable development in this peculiar geographical area of the Amazonia, helping improve the quality of life of people living in its cities, towns and villages and stimulate their respective production centers.

## PROPOSAL

The objective is to restore the pavement surface conditions in the critical sections of Route BR-174/AM/RR, the main deficiencies of which include patches, wear and tear, asphalt stripping, strain, and deterioration of the wearing surface. Rehabilitation requires recycling, drainage, waterproofing, reconstruction of the wearing surface, and traffic signing and road marking works. On the Venezuelan side, the road needs maintenance on a constant basis.

## PROGRESS ANALYSIS AND ASSESSMENT

With regard to the rehabilitation works on the Brazilian section, which are currently in execution, it should be noted that financial resources are allocated in the budgets of the federal government and the government of the state of Roraima. The project is included in the Brazilian Growth Acceleration Program (or PAC, its acronym in Portuguese), and works are scheduled to be completed in December 2015.

## BOA VISTA - BONFIM - LETHEM - LINDEN - GEORGETOWN ROAD

COUNTRIES

SUBSECTOR

ESTIMATED INVESTMENT **250,000,000**

SOURCE OF FINANCING

PROJECT STAGE **EXECUTION**

LIFE CYCLE STAGES AND NUMBER OF PROJECTS 0 1 0 2

ESTIMATED PROJECT COMPLETION DATE **OCTOBER 2021**

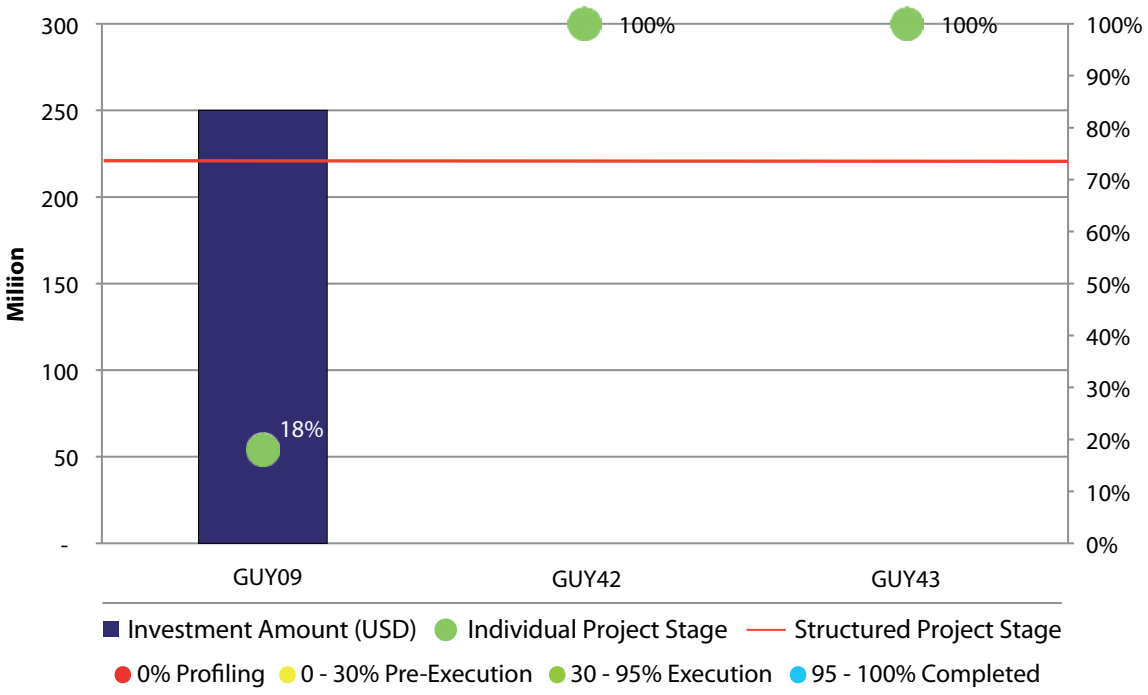
| Code | Stage | Name of the Individual Projects | Countries Involved | Estimated Investment (US$) |
|---|---|---|---|---|
| GUY09 | ● | LETHEM - LINDEN ROAD | GU | 250,000,000 |
| GUY42 | ● | BOA VISTA - BONFIM ROAD | BR | 0 |
| GUY43 | ● | LINDEN - GEORGETOWN ROAD | GU | 0 |

## PROJECT TECHNICAL SPECIFICATIONS

THE STRUCTURED PROJECT INVOLVES:

- Paving of 646.7 km of roads.

### STRUCTURED PROJECT CURRENT STATUS AND INDIVIDUAL PROJECTS STAGE AND ESTIMATED INVESTMENT




CIUDAD GUAYANA
SAN MARTIN
APATA
EL CALLAO
TUMEREMO
VENEZUELA
Georgetown
BARTICA
NEW AMSTERDAM
LINDEN - GEORGETOWN ROAD
LINDEN
NIEUW NICKERIE
ZUIDORAM
OREALLA
WACKAY
APURA
GUYANA
SURINAME
LETHEM - LINDEN ROAD
LETHEM
BOA VISTA
BOA VISTA - BONFIM ROAD
BRASIL
References
Country Capital
City
Road network
International border
Projects
Road

15

GUIANESE SHIELD

## RATIONALE

This project links the city of Boa Vista, in Brazil, with Georgetown, the capital of Guyana, and its completion will result in the most important north-south connection in Guyana, creating synergies with the initiatives aimed at implementing east-west links among Venezuela, Guyana and Suriname. Paving of the Lethem-Linden section will contribute to the integration between Brazil and Guyana, since this road is the only connection between both countries. Works on the Boa Vista-Bonfim (Brazil) and Linden-Georgetown (Guyana) sections as well as the bridge linking Bonfim and Lethem are already completed. Complementarily, the execution of this project is expected to attract greater trade with the Caribbean, the United States, Europe and Asia, as this road will be the shortest alternative route: the distance between Manaus and the Caribbean will be reduced by some 800 km. Furthermore, complementary actions are required concerning environmental preservation and the development of production and logistics integration. As regards the environment, it should be borne in mind that the road runs across environmentally sensitive areas, such as the rainforest and the Rupununi savannah. As for production and logistics integration, more detailed studies identifying the opportunities opened up by the paving of the section need to be conducted.

## PROPOSAL

The section of the road on the Brazilian side (Route BR-401/RR), which runs from Boa Vista to the border with Guyana, is in good condition, as is the bridge over the Takutu river, which joins Bonfim (Brazil) and Lethem (Guyana).

On the Guyanese side, two sections can be distinguished: the first one is the 70-km long Georgetown-Linden stretch, which is paved and in good condition; and the second section, spanning 453.7 km between Linden and Lethem, is an unpaved, low-standard road that includes fifty-one wooden bridges (which can bear a load of up to 8 tons) and a pontoon boat crossing over the Esequibo river, in Kurupukari.

## PROGRESS ANALYSIS AND ASSESSMENT

The section of Route BR 401/RR that spans from Boa Vista to Bonfim is paved and in good condition. The same holds for the Georgetown-Linden road section.

With reference to the Linden-Lethem section, the Governments of Brazil and Guyana created a joint Working Group that is exploring different financing possibilities to undertake the works in this road stretch as well as in the New Amsterdam deep water port and in the Upper and Middle Mazaruni hydroelectric power plants, in Guyana. As a result, a report will be issued including concrete actions and decisions.

## ROUTES INTERCONNECTING VENEZUELA (CIUDAD GUAYANA) - GUYANA (GEORGETOWN) - SURINAME (SOUTH DRAIN - APURA - ZANDERIJ - MOENGO - ALBINA), INCLUDING CONSTRUCTION OF THE BRIDGE OVER THE CORENTYNE RIVER

COUNTRIES

SUBSECTOR

ESTIMATED INVESTMENT **301,800,000**

SOURCE OF FINANCING

PROJECT STAGE **PROFILING**

LIFE CYCLE STAGES AND NUMBER OF PROJECTS 2 0 0 0

ESTIMATED PROJECT COMPLETION DATE **SEPTEMBER 2018**

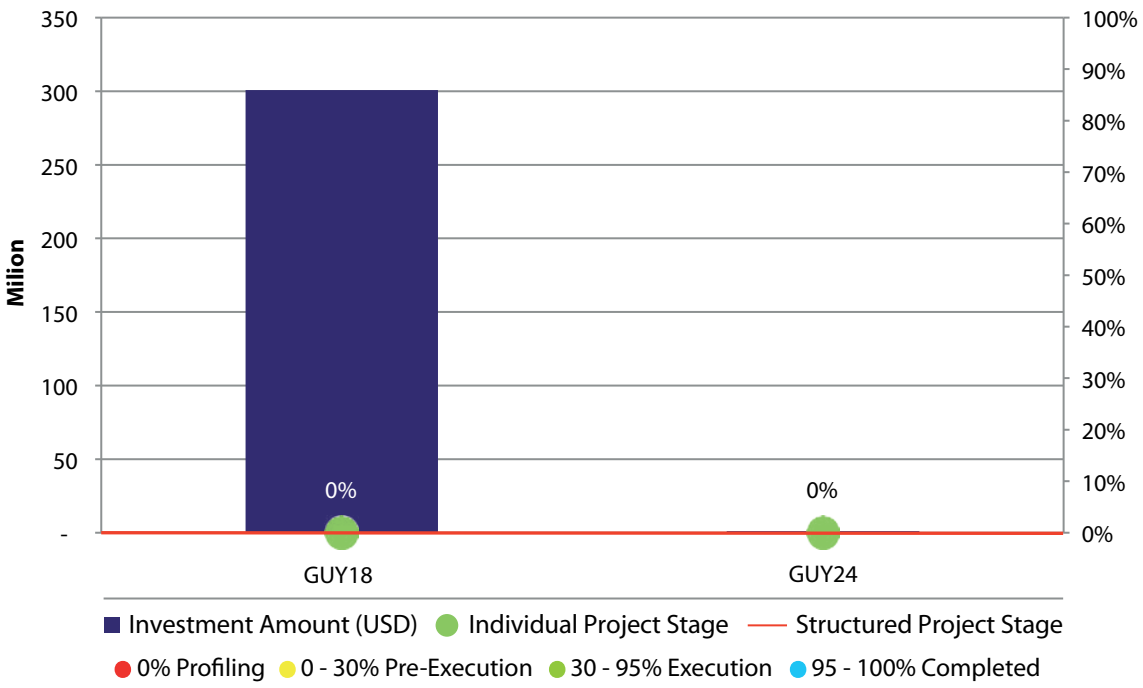
| Code | Stage | Name of the Individual Projects | Countries Involved | Estimated Investment (US$) |
|---|---|---|---|---|
| GUY18 | ● | ROUTES INTERCONNECTING VENEZUELA (CIUDAD GUAYANA) - GUYANA (GEORGETOWN) - SURINAME (APURA - ZANDERIJ - PARAMARIBO) | GU – SU - VE | 300,800,000 |
| GUY24 | ● | CONSTRUCTION OF THE BRIDGE OVER THE CORENTYNE RIVER | GU - SU | 1,000,000 |

## PROJECT TECHNICAL SPECIFICATIONS

THE STRUCTURED PROJECT INVOLVES:

- Construction of a road corridor.
- Construction of a bridge.

### STRUCTURED PROJECT CURRENT STATUS AND INDIVIDUAL PROJECTS STAGE AND ESTIMATED INVESTMENT




ROUTES INTERCONNECTING VENEZUELA (CIUDAD GUAYANA) - GUYANA (GEORGETOWN) - SURINAME (APURA - ZANDERIJ - PARAMARIBO)
CONSTRUCTION OF THE BRIDGE OVER THE CORENTYNE RIVER
ASUNCION
CARUPANO
PUERTO ESPAÑA
MATURIN
TUCUPITA
CIUDAD GUAYANA
SANMARTIN
UPATA
EL CALLAO
TUME REMO
VENEZUELA
Georgetown
BIRTICA
NEW AMSTERDAM
ROCKSTONE
LINDEN
ZUIDDRAAI
Paramaribo
ADBINA
OREALLA
APURA
GUYANA
SURINAME
GUYANE
LETHEM
BOA VISTA
BRASIL
References
Country Capital
City
Road network
International border
Projects
Bridge
Road

## RATIONALE

This structured project is made up of two complementary individual projects for the development of a road corridor to facilitate integration along the coastal axis stretching from Ciudad Guayana, in Venezuela, to Paramaribo, in Suriname. The project will help link the markets in the eastern region of Venezuela with those in Guyana and Suriname, which also will be connected with the state of Amapá through French Guiana. Additionally, such regions will have access to the Venezuelan market through the Venezuelan road network and, consequently, to the Andean markets. Furthermore, completion of the project will provide a connection with its area of influence in Brazil (the state of Roraima and the Manaus Free Trade Zone) via the Manaus-Boa Vista-Santa Elena de Uairén-Puerto Ordaz existing road corridor. Therefore, this project will have a highly favorable impact on regional integration and on building synergies for development at the borders.

## PROPOSAL

The individual projects that make up this structured project are as follows: i) the construction of a paved road running from San Martín de Turumbán, in the Venezuelan state of Bolívar, through Linden and Georgetown to Paramaribo; and ii) the construction of a bridge over the Corentyne river. At present, there is no road linking Venezuela and Guyana along the coastal axis, and trade between Guyana and Suriname is conducted by ferry, which represents a bottleneck for long-distance goods transport.

## PROGRESS ANALYSIS AND ASSESSMENT

Although the terms of reference have been completed, the feasibility study for the road section between Ciudad Guayana and Linden has not been started yet. At present, there is a paved road linking Linden and Georgetown. Venezuela and Guyana will agree on the way they will finance the feasibility study to be conducted. The Pikin Saron-Zanderij road section (21 km) is being prepared for paving, whereas the Zanderij-Carolina section (32 km) is already paved.

As for the construction of the bridge over the Corentyne river, the Ministries of Foreign Relations of Guyana and Suriname have jointly requested a Technical Cooperation from the Inter-American Development Bank to finance the feasibility study. The decision on the financing mode will be adopted by both countries.

# PARAGUAY-PARANA WATERWAY HUB

## PROJECTS

STRUCTURED 4

INDIVIDUAL 16

## ESTIMATED INVESTMENT

1,862.3

US$ Million

## BY SUBSECTOR

| | | |
|---|---|---|
| 1 | 5 | 10 |
| 15.0 | 677.3 | 1,170.0 |

## BY SOURCE OF FINANCING

16

1,862.3

# G. PARAGUAY-PARANÁ WATERWAY HUB (ARGENTINA, BOLIVIA, BRAZIL, PARAGUAY AND URUGUAY)

The Paraguay-Paraná Waterway Hub covers large areas of the basins of the Paraguay, Paraná, Uruguay, and Tietê rivers. The first three rivers run north to south, forming part of the borders between Brazil and Bolivia, Brazil and Paraguay, Paraguay and Argentina, Argentina and Brazil, and Uruguay and Argentina. The Tietê river runs east-west across the state of São Paulo, in Brazil, flowing into the lake formed by the Jupiá dam and the Paraná river.

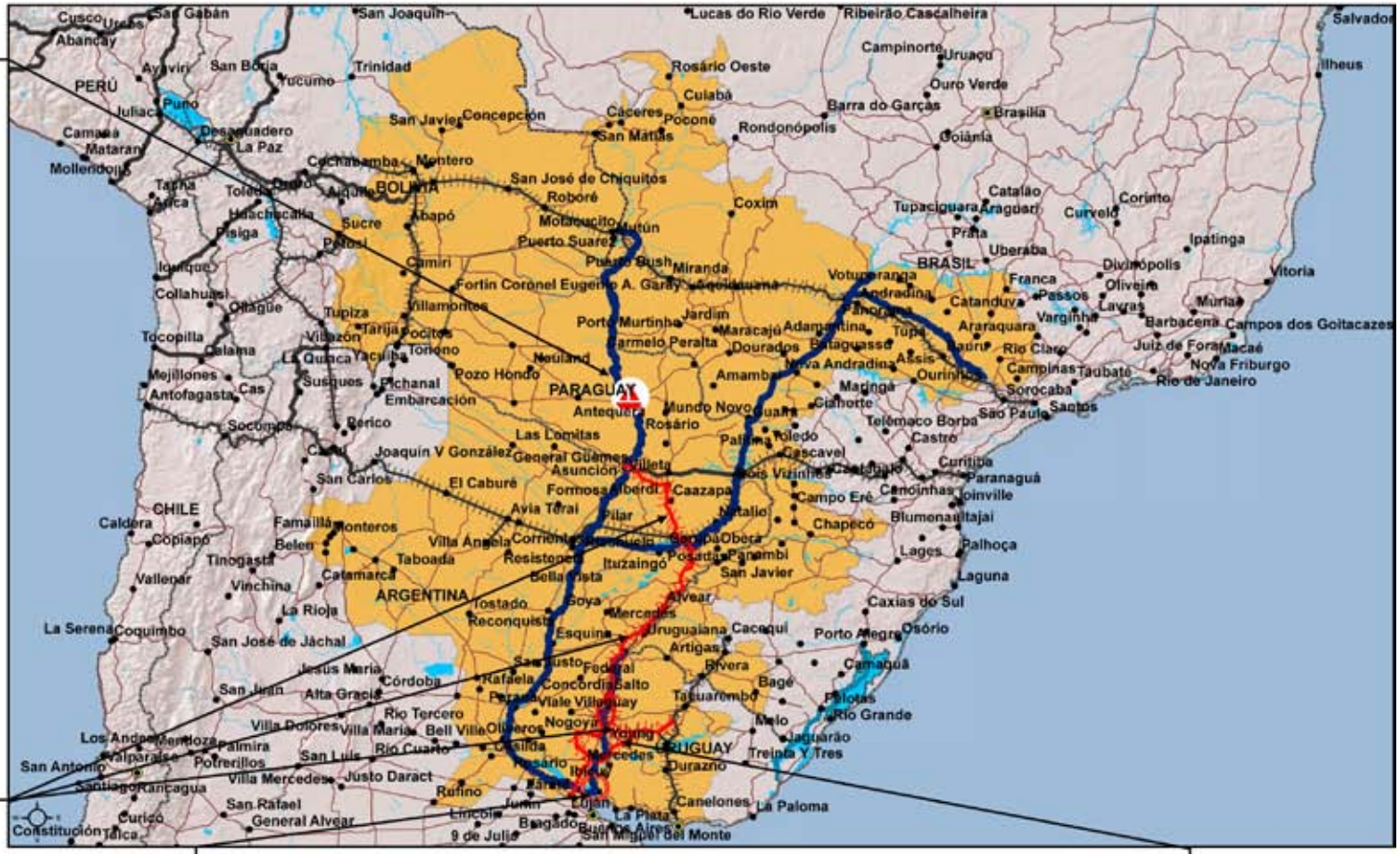
The area of influence of this Hub is crossed by several (road and rail) corridors that connect this with the Central Interoceanic, Capricorn, and MERCOSUR-Chile Hubs. The territory defined for the Paraguay-Paraná Waterway Hub covers 3,837,593 km$^2$, accounting for 29.6% of the total area of the countries that make it up.

The total population of the area of influence defined for this Hub was estimated at about 73,213,987 inhabitants in 2008, accounting for 29.4% of the total population of the countries that make it up. Furthermore, this area of influence has an average population density of 19 inhabitants per km$^2$. This indicator ranges from a maximum of almost 452 inhabitants per km$^2$ in the area of influence of the state of São Paulo, in Brazil, to a minimum of almost 1 inhabitant per km2 in the western region of the Republic of Paraguay.

API includes projects from the five project groups of the Paraguay-Paraná Waterway Hub: i) G1 - Paraguay River, Asunción - Corumbá; ii) G2 - Tietê - Paraná (Itaipu); iii) G3 - Paraguay - Paraná Rivers, Asunción - Paraná Delta; iv) G4 - Paraná River, Itaipu - Confluence; and v) G5 - Uruguay River.

Table G.1 shows the 16 individual projects that make up the four structured projects of this Hub incorporated into API. The estimated investments involved amount to US$1,862.3 million. Most of these projects are aimed at improving navigation conditions on the Plata river basin for the sake of Argentina, Bolivia, Brazil, Paraguay and Uruguay. The purpose of the other projects is to complete the rail connections among Paraguay, Uruguay and Argentina, and to rehabilitate two rail connections in Uruguay that are linked to the waterway. The projects comply with the selection criteria set out for inclusion in the Agenda, and their purpose is in line with the strategic functions of the Hub's project groups involved in API.

IMPROVEMENT OF NAVIGATION CONDITIONS ON THE RIVERS OF THE PLATA BASIN




PARAGUAY - ARGENTINA - URUGUAY RAILWAY INTERCONNECTION

NUEVA PALMIRA BELTWAY AND PORT ACCESS ROADS NETWORK

REHABILITATION OF THE CHAMBERLAIN - FRAY BENTOS RAILWAY BRANCH LINE

## Table G1 · API Projects - Paraguay-Paraná-Waterway Hub

| # | Structured Project Name | No. of Individual Projects | Countries | API amount (million US$) | Stage | Code | Name of the Individual Projects | Countries Involved | PG | Project Stage | Amount (US$) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 17 | IMPROVEMENT OF NAVIGATION CONDITIONS ON THE RIVERS OF THE PLATA BASIN | 10 | AR - BO - BR - PA - UY | 1,170.0 | 🟡 | HPP07 | IMPROVEMENT OF NAVIGATION CONDITIONS ON THE PARAGUAY RIVER (BETWEEN APA AND CORUMBÁ) | BO - BR - PA | G01 | 🟡 | 39,000,000 |
| | | | | | | HPP09 | IMPROVEMENT OF NAVIGATION CONDITIONS ON THE PARAGUAY RIVER (ASUNCIÓN - APA) | PA | G01 | 🟡 | 110,000,000 |
| | | | | | | HPP106 | SYSTEM FOR WATER LEVEL PREDICTION IN THE PARAGUAY RIVER (APA - ASUNCIÓN) | BO - PA | G01 | 🟡 | 0 |
| | | | | | | HPP108 | IMPROVEMENT OF NAVIGATION CONDITIONS ON THE ALTO PARANÁ RIVER (UPSTREAM OF SALTOS DEL GUAIRÁ) | BR | G02 | 🟢 | 15,000,000 |
| | | | | | | HPP122 | REHABILITATION AND MAINTENANCE OF THE TAMENGO CANAL | BO | G01 | 🔴 | 10,500,000 |
| | | | | | | HPP19 | IMPROVEMENT OF NAVIGATION CONDITIONS ON THE TIETÊ RIVER | BR | G02 | 🟢 | 800,000,000 |
| | | | | | | HPP42 | BINATIONAL PROJECT FOR THE IMPROVEMENT OF NAVIGATION CONDITIONS ON THE PARAGUAY RIVER, FROM CONFLUENCIA TO ASUNCIÓN | AR - PA | G03 | 🟢 | 45,498,216 |
| | | | | | | HPP44 | DEEPENING OF THE FAIRWAY IN THE PARANÁ RIVER FROM CONFLUENCIA TO THE PLATA RIVER | AR | G03 | 🟢 | 110,000,000 |
| | | | | | | HPP72 | BINATIONAL PROJECT FOR THE IMPROVEMENT OF NAVIGATION CONDITIONS ON THE ALTO PARANÁ RIVER | AR - PA | G04 | 🔴 | 0 |
| | | | | | | HPP88 | BINATIONAL PROJECT FOR THE IMPROVEMENT OF NAVIGATION CONDITIONS ON THE URUGUAY RIVER | AR - UY | G05 | 🟢 | 40,000,000 |
| 18 | PARAGUAY - ARGENTINA - URUGUAY RAILWAY INTERCONNECTION | 4 | AR - PA - UY | 577.3 | 🟡 | HPP103 | CONSTRUCTION AND REHABILITATION OF THE ASUNCIÓN - ARTIGAS RAILWAY | PA | G03 | 🟡 | 300,000,000 |
| | | | | | | HPP65 | REHABILITATION AND IMPROVEMENT OF THE PIEDRA SOLA - SALTO GRANDE RAILWAY CORRIDOR | UY | G05 | 🟢 | 127,300,000 |
| | | | | | | HPP76 | CONSTRUCTION AND REHABILITATION OF THE ARTIGAS - POSADAS RAILWAY | AR - PA | G04 | 🟡 | 150,000,000 |
| | | | | | | HPP82 | REHABILITATION OF THE ZÁRATE - POSADAS RAILWAY BRANCH LINE | AR | G05 | 🔴 | 0 |
| 19 | REHABILITATION OF THE CHAMBERLAIN - FRAY BENTOS RAILWAY BRANCH LINE | 1 | UY | 100.0 | 🟡 | HPP120 | REHABILITATION OF THE ALGORTA - FRAY BENTOS RAILWAY BRANCH LINE | UY | G05 | 🟡 | 100,000,000 |
| 20 | NUEVA PALMIRA BELTWAY AND PORT ACCESS ROADS NETWORK | 1 | UY | 15.0 | 🟡 | HPP97 | NUEVA PALMIRA BELTWAY AND PORT ACCESS ROADS NETWORK | UY | G05 | 🟡 | 15,000,000 |

Table G2 · **API Projects - Paraguay-Paraná-Waterway Hub by Life Cycle Stage**

(number of projects, million US$ and percentage)

| Project Stage | No. of Projects | % of Projects | Investment Amount | % of Investment Amount |
|---|---|---|---|---|
| Profiling | 3 | 18.8 | 10.5 | 0.6 |
| Pre-Execution | 7 | 43.8 | 714.0 | 38.3 |
| Execution | 6 | 37.5 | 1,137.8 | 61.1 |
| Completed | 0 | 0.0 | 0.0 | 0.0 |
| **TOTAL** | 16 | 100.0 | 1,862.3 | 100.0 |

Note: Amounts are estimated on the basis of the life cycle stage at which the API individual projects are.

Figure G1 · **API Projects - Paraguay-Paraná-Waterway Hub by Life Cycle Stage**

(% of number of projects and % of investment amount)

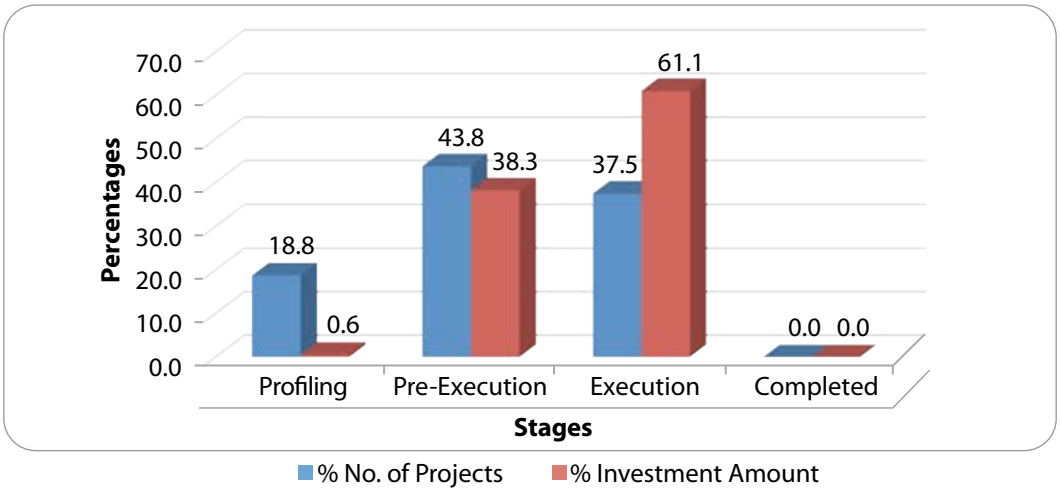



Figure G2 · **API Projects - Paraguay-Paraná-Waterway Hub by Subsector**

(% of number of projects and % of investment amount)

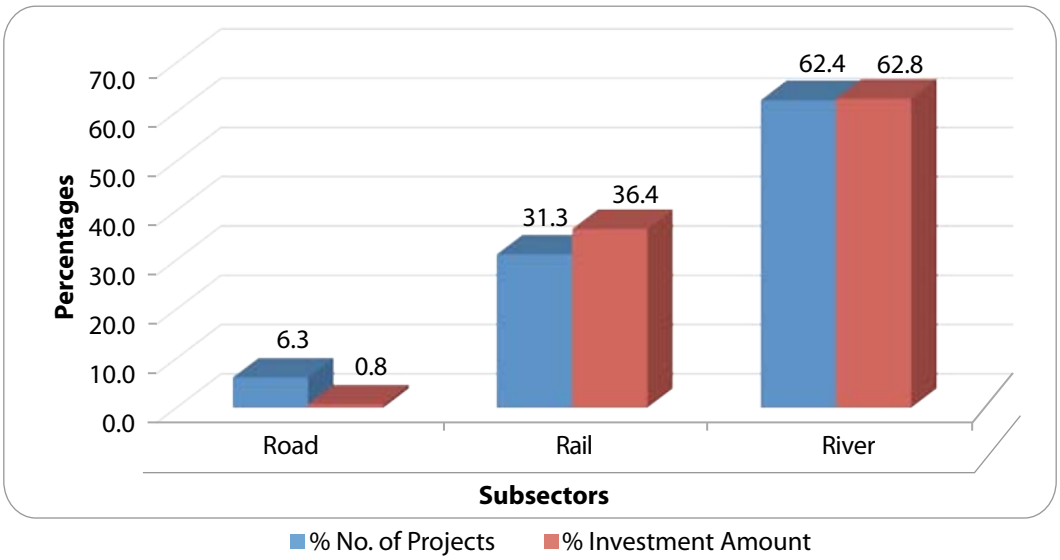


Figure G3 · **API Projects - Paraguay-Paraná-Waterway Hub by Source of Financing**

(% of number of projects and % of investment amount)

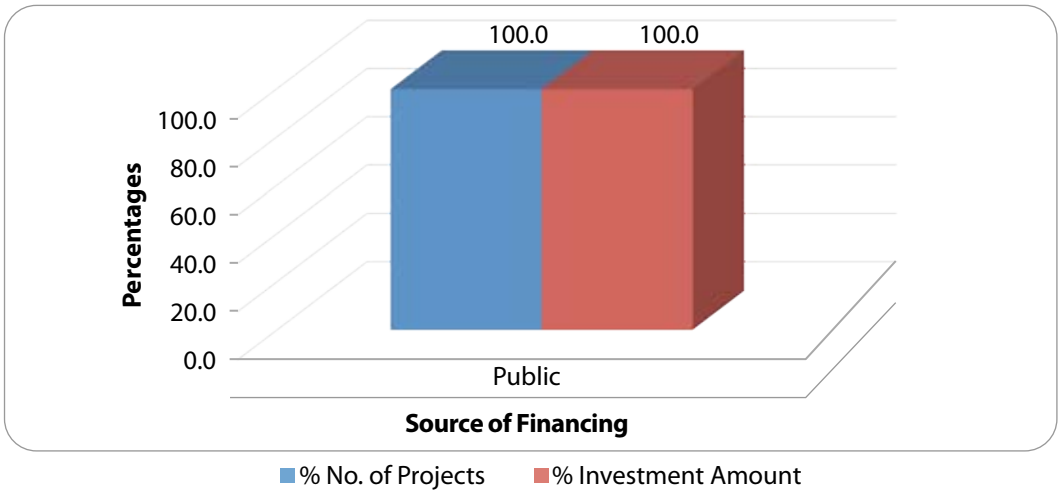



Table G3 · **API Projects Technical Specifications - Paraguay-Paraná-Waterway Hub**

The API projects in this Hub involve:

- Improvement of navigation conditions on approximately 3,753.1 km of waterways (including dredging and installation of aids to navigation, installation of markers, rehabilitation of sections, improvement of locks, channel rectification and enlargement, implementation of dams, construction of cargo terminals, upgrade of bridges).
- Implementation of a water level prediction system.
- Reconstruction and rehabilitation of 1,689 km of rail tracks (including restoration of tracks, engineering structures, and stations).
- Construction of an 11-km long ring road.
- Building of a bridge.
- Construction of a road junction and a roundabout.
- Upgrade of urban streets for direct access to a port.

## IMPROVEMENT OF NAVIGATION CONDITIONS ON THE RIVERS OF THE PLATA BASIN

17

PARAGUAY-PARANÁ WATERWAY

COUNTRIES

SUBSECTOR

ESTIMATED INVESTMENT **1,169,998,216**

SOURCE OF FINANCING

PROJECT STAGE **PRE-EXECUTION**

LIFE CYCLE STAGES AND NUMBER OF PROJECTS 2 3 5 0

ESTIMATED PROJECT COMPLETION DATE **JULY 2020**

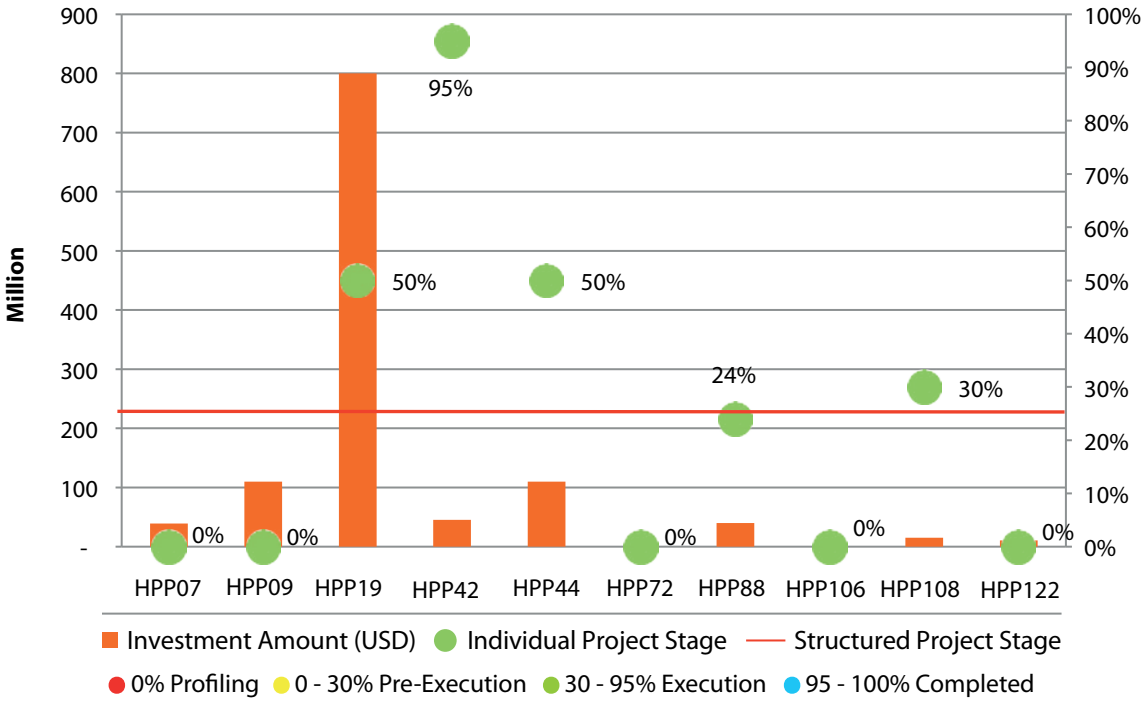
| Code | Stage | Name of the Individual Projects | Countries Involved | Estimated Investment (US$) |
|---|---|---|---|---|
| HPP07 | 🟡 | IMPROVEMENT OF NAVIGATION CONDITIONS ON THE PARAGUAY RIVER (BETWEEN APA AND CORUMBÁ) | BO - BR - PA | 39,000,000 |
| HPP09 | 🟡 | IMPROVEMENT OF NAVIGATION CONDITIONS ON THE PARAGUAY RIVER (ASUNCIÓN - APA) | PA | 110,000,000 |
| HPP106 | 🟡 | SYSTEM FOR WATER LEVEL PREDICTION IN THE PARAGUAY RIVER (APA - ASUNCIÓN) | BO - PA | 0 |
| HPP108 | 🟢 | IMPROVEMENT OF NAVIGATION CONDITIONS ON THE ALTO PARANÁ RIVER (UPSTREAM OF SALTOS DEL GUAIRÁ) | BR | 15,000,000 |
| HPP122 | 🔴 | REHABILITATION AND MAINTENANCE OF THE TAMENGO CANAL | BO | 10,500,000 |
| HPP19 | 🟢 | IMPROVEMENT OF NAVIGATION CONDITIONS ON THE TIETÊ RIVER | BR | 800,000,000 |
| HPP42 | 🟢 | BINATIONAL PROJECT FOR THE IMPROVEMENT OF NAVIGATION CONDITIONS ON THE PARAGUAY RIVER, FROM CONFLUENCIA TO ASUNCIÓN | AR - PA | 45,498,216 |
| HPP44 | 🟢 | DEEPENING OF THE FAIRWAY IN THE PARANÁ RIVER FROM CONFLUENCIA TO THE PLATA RIVER | AR | 110,000,000 |
| HPP72 | 🔴 | BINATIONAL PROJECT FOR THE IMPROVEMENT OF NAVIGATION CONDITIONS ON THE ALTO PARANÁ RIVER | AR - PA | 0 |
| HPP88 | 🟢 | BINATIONAL PROJECT FOR THE IMPROVEMENT OF NAVIGATION CONDITIONS ON THE URUGUAY RIVER | AR - UY | 40,000,000 |

## PROJECT TECHNICAL SPECIFICATIONS

THE STRUCTURED PROJECT INVOLVES:

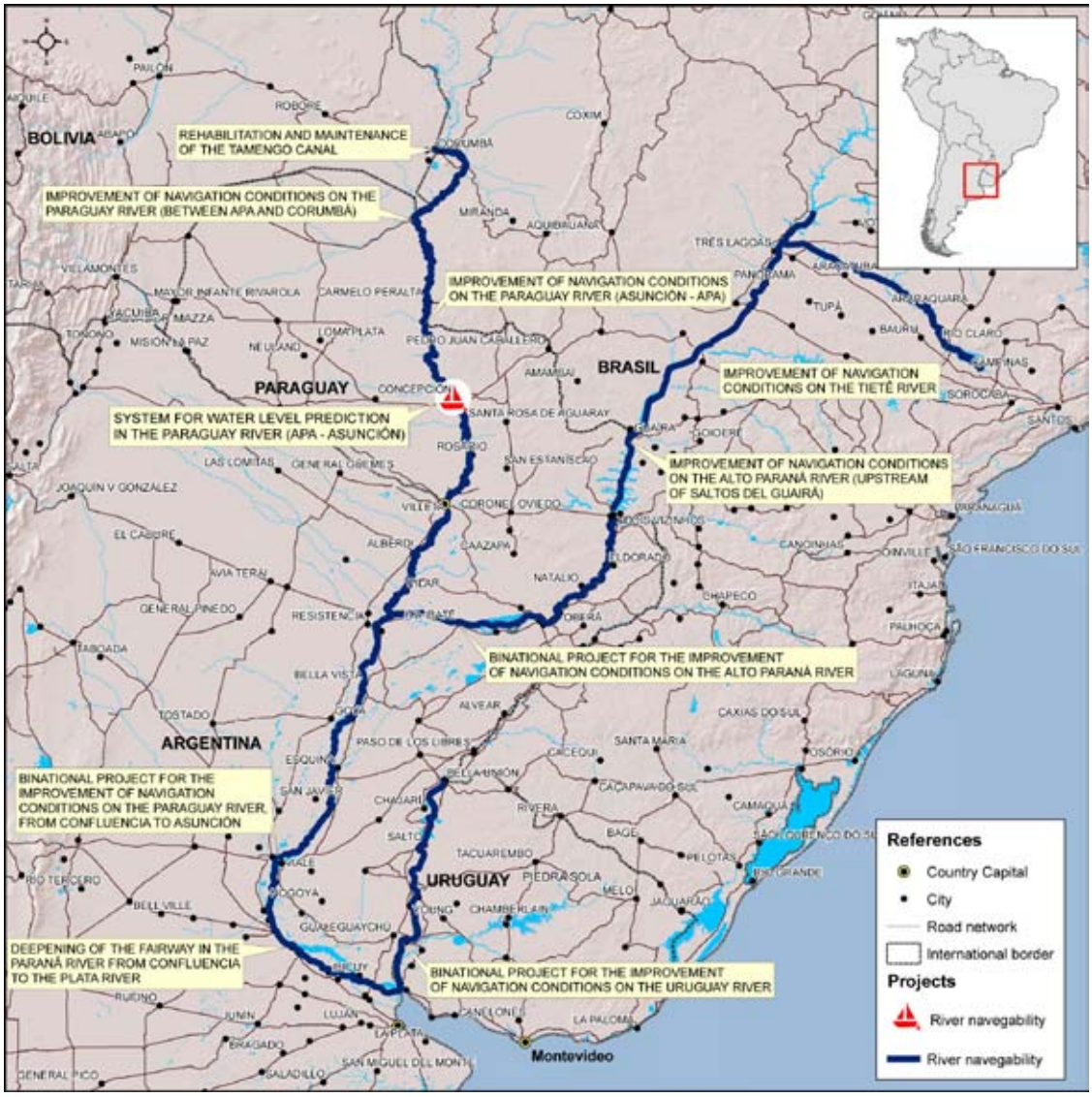
- Improvement of navigation conditions on approximately 3,753.1 km of waterways (including dredging and installation of aids to navigation, installation of markers, rehabilitation of sections, improvement of locks, channel rectification and enlargement, implementation of dams, construction of cargo terminals, upgrade of bridges).
- Implementation of a water level prediction system.

### STRUCTURED PROJECT CURRENT STATUS AND INDIVIDUAL PROJECTS STAGE AND ESTIMATED INVESTMENT




## LAST YEAR'S MAJOR DEVELOPMENT

- Project IMPROVEMENT OF NAVIGATION CONDITIONS ON THE ALTO PARANÁ RIVER (UPSTREAM OF SALTOS DEL GUAIRÁ) made 6% progress, having the resources for commencement of the works available.
- Project IMPROVEMENT OF NAVIGATION CONDITIONS ON THE TIETÊ RIVER made 20% progress, thus completing the first quarter of the works.
- Project BINATIONAL PROJECT FOR THE IMPROVEMENT OF NAVIGATION CONDITIONS ON THE PARAGUAY RIVER, FROM CONFLUENCIA TO ASUNCIÓN made 15% progress, thus completing the last quarter of the works.


BOLIVIA
PARAGUAY
BRASIL
ARGENTINA
URUGUAY
REHABILITATION AND MAINTENANCE OF THE TAMENGO CANAL
IMPROVEMENT OF NAVIGATION CONDITIONS ON THE PARAGUAY RIVER (BETWEEN APA AND CORUMBÁ)
IMPROVEMENT OF NAVIGATION CONDITIONS ON THE PARAGUAY RIVER (ASUNCIÓN - APA)
SYSTEM FOR WATER LEVEL PREDICTION IN THE PARAGUAY RIVER (APA - ASUNCIÓN)
IMPROVEMENT OF NAVIGATION CONDITIONS ON THE TIETÊ RIVER
IMPROVEMENT OF NAVIGATION CONDITIONS ON THE ALTO PARANÁ RIVER (UPSTREAM OF SALTOS DEL GUAIRÁ)
BINATIONAL PROJECT FOR THE IMPROVEMENT OF NAVIGATION CONDITIONS ON THE ALTO PARANÁ RIVER
BINATIONAL PROJECT FOR THE IMPROVEMENT OF NAVIGATION CONDITIONS ON THE PARAGUAY RIVER, FROM CONFLUENCIA TO ASUNCIÓN
DEEPENING OF THE FAIRWAY IN THE PARANÁ RIVER FROM CONFLUENCIA TO THE PLATA RIVER
BINATIONAL PROJECT FOR THE IMPROVEMENT OF NAVIGATION CONDITIONS ON THE URUGUAY RIVER
Montevideo
References
Country Capital
City
Road network
International border
Projects
River navegability
River navegability

17

PARAGUAY-PARANÁ WATERWAY

## RATIONALE

The Plata Basin covers a total area of nearly 3.1 million km2, which is one of the most potentially rich regions in the planet on account of its diverse climatic conditions, mining resources, agricultural capability, and energy, industrial and communication possibilities. The improvement of the navigation conditions on the waterways fed by the basin will result in a significant reduction in the cost of transport for both inter- and extra-regional trade, which will contribute to economically integrating the region and strengthening its sustainable development. This will enhance the competitiveness of regional products, mainly of those produced in the areas farthest away from the seaports. As a secondary effect, the project will help reduce the number of trucks on the highways, lowering the number of accidents, limiting exhaust pollution, improving pavement durability, and bringing down road maintenance costs.

The agreement of the countries involved concerning the improvement of the navigation conditions of the Plata Basin rivers was formalized in the 1969 Plata River Basin Treaty, the purpose of which is to promote the consistent development and physical integration of the Plata Basin and its direct and vast areas of influence.

Along their course, the Plata Basin rivers also constitute natural borders between the countries. Thus, the Paraguay river is shared by Brazil and Paraguay and by Paraguay and Argentina. Furthermore, the Paraná river serves in some areas as a dividing line between Brazil and Paraguay and between Argentina and Paraguay, while the Uruguay river acts, at some points, as a natural border between Brazil and Argentina and between Argentina and Uruguay. Between Puerto Suárez and Corumbá (Mato Grosso do Sul, Brazil), in southeastern Bolivia, in the province of Germán Busch (department of Santa Cruz), the Tamengo System is found, made up of the Cáceres lake, the Tamengo canal, the Paraguay river, and the Sicurí and Tuyuyú canals. The 10.5-km long Tamengo canal, in Bolivia, was opened to give access to the Paraná-Paraguay waterway; it is a tributary of the Paraguay river on its right bank and connects to the Cáceres lake. The first 6.5-km stretch, in the outlet of the Cáceres lake, falls under shared sovereignty between Bolivia and Brazil, while the other 4-km section, from the Concepción stream up to where the canal flows into the Paraguay river, falls under the exclusive sovereignty of Brazil. The rehabilitation and maintenance of the Tamengo canal play an important role under the Paraguay-Paraná River Transport Agreement, as it provides South America with an east-west connection, facilitating an intense trade flow between the countries. Among the tributaries, the Tietê river, which flows into the Paraná river, stands out. This river runs across the Metropolitan Region of São Paulo, but its socioeconomic significance is even greater in the inland of this state. The Tietê has a potential for hydroelectric power as well as for transportation thanks to an integrated system of locks that make it navigable.

Thus, the Tietê-Paraná waterway constitutes an important link among the MERCOSUR countries, enabling the direct connection of the most economically active region of Brazil with its neighboring countries. In this context, the waterway allows soybean and fuel produced in Brazil to reach Argentina and, similarly, Argentine wheat to reach the Brazilian market. It also enables Paraguayan products to reach São Paulo and the Santos port. Complementary actions are needed to ensure the preservation of the environment and the tapping of any opportunities for logistics and production development. With regard to the environment, the project affects environmentally sensitive areas such as the wetland known as Pantanal, a large floodplain seasonably covered by the Paraguay river waters and made up of unaltered ecosystems and a rich biodiversity.

## PROPOSAL

This project comprises ten individual projects, all of which are concerned with navigation conditions in the area of influence of the Plata river basin.

One individual project involves Bolivia, Brazil and Paraguay: Improvement of Navigation Conditions on the Paraguay River (between Apa and Corumbá). Two projects involve Argentina and Paraguay: i) Binational Project for the Improvement

of Navigation Conditions on the Paraguay River, from Confluencia to Asunción; and ii) Binational Project for the Improvement of Navigation Conditions on the Alto Paraná River. One project concerns Argentina and Uruguay: Binational Project for the Improvement of Navigation Conditions on the Uruguay River. Another project involves Paraguay and Bolivia: System for Water Level Prediction in the Paraguay River (Apa - Asunción). One project involves Bolivia: Rehabilitation and Maintenance of the Tamengo Canal. Two projects are located in Brazil: i) Improvement of Navigation Conditions on the Tietê River; and ii) Improvement of Navigation Conditions on the Alto Paraná River (Upstream of Saltos del Guairá). One project is located in Paraguay: Improvement of Navigation Conditions on the Paraguay River (Asunción - Apa). Finally, another project concerns Argentina: Deepening of the Fairway in the Paraná River from Confluencia to the Plata River.

## PROGRESS ANALYSIS AND ASSESSMENT

This structured project is mentioned in statements of the presidents and relevant ministers of the respective countries. In addition, there are agreements among the countries reflecting the importance of the actions proposed (the Uruguay River Executive Commission and the Plata River Basin Treaty).

Furthermore, the countries are making headway in the studies concerning the basins of the rivers involved. Of the 10 individual projects, five are at the execution stage, three at the pre-execution stage, and two at the profiling stage.

Several works associated with the Paraguay, Paraná, and Tietê rivers are included in the Brazilian Growth Acceleration Program (PAC). In this regard, the Project for the Improvement of Navigation Conditions on the Paraguay River (between Apa and Corumbá) is at the pre-execution stage. The project for the Improvement of Navigation Conditions on the Tietê River is at its execution stage; the first quarter of the works was completed in the beginning of 2014, and completion of the second quarter of the works is expected for early 2015.

The project for the Improvement of Navigation Conditions on the Alto Paraná River (Upstream of Saltos del Guairá) is in execution and expected to be completed in November 2015.

The project involving the Tamengo canal concerns a maintenance dredging plan, which needs to be technically adjusted for implementation purposes. At present there are two private companies operating port terminals at the canal: Central Aguirre Portuaria S.A. (CAPSA) and Gravetal Bolivia S.A., which operates on the Concepción stream (a tributary of the Tamengo canal). The former devotes to the loading and unloading of hydrocarbons (Free Port Terminal Company, FPTC) and oilseed products (Aguirre Agro Bolivia S.A., AABSA), and has a wharf front with a crane for containers. The latter, Gravetal Bolivia S.A., has an oilseed processing plant and two wharf fronts (Tamengo 1 and Tamengo 2). Furthermore, Empresa Naviera Boliviana (ENABOL) has completed the pre-investment studies for the implementation of a port terminal in Puerto Quijarro.

The Deepening of the Fairway in the Paraná River from Confluencia to the Plata River project is at the execution stage, and the Binational Project for the Improvement of Navigation Conditions on the Alto Paraná River is at the profiling stage. In addition, the Improvement of Navigation Conditions on the Paraguay River (Asunción - Apa) and the System for Water Level Prediction in the Paraguay River (Apa - Asunción) projects are both at the pre-execution stage.

The Binational Project for the Improvement of Navigation Conditions on the Paraguay River from Confluencia to Asunción is at the execution stage; the Confluencia-Santa Fe section has been dredged to a depth of 10 feet, and a contract for its maintenance is in force until 2021. The Binational Project for the Improvement of Navigation Conditions on the Uruguay River is at the execution stage, and the first quarter of the works are expected to be completed in May 2015.

## PARAGUAY - ARGENTINA - URUGUAY RAILWAY INTERCONNECTION

COUNTRIES

SUBSECTOR

ESTIMATED INVESTMENT **577,300,000**

SOURCE OF FINANCING

PROJECT STAGE **PRE-EXECUTION**

LIFE CYCLE STAGES AND NUMBER OF PROJECTS 1 2 1 0

ESTIMATED PROJECT COMPLETION DATE **FEBRUARY 2020**

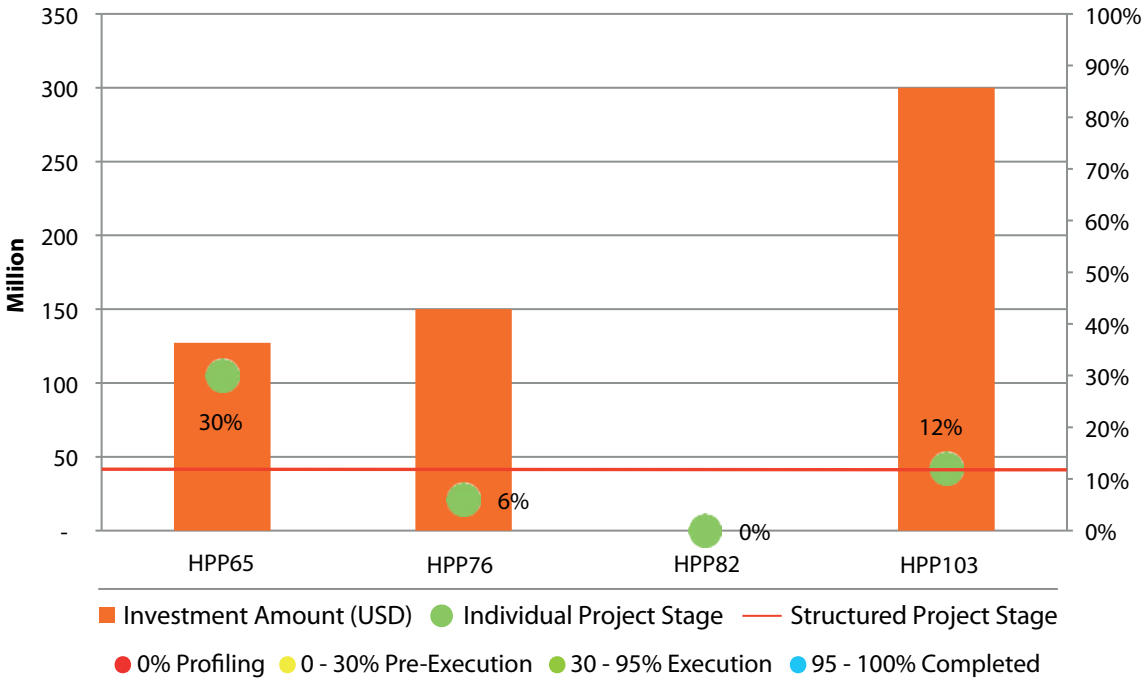
| Code | Stage | Name of the Individual Projects | Countries Involved | Estimated Investment (US$) |
|---|---|---|---|---|
| HPP103 | 🟡 | CONSTRUCTION AND REHABILITATION OF THE ASUNCIÓN - ARTIGAS RAILWAY | PA | 300,000,000 |
| HPP65 | 🟢 | REHABILITATION AND IMPROVEMENT OF THE PIEDRA SOLA - SALTO GRANDE RAILWAY CORRIDOR | UY | 127,300,000 |
| HPP76 | 🟡 | CONSTRUCTION AND REHABILITATION OF THE ARTIGAS - POSADAS RAILWAY | AR - PA | 150,000,000 |
| HPP82 | 🔴 | REHABILITATION OF THE ZÁRATE - POSADAS RAILWAY BRANCH LINE | AR | 0 |

## PROJECT TECHNICAL SPECIFICATIONS

THE STRUCTURED PROJECT INVOLVES:

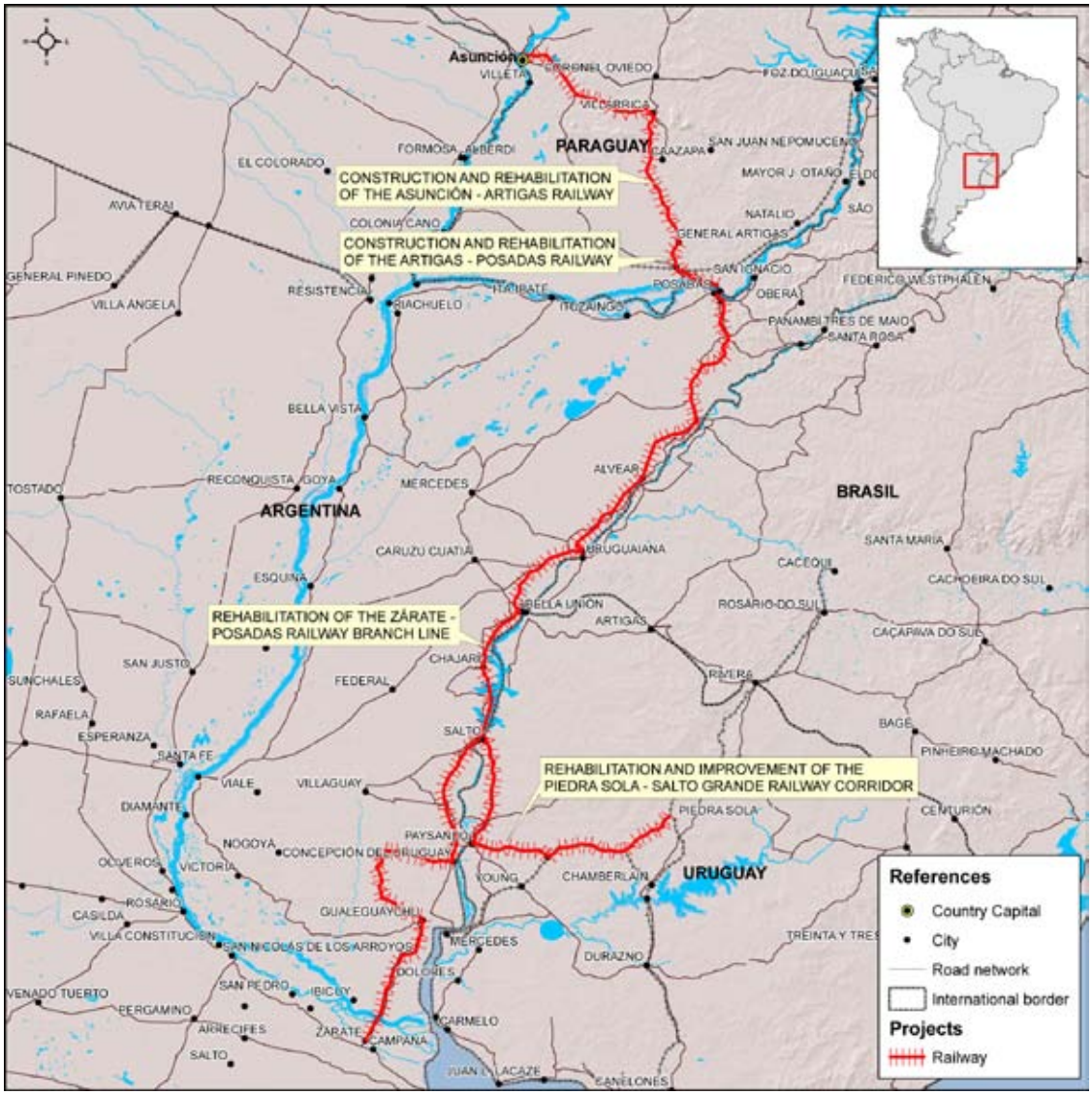
- Reconstruction and rehabilitation of 1,548 km of rail tracks (including restoration of tracks, engineering structures, and stations).

### STRUCTURED PROJECT CURRENT STATUS AND INDIVIDUAL PROJECTS STAGE AND ESTIMATED INVESTMENT




## LAST YEAR'S MAJOR DEVELOPMENTS

- Project CONSTRUCTION AND REHABILITATION OF THE ARTIGAS - POSADAS RAILWAY made 6% progress, having the resources for the pre-feasibility studies available.
- Project REHABILITATION AND IMPROVEMENT OF THE PIEDRA SOLA - SALTO GRANDE RAILWAY CORRIDOR made 12% progress, having the resources for commencement of the works available.


Asunción
PARAGUAY
CONSTRUCTION AND REHABILITATION OF THE ASUNCIÓN - ARTIGAS RAILWAY
CONSTRUCTION AND REHABILITATION OF THE ARTIGAS - POSADAS RAILWAY
REHABILITATION OF THE ZÁRATE - POSADAS RAILWAY BRANCH LINE
REHABILITATION AND IMPROVEMENT OF THE PIEDRA SOLA - SALTO GRANDE RAILWAY CORRIDOR
ARGENTINA
BRASIL
URUGUAY
References
Country Capital
City
Road network
International border
Projects
Railway

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PARAGUAY-PARANÁ WATERWAY

## RATIONALE

This structured project will have a high impact on the physical integration of Paraguay, Argentina and Uruguay, as it will strengthen the sustainable socioeconomic development in all the area of influence zoned for the rail alignment that connects the three countries. Therefore, the project strengthens networks that are regional in scope and is instrumental in furthering regional connectivity for integration purposes. This regional rail network complements the river network made up of the Paraná and Uruguay rivers as well as the existing road networks, promoting the development of multimodal transportation, which will result in a reduction in the cost of freight transport and will enhance the competitiveness of regional products. Additionally, as the rail sections involve an international connection, complementary actions are needed, particularly in relation to border crossings and common regulations.

## PROPOSAL

This structured project is made up of the following individual projects:

- Rehabilitation and improvement of the Piedra Sola - Salto Grande section, in Uruguay;
- Rehabilitation of the Zárate - Posadas Railway Branch Line;
- Construction and Rehabilitation of the Asunción - Artigas Railway;
- Construction and Rehabilitation of the Artigas - Posadas Railway.

The purpose of the first project is to reconstruct a 330-km section of the Uruguayan rail network, enabling the interconnection of the city of Asunción and the port of Montevideo through the Argentine territory.

The second project aims at improving operating conditions on the international connections that begin and end in Posadas and provide a link with Paraguay in the town of Encarnación as well as with the different ports on the Plata river basin.

The goal of the third and fourth projects is to improve rail track infrastructure to reduce travel time along the 1,020-km stretch between Zárate and Posadas, Argentina.

## PROGRESS ANALYSIS AND ASSESSMENT

The individual projects making up this structured project form part of the COSIPLAN Project Portfolio and are included in the National Plans of the countries involved, and mentioned in declarations of ministerial as well as presidential summit meetings. Furthermore, a technical study will be carried out for the reactivation and improvement of the rail sections in the three countries, which will enable connectivity with lower transaction costs and a better quality of life for those who live in the region.

The project in the territory of Uruguay is at the execution stage, the tenders for the works having been received on August 15, 2014. The Argentina-Paraguay binational projects —Construction and Rehabilitation of the Asunción - Artigas Railway and Construction and Rehabilitation of the Artigas - Posadas Railway are at the pre-execution stage, while the Rehabilitation of the Zárate - Posadas Railway Branch Line project is at the profiling stage.

## REHABILITATION OF THE CHAMBERLAIN - FRAY BENTOS RAILWAY BRANCH LINE

COUNTRIES

SUBSECTOR

ESTIMATED INVESTMENT **100,000,000**

SOURCE OF FINANCING

PROJECT STAGE **PRE-EXECUTION**

LIFE CYCLE STAGES AND NUMBER OF PROJECTS 0 1 0 0

ESTIMATED PROJECT COMPLETION DATE **MARCH 2018**

| Code | Stage | Name of the Individual Projects | Countries Involved | Estimated Investment (US$) |
|---|---|---|---|---|
| HPP120 | ● | REHABILITATION OF THE ALGORTA - FRAY BENTOS RAILWAY BRANCH LINE | UY | 100,000,000 |

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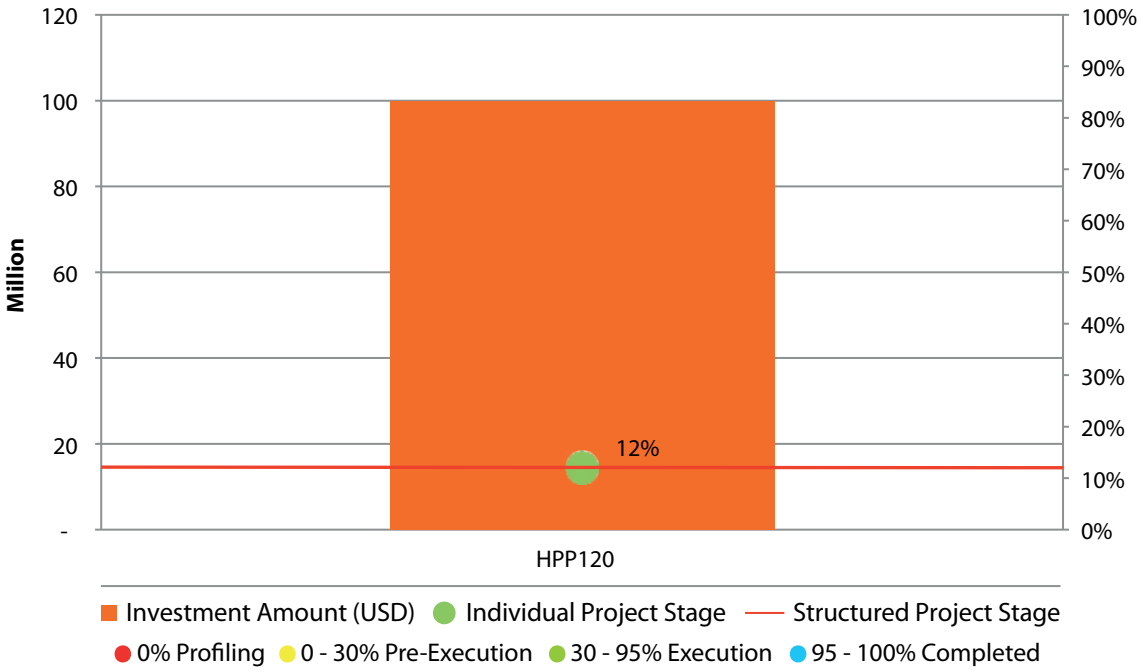
PARAGUAY-PARANÁ WATERWAY

## PROJECT TECHNICAL SPECIFICATIONS

THE STRUCTURED PROJECT INVOLVES:

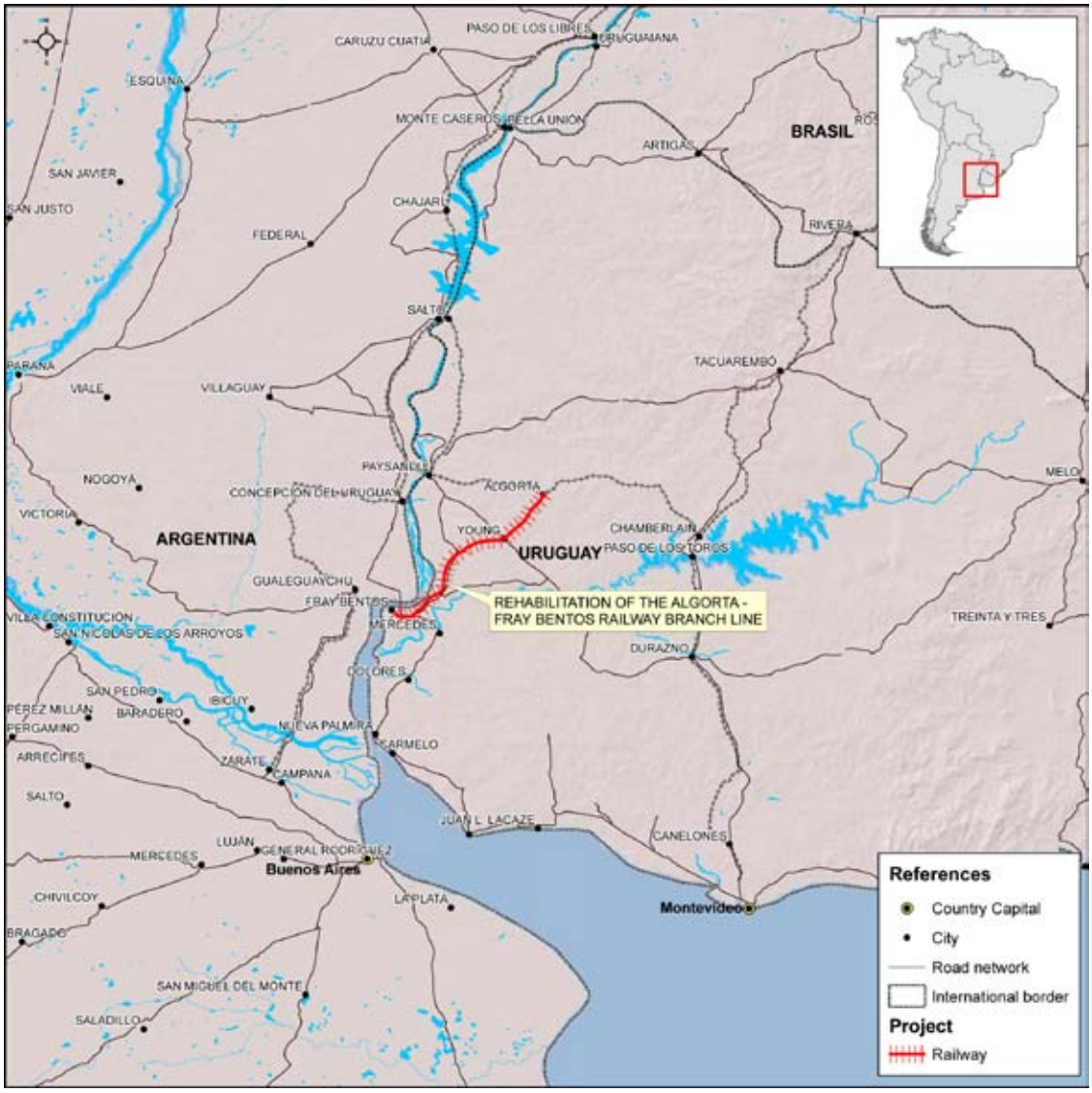
- Rehabilitation of a 141-km long railway branch line.

### STRUCTURED PROJECT CURRENT STATUS AND INDIVIDUAL PROJECTS STAGE AND ESTIMATED INVESTMENT




## LAST YEAR'S MAJOR DEVELOPMENTS

- Project REHABILITATION OF THE ALGORTA - FRAY BENTOS RAILWAY BRANCH LINE made 6% progress, the pre-feasibility studies having started.


PASO DE LOS LIBRES
URUGUAIANA
CARUZU CUATIA
ESQUINA
MONTE CASEROS
BELLA UNION
BRASIL
ARTIGAS
SAN JAVIER
SAN JUSTO
CHAJARI
FEDERAL
RIVERA
SALTO
PARANA
TACUAREMBO
VIALE
VILLAGUAY
PAYSANDU
NOGOYA
ALGORTA
CONCEPCION DEL URUGUAY
MELO
VICTORIA
ARGENTINA
YOUNG
CHAMBERLAIN
URUGUAY
PASO DE LOS TOROS
GUALEGUAYCHU
FRAY BENTOS
REHABILITATION OF THE ALGORTA - FRAY BENTOS RAILWAY BRANCH LINE
MERCEDES
TREINTA Y TRES
VILLA CONSTITUCION
SAN NICOLAS DE LOS ARROYOS
DURAZNO
DOLORES
SAN PEDRO
IBICUY
PEREZ MILLAN
BARADERO
PERGAMINO
NUEVA PALMIRA
CARMELO
ARRECIFES
ZARATE
CAMPANA
SALTO
JUAN L. LACAZE
CANELONES
LUJAN
MERCEDES
GENERAL RODRIGUEZ
Buenos Aires
LA PLATA
Montevideo
CHIVILCOY
BRAGADO
SAN MIGUEL DEL MONTE
SALADILLO
References
Country Capital
City
Road network
International border
Project
Railway

19

PARAGUAY-PARANÁ WATERWAY

## RATIONALE

This structured project seeks to rehabilitate the Chamberlain-Fray Bentos rail branch line, which connects the Fray Bentos port with the national rail networks, some of which reach neighboring countries. This is the case of the following railway lines: Montevideo-Rivera, which forms part of structured project No. 28 (Montevideo - Cacequi Railway Corridor) and Algorta-Paysandú-Salto-Salto Grande, which is included in structured project No. 18 (Paraguay - Argentina - Uruguay Railway Interconnection). This rail line is of a regional scope since it connects the Paraná and Uruguay river network (at the Fray Bentos port) with the regional rail and existing road networks, promoting the development of multimodal transportation, which will result in a reduction in the cost of freight transport and enhance the competitiveness of regional products.

## PROPOSAL

The rail section on which works are to be carried out joins the village of Algorta and the city of Fray Bentos, both in the Río Negro department. This 141-km long section forms part of the active rail network in Uruguay. The deterioration of the railroad hampers the adequate transportation of freight in the area of influence of the project.

## PROGRESS ANALYSIS AND ASSESSMENT

The project forms part of the COSIPLAN Project Portfolio and is a priority for the Uruguayan government. The only individual project included in this structured project is at its pre-execution stage. At present, studies are underway to analyze its financial viability through public-private partnership agreements.

## NUEVA PALMIRA BELTWAY AND PORT ACCESS ROADS NETWORK

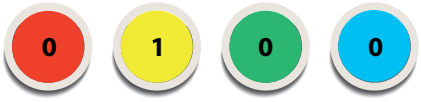
COUNTRIES 

SUBSECTOR 

ESTIMATED INVESTMENT **15,000,000**

SOURCE OF FINANCING 

PROJECT STAGE **PRE-EXECUTION**

LIFE CYCLE STAGES AND NUMBER OF PROJECTS 


ESTIMATED PROJECT COMPLETION DATE **DECEMBER 2017**

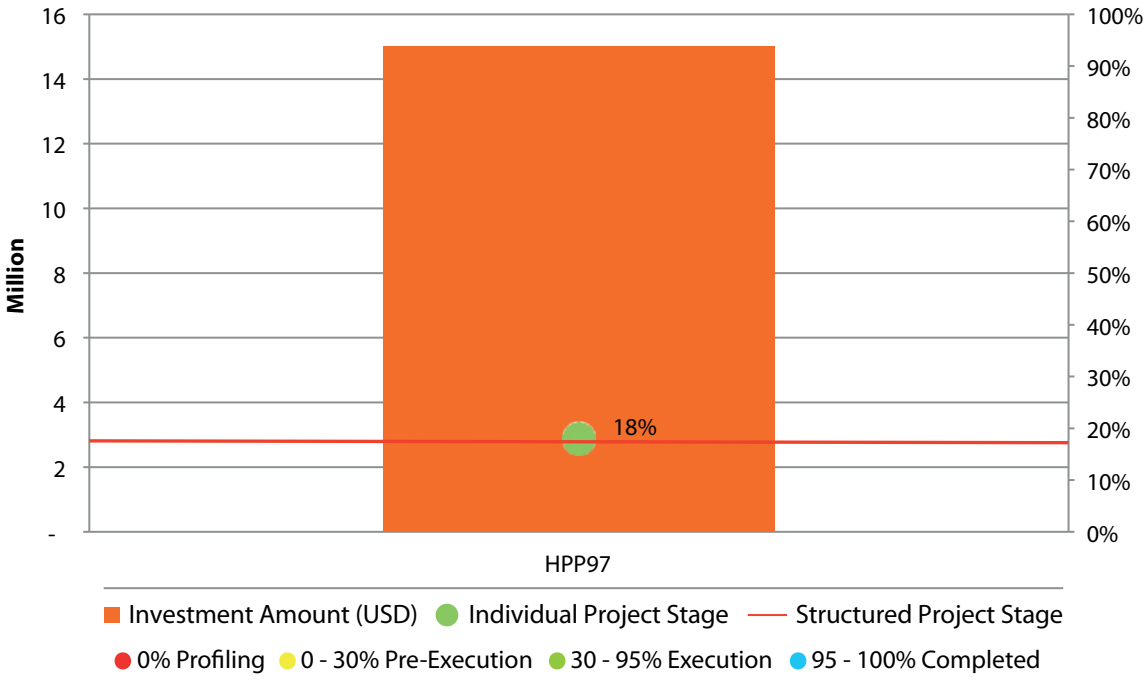
| Code | Stage | Name of the Individual Projects | Countries Involved | Estimated Investment (US$) |
|---|---|---|---|---|
| HPP97 | ● | NUEVA PALMIRA BELTWAY AND PORT ACCESS ROADS NETWORK | UY | 15,000,000 |

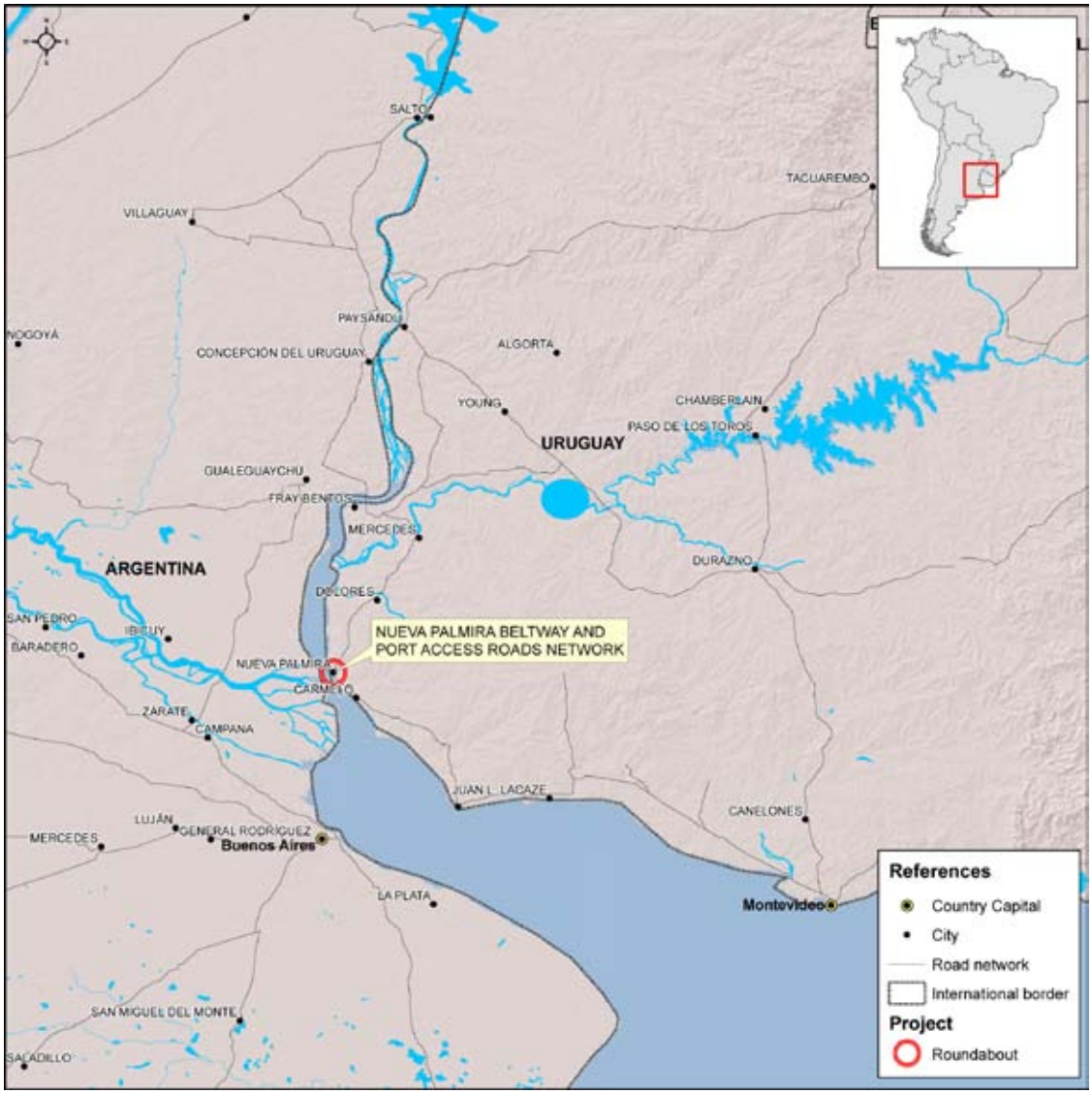
## PROJECT TECHNICAL SPECIFICATIONS

THE STRUCTURED PROJECT INVOLVES:

- Construction of an 11-km long ring road.
- Building of a bridge.
- Construction of a road junction and a roundabout.
- Upgrade of urban streets for direct access to the port.

### STRUCTURED PROJECT CURRENT STATUS AND INDIVIDUAL PROJECTS STAGE AND ESTIMATED INVESTMENT




SALTO
VILLAGUAY
TACUAREMBÓ
PAYSANDÚ
NOGOYÁ
CONCEPCIÓN DEL URUGUAY
ALGORTA
YOUNG
CHAMBERLAIN
PASO DE LOS TOROS
URUGUAY
GUALEGUAYCHÚ
FRAY BENTOS
MERCEDES
ARGENTINA
DURAZNO
DOLORES
SAN PEDRO
IBICUY
BARADERO
NUEVA PALMIRA
CARMELO
NUEVA PALMIRA BELTWAY AND PORT ACCESS ROADS NETWORK
ZÁRATE
CAMPANA
JUAN L. LACAZE
CANELONES
LUJÁN
MERCEDES
GENERAL RODRÍGUEZ
Buenos Aires
LA PLATA
Montevideo
SAN MIGUEL DEL MONTE
SALADILLO
References
Country Capital
City
Road network
International border
Project
Roundabout

20

PARAGUAY-PARANÁ WATERWAY

## RATIONALE

Nueva Palmira is strategically located on the banks of the Uruguay river, in front of the Paraná river mouth. It borders the city of Dolores on the north and the city of Carmelo on the south, and is 280 km away of Montevideo. In Nueva Palmira, there are commercial port facilities that receive cargo, particularly grain, from the area of influence of the Paraná-Paraguay waterway, as well as national products. These port facilities, located in the immediate vicinity of the city of Nueva Palmira, have created negative externalities due to the export increase of the last years. Truck traffic passes through urban streets on its way to the port, causing trouble in the city, such as the disturbance of daily activities and an increasing environmental pollution (noise pollution and the one caused by grain powder). In addition to these problems, the heavier traffic of trucks has resulted in the congestion of the access roads to the port area, making it more difficult for trucks to enter the different port terminals. This brings about negative consequences that range from logistics chain cost increases to problems between haulers and the other players involved. This project is of particular importance as it consolidates this vast production network and promotes regional trade. According to Law 18,308 —Territorial Planning and Sustainable Development—, the territorial planning of Nueva Palmira is soon to be approved, taking these considerations into account.

## PROPOSAL

This project, which will provide freight transport vehicles with a direct connection between the port and Routes 21 and 12, is intended to: (i) organize traffic access to the port so as to prevent heavy truck traffic from entering the city; (ii) set protocols of access to the port area minimizing negative externalities (Decree No. 012/012); and (iii) implement solutions to offer users more comfortable conditions. The project is complemented with works already executed, in execution or to be executed in Routes 12, 21 and 24.

## PROGRESS ANALYSIS AND ASSESSMENT

The only individual project within this structured project forms part of the COSIPLAN Project Portfolio. On December 6, 2012, the tender documentation for the Public-Private Partnership Agreement concerning Routes 21 and 24 Road Corridor was published in order to receive proposals by the public sector as part of the process of drafting the legal document and deciding on the investment modality. A revision of the project was necessary on account of budget restrictions (December 2013), and the alternatives were submitted to the relevant authorities in March 2014. The terms and conditions have already been set, so once the relevant decisions are made, the call for tender can be issued.

# CENTRAL INTEROCEANIC HUB

## PROJECTS

STRUCTURED **4** INDIVIDUAL **7**

## ESTIMATED INVESTMENT

**460.1**
US$ Million

## BY SUBSECTOR

| | | | |
|---|---|---|---|
| 1 | 3 | 1 | 2 |
| 20.0 | 429.5 | 6.7 | 3.9 |

## BY SOURCE OF FINANCING

**7**

460.7

# H. CENTRAL INTEROCEANIC HUB (BOLIVIA, BRAZIL, CHILE, PARAGUAY AND PERU)

The territory of the Central Interoceanic Hub includes the departments of Arequipa, Moquegua, Puno, and Tacna, in Peru; Regions XV and I (Arica and Parinacota, and Tarapacá, respectively) and the province of Loa in Region II, Antofagasta, in Chile; the departments of Beni, La Paz, Oruro, Potosí, Tarija, Cochabamba, Chuquisaca, and Santa Cruz, in Bolivia; the Republic of Paraguay; and the Brazilian states of Mato Grosso, Mato Grosso do Sul, Rio de Janeiro, São Paulo, and Paraná. The area of influence defined for this Hub covers 3,461,461 km$^2$, accounting for 28.7% of the total area of the five countries that make it up.

The total population of the area of influence was estimated at 92,594,587 inhabitants in 2008, accounting for 36.8% of the total population of the five countries that make up the Hub. Furthermore, the area of influence has an average population density of almost 27 inhabitants per km$^2$. This indicator ranges from a maximum of just over 363 inhabitants per km2 in the state of Rio de Janeiro to a minimum 2 inhabitants per km$^2$ in the department of Beni, in Bolivia.

API includes projects from four of the five project groups of this Hub: i) G1 - Chile - Bolivia - Paraguay - Brazil Connection; ii) G2 - Optimization of the Corumbá - São Paulo - Santos - Rio de Janeiro Corridor; iii) G3 - Santa Cruz - Puerto Suárez - Corumbá Connection; and iv) G5 - Connections of the Hub to the Pacific: Ilo / Matarani - Desaguadero - La Paz + Arica - La Paz + Iquique - Oruro - Cochabamba - Santa Cruz.

Table H.1 shows the seven individual projects that make up the four structured projects of the Central Interoceanic Hub incorporated into API. The estimated investments involved amount to US$460.1 million. The projects are aimed at improving road, rail and air connections among Bolivia, Brazil, Paraguay and Peru, all of them revolving around Bolivia. Four of the individual projects have been grouped together in the so-called Improvement of Road Connectivity in the Central Interoceanic Hub structured project for the purpose of enhancing Brazil-Bolivia road connection within the Hub. The other API projects from this Hub are intended to raise freight capacity at the Viru Viru Airport (Santa Cruz de la Sierra, Bolivia); improve the Infante Rivarola-Cañada Oruro border crossing between Bolivia and Paraguay; and develop a central bioceanic rail corridor in Bolivia.

Map H.1 · **API Projects - Central Interoceanic Hub**

## Table H.1 · API Projects - Central Interoceanic Hub

| # | Structured Project Name | No. of Individual Projects | Countries | API amount (million US$) | Stage | Code | Name of the Individual Projects | Countries Involved | PG | Project Stage | Amount (US$) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 21 | PASSENGER AND CARGO HUB AIRPORT FOR SOUTH AMERICA (VIRU VIRU, SANTA CRUZ, INTERNATIONAL HUB AIRPORT) | 1 | BO | 20.0 | ● | IOC78 | PASSENGER AND CARGO HUB AIRPORT FOR SOUTH AMERICA (VIRU VIRU, SANTA CRUZ, INTERNATIONAL HUB AIRPORT) | BO | G03 | ● | 20,000,000 |
| 22 | IMPROVEMENT OF ROAD CONNECTIVITY IN THE CENTRAL INTEROCEANIC HUB | 4 | BO - BR | 431.5 | ● | IOC14 | CAMPO GRANDE BYPASS | BR | G02 | ● | 30,000,000 |
| | | | | | | IOC25 | PUERTO SUÁREZ - CORUMBÁ INTEGRATED CONTROL AREA | BO - BR | G03 | ● | 2,000,000 |
| | | | | | | IOC32 | TOLEDO - PISIGA ROAD | BO | G05 | ● | 130,500,000 |
| | | | | | | IOC80 | UPGRADE OF LA PAZ - SANTA CRUZ ROUTE TO A FOUR-LANE ROAD | BO | G05 | ● | 269,000,000 |
| 23 | INFANTE RIVAROLA - CAÑADA ORURO BORDER CROSSING | 1 | BO - PA | 1.9 | ● | IOC09 | INFANTE RIVAROLA - CAÑADA ORURO BORDER CROSSING | BO - PA | G01 | ● | 1,900,000 |
| 24 | CENTRAL BIOCEANIC RAILWAY CORRIDOR (BOLIVIAN SECTION) | 1 | BO | 6.7 | ● | IOC81 | CENTRAL BIOCEANIC RAILWAY CORRIDOR | BO | G05 | ● | 6,700,000 |

Table H.2 · **API Projects - Central Interoceanic Hub by Life Cycle Stage**

(number of projects, million US$ and percentage)

| Project Stage | No. of Projects | % of Projects | Investment Amount | % of Investment Amount |
|---|---|---|---|---|
| Profiling | 1 | 14.3 | 20.0 | 4.3 |
| Pre-Execution | 1 | 14.3 | 6.7 | 1.5 |
| Execution | 5 | 71.4 | 433.4 | 94.2 |
| Completed | 0 | 0.0 | 0.0 | 0.0 |
| **TOTAL** | 7 | 100.0 | 460.1 | 100.0 |

Note: Amounts are estimated on the basis of the life cycle stage at which the API individual projects are.

Figure H.1 · **API Projects - Central Interoceanic Hub by Life Cycle Stage**

(% of number of projects and % of investment amount)

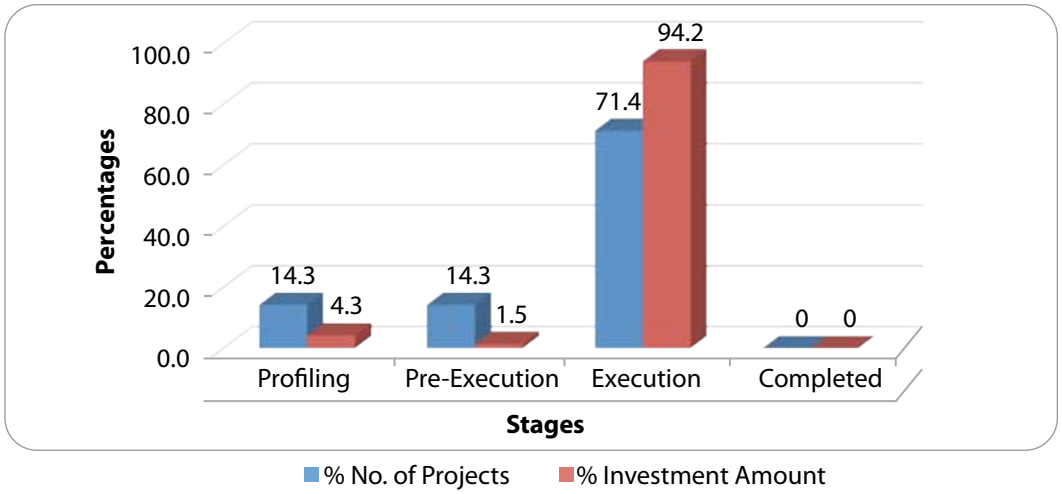



Figure H.2 · **API Projects - Central Interoceanic Hub by Subsector**

(% of number of projects and % of investment amount)

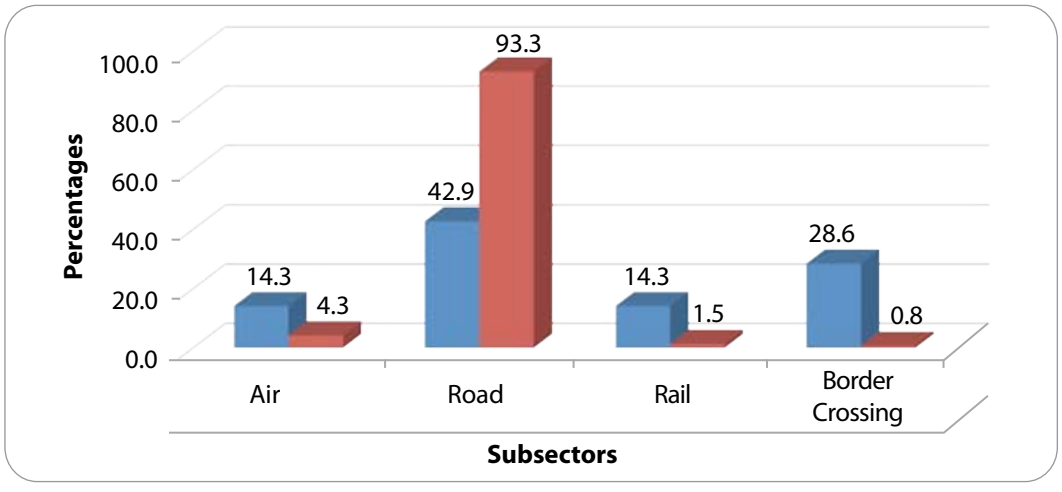


Figure H.3 · **API Projects - Central Interoceanic Hub by Source of Financing**

(% of number of projects and % of investment amount)

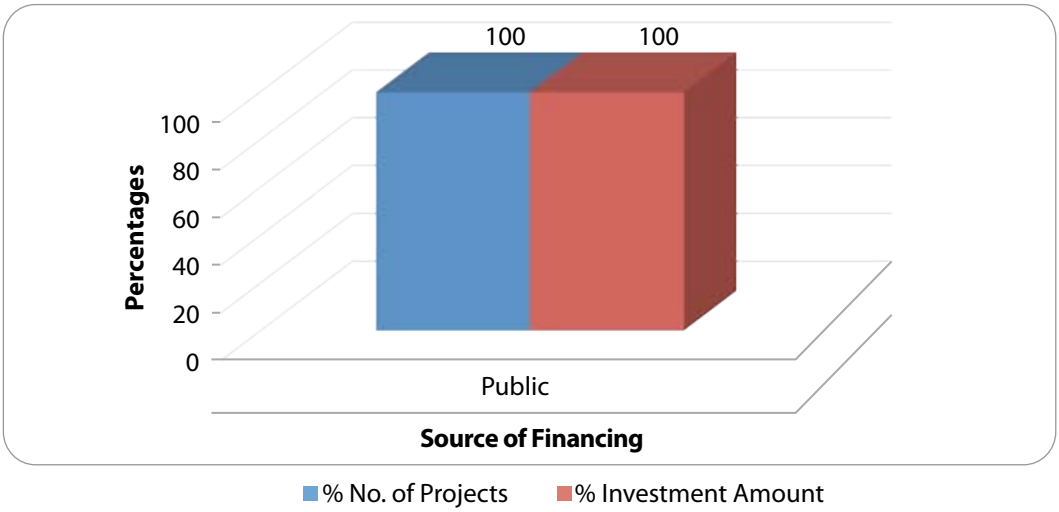



Table H.3 · **API Projects Technical Specifications - Central Interoceanic Hub by Source of Financing**

- Expansion of a freight and passenger airport (including the upgrade and construction of hangars and infrastructure for cargo storage and control, as well as the expansion of the cargo apron, among other works).
- Construction of a 46-km ring road.
- Improvement of a border crossing.
- Construction of a border center for integrated control operations in a single customs office and complementary works (including housing for officers, a generator enclosure, a water tank and complementary works, a parking lot, a lab for phytosanitary controls, and equipment for the communications system).
- Paving of 232 km of roads.
- Upgrade to four lanes along 789 km of roads.
- The rehabilitation and construction of 1,700 km of rails.

## PASSENGER AND CARGO HUB AIRPORT FOR SOUTH AMERICA (VIRU VIRU, SANTA CRUZ, INTERNATIONAL HUB AIRPORT)

COUNTRIES

SUBSECTOR

ESTIMATED INVESTMENT **20,000,000**

SOURCE OF FINANCING

PROJECT STAGE **PROFILING**

LIFE CYCLE STAGES AND NUMBER OF PROJECTS 1 0 0 0

ESTIMATED PROJECT COMPLETION DATE **DECEMBER 2017**

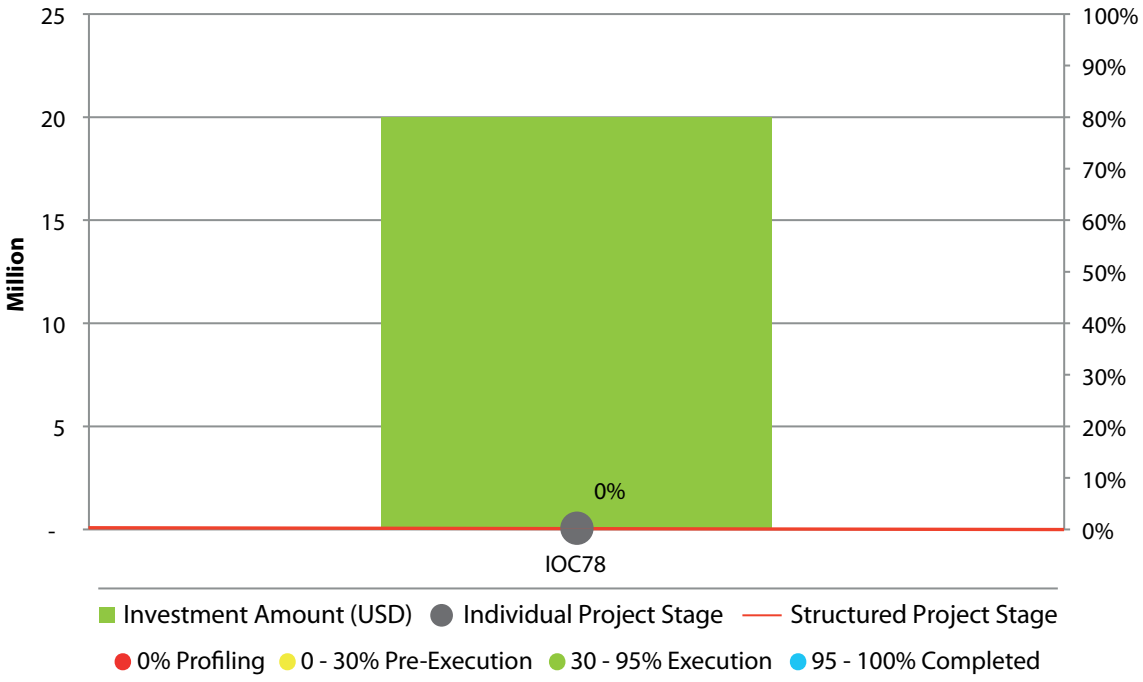
| Code | Stage | Name of the Individual Projects | Countries Involved | Estimated Investment (US$) |
|---|---|---|---|---|
| IOC78 | ● | PASSENGER AND CARGO HUB AIRPORT FOR SOUTH AMERICA (VIRU VIRU, SANTA CRUZ, INTERNATIONAL HUB AIRPORT) | BO | 20,000,000 |

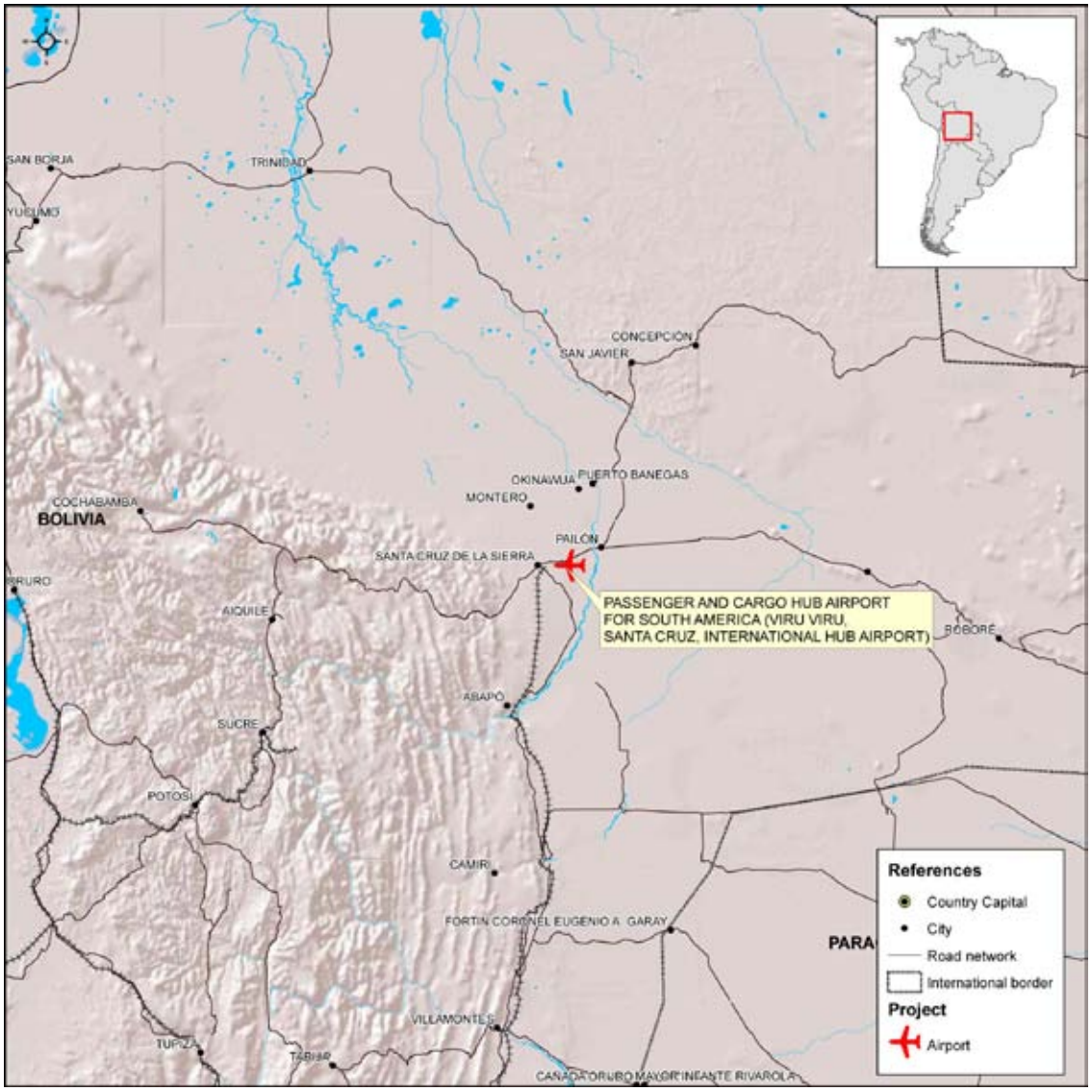
## PROJECT TECHNICAL SPECIFICATIONS

THE STRUCTURED PROJECT INVOLVES:

- Expansion of a freight and passenger airport (including the upgrade and construction of hangars and infrastructure for cargo storage and control, as well as the expansion of the cargo apron, among other works).

### STRUCTURED PROJECT STATUS AND INDIVIDUAL PROJECT STAGE AND ESTIMATED INVESTMENT




SAN BORJA
TRINIDAD
YUCUMO
CONCEPCION
SAN JAVIER
OKINAWUA
PUERTO BANEGAS
MONTERO
COCHABAMBA
BOLIVIA
PAILON
SANTA CRUZ DE LA SIERRA
ORURO
AIQUILE
PASSENGER AND CARGO HUB AIRPORT
FOR SOUTH AMERICA (VIRU VIRU,
SANTA CRUZ, INTERNATIONAL HUB AIRPORT)
BOBORE
ABAPÓ
SUCRE
POTOSI
CAMIRI
FORTIN CORONEL EUGENIO A. GARAY
PARA
VILLAMONTES
TUPIZA
TARIJA
CANADA ORURO MAYOR INFANTE RIVAROLA
References
Country Capital
City
Road network
International border
Project
Airport

21

CENTRAL INTEROCEANIC

## RATIONALE

Este proyecto estructurado busca establecer un centro aéreo de distribución regional de carga y pasajeros (nacional e internacional), que permita un manejo adecuado, eficiente y seguro como elemento de desarrollo económico local y regional. El proyecto es importante pues permitirá fomentar las exportaciones de productos agroindustriales de su área de influencia y generará un aumento de las importaciones de insumos. Uno de los HUB será el aeropuerto de Viru Viru que se encuentra localizado en la ciudad de Santa Cruz de la Sierra, Bolivia. Este aeropuerto está situado en el centro geográfico de Suramérica, por lo que se espera que sirva de punto de interconexión aérea y que se constituya en un aeropuerto distribuidor de cargas y pasajeros en todo el Eje Interoceánico Central. El aeropuerto tiene una altitud cercana al nivel del mar, por lo que las aeronaves podrán operar con toda su capacidad de carga.

## PROPOSAL

El creciente comercio de carga aérea justifica la expansión del aeropuerto. El proyecto implica la adecuación y construcción de nueva infraestructura para el almacenamiento y control de la carga, hangares, ampliación de la plataforma de carga, entre otros. Las líneas aéreas de otros continentes podrán realizar sus operaciones hacia este aeropuerto desde donde se distribuirían los pasajeros y carga hacia los demás países, con menor recorrido y tiempo. Esto permitirá menores costos operativos y, por lo tanto, menores fletes y pasajes.

## PROGRESS ANALYSIS AND ASSESSMENT

The only individual project included in this structured project forms part of the COSIPLAN Project Portfolio and is a priority in Bolivia's National Development Plan. It has an associated Master Plan updated as of 2005, and is at the profiling stage. The cost of the feasibility study has been estimated and, at present, the financial resources committed by FONPLATA to conduct the studies are being secured. The project is also included as a priority in the plans of the Bolivian Office of the Deputy Minister of Transport, and the competence over its implementation rests with the Central Government.

## IMPROVEMENT OF ROAD CONNECTIVITY IN THE CENTRAL INTEROCEANIC HUB

COUNTRIES

SUBSECTOR

ESTIMATED INVESTMENT **431,500,000**

SOURCE OF FINANCING

PROJECT STAGE **EXECUTION**

LIFE CYCLE STAGES AND NUMBER OF PROJECTS 0 0 4 0

ESTIMATED PROJECT COMPLETION DATE **AUGUST 2016**

| Code | Stage | Name of the Individual Projects | Countries Involved | Estimated Investment (US$) |
|---|---|---|---|---|
| IOC14 | ● | CAMPO GRANDE BYPASS | BR | 30,000,000 |
| IOC25 | ● | PUERTO SUÁREZ - CORUMBÁ INTEGRATED CONTROL AREA | BO - BR | 2,000,000 |
| IOC32 | ● | TOLEDO - PISIGA ROAD | BO | 130,500,000 |
| IOC80 | ● | UPGRADE OF LA PAZ - SANTA CRUZ ROUTE TO A FOUR-LANE ROAD | BO | 269,000,000 |

22

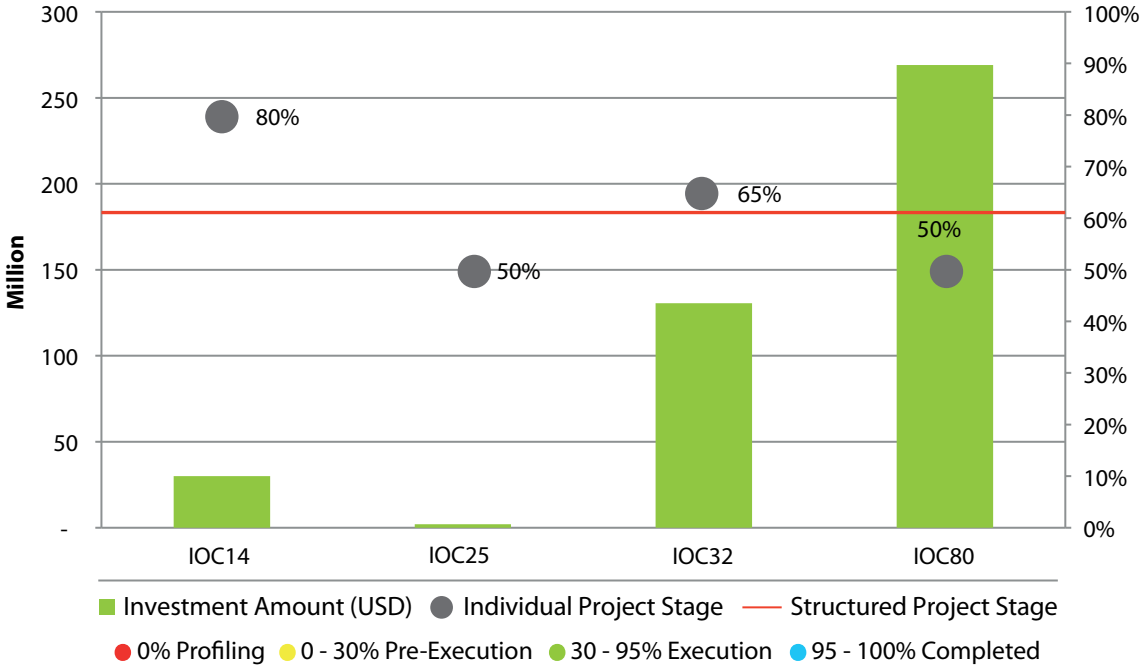
CENTRAL INTEROCEANIC

## PROJECT TECHNICAL SPECIFICATIONS

THE STRUCTURED PROJECT INVOLVES:

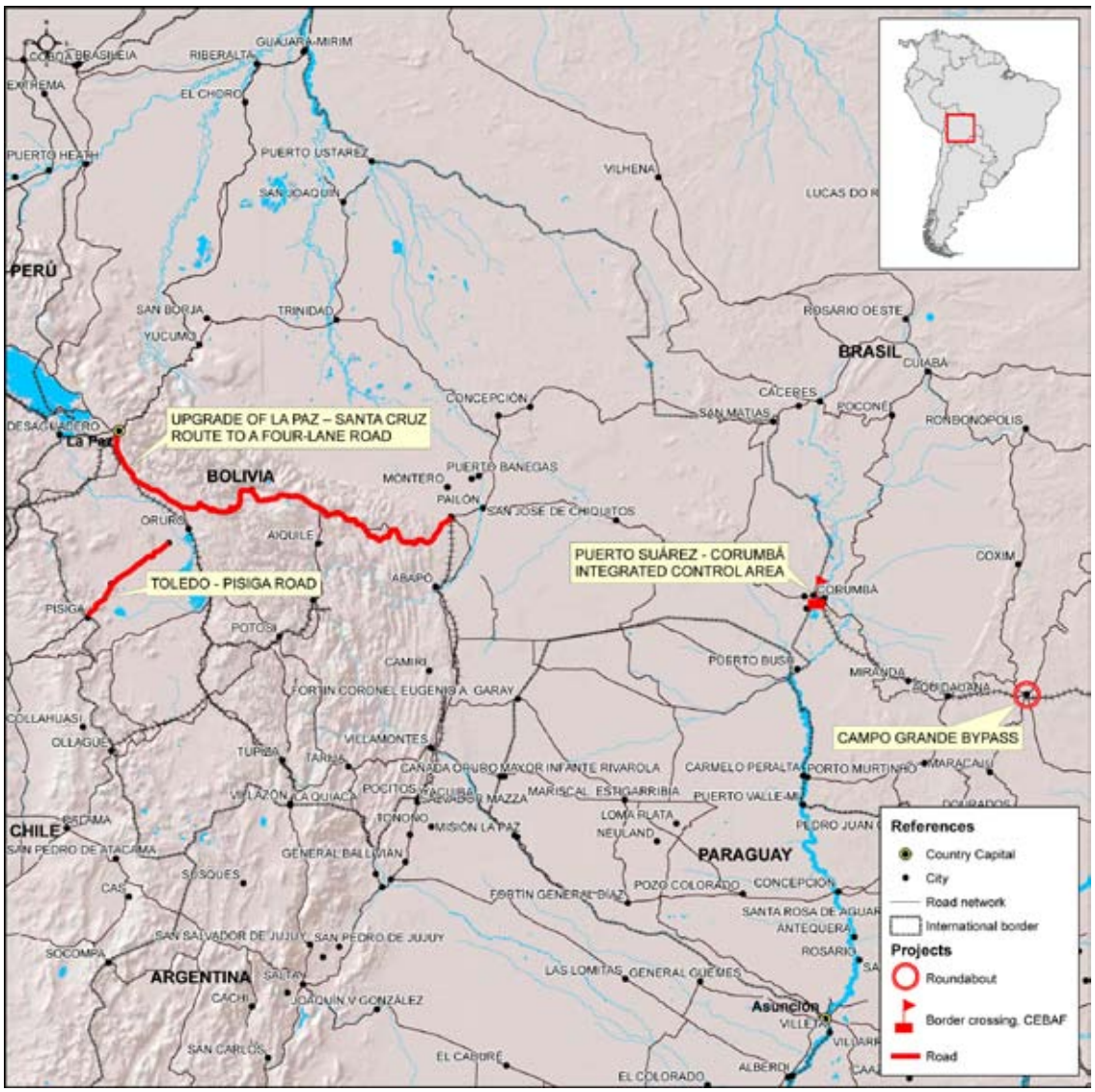
- Construction of a 46-km ring road.
- Improvement of a border crossing.
- Paving of 232 km of roads.
- Upgrade to four lanes along 789 km of roads.

### STRUCTURED PROJECT STATUS AND INDIVIDUAL PROJECT STAGE AND ESTIMATED INVESTMENT




## LAST YEAR'S MAJOR DEVELOPMENTS:

- Project UPGRADE OF LA PAZ - SANTA CRUZ ROUTE TO A FOUR-LANE ROAD made 20% progress, having completed the first quarter of the works.


UPGRADE OF LA PAZ – SANTA CRUZ ROUTE TO A FOUR-LANE ROAD
TOLEDO - PISIGA ROAD
PUERTO SUÁREZ - CORUMBÁ INTEGRATED CONTROL AREA
CAMPO GRANDE BYPASS
PERÚ
BOLIVIA
BRASIL
CHILE
PARAGUAY
ARGENTINA
La Paz
ORURO
PISIGA
POTOSI
SANTA CRUZ
CORUMBA
Asunción
References
Country Capital
City
Road network
International border
Projects
Roundabout
Border crossing. CEBAF
Road

22

CENTRAL INTEROCEANIC

## RATIONALE

The purpose of this project is to link Bolivia with Peru and Chile on the west and with Brazil on the east (through the states of Mato Grosso do Sul and São Paulo to the port of Santos). Furthermore, it enables the integration of Bolivia with Paraguay, Argentina and Uruguay through the Tamengo canal and the Paraguay-Paraná waterway, thus encouraging the regional integration of the South American countries. The simultaneous implementation of the individual projects is highly important, as enhanced road connectivity in the Central Interoceanic Hub will impact on 98% of the trade between Brazil and Bolivia. In addition, the individual projects will require complementary actions, such as efficient border crossings, standardized rules for vehicular traffic, sustainable environmental preservation, and identification of logistics and production integration opportunities within, for example, the mining/iron and steel production chain, and the agricultural and agro-industrial chain.

## PROPOSAL

This structured project is made up of four individual projects located in the Central Interoceanic Hub and intended to facilitate long-distance trade. Three of them involve roads, and one is related to a border crossing between Bolivia and Brazil. The former are i) Upgrade of La Paz - Santa Cruz Route to a Four-lane Road; ii) Campo Grande Bypass; and iii) Toledo - Pisiga Road; whereas the latter is the Puerto Suárez - Corumbá Border Crossing project.

The Upgrade of La Paz - Santa Cruz Route to a Four-lane Road project forms part of a corridor that will join the departments of La Paz, Oruro, Cochabamba, and Santa Cruz with four-lane, paved, first-category roads, facilitating trade and reducing the number of accidents. This corridor provides a link with Peru and Chile on the west and with Brazil on the east, in the Bolivian town and port of Puerto Quijarro, which is a point of connection with the Paraguay-Paraná waterway through the Tamengo canal and, consequently, with Uruguay and Paraguay. The Toledo - Pisiga Road project aims at supplementing Bolivia's articulation with the Chilean port of Iquique, and its completion will also contribute to improving the competitiveness of important mining areas in Bolivia. The Puerto Suárez (Bolivia)-Corumbá (Brazil) Integrated Control Area needs improved infrastructure and harmonization of the Bolivian and Brazilian transport systems. Finally, the purpose of the Campo Grande bypass is to ensure a safer and smoother traffic flow in the city of Campo Grande, where congestion caused by long-distance, light- and heavy-duty vehicles is a problem.

## PROGRESS ANALYSIS AND ASSESSMENT

The four individual projects that make up this structured project belong to the COSIPLAN Project Portfolio, and all of them are in execution.

The projects in Bolivia are included in the National Development Plan, and investment plans are already in place, providing for the availability of resources to guarantee their execution and ensuring their harmonization with the plans. Moreover, the funds for all the sections of the La Paz-Santa Cruz four-lane road have been allocated, and most sections are already being constructed.

The Puerto Suárez-Corumbá Integrated Control Area (ACI, in Spanish) requires an amount of US$2,000,000 for its operation. In this regard, the Federal Government of Brazil will finance the construction of a warehouse for confiscated goods and a kennel to house sniffer dogs, the improvement of the Esdras border crossing infrastructure, and the purchase of a forklift truck. On March 27, 2012, the regulation creating the ACI between the Bolivian customs office in Puerto Suárez and the Brazilian Federal Revenue Inspectorate in Corumbá was signed with the purpose of simplifying export and import formalities for trucks and rail cars. In 2013, the joint works were commenced with the presence of the Bolivian customs in Porto Seco, Corumbá, with a view to upgrading the existing infrastructure.

The construction of the Campo Grande ring road is underway and forms part of the Brazilian Growth Acceleration Program (PAC); hence, its resources have already been allocated. Completion of the works requires the relocation of the electric power distribution network in the central axis of the lane as well as the regularization of the expropriation process.

## INFANTE RIVAROLA - CAÑADA ORURO BORDER CROSSING

COUNTRIES 

SUBSECTOR 

ESTIMATED INVESTMENT **1,900,000**

SOURCE OF FINANCING 

PROJECT STAGE **EXECUTION**

LIFE CYCLE STAGES AND NUMBER OF PROJECTS 


ESTIMATED PROJECT COMPLETION DATE **DECEMBER 2015**

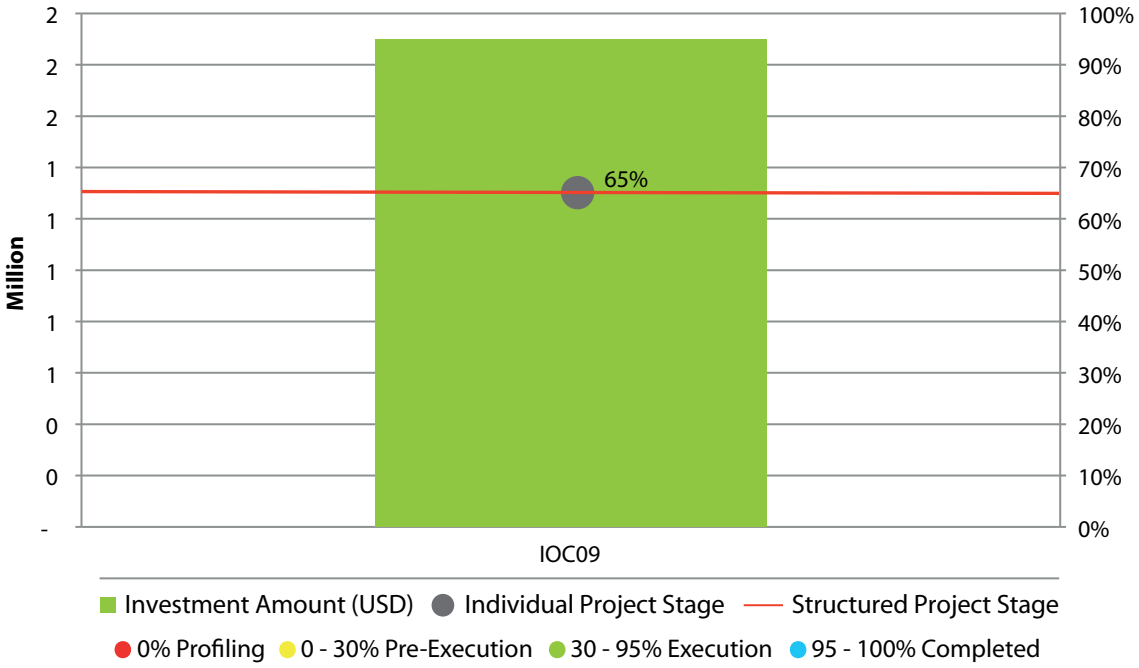
| Code | Stage | Name of the Individual Projects | Countries Involved | Estimated Investment (US$) |
|---|---|---|---|---|
| IOC09 | ● | INFANTE RIVAROLA - CAÑADA ORURO BORDER CROSSING | BO – PA | 1,900,000 |

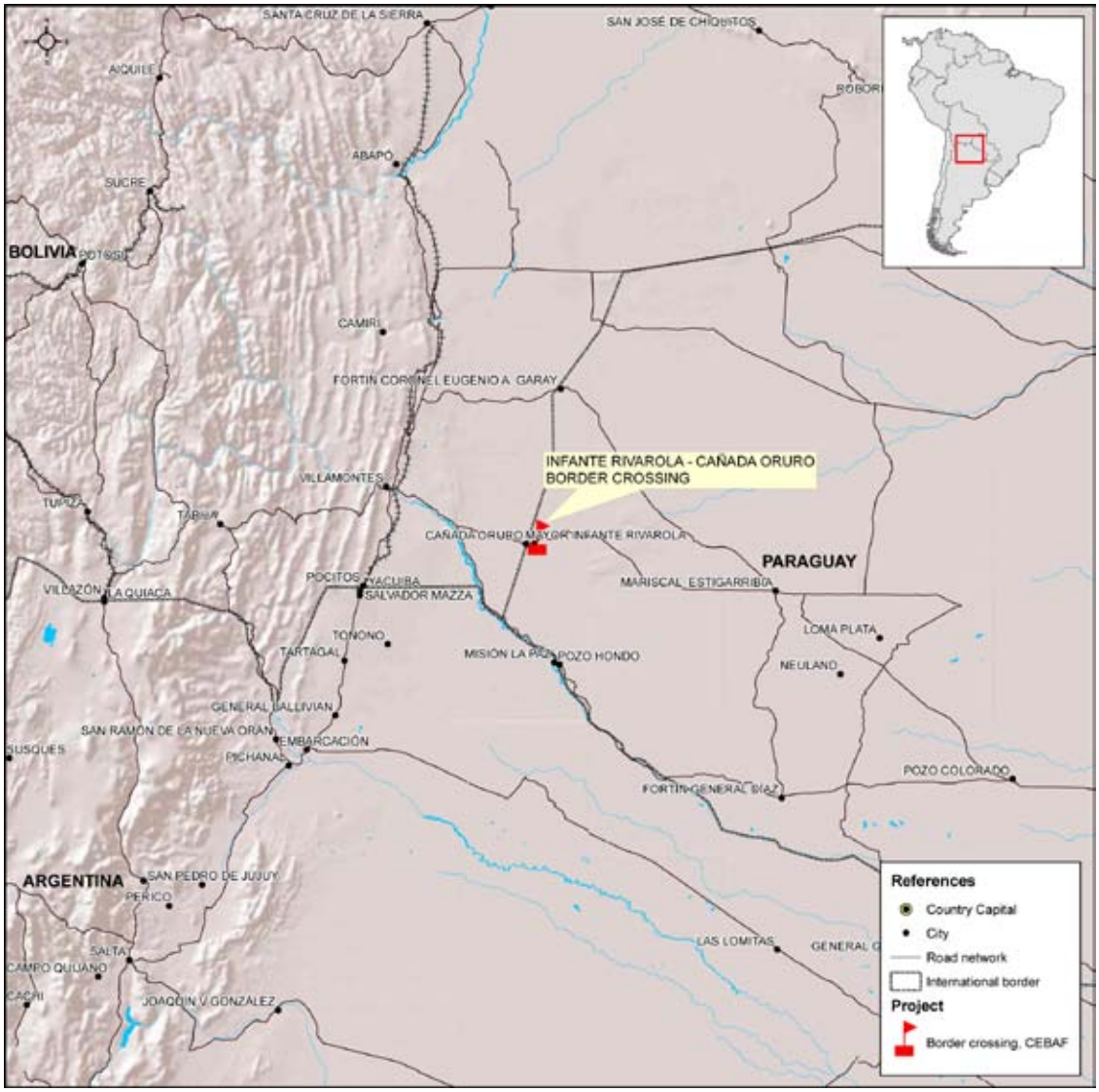
## PROJECT TECHNICAL SPECIFICATIONS

THE STRUCTURED PROJECT INVOLVES:

- Construction of a border center for integrated control operations in a single customs office and complementary works (including housing for officers, a generator enclosure, a water tank and complementary works, a parking lot, a lab for phytosanitary controls, and equipment for the communications system).

### STRUCTURED PROJECT STATUS AND INDIVIDUAL PROJECT STAGE AND ESTIMATED INVESTMENT




SANTA CRUZ DE LA SIERRA
SAN JOSÉ DE CHIQUITOS
AIQUILE
ROBORÉ
ABAPÓ
SUCRE
BOLIVIA
POTOSÍ
CAMIRI
FORTIN CORONEL EUGENIO A. GARAY
INFANTE RIVAROLA - CAÑADA ORURO
BORDER CROSSING
VILLAMONTES
TUPIZA
TARIJA
CAÑADA ORURO MAYOR
INFANTE RIVAROLA
PARAGUAY
POCITOS
YACUIBA
VILLAZÓN
LA QUIACA
SALVADOR MAZZA
MARISCAL ESTIGARRIBIA
LOMA PLATA
TOHONO
TARTAGAL
MISIÓN LA PAZ
POZO HONDO
NEULAND
GENERAL MOSCONI
SAN RAMÓN DE LA NUEVA ORÁN
EMBARCACIÓN
SUSQUES
PICHANAL
POZO COLORADO
FORTIN GENERAL DÍAZ
ARGENTINA
SAN PEDRO DE JUJUY
PERICO
LAS LOMITAS
SALTA
CAMPO QUIJANO
CACHI
JOAQUÍN V. GONZÁLEZ
References
Country Capital
City
Road network
International border
Project
Border crossing, CEBAF

23

CENTRAL INTEROCEANIC

## RATIONALE

The purpose of this structured project is to build and install the necessary infrastructure and services to allow efficient passenger and freight traffic between Bolivia and Paraguay. The project is located in the geographic midpoint of the Central Interoceanic Hub, in the Bolivia-Paraguay border area, and its implementation is justified by the increase in vehicular traffic and trade flows between Paraguay and Bolivia directly resulting from the pavement and improvement of the Villa Montes-Cañada Oruro road. The project involves paving of the Paraguayan road section between Estancia La Patria and Infante Rivarola (which has been completed), and of the Bolivian Cañada Oruro-Villa Montes road section. As for the latter, the Palo Marcado-Cañada Oruro stretch is already paved and operational. It is located in the third section of the Gran Chaco province in the Tarija Department, and it forms part of Route F11, within the Bolivian Fundamental Road Network, as well as of the corridor for exporting agricultural products from southern Santa Cruz and the Bolivian Chaco region to the Paraguayan and Brazilian markets.

## PROPOSAL

The only individual project included in this structured project involves the construction of infrastructure for a Paraguay-Bolivia border center for integrated control operations, including access and cargo inspection areas, a facility for the storage of withheld cargo, IT and communications systems, and a lab for sanitary controls.

## PROGRESS ANALYSIS AND ASSESSMENT

This project is included in the COSIPLAN Project Portfolio and is currently at the execution stage.

At present, 75% of its first stage is already executed. In September 2012, works were interrupted for budgetary reasons. Completion of the project is expected for the last quarter of 2015.On the Bolivian side, works on the Palo Marcado-Cañada Oruro section have been completed and the section is operational as of the date of this report. The route of the project starts in the town of Villa Montes, located 275 km away from the city of Tarija; along its first 60-km stretch, it runs parallel to the Pilcomayo river up to the village of Ibibobo, from where it reaches in a straight line the border with Paraguay at a place known as "Hito BR 94" (BR 94 Milestone) or Cañada Oruro. The project forms part of Route F11, which links Tarija with the capital city of the O'Connor province as well as with the capital of the third section of the Gran Chaco province —Villa Montes—, and ends on the border with Paraguay at BR 94 Milestone. The whole road is within the Gran Chaco plain and runs across lands with undulating and flat relief.

## CENTRAL BIOCEANIC RAILWAY CORRIDOR (BOLIVIAN SECTION)

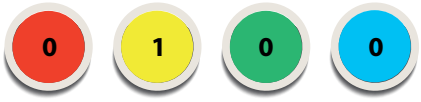
COUNTRIES 

SUBSECTOR 

ESTIMATED INVESTMENT **6,700,000**

SOURCE OF FINANCING 

PROJECT STAGE **PRE-EXECUTION**

LIFE CYCLE STAGES AND NUMBER OF PROJECTS 


ESTIMATED PROJECT COMPLETION DATE **JULY 2024**

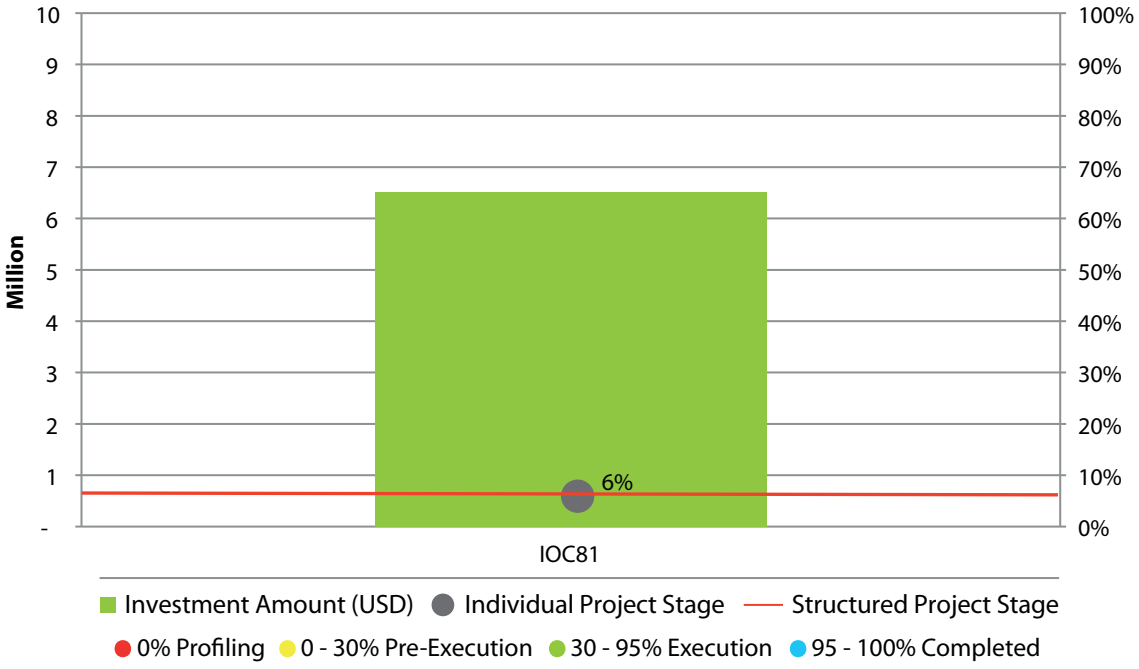
| Code | Stage | Name of the Individual Projects | Countries Involved | Estimated Investment (US$) |
|---|---|---|---|---|
| IOC81 | ● | CENTRAL BIOCEANIC RAILWAY CORRIDOR | BO | 6,700,000 |

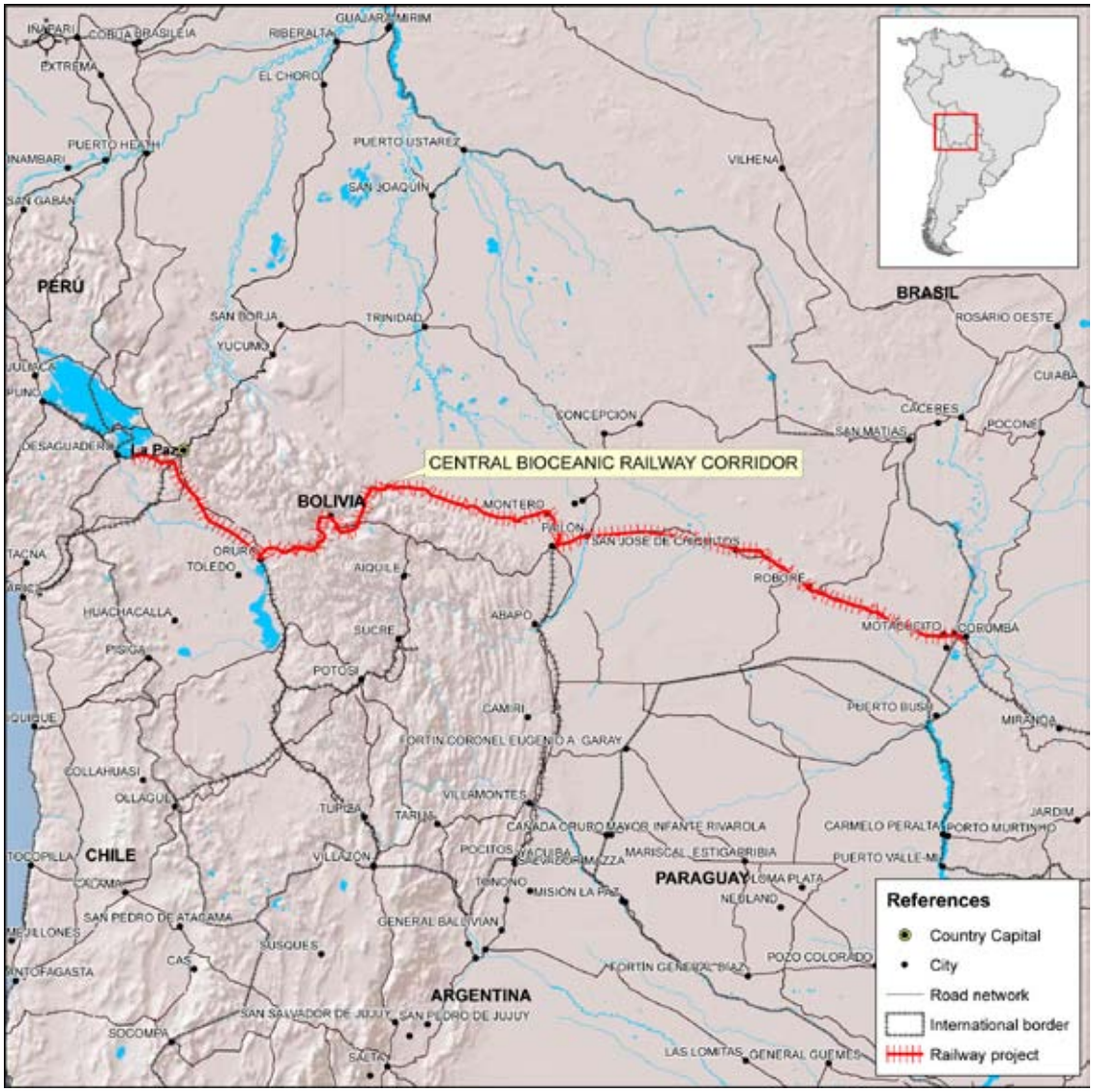
## PROJECT TECHNICAL SPECIFICATIONS

THE STRUCTURED PROJECT INVOLVES:

- Rehabilitation and construction of 1,700 km of rails.

### STRUCTURED PROJECT STATUS AND INDIVIDUAL PROJECT STAGE AND ESTIMATED INVESTMENT




CENTRAL BIOCEANIC RAILWAY CORRIDOR
PERÚ
BOLIVIA
CHILE
PARAGUAY
ARGENTINA
BRASIL
La Paz
ORURO
SUCRE
POTOSI
MONTERO
PAILON
SAN JOSE DE CHIQUITOS
ROBORE
MOTACUCITO
COROMBA
PUERTO BUSH
MIRANDA
CAMIRI
FORTIN CORONEL EUGENIO A. GARAY
VILLAMONTES
CANADA ORURO
MAYOR INFANTE RIVAROLA
CARMELO PERALTA
PORTO MURTINHO
JARDIM
MARISCAL ESTIGARRIBIA
PUERTO VALLEMI
LOMA PLATA
NUEVA ITALIA
TRINIDAD
SAN JOAQUIN
PUERTO USTAREZ
VILHENA
ROSARIO OESTE
CUIABA
CACERES
POCONE
SAN MATIAS
CONCEPCION
SAN BORJA
YUCUMO
RIBERALTA
GUAJARA-MIRIM
EL CHORO
PUERTO HEATH
COBIJA
BRASILEIA
EXTREMA
INAPARI
SAN GABAN
INAMBARI
DESAGUADERO
TACNA
ARICA
HUACHACALLA
PISIGA
QUILLAGUA
COLLAHUASI
OLLAGUE
TOCOPILLA
CALAMA
SAN PEDRO DE ATACAMA
MEJILLONES
ANTOFAGASTA
TUPIZA
TARIJA
VILLAZON
TRINONO
MISION LA PAZ
GENERAL BALLIVIAN
SUSQUES
CAS
POCITOS
YACUIBA
CAMPO DURO
POZO COLORADO
FORTIN GENERAL BRIZ
LAS LOMITAS
GENERAL GUEMES
SAN SALVADOR DE JUJUY
SAN PEDRO DE JUJUY
SALTA
SOCOMPA
AIQUILE
ABAPO
TOLEDO
References
Country Capital
City
Road network
International border
Railway project

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CENTRAL INTEROCEANIC

## RATIONALE

This structured project will ensure an interconnection for Brazil, Chile, Peru and Bolivia in the central area of South America, facilitating trade among such countries as well as exports to overseas markets. The Central Bioceanic Railway Corridor, spanning 4,000 km from the port of Santos, in Brazil, to the port of Arica, in Chile, will link rail networks. The section in Bolivia is of critical importance, since at present the two rail networks in the country, the Andean and the Eastern ones, are not interconnected. This approximately 500-km long missing link in Bolivian territory equals 6% of the total length of the Central Bioceanic Railway Corridor. Both rail networks have meter gauge tracks and a bearing capacity ranging from 15-ton to 18-ton axle load, and allow a speed of 70 km/h (passengers) and 40 km/h (cargo). The Bolivian missing link is an obstacle to uninterrupted traffic along the entire corridor; moreover, the railroad sections are not able to efficiently handle the forecasted freight volumes. Goods traffic forecasts provide sufficient reasons to define a project for the upgrade and harmonization of the carrying capacity of tracks throughout the Bolivian territory.

## PROPOSAL

The proposal involves investments aimed at i) enhancing existing infrastructure (replacement of tracks and cross-ties, and other improvements); and ii) building the interconnection as per the alternative solution that seems more reasonable in technical, operational, environmental, economic and social terms. Thus, the intention is to achieve interoperability (compatible track gages and a standard track bearing capacity) at the regional level.

## PROGRESS ANALYSIS AND ASSESSMENT

The only individual project making up this structured project is included in the COSIPLAN Project Portfolio and is a priority in both Bolivia's National Development Plan and Sectoral Development Plan, as well as in the Annual Operating Plan 2011-2012 of the Bolivian Office of the Deputy Minister of Transport.

At the national level, the Central Bioceanic Railway Corridor is the most ambitious project in the history of Bolivia, and will facilitate the sustainable development, exploitation and industrialization of natural resources, enabling export and import operations in a better condition than today as well as a logistics chain with the Corridor as its main axis.

The study intended to identify alternatives has already been conducted, and will be complemented with other studies including basic design engineering. Furthermore, it should be stated that the resources required to undertake this project have already been secured from the Inter-American Development Bank.

# MERCOSUR - CHILE HUB

## PROJECTS

STRUCTURED **6** INDIVIDUAL **15**

## ESTIMATED INVESTMENT

**3,131.8**
US$ Million

## BY SUBSECTOR

| | | | | |
|---|---|---|---|---|
| 3 | 2 | 5 | 4 | 1 |
| 1,697.5 | 139.9 | 40.4 | 254.0 | 1,000.0 |

## BY SOURCE OF FINANCING

| | | |
|---|---|---|
| 9 | 4 | 2 |
| 1,907.9 | 89.0 | 1,134.9 |

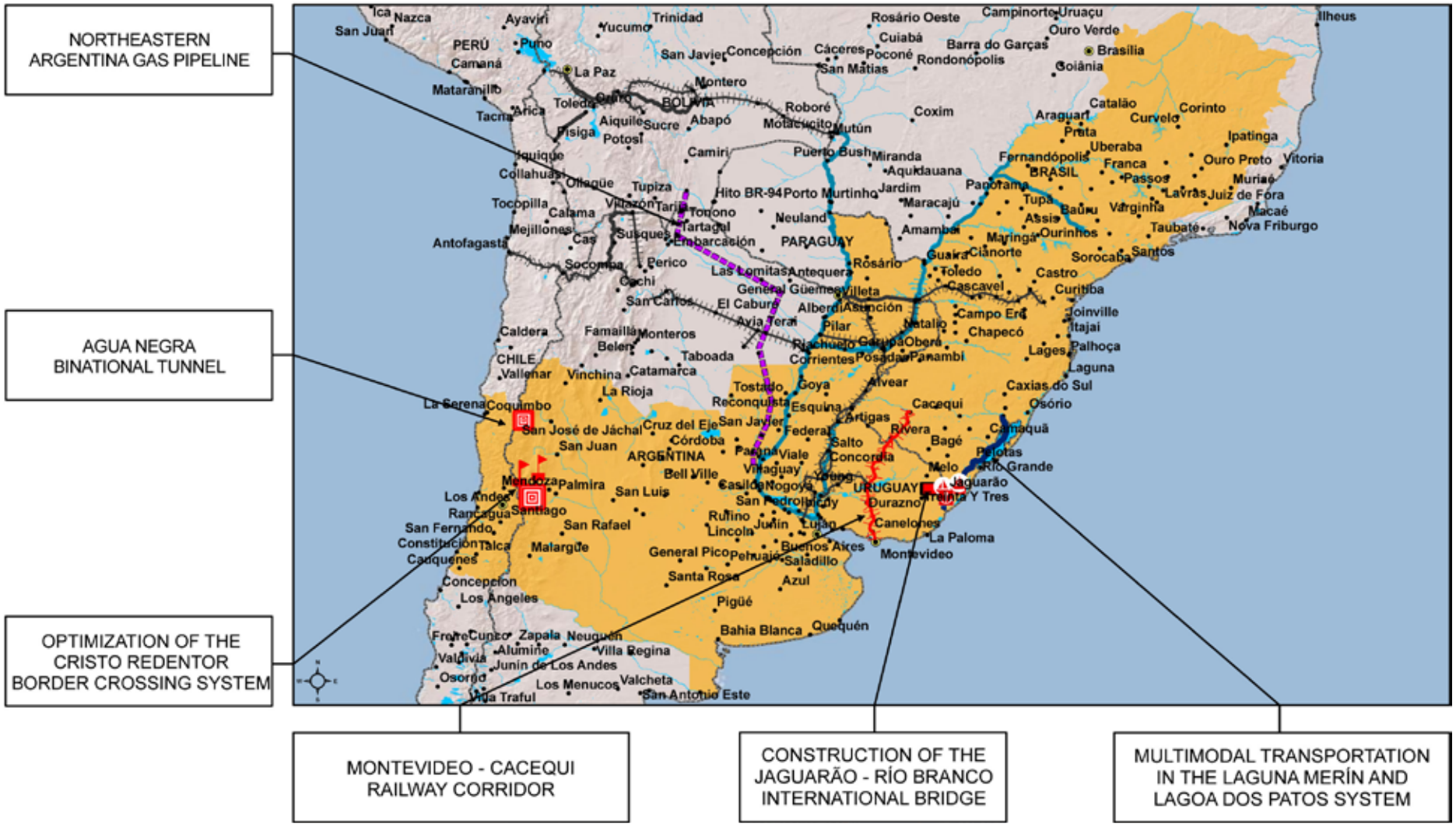
The area of influence of the MERCOSUR-Chile Hub encompasses Chile's Metropolitan Region and Regions IV, V, VI, and VII (Coquimbo, Valparaíso, Libertador, and Maule, respectively); the Argentine provinces of Mendoza, San Juan, La Rioja, San Luis, Córdoba, La Pampa, Santa Fe, Salta, Buenos Aires, Entre Ríos, Corrientes, and Misiones; the Brazilian states of Rio Grande do Sul, Santa Catarina, Paraná, São Paulo, and Minas Gerais; the eastern region of Paraguay; and the entire Uruguayan territory. This area of influence covers 3,216,623 km$^2$, accounting for 18% of the total area of the South American continent.

The total population of the area of influence was estimated at about 141,453,273 inhabitants in 2014, accounting for 34.9% of the South American population. Furthermore, the area of influence has an average population density of almost 44 inhabitants per km$^2$. This indicator ranges from a maximum 438 inhabitants per km$^2$ in the Metropolitan Region of Chile to a minimum of slightly more than 2 inhabitants per km$^2$ in the territory of the Argentine province of La Pampa.

API includes projects from four of the six project groups of this Hub: i) G2 - Porto Alegre - Argentina / Uruguay Border - Buenos Aires; ii) G3 - Valparaíso - Buenos Aires; iii) G4 - Coquimbo - Argentine Central Region - Paysandú; and iv) G5 - Energy Group.

Table I.1 shows the 15 individual projects that make up the six structured projects of the MERCOSUR-Chile Hub incorporated into API. The investments involved amount to US$3,131.8 million. API has an impact on the development of the five countries within the Hub (Argentina, Bolivia, Brazil, Chile and Uruguay). The largest-size project is the Northeastern Argentina Gas Pipeline. The other projects have different objectives. Three of them are intended to have a positive effect on the Brazilian and Uruguayan cross-border development via a rail corridor, an international bridge, and the improvement of multimodal transport between the Merín (or Mirim) and Lagoa dos Patos lakes. Finally, two projects contributing to the connectivity between Argentina and Chile are included: Agua Negra Binational Tunnel, and Optimization of the Cristo Redentor Border Crossing System. All the projects meet the selection criteria set out for inclusion in the Agenda and are consistent with the strategic functions of the Hub's project groups involved in API.

Map I.1 · **API Projects - MERCOSUR-Chile Hub**



## Table I.1 · API Projects - MERCOSUR-Chile Hub

| # | Structured Project Name | No. of Individual Projects | Countries | API amount (million US$) | Stage | Code | Name of the Individual Projects | Countries Involved | PG | Project Stage | Amount (US$) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 25 | NORTHEASTERN ARGENTINA GAS PIPELINE | 1 | AR - BO | 1,000.0 | 🟡 | MCC68 | NORTHEASTERN ARGENTINA GAS PIPELINE | AR | G05 | 🟡 | 1,000,000,000 |
| 26 | CONSTRUCTION OF THE JAGUARÃO - RÍO BRANCO INTERNATIONAL BRIDGE | 1 | BR - UY | 93.5 | 🟡 | MCC22 | CONSTRUCTION OF THE JAGUARÃO - RÍO BRANCO INTERNATIONAL BRIDGE | BR - UY | G02 | 🟡 | 93,500,000 |
| 27 | MULTIMODAL TRANSPORTATION IN THE LAGUNA MERÍN AND LAGOA DOS PATOS SYSTEM | 5 | BR - UY | 40.4 | 🟡 | MCC157 | DREDGING OF THE TACUARÍ RIVER | BR | G02 | 🟢 | 1,350,000 |
| | | | | | | MCC158 | DREDGING OF AND INSTALLATION OF SIGNS, MARKERS AND AIDS TO NAVIGATION ON THE MIRIM LAKE - DOS PATOS LAKE SYSTEM | BR | G02 | 🔴 | 0 |
| | | | | | | MCC159 | LA CHARQUEADA PORT TERMINAL AND DREDGING OF THE CEBOLLATI RIVER | UY | G02 | 🟢 | 7,000,000 |
| | | | | | | MCC160 | PORT TERMINAL AND DREDGING OF TACUARÍ | UY | G02 | 🟡 | 7,000,000 |
| | | | | | | MCC85 | DREDGING OF MIRIM LAKE | BR | G02 | 🟡 | 25,000,000 |
| 28 | MONTEVIDEO - CACEQUI RAILWAY CORRIDOR | 2 | BR - UY | 139.9 | 🟢 | MCC115 | REHABILITATION OF THE RIVERA - SANTANA DO LIVRAMENTO - CACEQUI RAILWAY SECTION | BR - UY | G02 | 🔵 | 5,000,000 |
| | | | | | | MCC30 | REHABILITATION OF THE MONTEVIDEO - RIVERA RAILWAY | UY | G02 | 🟢 | 134,900,000 |
| 29 | OPTIMIZATION OF THE CRISTO REDENTOR BORDER CROSSING SYSTEM | 5 | AR - CH | 258.0 | 🟡 | MCC151 | INTEGRATED FREIGHT CONTROL CENTER AT USPALLATA (CRISTO REDENTOR SYSTEM OPTIMIZATION) | AR | G03 | 🟡 | 90,000,000 |
| | | | | | | MCC152 | PASSENGER CONTROL CENTER AT LOS HORCONES (CRISTO REDENTOR SYSTEM OPTIMIZATION) | AR | G03 | 🟡 | 80,000,000 |
| | | | | | | MCC153 | NEW LOS LIBERTADORES BORDER COMPLEX (CRISTO REDENTOR SYSTEM OPTIMIZATION) | CH | G03 | 🟡 | 70,000,000 |
| | | | | | | MCC154 | REHABILITATION OF THE CRISTO REDENTOR TUNNEL AND CARACOLES (CRISTO REDENTOR SYSTEM OPTIMIZATION) | AR - CH | G03 | 🟡 | 4,000,000 |
| | | | | | | MCC155 | BINATIONAL MANAGEMENT CONTROL SYSTEM AT THE CRISTO REDENTOR BORDER CROSSING (CRISTO REDENTOR SYSTEM OPTIMIZATION) | AR - CH | G03 | 🟡 | 14,000,000 |
| 30 | AGUA NEGRA BINATIONAL TUNNEL | 1 | AR - CH | 1,600.0 | 🟡 | MCC110 | AGUA NEGRA BINATIONAL TUNNEL | AR - CH | G04 | 🟡 | 1,600,000,000 |

Table I.2 · API Projects - MERCOSUR-Chile Hub by Life Cycle Stage

(number of projects, million US$ and percentage)

| Project Stage | No. of Projects | % of Projects | Investment Amount | % of Investment Amount |
|---|---|---|---|---|
| Profiling | 1 | 6.7 | 0.0 | 0.0 |
| Pre-Execution | 10 | 66.7 | 2,983.5 | 95.3 |
| Execution | 3 | 20.0 | 143.3 | 4.6 |
| Completed | 1 | 6.7 | 5.0 | 0.2 |
| **TOTAL** | 15 | 100.0 | 3,131.8 | 100.0 |

Note: Amounts are estimated on the basis of the life cycle stages at which the API individual projects are.

Figure I.1 · API Projects - MERCOSUR-Chile Hub by Life Cycle Stage

(% of number of projects and % of investment amount)

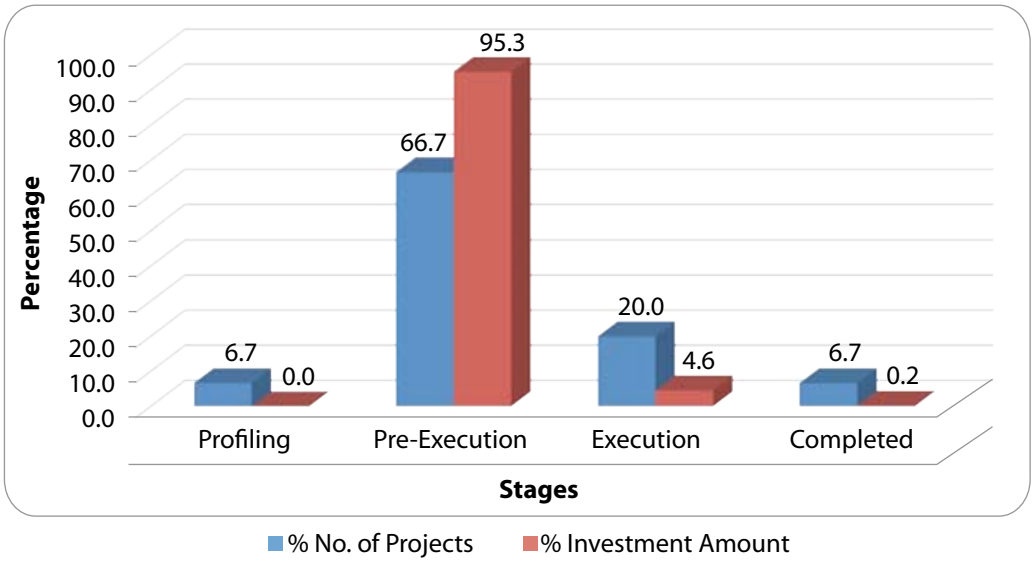



Figure I.2 · API Projects - MERCOSUR-Chile Hub by Subsector

(% of number of projects and % of investment amount)

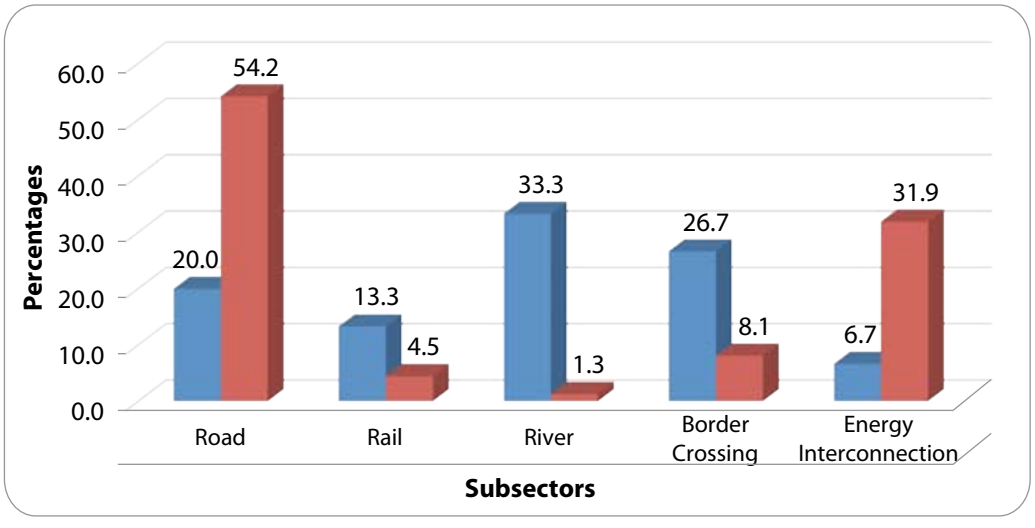


Figure I.3 · **API Projects - MERCOSUR-Chile Hub by Source of Financing**

(% of number of projects and % of investment amount)

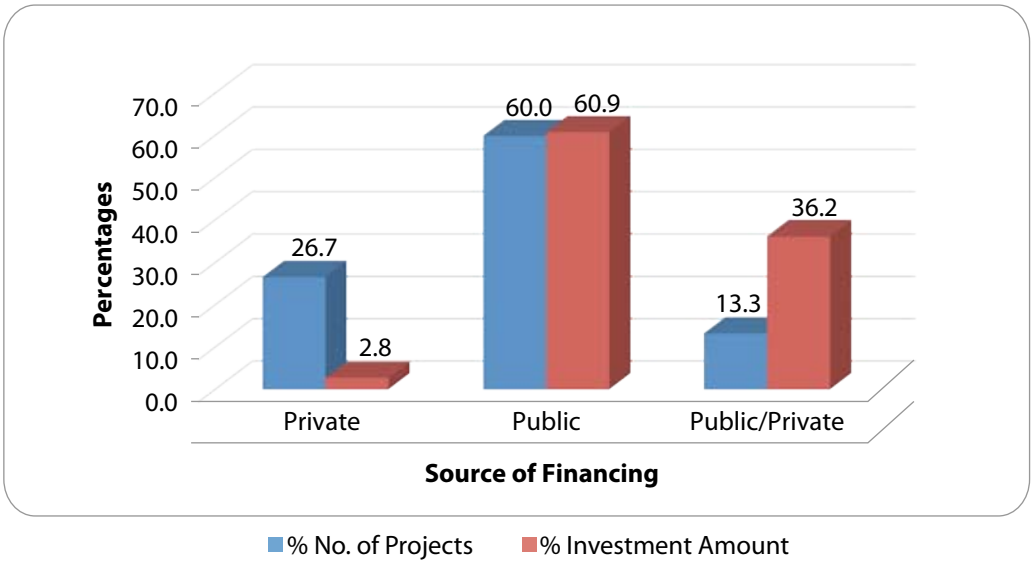



Table I.3 · **API Projects - Technical Specifications - MERCOSUR-Chile Hub**

- Upgrade of 15.5 km of roads.
- Construction of a 400-m long and 16.85-m wide bridge.
- Construction of a 13-km four-lane tunnel.
- Rehabilitation of a binational tunnel.
- Construction of four border complexes: a 20-ha complex (including the consolidation and improvement of the work area for private cars, the creation of a new area for buses, the construction of a new housing facility for 150 people, the construction of a new lounge facility and rest areas for officers from the institutions of both countries, and the construction of a new building for a brief rest or stop over for passengers) and a 32-ha complex (including civil works and installations needed to carry out tasks of control and surveillance of people, vehicles, goods and luggage).
- Design of a management control system.
- Optimization of a 47-ha freight control center.
- Optimization of a 20-ha passenger control center.
- Rehabilitation of 580 km of rails.
- Construction of two river port terminals.
- Dredging works, upgrade of corridors and complementary works in two lakes and their tributaries (including the installation of signs and markers and aids to navigation in navigable waterways, and cartographic and hydrographic surveys).
- Construction of a 1,500-km, 24-inch diameter trunk gas pipeline.

## NORTHEASTERN ARGENTINA GAS PIPELINE

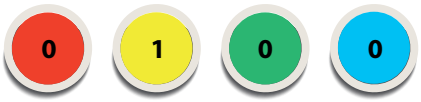
COUNTRIES 

SUBSECTOR 

ESTIMATED INVESTMENT **1,000,000,000**

SOURCE OF FINANCING 

PROJECT STAGE **PRE-EXECUTION**

LIFE CYCLE STAGES AND NUMBER OF PROJECTS 


ESTIMATED PROJECT COMPLETION DATE **DECEMBER 2022**

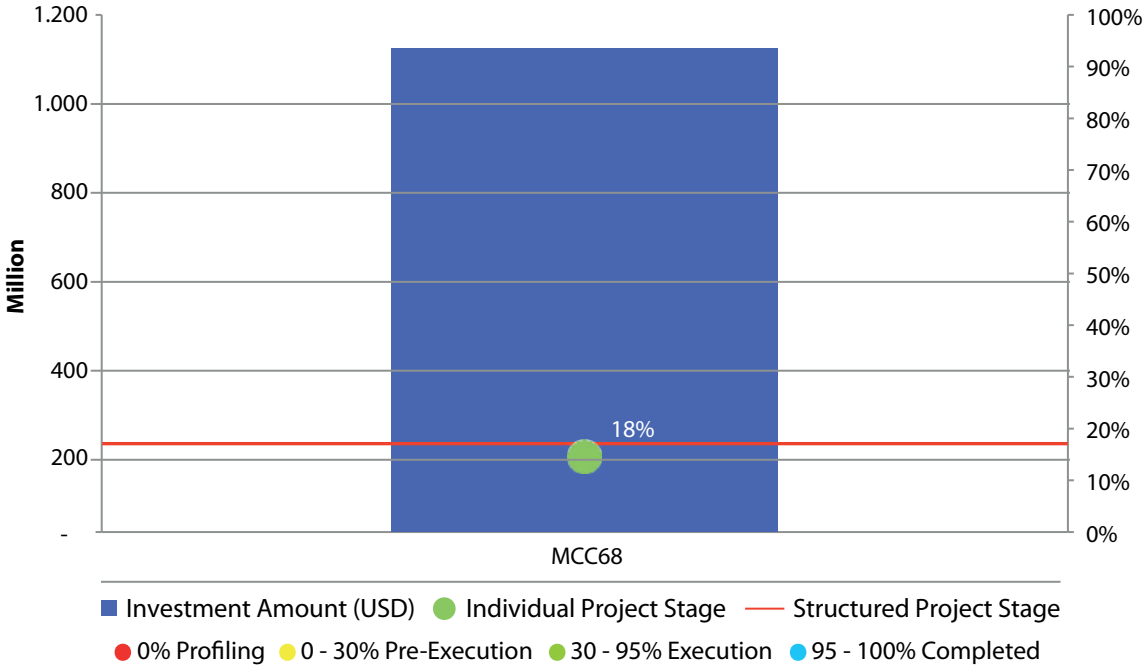
| Code | Stage | Name of the Individual Projects | Countries Involved | Estimated Investment (US$) |
|---|---|---|---|---|
| MCC68 | ● | NORTHEASTERN ARGENTINA GAS PIPELINE | AR | 1,000,000,000 |

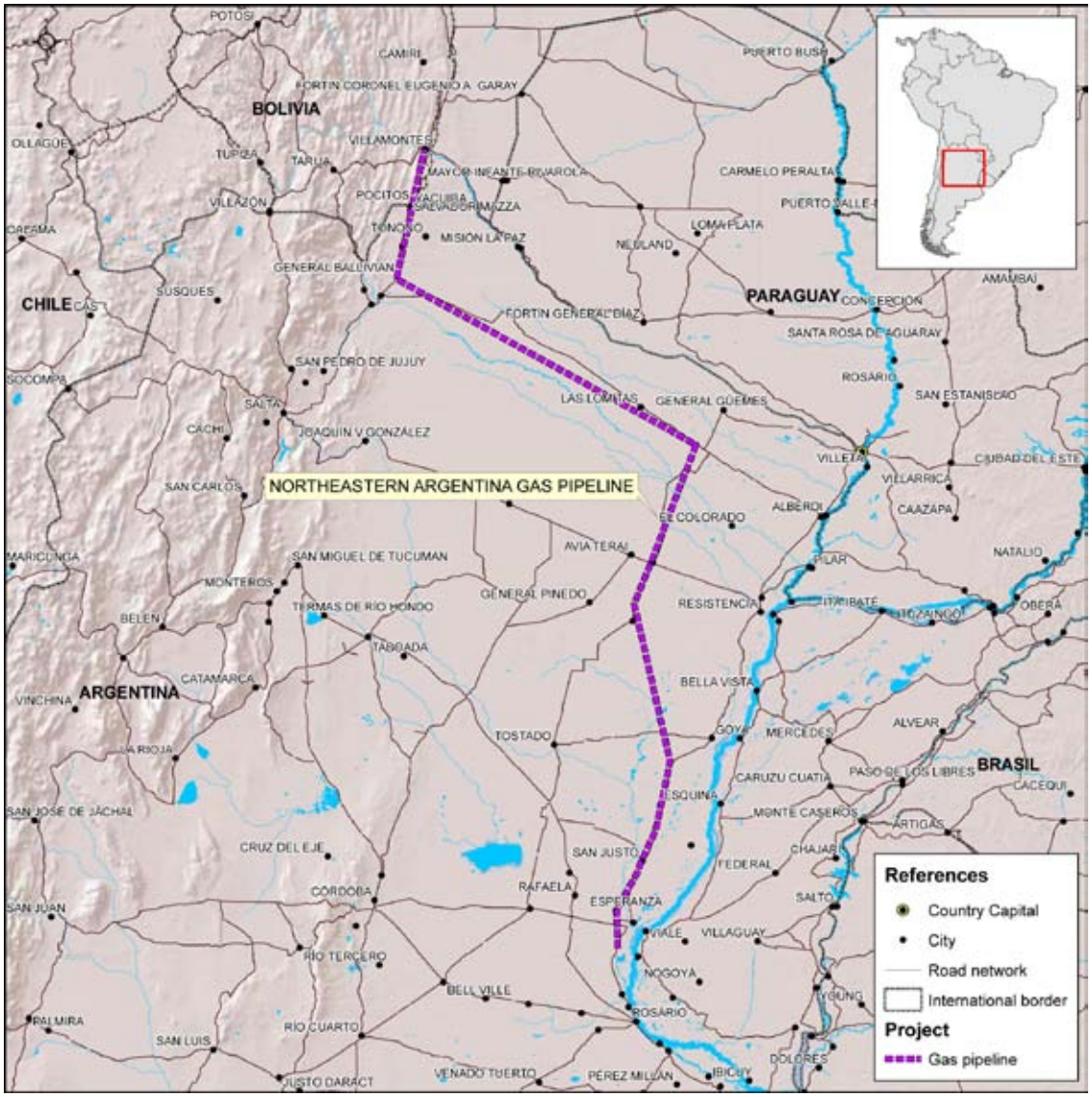
## PROJECT TECHNICAL SPECIFICATIONS

THE STRUCTURED PROJECT INVOLVES:

- Construction of a 1,500-km, 24-inch diameter trunk gas pipeline.

### STRUCTURED PROJECT STATUS AND INDIVIDUAL PROJECT STAGE AND ESTIMATED INVESTMENT




NORTHEASTERN ARGENTINA GAS PIPELINE
BOLIVIA
CHILE
PARAGUAY
ARGENTINA
BRASIL
POTOSI
CAMIRI
PUERTO BUSH
FORTIN CORONEL EUGENIO A. GARAY
VILLAMONTES
TUPIZA
TARIJA
OLLAGUE
VILLAZON
POCITOS
YACUIBA
CARMELO PERALTA
PUERTO CALLE
TOROMO
MISION LA PAZ
LOMA PLATA
NUEVA ESPERANZA
GENERAL BALLIVIAN
AMAMBAY
SUSQUES
CONCEPCION
FORTIN GENERAL DIAZ
SANTA ROSA DE AGUARAY
SAN PEDRO DE JUJUY
ROSARIO
SAN ESTANISLAO
LAS LOMITAS
GENERAL GUEMES
SALTA
CACHI
JOAQUIN V GONZALEZ
VILLETA
CIUDAD DEL ESTE
VILLARRICA
SAN CARLOS
EL COLORADO
ALBERDI
CAAZAPA
AVIA TERAI
PILAR
NATALIO
SAN MIGUEL DE TUCUMAN
MONTEROS
GENERAL PINEDO
RESISTENCIA
ITA IBATE
POSADAS
OBERA
TERMAS DE RIO HONDO
BELEN
TABOADA
CATAMARCA
BELLA VISTA
VINCHINA
GOYA
MERCEDES
ALVEAR
TOSTADO
LA RIOJA
CARUZU CUATIA
PASO DE LOS LIBRES
CACEQUI
ESQUINA
MONTE CASEROS
ARTIGAS
SAN JOSE DE JACHAL
CRUZ DEL EJE
SAN JUSTO
CHAJARI
FEDERAL
CORDOBA
RAFAELA
ESPERANZA
SALTO
SAN JUAN
VIALE
VILLAGUAY
RIO TERCERO
NOGOYA
BELL VILLE
ROSARIO
PALMIRA
SAN LUIS
RIO CUARTO
VENADO TUERTO
PEREZ MILLAN
IBICUY
DOLORES
JUSTO DARACT
References
Country Capital
City
Road network
International border
Project
Gas pipeline

25

MERCOSUR - CHILE

## RATIONALE

The purpose of this structured project is to ensure natural gas supply to the northeastern region of Argentina through large-diameter pipes, and to secure a sustained provision of adequate flows for use in natural gas vehicles and in industrial and agribusiness production. The trunk gas pipeline will link, in the vicinity of Santa Fe city, the gas reserves located in northern Argentina and in Bolivia with the Argentine Interconnected System of Trunk Gas Pipelines. This interconnection will ensure the flow of significant gas volumes in those parts of Argentina where the demand is greater, as well as expanded gas availability in provinces that either lack gas supply or have insufficient provision to secure the economic development that the region requires. Furthermore, the project will enhance environmental standards, as it encourages the replacement of other, more polluting fossil fuels. In addition, it has been identified that a program of complementary actions associated with the border strip is needed, involving infrastructure, environmental preservation, and logistics and production integration opportunities.

## PROPOSAL

The proposal involves building a natural gas transportation system that stretches from Bolivia and spans along approximately 1500 km of the trunk gas pipeline that runs across the Argentine province of Chaco, linking the sections in the provinces of Formosa and Santa Fe. The branches stemming from the trunk pipeline will contribute to the development of smaller towns in the interior of the provinces. The proposed works comprise: i) the trunk gas pipeline and the provincial branches stemming from it; ii) the gas compressor stations, pressure regulator stations, and measuring stations; and iii) above-ground facilities as well as other ancillary civil, electrical, and communications works. These ancillary works will include, among others, the implementation of electronic data transmission systems, remote operation, and telemetry.

## PROGRESS ANALYSIS AND ASSESSMENT

This single individual project making up the structured project forms part of the COSIPLAN Project Portfolio and is frequently mentioned as a priority in joint statements.

The gas pipeline will be built in four stages, the first of which will commence with the contracts signed by the Planning Minister, Julio de Vido, on August 2014.

Quotes were sent by eighteen companies interested in the construction of the first stage of the gas pipeline, which has been broken down into three sections. The first one, 230-km long, goes from the international gas pipeline Juana Azurduy to the provincial border between Salta and Formosa; the second, 303-km long section is located in the province of Formosa, starting from the provincial border with Salta; the third section, of 265 km, will be built in Santa Fe. The companies selected are described below.

The first section was commissioned to Servicios Vertúa; the second stretch will be built by the joint venture Techint-Panedile; and the third section will be constructed by the joint venture Contreras Hermanos-Helport-CPC-Rovella Carranza. The three sections involve 798 km of 24-inch pipes, which will be provided by a Techint company known as SIAT S.A. The total investment of this stage will amount to about 400 million dollars.

In addition, a call for tender was made for the three sections of the second stage, passing through the provinces of Formosa, Chaco and Santa Fe, which will demand an investment of 1.5 billion dollars. The whole works will involve four stages, and their purpose is to supply natural gas from Bolivia to 3.5 million inhabitants of the provinces of Salta, Formosa, Chaco, the north of Santa Fe, Corrientes, and Misiones.

## CONSTRUCTION OF THE JAGUARÃO - RÍO BRANCO INTERNATIONAL BRIDGE

COUNTRIES

SUBSECTOR

ESTIMATED INVESTMENT **93,500,000**

SOURCE OF FINANCING

PROJECT STAGE **PRE-EXECUTION**

LIFE CYCLE STAGES AND NUMBER OF PROJECTS 0 1 0 0

ESTIMATED PROJECT COMPLETION DATE **JULY 2017**

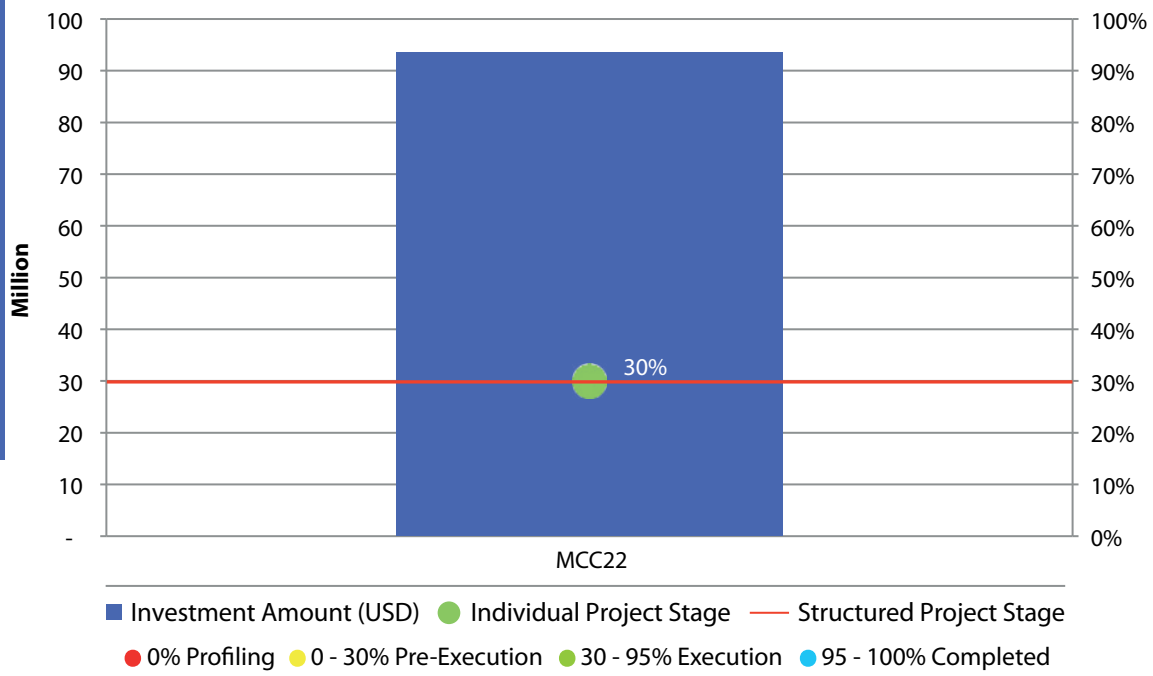
| Code | Stage | Name of the Individual Projects | Countries Involved | Estimated Investment (US$) |
|---|---|---|---|---|
| MCC22 | ● | CONSTRUCTION OF THE JAGUARÃO - RÍO BRANCO INTERNATIONAL BRIDGE | BR – UY | 93,500,000 |

## PROJECT TECHNICAL SPECIFICATIONS

THE STRUCTURED PROJECT INVOLVES:

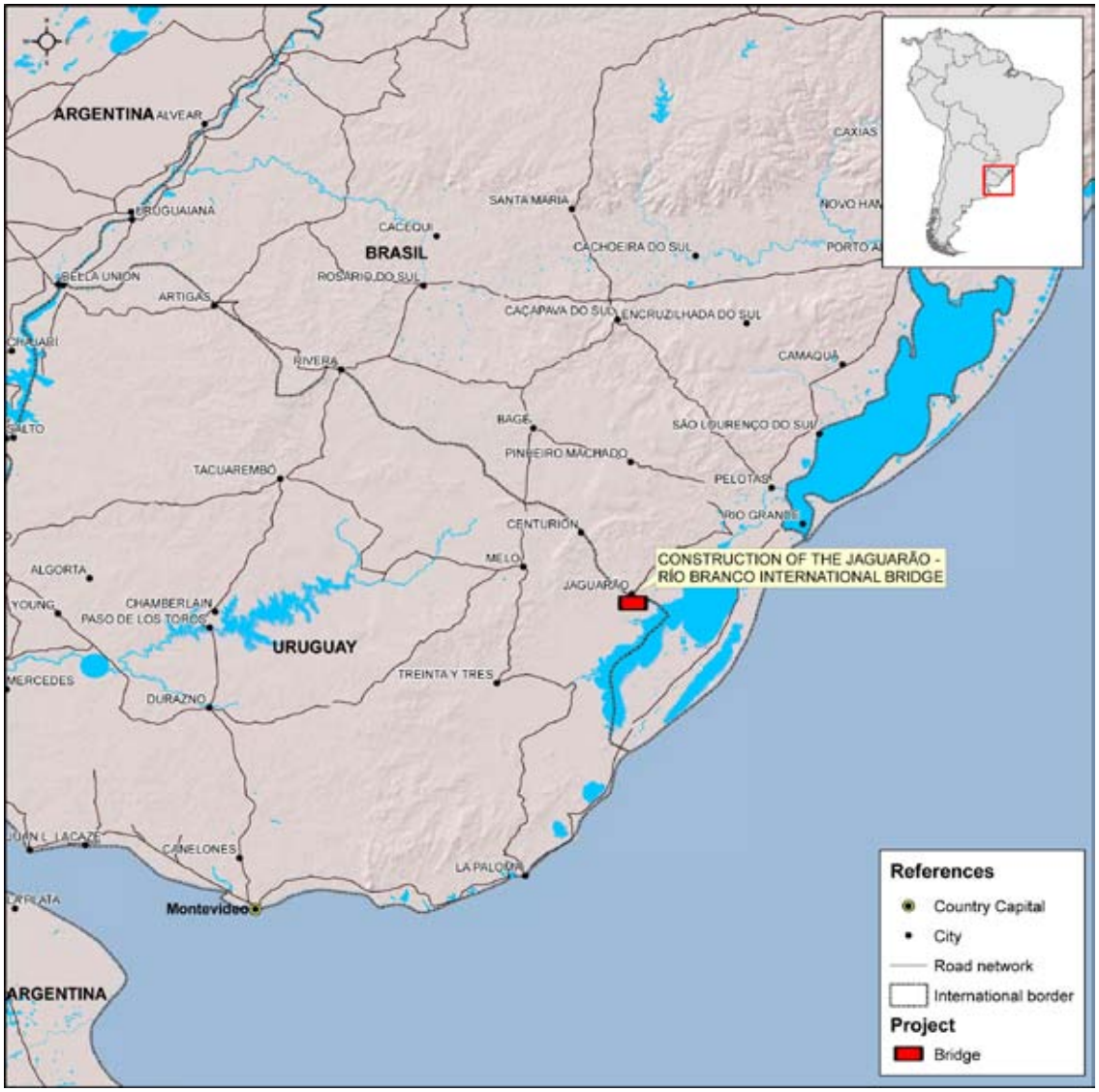
- Construction of a 400-m long and 16.85-m wide bridge.
- Upgrade of 15.5 km of roads.
- Construction of two border complexes.

### STRUCTURED PROJECT STATUS AND INDIVIDUAL PROJECT STAGE AND ESTIMATED INVESTMENT




## LAST YEAR'S MAJOR DEVELOPMENTS

- Project CONSTRUCTION OF THE JAGUARÃO - RÍO BRANCO INTERNATIONAL BRIDGE made 6% progress, having secured the necessary resources to carry out the works.


ARGENTINA
ALVEAR
BRASIL
SANTA MARIA
CACEQUI
CACHOEIRA DO SUL
ROSARIO DO SUL
CACAPAVA DO SUL
ENCRUZILHADA DO SUL
CAMAQUÃ
SÃO LOURENÇO DO SUL
PELOTAS
RIO GRANDE
BAGE
PINHEIRO MACHADO
CENTURIÓN
MELO
JAGUARÃO
CONSTRUCTION OF THE JAGUARÃO - RÍO BRANCO INTERNATIONAL BRIDGE
TACUAREMBÓ
RIVERA
ARTIGAS
BELLA UNION
ALGORTA
YOUNG
CHAMBERLAIN
PASO DE LOS TOROS
URUGUAY
MERCEDES
DURAZNO
TREINTA Y TRES
CANELONES
LA PALOMA
Montevideo
ARGENTINA
References
Country Capital
City
Road network
International border
Project
Bridge

26

MERCOSUR - CHILE

## RATIONALE

This project is located on the border between Uruguay and Brazil, in the vicinity of the Yaguarón (or Jaguarão) river, near the cities of Río Branco, in the Uruguayan department of Cerro Largo, and Jaguarão, in the Brazilian state of Rio Grande do Sul. The purpose of the project is to ensure an unrestricted flow of international freight and passenger road traffic, leveraging the integration of the areas of influence through increased trade activity and greater cultural exchange. Through the reduction of traffic on the Chuí-Chuy commercial road by diverting it to the new international bridge, the project will protect the nature reserves on the Atlantic coast; alleviate traffic congestion in the Pelotas-Rio Grande section of Brazilian route BR-392/RS; result in the coastal road being used by passenger and tourist traffic only; and reduce the distance by road between Montevideo and Porto Alegre by approximately 53 km. The technical, economic and environmental feasibility study estimates that 75% of cargo vehicles and 50% of passenger vehicles that currently use the Chuí-Chuy road in long-distance trips will be diverted to the new bridge (Jaguarão-Río Branco).

## PROPOSAL

The main works of the project involve the construction of a second international bridge over the Yaguarón (or Jaguarão) river and the upgrade of its approach roads. The new bridge will be a concrete and steel extradosed structure, measuring 400 m in length and 16.85 m in width. As regards approach roads, the project includes 9.1 km up to Route BR-116/RS (Brazil) and 6.4 km up to Route 26 (Uruguay). Border crossings will have integrated controls, with passenger controls on the Uruguayan side and cargo controls on the Brazilian side.

## PROGRESS ANALYSIS AND ASSESSMENT

This project forms part of the COSIPLAN Project Portfolio and is frequently mentioned as a priority in joint statements. Furthermore, the Brazil-Uruguay Joint Committee, created pursuant to the agreement signed by the two countries, and the Brazil-Uruguay Strategic Planning and Production Integration Bilateral Commission (CBPE) are in charge of the project. Both countries have allocated funds in their budget for the execution of this binational project, which is also included in the Brazilian Growth Acceleration Program (or PAC, its acronym in Portuguese). The project is currently at its pre-execution stage and scheduled to be completed in July 2017.

## MULTIMODAL TRANSPORTATION IN THE LAGUNA MERÍN AND LAGOA DOS PATOS SYSTEM



COUNTRIES

SUBSECTOR

ESTIMATED INVESTMENT **40,350,000**

SOURCE OF FINANCING

PROJECT STAGE **PRE-EXECUTION**

LIFE CYCLE STAGES AND NUMBER OF PROJECTS 1 2 2 0

ESTIMATED PROJECT COMPLETION DATE **SEPTEMBER 2016**

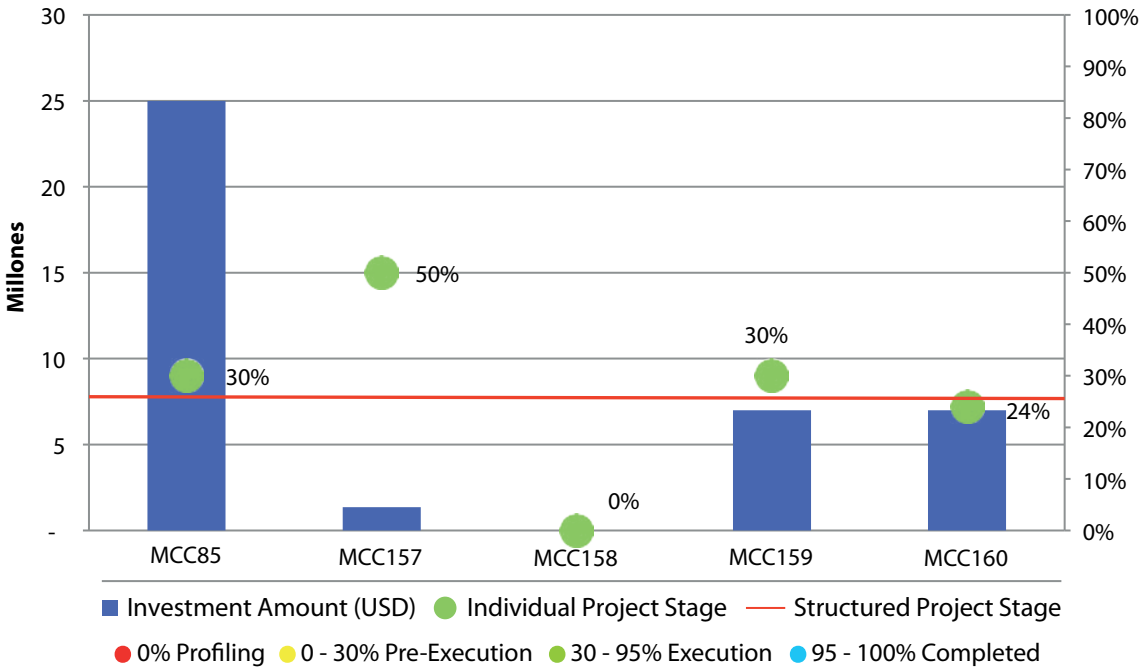
| Code | Stage | Name of the Individual Projects | Countries Involved | Estimated Investment (US$) |
|---|---|---|---|---|
| MCC157 | ● | DREDGING OF THE TACUARÍ RIVER | BR | 1,350,000 |
| MCC158 | ● | DREDGING OF AND INSTALLATION OF SIGNS, MARKERS AND AIDS TO NAVIGATION ON THE MIRIM LAKE - DOS PATOS LAKE SYSTEM | BR | 0 |
| MCC159 | ● | LA CHARQUEADA PORT TERMINAL AND DREDGING OF THE CEBOLLATI RIVER | UY | 7,000,000 |
| MCC160 | ● | PORT TERMINAL AND DREDGING OF TACUARÍ | UY | 7,000,000 |
| MCC85 | ● | DREDGING OF MIRIM LAKE | BR | 25,000,000 |

## PROJECT TECHNICAL SPECIFICATIONS

THE STRUCTURED PROJECT INVOLVES:

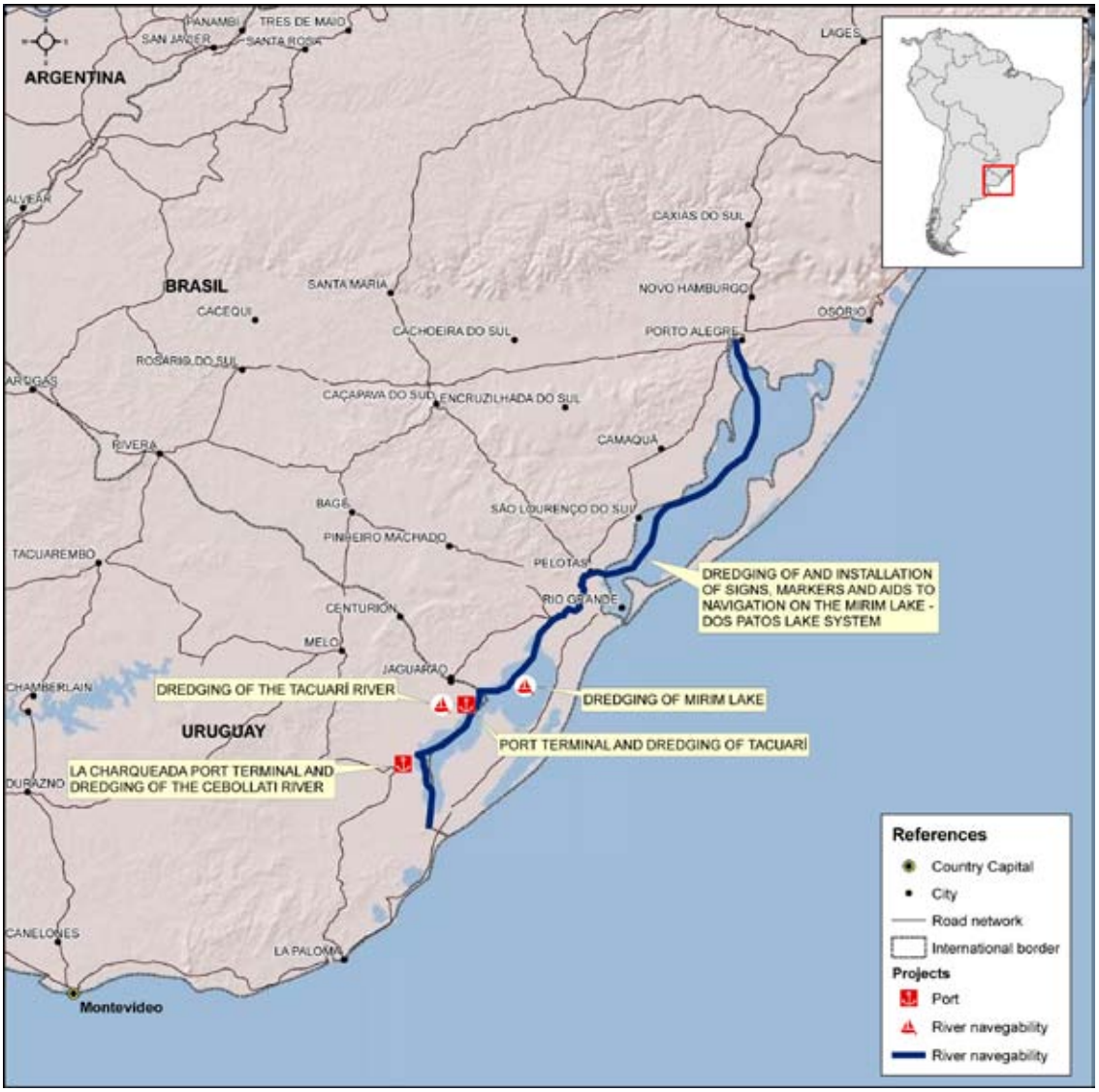
- Construction of two river port terminals (including 5-km approach roads to the port).
- Dredging works, upgrade of corridors and complementary works in two lakes and their tributaries (including the installation of signs and markers and aids to navigation in navigable waterways, cartographic and hydrographic surveys, and the maintenance of 860 km of waterways).

### STRUCTURED PROJECT STATUS AND INDIVIDUAL PROJECT STAGE AND ESTIMATED INVESTMENT




## LAST YEAR'S MAJOR DEVELOPMENTS

- Project PORT TERMINAL AND DREDGING OF TACUARÍ made 6% progress, having obtained the permits and completed the institutional formalities required.
- Project DREDGING OF MIRIM LAKE made 6% progress, having secured the resources required to carry out the works.


ARGENTINA
BRASIL
URUGUAY
PANAMBI
TRES DE MAIO
SAN JAVIER
SANTA ROSA
ALVEAR
LAGES
CAXIAS DO SUL
SANTA MARIA
NOVO HAMBURGO
CACEQUI
OSORIO
CACHOEIRA DO SUL
PORTO ALEGRE
ROSARIO DO SUL
ARTIGAS
CAÇAPAVA DO SUL
ENCRUZILHADA DO SUL
CAMAQUÃ
RIVERA
BAGÉ
SÃO LOURENÇO DO SUL
PINHEIRO MACHADO
TACUAREMBO
PELOTAS
RIO GRANDE
CENTURIÓN
MELO
JAGUARÃO
CHAMBERLAIN
DURAZNO
CANELONES
LA PALOMA
Montevideo
DREDGING OF AND INSTALLATION OF SIGNS, MARKERS AND AIDS TO NAVIGATION ON THE MIRIM LAKE - DOS PATOS LAKE SYSTEM
DREDGING OF THE TACUARÍ RIVER
DREDGING OF MIRIM LAKE
PORT TERMINAL AND DREDGING OF TACUARÍ
LA CHARQUEADA PORT TERMINAL AND DREDGING OF THE CEBOLLATI RIVER
References
Country Capital
City
Road network
International border
Projects
Port
River navegability
River navegability

27

MERCOSUR - CHILE

## RATIONALE

The project has significant cross-border implications, and involves works in both Uruguay and Brazil, to meet the need for improved connectivity between the eastern region of Uruguay and the southern area of Brazil, which at present is exclusively by road. The restoration of the river transportation mode will help carry greater cargo volumes, reduce freight and infrastructure maintenance costs, alleviate bottlenecks at border crossings, mitigate the environmental impact caused by exhaust emissions and noise pollution, and reduce the number of road accidents. The impacts of the project on the river and lake environments are being studied by both countries in their respective jurisdictions. The rationale for this project is in line with the Agreement between the Federal Republic of Brazil and the Republic of Uruguay concerning River and Lake Transportation along the Uruguay-Brazil Waterway, signed on July 30, 2010, in the city of Santana do Livramento. This waterway became inactive after the construction of Route BR-471/RS (Chuí-Pelotas) in the 1970s. Route BR-471/RS runs across the Taim Ecological Station, which has an area of 32,038 ha comprising part of the Santa Vitória do Palmar and Rio Grande municipalities, between the Merín (or Mirim) lake and the Atlantic ocean, near the Chuí or Chuy stream (Brazil-Uruguay border). In Uruguay, the area of influence of the project comprises the Merín lake and its tributaries, particularly the Yaguarón (or Jaguarão), Cebollatí and Tacuarí rivers. In Brazil, it encompasses the same lake ("Mirim" in Portuguese) and its tributaries —particularly the Jaguarão river—; São Gonçalo channel and its tributaries; the water-access channels to the port of Rio Grande; the Lagoa dos Patos lake and its tributaries; the Guaíba river; and the Taquari, Jacuí, dos Sinos, Gravataí, Caí, and Camaquã rivers, covering a total area of 997 km.

## PROPOSAL

The project aims at revitalizing river and lake transport along the waterway formed by the Merín (or Mirim) and dos Patos lakes and their tributaries. The purpose is to have efficient, safe, regular and adequate freight and passenger transportation services to meet the current requirements of trade, economic development, and environmental preservation. The project consists in carrying out dredging works; installing aids to navigation and signs and markers along the navigable waterways of both countries; jointly conducting cartographic and hydrographic surveys on the Merín lake; and building ports in the Uruguayan territory. Since the project is concerned with a waterway shared by two countries, actions associated with immigration, customs and sanitary regulations, among others, are needed, which will be carried out jointly by the relevant national and binational entities.

The project forms part of the COSIPLAN Project Portfolio, has been mentioned in joint statements by both presidents, and is within the framework of the Treaty on Cooperation in the Use of Natural Resources and the Development of the Merín Lake Basin. The project falls under the purview of the Uruguay-Brazil Waterway Technical Secretariat, has been commissioned to the Working Group for the Development of a Cartographic Plan, and is also monitored by the Brazil-Uruguay High-Level Group (GAN).

Environmental protection requirements in force in each country are being observed so as not to affect the ecosystem, in particular the river and lake environments.

The funds for this project have been provided for in the budget estimate for 2010-2014 of Uruguay's National Hydrography Authority, under the purview of the Ministry of Transport and Public Works, while Brazil has included the project in the second stage of the Growth Acceleration Program (or PAC 2, its acronym in Portuguese), which ensures the financial resources required for its implementation and provides it with a special management model.

The project is at the pre-execution stage and is scheduled to be completed in 2016. The dates of completion of its sub-stages will be defined after the feasibility study is finished.

Finally, it should be stated that, during 2013, the Strategic Environmental and Social Assessment (EASE) Methodology was applied to this structured project with the active participation of the national technical teams of Brazil and Uruguay.

## MONTEVIDEO – CACEQUI RAILWAY CORRIDOR

COUNTRIES 

SUBSECTOR 

ESTIMATED INVESTMENT **139,900,000**

SOURCE OF FINANCING 

PROJECT STAGE **EXECUTION**

LIFE CYCLE STAGES AND NUMBER OF PROJECTS 


ESTIMATED PROJECT COMPLETION DATE **NOVEMBER 2016**

| Code | Stage | Name of the Individual Projects | Countries Involved | Estimated Investment (US$) |
|---|---|---|---|---|
| MCC115 | ● | REHABILITATION OF THE RIVERA - SANTANA DO LIVRAMENTO - CACEQUI RAILWAY SECTION | BR – UY | 5,000,000 |
| MCC30 | ● | REHABILITATION OF THE MONTEVIDEO - RIVERA RAILWAY | UY | 134,900,000 |

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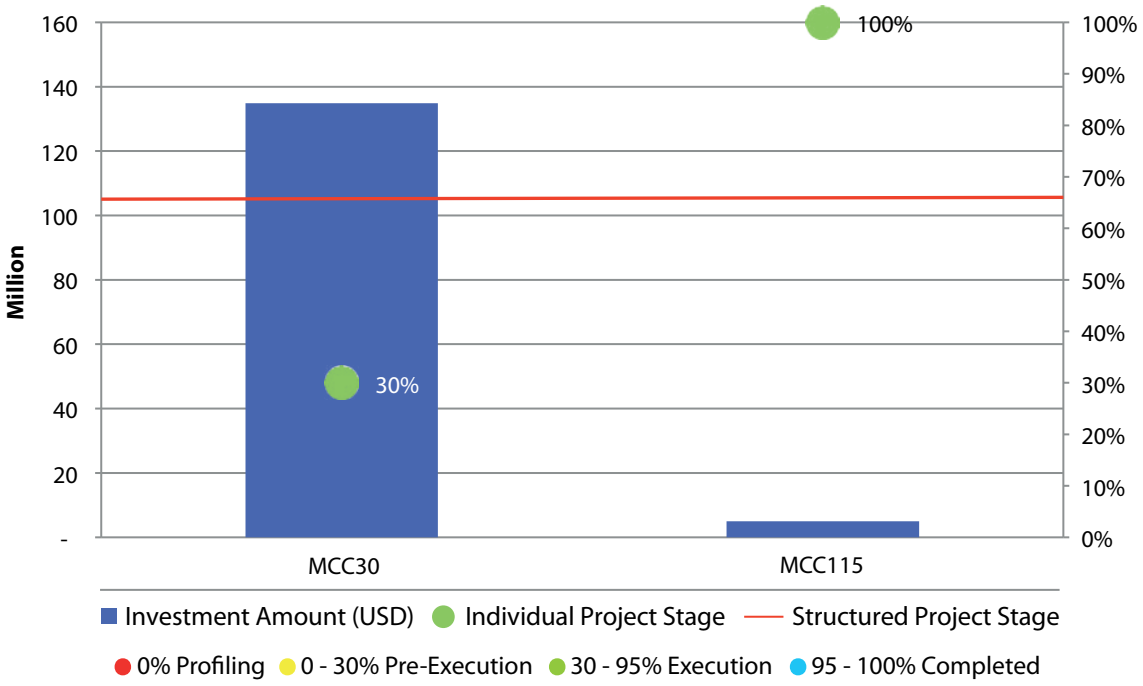
MERCOSUR - CHILE

## PROJECT TECHNICAL SPECIFICATIONS

THE STRUCTURED PROJECT INVOLVES:

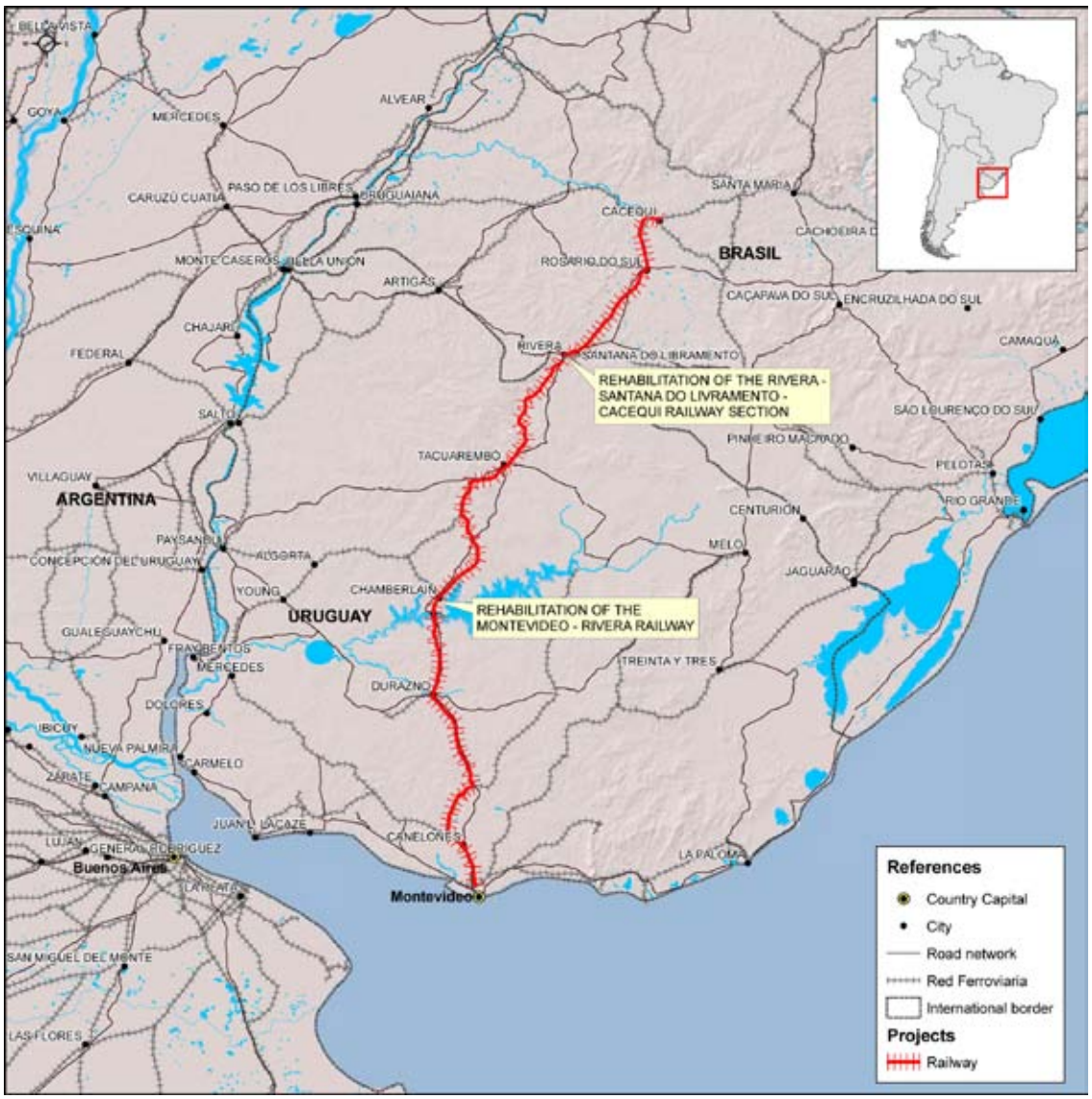
- Rehabilitation of 580 km of rails.

### STRUCTURED PROJECT STATUS AND INDIVIDUAL PROJECT STAGE AND ESTIMATED INVESTMENT




## LAST YEAR'S MAJOR DEVELOPMENTS

- Project REHABILITATION OF THE MONTEVIDEO - RIVERA RAILWAY made 6% progress, having secured the resources required to carry out the works.


BELLA VISTA
GOYA
MERCEDES
ALVEAR
PASO DE LOS LIBRES
URUGUAIANA
CARUZÚ CUATIÁ
SANTA MARIA
CACEQUI
ESQUINA
MONTE CASEROS
BELLA UNION
ARTIGAS
ROSARIO DO SUL
BRASIL
CAÇAPAVA DO SUL
ENCRUZILHADA DO SUL
CHAJARÍ
FEDERAL
RIVERA
SANTANA DO LIVRAMENTO
CAMAQUÃ
REHABILITATION OF THE RIVERA - SANTANA DO LIVRAMENTO - CACEQUI RAILWAY SECTION
SALTO
SÃO LOURENÇO DO SUL
PINHEIRO MACHADO
TACUAREMBO
PELOTAS
VILLAGUAY
ARGENTINA
RIO GRANDE
CENTURIÓN
PAYSANDÚ
ALGORTA
MELO
CONCEPCIÓN DEL URUGUAY
JAGUARÃO
YOUNG
CHAMBERLAIN
URUGUAY
REHABILITATION OF THE MONTEVIDEO - RIVERA RAILWAY
GUALEGUAYCHÚ
FRAY BENTOS
MERCEDES
TREINTA Y TRES
DURAZNO
DOLORES
IBICUY
NUEVA PALMIRA
CARMELO
ZARATE
CAMPANA
JUAN L. LACAZE
CANELONES
LUJAN
GENERAL RODRIGUEZ
Buenos Aires
LA PALOMA
LA PLATA
Montevideo
SAN MIGUEL DEL MONTE
LAS FLORES
References
Country Capital
City
Road network
Red Ferroviaria
International border
Projects
Railway

28

MERCOSUR - CHILE

## RATIONALE

This project has significant cross-border implications, and involves works in both Uruguay and Brazil, as it will connect the city of Montevideo (Uruguay) with the Rio Grande port (Brazil) and the southern and southeastern regions of Brazil by rail. The project seeks to further physical integration in the MERCOSUR region, especially in the rail corridors linking Montevideo with the Brazilian and Argentine networks in Rivera and Salto Grande, respectively. Furthermore, it will strengthen regional connectivity and create cross-border synergies between Uruguay and Brazil, enhancing regional production flows, activating and optimizing rail transportation, and opening up cargo transportation opportunities currently restricted to the road network. This initiative, which represents a priority on the agenda of both governments, is an efficient instrument for consolidating regional trade, as railways can carry large volumes with high energy efficiency (mainly in medium- and long-distance journeys), under safer conditions than road vehicles —i.e. fewer accidents, robberies and thefts—, with less environmental impacts, and at lower —hence, more competitive— freight and infrastructure costs, while encouraging the participation of logistics operators and providers of goods and services located in the project's area of influence. At present, the goods traded between the two countries —primary and secondary products (mainly cereals, timber, barley, rice, molten iron sheets, and agricultural machines)— are carried by road (in Brazil, through BR-293/RS and BR-158/RS). As for upgrade works in the Uruguayan section, they will bring about better services, as they will directly impact on transportation costs for the benefit of clients. This will help attract investments to the logistics sector, cargo transfer terminals, and activities directly or indirectly associated with rail operations and logistics in general.

## PROPOSAL

In Brazil, the 158-km long Santana do Livramiento-Cacequi rail section needs to be brought back into operation. Experts and representatives from Brazil's National Land Transport Agency (ANTT) and from América Latina Logística do Brasil S/A (ALL) —the firm holding the concession for this rail section stretch— carried out a technical inspection and identified the necessary rehabilitation works, including cross-tie replacement, cut removal, embankment reinforcement, and repair activities in ten bridges. In Uruguay, the 567-km rail corridor between Montevideo and Rivera needs to be upgraded. These works are aimed at improving the level of service of the sections that make up the corridor, particularly in terms of condition, speed, and safety for the rail transport of goods. This first rehabilitation stage (admissible axle load in Uruguay: 18 tons) is intended to consolidate rail infrastructure so that it meets the new domestic and international freight transportation requirements, and will be followed by another one to keep pace with the growing demand for this mode of transport. The new railroad superstructure will facilitate the upgrade to a 22-ton axle load in a future phase through the reinforcement of the track structural components, maintaining the travelling speeds improved at the first stage. The complementary actions identified are the following: negotiate contracts to enhance operation conditions; discuss issues related to cargo transfer facilitation; purchase equipment; seek potential rail shippers; identify the products to be traded; verify the need to incorporate new rolling stock; and rehabilitate stations.

The two individual projects that make up this structured project form part of the COSIPLAN Project Portfolio. The structured project is supported by joint statements made by the two countries, as it is of strategic importance in the context of a new Brazil-Uruguay bilateral relation paradigm. Moreover, the pre-investment studies were completed in 2011. Works in the Brazilian territory were completed in December 2012, and, therefore, the railway started its international operation between Uruguay and Brazil. The rail rehabilitation and upgrade works in Uruguay will take until 2016.

## OPTIMIZATION OF THE CRISTO REDENTOR BORDER CROSSING SYSTEM

COUNTRIES

SUBSECTOR

ESTIMATED INVESTMENT **258,000,000**

SOURCE OF FINANCING

PROJECT STAGE **PRE-EXECUTION**

LIFE CYCLE STAGES AND NUMBER OF PROJECTS 0 5 0 0

ESTIMATED PROJECT COMPLETION DATE **DECEMBER 2018**

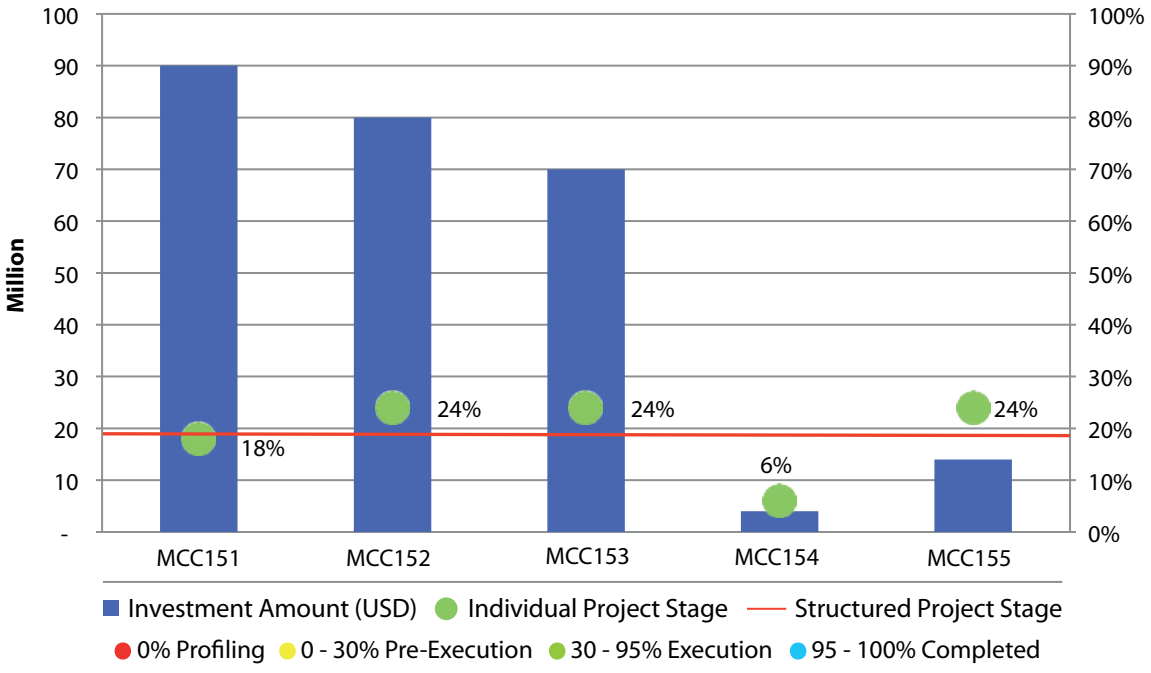
| Code | Stage | Name of the Individual Projects | Countries Involved | Estimated Investment (US$) |
|---|---|---|---|---|
| MCC151 | | INTEGRATED FREIGHT CONTROL CENTER AT USPALLATA (CRISTO REDENTOR SYSTEM OPTIMIZATION) | AR | 90,000,000 |
| MCC152 | | PASSENGER CONTROL CENTER AT LOS HORCONES (CRISTO REDENTOR SYSTEM OPTIMIZATION) | AR | 80,000,000 |
| MCC153 | | NEW LOS LIBERTADORES BORDER COMPLEX (CRISTO REDENTOR SYSTEM OPTIMIZATION) | CH | 70,000,000 |
| MCC154 | | REHABILITATION OF THE CRISTO REDENTOR TUNNEL AND CARACOLES (CRISTO REDENTOR SYSTEM OPTIMIZATION) | AR - CH | 4,000,000 |
| MCC155 | | BINATIONAL MANAGEMENT CONTROL SYSTEM AT THE CRISTO REDENTOR BORDER CROSSING (CRISTO REDENTOR SYSTEM OPTIMIZATION) | AR - CH | 14,000,000 |

## PROJECT TECHNICAL SPECIFICATIONS

THE STRUCTURED PROJECT INVOLVES:

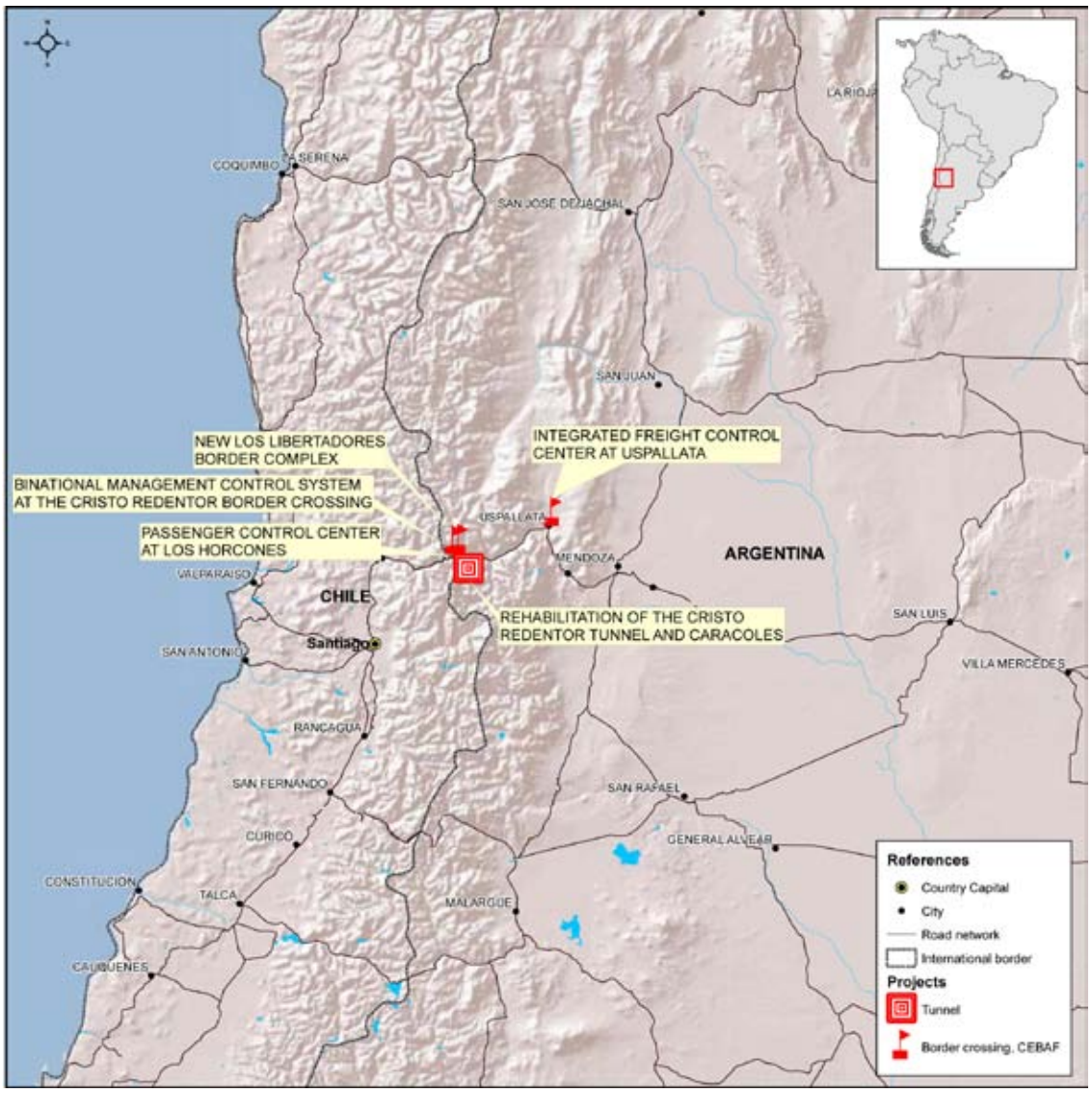
- Optimization of a 47-ha freight control center.
- Optimization of a 20-ha passenger control center (including the consolidation and improvement of the work area for private cars, the creation of a new area for buses, the construction of a new housing facility for 150 people, the construction of a new lounge facility and rest areas for officials from the institutions of both countries, and the construction of a new building for a brief rest or stop-over for passengers).
- Construction of a new 32-ha border complex (including civil works and installations needed to carry out tasks of control and surveillance of people, vehicles, goods and luggage).
- Rehabilitation of a binational tunnel.
- Design of a management control system.

### STRUCTURED PROJECT STATUS AND INDIVIDUAL PROJECT STAGE AND ESTIMATED INVESTMENT




## LAST YEAR'S MAJOR DEVELOPMENTS

- Project NEW LOS LIBERTADORES BORDER COMPLEX (CRISTO REDENTOR SYSTEM OPTIMIZATION) made 6% progress, having obtained the permits and completed the institutional formalities required.


NEW LOS LIBERTADORES BORDER COMPLEX
BINATIONAL MANAGEMENT CONTROL SYSTEM AT THE CRISTO REDENTOR BORDER CROSSING
PASSENGER CONTROL CENTER AT LOS HORCONES
INTEGRATED FREIGHT CONTROL CENTER AT USPALLATA
REHABILITATION OF THE CRISTO REDENTOR TUNNEL AND CARACOLES
CHILE
ARGENTINA
Santiago
COQUIMBO
LA SERENA
SAN JOSE DE JACHAL
SAN JUAN
USPALLATA
MENDOZA
VALPARAISO
SAN ANTONIO
RANCAGUA
SAN FERNANDO
CURICO
TALCA
CONSTITUCION
CAUQUENES
MALARGUE
SAN RAFAEL
GENERAL ALVEAR
SAN LUIS
VILLA MERCEDES
References
Country Capital
City
Road network
International border
Projects
Tunnel
Border crossing, CEBAF

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MERCOSUR - CHILE

## RATIONALE

This structured project consists in a plan to improve the infrastructure as well as the technological and operational aspects involved in the operation of all the border building complexes and management stations that form part of the Cristo Redentor border crossing system. It is a systemic solution to the congestion problem posed for years by the growing traffic demand to the services provided by both countries in this connection. This border crossing is located in the Andes mountain range, and links Chile's Region V, Valparaíso, with the Argentine province of Mendoza. This is a high priority project, as this border crossing is the main land connection between Argentina and Chile as well as the converging point for roads with heavy traffic coming from the MERCOSUR region to Chile and to overseas Pacific markets via the ports of Valparaíso, San Antonio and Quintero, located in Region V. The project is based on a study that analyzed alternative solutions for the improvement of both infrastructure and operations at the Cristo Redentor border crossing in order to select the ones to be implemented with the aim of having a better border control system in place under a staged development plan for the short, medium and long term. This initiative considers all the aspects related to bilateral traffic, without seeing congestion as the result of a single cause, and takes into account new concepts such as the following: the optimization of space by allocating different areas for different services depending on vehicle type, which prevents border control areas from being used for other activities and, thus, users from being delayed longer than necessary; the implementation of new technologies; the design of a model for the flow of people and vehicles in the control area; and the building of housing facilities for customs officers.

## PROPOSAL

The project includes: i) operational measures for the performance of border control functions; ii) a model for the flow of people and vehicles in the control area; iii) the location of each border control station (making a distinction between the control of passengers and the inspection of goods); iv) an infrastructure investment plan, according to the alternatives for each type of control; v) estimated operating and maintenance costs; and vi) the guidelines for a contingency plan to be approved by the countries involved. This project comprises several works and individual actions to be undertaken by Chile and Argentina in two stages, with short- and medium-term goals. The degree of progress related to such works and actions is different. The project has its origins in the approval by both governments of the Binational Study on the Optimization of the Cristo Redentor Border Crossing System, carried out within the framework of IIRSA as a technical cooperation program funded by the IDB. The Binational Commission for the optimization of the Cristo Redentor border crossing, created in 2011, has already held several meetings. Progress has been made as to some actions intended to speed up operations and define the logistics needs of each service involved in the integrated controls of the respective building complexes. The project provides for a first stage, with provisional improvements using mobile units aimed at expanding the capacity of the facilities, and a second stage, in which controls will be carried out in the final and permanent facilities. The project as a whole is at the pre-execution stage regarding the most important works, and its pre-investment studies are already completed.

At present, the Integrated Control Center at Uspallata (ACIUS, its acronym in Spanish) has some service civil works already finished: the administrative facilities, the cargo inspection bay, the scanning bay, and the area for seized cargo. As for road infrastructure, the recommended works are: defining the access roads to ACIUS via the bypass of National Route No. 7 and National Route No. 49, thus avoiding the urban area. The design proposed includes the necessary roundabouts and management control stations.

Concerning the passenger control center at Los Horcones, the project profile was sent to the Externally-financed Programs and Projects Coordination Unit under the purview of the Federal Planning Ministry for its consideration as a priority upon request for external funding to the IDB.

The rehabilitation of the Cristo Redentor Tunnel and Caracoles project is currently being designed, and is scheduled to finish in 2014, whereas a call for tender has been launched for the New Los Libertadores Border Complex project, the construction of which is scheduled to start by the end of 2015.

Finally, with regard to the binational management system, on the Argentine side, the Territorial Planning Under-Secretary has submitted to the consideration of the Ministry of Economy the request for a non-refundable technical cooperation to the IDB Regional Infrastructure Fund to carry out the formalities required to materialize the granting of the loan as soon as possible; on the Chilean side, a pre-feasibility study is about to be completed to determine the works/systems to incorporate along the road in order to help accelerate the international flow of passengers and vehicles.

## AGUA NEGRA BINATIONAL TUNNEL

COUNTRIES

SUBSECTOR

ESTIMATED INVESTMENT **1,600,000,000**

SOURCE OF FINANCING

PROJECT STAGE **PRE-EXECUTION**

LIFE CYCLE STAGES AND NUMBER OF PROJECTS 0 1 0 0

ESTIMATED PROJECT COMPLETION DATE **DECEMBER 2022**

| Code | Stage | Name of the Individual Projects | Countries Involved | Estimated Investment (US$) |
|---|---|---|---|---|
| MCC110 | ● | AGUA NEGRA BINATIONAL TUNNEL | AR - CH | 1,600,000,000 |

30

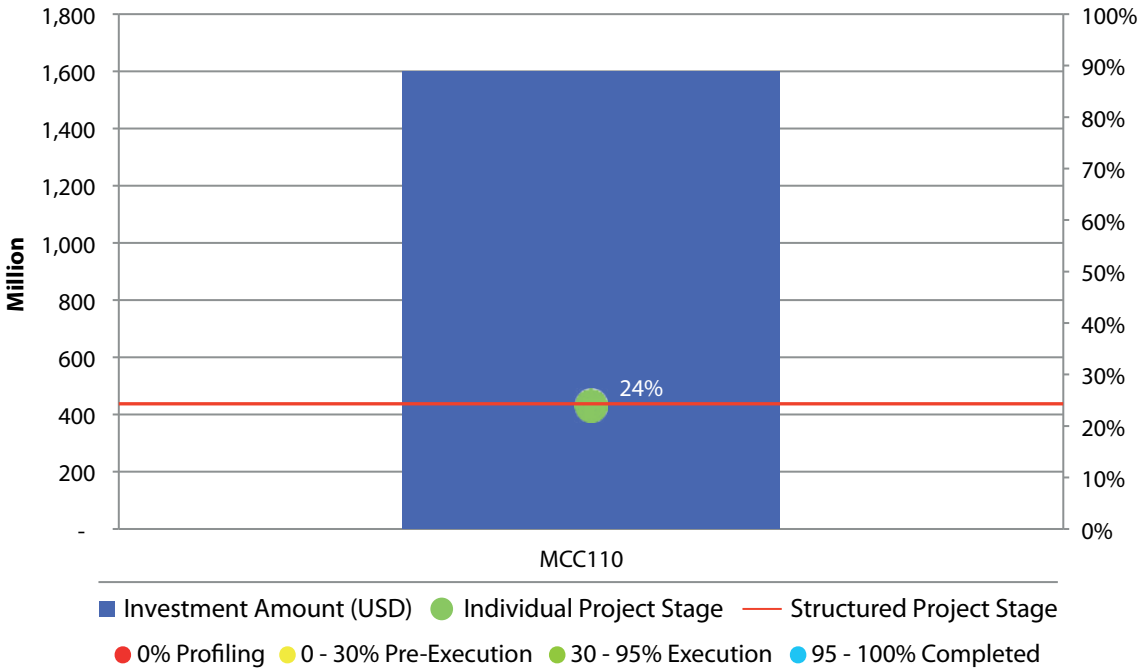
MERCOSUR - CHILE

## PROJECT TECHNICAL SPECIFICATIONS

THE STRUCTURED PROJECT INVOLVES:

- Construction of a 13-km four-lane tunnel.

### ESTRUCTURED PROJECT STATUS AND INDIVIDUAL PROJECT STAGE AND ESTIMATED INVESTMENT




## LAST YEAR'S MAJOR DEVELOPMENTS

- Project AGUA NEGRA BINATIONAL TUNNEL made 12% progress, having secured the permits and completed the institutional formalities required.


CALDERA
COPIAPO
BELEN
TINOGASTA
VALLENAR
VINCHINA
LA RIOJA
COQUIMBO
LA SERENA
SAN JOSE DE JACHAL
AGUA NEGRA BINATIONAL TUNNEL
CHILE
ARGENTINA
CRUZ DEL EJE
SAN JUAN
VILLA DOLORES
USPALLATA
LOS ANDES
MENDOZA
VALPARAISO
PALMIRA
SAN LUIS
SAN ANTONIO
Santiago
RANCAGUA
SAN FERNANDO
SAN RAFAEL
References
Country Capital
City
Road network
International border
Project
Tunnel

30

MERCOSUR - CHILE

## RATIONALE

The main purpose of this structured project is to construct a two-way tunnel at the Agua Negra border crossing between Chile and Argentina. Given its geographical location, this is an important regional integration point, as it provides a further connection from the central area of Argentina to the area of influence of the Coquimbo port in Chile, which encourages tourism and international trade among the countries that make up the MERCOSUR-Chile Hub. Furthermore, Argentina and Chile have produced estimates (social impact assessment studies) of the effect that the opening of the tunnel will have on traffic levels. Despite their differences, these studies have been further refined to get more accurate figures concerning demand. The altitude of the border crossing would be brought down from 4,750 to 3,620 meters above sea level on the Chilean end of the tunnel, and to 4,085 meters above sea level on the Argentine end, thus improving the existing connection. The new alignment, with a nominal length of 13.8 km, would offer a faster and safer route to join the Chilean Coquimbo region with the Argentine province of San Juan, opening up new opportunities for tourism and trade development. At the bilateral level, this project was analyzed within the framework of the Joint Technical Group and, later, by the Agua Negra Binational Entity or EBITAN, created pursuant to the Maipú Treaty on Integration and Cooperation signed by Argentina and Chile in 2009. In the multilateral context, it is included in API and in the COSIPLAN Project Portfolio.

## PROPOSAL

This structured project is located in the Argentine province of San Juan and in Chile's Region IV, and is part of the Porto Alegre (Brazil)-Coquimbo (Chile) bioceanic corridor. The project consists in building an international tunnel to replace the last kilometers of road on each side of the border, and offer cargo vehicles an alternative to avoid the most risky and rainy road sections in the area. The elements that make up the project subject to the Protocol to the Maipú Treaty are the following: a) the studies conducted in Chile and Argentina on the Agua Negra International Tunnel; b) additional studies that may be carried out by the parties or by construction companies; c) the civil works to construct the tunnel, its facilities, safety equipment, and access roads for its operation, including mechanical systems (ventilation and fire control), electrical systems (electric power, lighting, etc.), and electronic systems (control and communications); d) additional structures, facilities, equipment, systems and construction works located in the binational area, including those related to telecommunications and external services required for the management and operation of the Agua Negra International Tunnel; e) the procedures, rules and technical manuals created during the different project stages and approved by EBITAN; and f) the activities of construction, maintenance, operation, and management of the tunnel, according to the regulations applicable to the project.

## PROGRESS ANALYSIS AND ASSESSMENT

This project is at the pre-execution stage. Concerning its feasibility, demand and social impact assessment studies have been completed in both countries. Moreover, the technical studies, ranging from conceptual engineering to basic engineering, geology, and hydrogeology, have already been completed. Approval of Protocol II, establishing the new organization of EBITAN, is being assessed. Furthermore, the tender specifications are being prepared, so as to issue the call for tender after approval of such protocol.

As agreed, the tunnel construction cost will be borne by both countries, in proportion to the area involved in their respective territories. Estimations will use a formula whereby the tunnel construction will be financed by Argentina, but once the tunnel becomes operational, Chile will refund Argentina its share in the cost of the construction works with its respective toll fees. The construction of the tunnel is expected to take seven years.

# PERU-BRAZIL-BOLIVIA HUB

## PROJECTS

STRUCTURED 1 INDIVIDUAL 1

## ESTIMATED INVESTMENT

85.4 US$ Million

## BY SUBSECTOR

1

85.4

## BY SOURCE OF FINANCING

1

85.4

# J. PERU-BRAZIL-BOLIVIA HUB (BOLIVIA, BRAZIL AND PERU)

The area of influence of this Hub comprises the departments of Tacna, Moquegua, Arequipa, Apurímac, Cusco, Madre de Dios, and Puno, in Peru; Pando, Beni, and La Paz, in Bolivia; and the states of Acre and Rondônia, in Brazil. This area of influence covers 1,146,871 km$^2$, accounting for 10.5% of the total area of the three countries that make up the Hub.

The total population of the area of influence was estimated at 10,249,938 inhabitants in 2008, accounting for 4.5% of the total population of the three countries. Furthermore, this area has an average population density of almost 9 inhabitants per km$^2$. This indicator ranges from a maximum of almost 21 inhabitants per km$^2$ in the area of influence of the department of La Paz, in Bolivia, to a minimum of slightly more than 1 inhabitant per km$^2$ in the department of Pando, also in Bolivia. The territory of this Hub is the least densely populated among the nine API Hubs.

Of the three project groups that make up this Hub, a single project from Project Group 2 (G2 - Rio Branco - Cobija - Riberalta - Yucumo - La Paz Corridor) is included in API.

Table J.1 shows the only API structured project in the Peru-Brazil-Bolivia Hub. The estimated investment amount involved is US$85.4 million.

Map J.1 • **API Projects - Peru-Brazil-Bolivia Hub**

Table J.1 • **API Projects - Peru-Brazil-Bolivia Hub**

| # | Structured Project Name | No. of Individual Projects | Countries | API amount (million US$) | Stage | Code | Name of the Individual Projects | Countries Involved | PG | Project Stage | Amount (US$) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 31 | PORTO VELHO - PERUVIAN COAST CONNECTION | 1 | BR - PE | 85.4 | ● | PBB64 | BRIDGE OVER THE MADEIRA RIVER IN ABUNÃ (BR-364/RO) | BR | G02 | ● | 85,350,000 |

Table J.2 • **API Projects - Peru-Brazil-Bolivia Hub by Life Cycle Stage**

(number of projects, million US$ and percentage)

| Project Stage | No. of Projects | % of Projects | Investment Amount | % of Investment Amount |
|---|---|---|---|---|
| Profiling | 0 | 0.0 | 0.0 | 0.0 |
| Pre-Execution | 1 | 100.0 | 85.4 | 100.0 |
| Execution | 0 | 0.0 | 0.0 | 0.0 |
| Completed | 0 | 0.0 | 0.0 | 0.0 |
| **TOTAL** | 1 | 100.0 | 85.4 | 100.0 |

Note: Amounts are estimated on the basis of the life cycle stages at which the API individual projects are.

Figure J.1 • **API Projects - Peru-Brazil-Bolivia Hub by Life Cycle Stage**

(% of number of projects and % of investment amount)

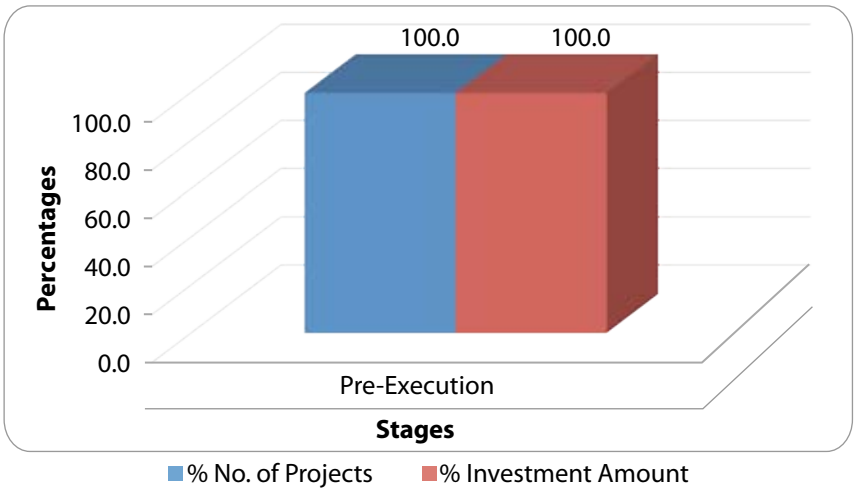



Figure J.2 • **API Projects - Peru-Brazil-Bolivia Hub by Subsector**

(% of number of projects and % of investment amount)

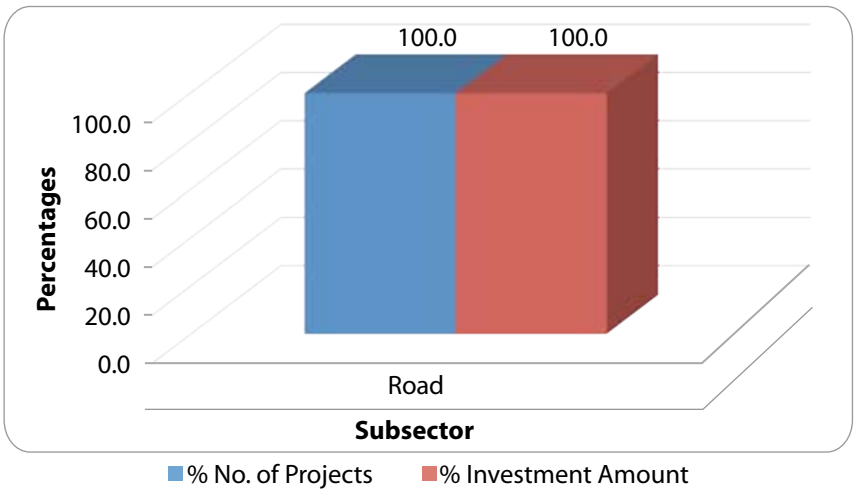


Figure J.3 • **API Projects - Peru-Brazil-Bolivia Hub by Source of Financing**

(% of number of projects and % of investment amount)

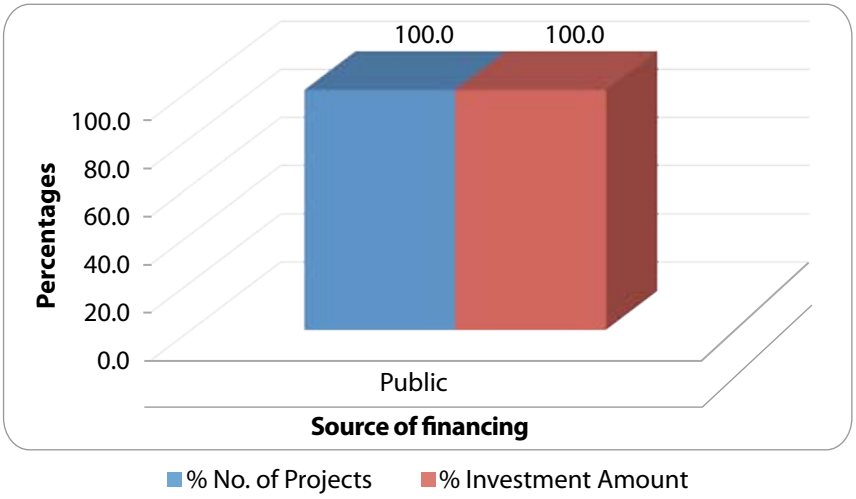



Table J.3 • **API Projects - Technical Specifications - Peru-Brazil-Bolivia Hub**

The API project in this Hub involves:

- The construction of a 1-km long bridge.

## PORTO VELHO - PERUVIAN COAST CONNECTION

COUNTRIES

SUBSECTOR

ESTIMATED INVESTMENT **85,350,000**

SOURCE OF FINANCING

PROJECT STAGE **PRE-EXECUTION**

LIFE CYCLE STAGES AND NUMBER OF PROJECTS 0 1 0 0

ESTIMATED PROJECT COMPLETION DATE **DECEMBER 2016**

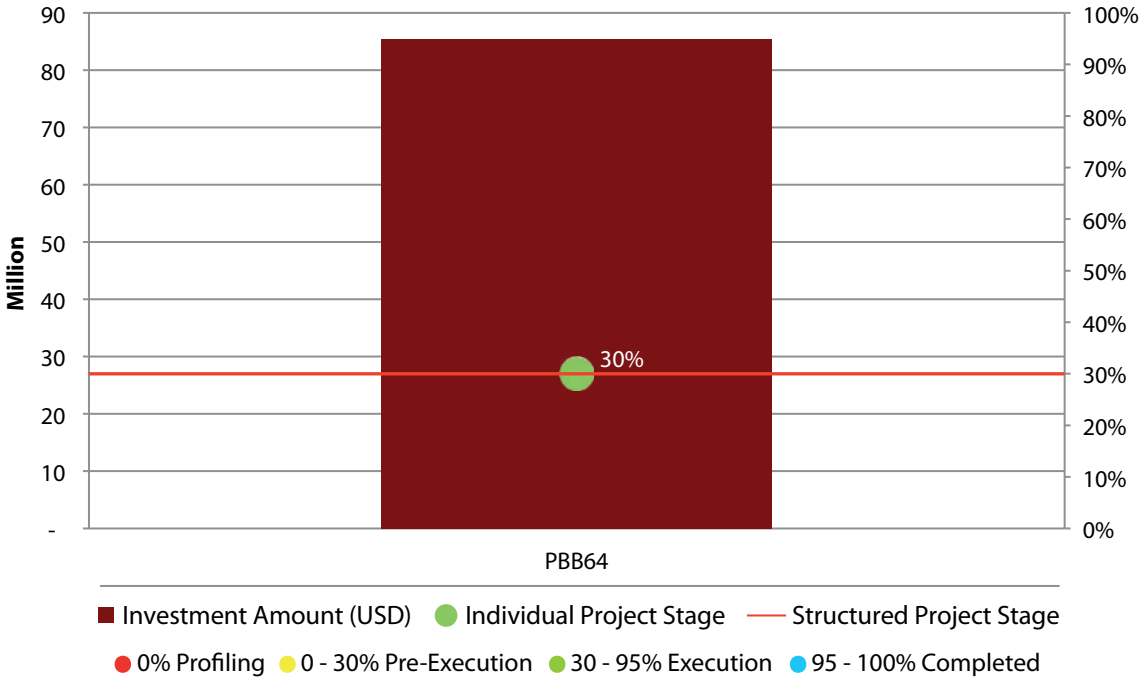
| Code | Stage | Name of the Individual Projects | Countries Involved | Estimated Investment (en US$) |
|---|---|---|---|---|
| PBB64 | ● | BRIDGE OVER THE MADEIRA RIVER IN ABUNÃ (BR-364/RO) | BR | 85,350,000 |

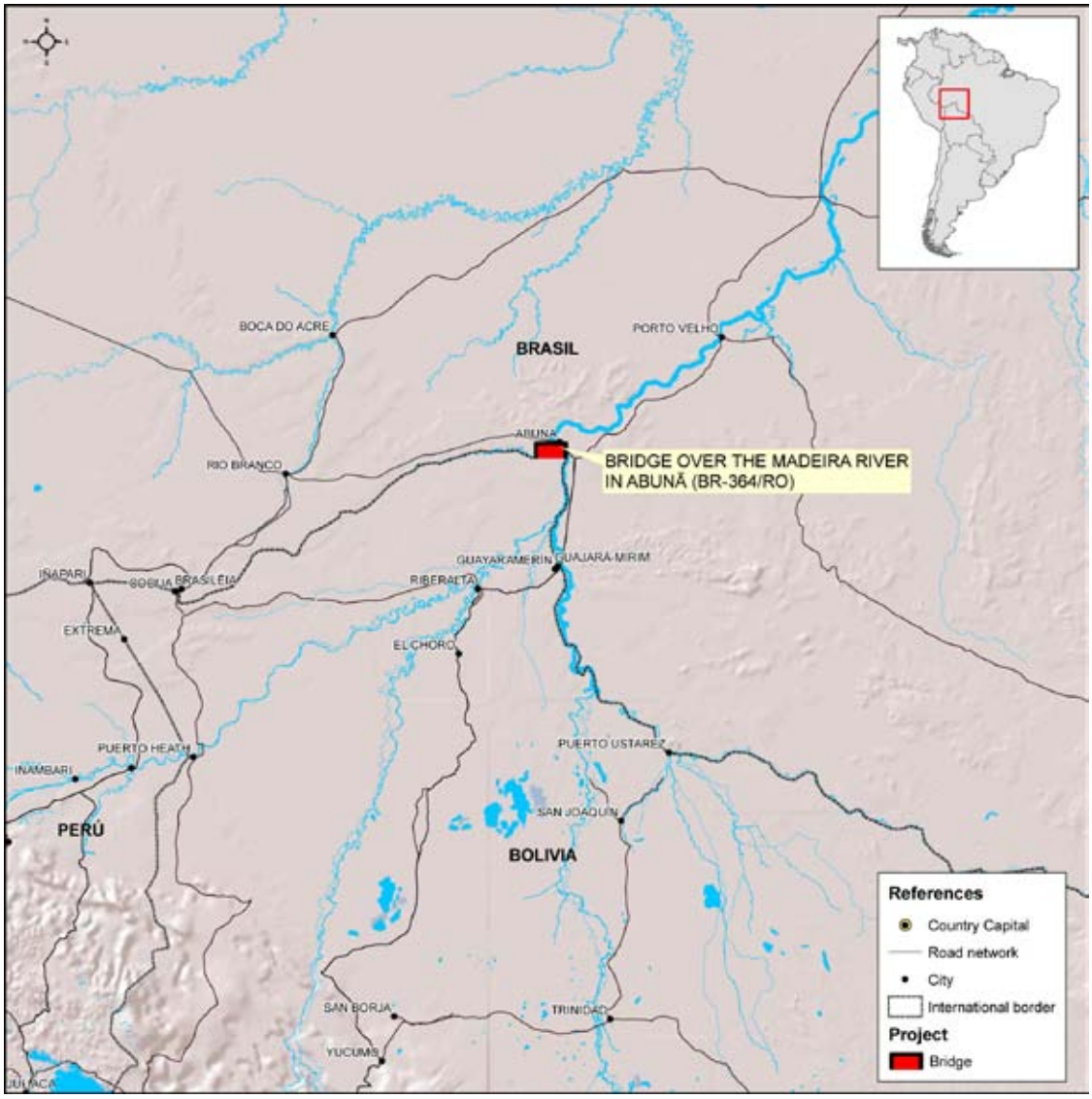
## PROJECT TECHNICAL SPECIFICATIONS

THE STRUCTURED PROJECT INVOLVES:

- Construction of a 1-km long bridge.

### STRUCTURED PROJECT CURRENT STATUS AND INDIVIDUAL PROJECTS STAGE AND ESTIMATED INVESTMENT




BOCA DO ACRE
BRASIL
PORTO VELHO
ABUNÃ
RIO BRANCO
BRIDGE OVER THE MADEIRA RIVER
IN ABUNÃ (BR-364/RO)
GUAYARAMERIN
GUAJARA-MIRIM
INAPARI
RIBERALTA
EXTREMA
EL CHORO
PUERTO HEATH
PUERTO USTAREZ
INAMBARI
SAN JOAQUIN
PERÚ
BOLIVIA
SAN BORJA
TRINIDAD
YUCUMO
References
Country Capital
Road network
City
International border
Project
Bridge

31

PERU-BRAZIL-BOLIVIA

## RATIONALE

This structured project creates significant cross-border (social, cultural, educational, tourism, economic, and trade) synergies by strengthening regional connectivity networks, which coordinates and promotes the integration of Brazil and Peru. It also encourages important opportunities for the development of logistics chains and production integration processes, fostering the internationalization of the micro- and small-sized enterprises located in the region. Furthermore, at the local level, the project will contribute to reducing the vulnerability of border cities and towns and, overall, of the Acre state economy. With the completion of the Southern Interoceanic Highway in Peru on July 15, 2011, the road connection between Peru and Brazil through the Acre state became a reality. However, this connection is interrupted in the Rondônia state, since in order to get to other Brazilian localities either in the direction of Manaus, through Porto Velho and the Madeira waterway, or in the direction of the central-western and southeastern regions, it is necessary to cross the Madeira river in the small village of Abunã using a draft boat, which affects transport efficiency.

## PROPOSAL

In order to strengthen the connection of Peru with Brazil through the Southern Interoceanic Highway —along which there is already a significant increase in the bilateral flow of goods and people—, the project includes the construction of a approximately 1.2-km long bridge over the Madeira river in Abunã so as to ensure uninterrupted integration by road.

## PROGRESS ANALYSIS AND ASSESSMENT

The project is at the pre-execution stage, and the works are scheduled to be completed by December 2016. The contract for the construction of the bridge over the Madeira river in Abunã on Route BR-364/RO was put to tender and awarded in 2013, and works are expected to be finalized in 2017. The project is included in the Brazilian Growth Acceleration Program (or PAC, in Portuguese). The Peruvian sections of the Southern Interoceanic Highway between Iñapari and the southern sea ports are all completed and serve international traffic. The Urcos-Pte. Inambari (300 km), Pte. Inambari-Iñapari (403 km), and Azángaro-Pte. Inambari (306 km) stretches have been paved, while the San Juan de Marcona-Urcos (758 km) and Matarani/Ilo-Azángaro (855 km) sections have been rehabilitated. Furthermore, the construction of the 722-m long Continental Bridge over the Madre de Dios river has been completed, thus revitalizing transport flows to and from the border. With reference to the Iñapari border crossing, the CEBAF on the Peruvian side, currently at the feasibility phase, is yet to be built. This issue is being discussed at the bilateral level to define the best way to carry out border controls. The completion of the Southern Interoceanic Highway is contributing to making headway in the process of integration with Brazil. At present, there are already some cargo traffic flows. The transportation of Andean cereals, onions, garlic, cement, iron and other products from the southern areas of Peru towards the Brazilian states of Acre and Rondônia is expected to increase. Furthermore, there are two passenger transport companies already operating in the area, one covering the route between Cusco and Rio Branco and the other going up to the city of São Paulo. However, the greatest impact of the Southern Interoceanic Highway lies in that it has connected isolated areas of Peru's Madre de Dios department with more developed regions, such as Cusco and Juliaca-Puno, and much more dynamism is observed here in cargo traffic flows for commercial and tourism purposes. The Southern Interoceanic Highway has two contact points with the Pacific ocean for the exit/entry of goods: the Ilo and Matarani ports. The Matarani port terminal is currently operated under a concession agreement and is in good condition for international trade activities. As for the Ilo port terminal, its facilities are planned to be improved and streamlined, thus helping support also Bolivian import and export operations.

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www.iirsa.org/proyectos

Initiative for the Integration of Regional Infrastructure in South America - IIRSA
www.iirsa.org/

## ACRONYMS AND ABBREVIATIONS

| | |
|---|---|
| AABSA | Aguirre Agro Bolivia S.A. |
| ACIUS | Área de Control Integrado de Uspallata |
| AIC | Implementation Agenda Based on Consensus 2005-2010 |
| ALL | América Latina Logística do Brasil S/A |
| AMA | Amazon Hub |
| AND | Andean Hub |
| ANTT | Brazil's National Land Transport Agency |
| API | Integration Priority Project Agenda |
| BNDES | Brazilian National Bank for Economic and Social Development |
| CAF | Development Bank of Latin America |
| CAN | Andean Community of Nations |
| CAP | Capricorn Hub |
| CAPSA | Central Aguirre Portuaria S.A. |
| CBPE | Brazil-Uruguay Strategic Planning and Production Integration Bilateral Commission |
| CCT | Technical Coordination Committee |
| CEBAF | Binational Border Service Center |
| CENAF | National Border Service Center |
| CMS | Continuous Monitoring System |
| COSIPLAN | South American Infrastructure and Planning Council |
| EASE | Strategic Environmental and Social Evaluation Methodology |
| EBITAN | Agua Negra Binational Entity |
| ENABOL | Empresa Naviera Boliviana |
| FONPLATA | Financial Fund for the Development of the Plata Basin |
| FPTC | Free Port Terminal Company |
| GAN | Brazil-Uruguay High-Level Group |
| GTE | Executive Technical Group |
| GUY | Guianese Shield Hub |
| HPP | Paraguay-Paraná Waterway Hub |
| IDB | Inter-American Development Bank |
| IIRSA | Initiative for the Integration of Regional Infrastructure in South America |
| INVÍAS | Instituto Nacional de Vías |
| IOC | Central Interoceanic Hub |
| MCC | Eje MERCOSUR-Chile |
| MERCOSUR | Southern Common Market |
| PAC | Brazilian Growth Acceleration Program |
| PAE | Strategic Action Plan 2012-2022 |
| PBB | Peru-Brazil-Bolivia Hub |
| PG | Project Group |
| PIT | Intermodal Transportation Plan |
| PTIs | Integration Territorial Program |
| SENAMIG | Bolivian National Migration Service |
| SENASAG | Bolivian National Service for Agricultural Health and Food Safety |
| SENIAT | Venezuelan National Integrated Customs and Tax Administration Service |
| UNASUR | Union of South American Nations |
| ZAL | Logistics Activity Zone |

# **ANNEX 1**. DETAILED LIST OF THE STRUCTURED AND INDIVIDUAL PROJECTS WITHIN API

| # | Structured Project Name | No. of Individual Projects | Countries | API amount (million US$) | Stage | Code | Name of the Individual Projects | Countries Involved | PG | Project Stage | Amount (US$) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | PAITA - TARAPOTO - YURIMAGUAS ROAD, PORTS, LOGISTICS CENTERS AND WATERWAYS | 10 | PE | 471.9 | | AMA102 | CONSTRUCTION OF NEW YURIMAGUAS PORT | PE | G03 | | 43,730,000 |
| | | | | | | AMA16 | TARAPOTO - YURIMAGUAS ROAD* | PE | G03 | | 0 |
| | | | | | | AMA20 | PAITA LOGISTICS CENTER | PE | G03 | | 47,650,000 |
| | | | | | | AMA21 | YURIMAGUAS LOGISTICS CENTER | PE | G03 | | 15,000,000 |
| | | | | | | AMA24 | PAITA PORT | PE | G03 | | 266,922,000 |
| | | | | | | AMA25 | PAITA - TARAPOTO ROAD* | PE | G03 | | 0 |
| | | | | | | AMA40 | IMPROVEMENT OF NAVIGATION CONDITIONS ON THE HUALLAGA RIVER WATERWAY, BETWEEN YURIMAGUAS AND THE CONFLUENCE WITH MARAÑÓN RIVER | PE | G06 | | 33,000,000 |
| | | | | | | AMA41 | IMPROVEMENT OF NAVIGATION CONDITIONS ON THE MARAÑÓN RIVER WATERWAY, BETWEEN SARAMERIZA AND THE CONFLUENCE WITH UCAYALI RIVER | PE | G06 | | 11,000,000 |
| | | | | | | AMA44 | IQUITOS LOGISTICS CENTER | PE | G06 | | 15,000,000 |
| | | | | | | AMA56 | MODERNIZATION OF IQUITOS PORT | PE | G06 | | 39,550,000 |
| 2 | CALLAO - LA OROYA - PUCALLPA ROAD, PORTS, LOGISTICS CENTERS AND WATERWAYS | 11 | PE | 2,761.8 | | AMA104 | CONSTRUCTION OF NEW PUCALLPA PORT | PE | G04 | | 54,959,720 |
| | | | | | | AMA26 | IMPROVEMENT OF TINGO MARÍA - PUCALLPA ROAD | PE | G04 | | 438,352,770 |
| | | | | | | AMA30 | PUCALLPA INTERMODAL LOGISTICS CENTER | PE | G04 | | 15,000,000 |
| | | | | | | AMA31 | MODERNIZATION OF EL CALLAO PORT (NEW CONTAINER DOCK) | PE | G04 | | 704,835,670 |
| | | | | | | AMA32 | LIMA - RICARDO PALMA EXPRESSWAY | PE | G04 | | 242,000,000 |
| | | | | | | AMA43 | IMPROVEMENT OF NAVIGATION CONDITIONS ON THE UCAYALI RIVER WATERWAY, BETWEEN PUCALLPA AND THE CONFLUENCE WITH MARAÑÓN RIVER | PE | G06 | | 19,000,000 |
| | | | | | | AMA63 | IIRSA CENTER, SECTION 2: RICARDO PALMA - LA OROYA - TURN OFF TO CERRO DE PASCO / LA OROYA - HUANCAYO | PE | G04 | | 100,000,000 |
| | | | | | | AMA64 | IIRSA CENTER, SECTION 3: TURN OFF TO CERRO DE PASCO - TINGO MARÍA | PE | G04 | | 115,606,060 |
| | | | | | | AMA65 | EL CALLAO LOGISTICS ACTIVITIES ZONE (ZAL CALLAO) | PE | G04 | | 68,300,000 |
| | | | | | | AMA66 | EL CALLAO MULTI-PURPOSE NORTHERN TERMINAL | PE | G04 | | 883,482,448 |
| | | | | | | AMA67 | EL CALLAO MINERAL SHIPPING TERMINAL | PE | G04 | | 120,300,000 |
| 3 | NORTHEASTERN ACCESS TO THE AMAZON RIVER | 5 | BR – CO EC - PE | 52.8 | | AMA38 | IMPROVEMENT OF NAVIGATION CONDITIONS ON THE PUTUMAYO - IÇÁ RIVER | CO - EC - PE | G06 | | 15,000,000 |
| | | | | | | AMA39 | IMPROVEMENT OF NAVIGATION CONDITIONS ON THE MORONA RIVER | EC - PE | G06 | | 2,000,000 |
| | | | | | | AMA42 | MEJORAMIENTO DE LA NAVEGABILIDAD DEL RÍO NAPO | EC - PE | G06 | | 5,759,000 |
| | | | | | | AMA45 | IMPROVEMENT OF NAVIGATION CONDITIONS ON THE NAPO RIVER | EC | G07 | | 5,000,000 |
| | | | | | | AMA71 | MORONA FREIGHT TRANSFER PORT | EC | G02 | | 25,000,000 |

| # | Structured Project Name | No. of Individual Projects | Countries | API amount (million US$) | Stage | Code | Name of the Individual Projects | Countries Involved | PG | Project Stage | Amount (US$) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 4 | CARACAS - BOGOTÁ - BUENAVENTURA / QUITO ROAD CORRIDOR | 2 | CO – EC – VE | 3,350.0 | ● | AND05 | BOGOTÁ - CÚCUTA ROAD CORRIDOR | CO | G02 | ● | 1,559,000,000 |
| | | | | | | AND07 | BOGOTÁ - BUENAVENTURA ROAD CORRIDOR | CO | G02 | ● | 1,791,000,000 |
| 5 | COLOMBIA - ECUADOR BORDER INTERCONNECTION | 4 | CO - EC | 227.7 | ● | AND31 | BINATIONAL BORDER SERVICE CENTER (CEBAF) AT SAN MIGUEL | CO - EC | G06 | ● | 25,000,000 |
| | | | | | | AND79 | IMPROVEMENT AND PAVING OF THE MOCOA - SANTA ANA - SAN MIGUEL ROAD SECTION | CO | G06 | ● | 133,629,000 |
| | | | | | | AND82 | IMPLEMENTATION OF THE BINATIONAL BORDER SERVICE CENTER (CEBAF) AT THE TULCÁN - IPIALES (RUMICHACA) BORDER CROSSING | CO - EC | G02 | ● | 65,000,000 |
| | | | | | | AND91 | CONSTRUCTION OF THE NEW INTERNATIONAL RUMICHACA BRIDGE AND IMPROVEMENT OF THE EXISTING BRIDGE | CO - EC | G02 | ● | 4,100,000 |
| 6 | COLOMBIA - VENEZUELA BORDER CROSSINGS CONNECTIVITY SYSTEM | 3 | CO - VE | 4.0 | ● | AND02 | BINATIONAL BORDER SERVICE CENTER (CEBAF) AT PARAGUACHÓN | VE | G01 | ● | 2,000,000 |
| | | | | | | AND13 | IMPROVEMENT OF JOSÉ ANTONIO PÁEZ BRIDGE* | CO | G03 | ● | 0 |
| | | | | | | AND81 | IMPROVEMENT OF THE BORDER CROSSINGS IN THE NORTHERN DEPARTMENT OF SANTANDER AND THE TÁCHIRA STATE | CO - VE | G02 | ● | 2,000,000 |
| 7 | DESAGUADERO BINATIONAL BORDER SERVICE CENTER (CEBAF) | 1 | BO - PE | 40.2 | ● | AND47 | DESAGUADERO BINATIONAL BORDER SERVICE CENTER (CEBAF) | BO - PE | G08 | ● | 40,231,927 |
| 8 | AUTOPISTA DEL SOL EXPRESSWAY: IMPROVEMENT AND REHABILITATION OF THE SULLANA - AGUAS VERDES SECTION (INCLUDING TUMBES BYPASS) | 1 | PE | 515.5 | ● | AND28 | AUTOPISTA DEL SOL EXPRESSWAY: IMPROVEMENT AND REHABILITATION OF THE SULLANA - AGUAS VERDES SECTION (INCLUDING TUMBES BYPASS) | PE | G05 | ● | 515,478,715 |

| # | Structured Project Name | No. of Individual Projects | Countries | API amount (million US$) | Stage | Code | Name of the Individual Projects | Countries Involved | PG | Project Stage | Amount (US$) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 9 | CONSTRUCTION OF THE SALVADOR MAZZA - YACUIBA BINATIONAL BRIDGE AND BORDER CENTER | 1 | AR - BO | 45.0 | ● | CAP10 | CONSTRUCTION OF THE SALVADOR MAZZA - YACUIBA BINATIONAL BRIDGE AND BORDER CENTER | AR - BO | G02 | ● | 45,000,000 |
| 10 | ARGENTINA - BOLIVIA WEST CONNECTION | 3 | AR - BO | 477.0 | ● | CAP11 | REHABILITATION OF JUJUY - LA QUIACA RAILWAY | AR | G02 | ● | 62,000,000 |
| | | | | | | CAP50 | PAVING OF NATIONAL ROUTE No. 40, MINING CORRIDOR PATH (BORDER WITH BOLIVIA) | AR | G02 | ● | 400,000,000 |
| | | | | | | CAP81 | LA QUIACA - VILLAZÓN BRIDGE AND BORDER CENTER | AR - BO | G02 | ● | 15,000,000 |
| 11 | PARANAGUÁ - ANTOFAGASTA BIOCEANIC RAILWAY CORRIDOR | 9 | AR - BR - CH - PA | 5,102.2 | ● | CAP20 | CASCAVEL - FOZ DO IGUAÇU BIOCEANIC RAILWAY CORRIDOR | BR | G03 | ● | 324,000,000 |
| | | | | | | CAP23 | STUDY FOR THE OPTIMIZATION OF THE ÑEEMBUCÚ - BERMEJO NODE | AR - PA | G04 | ● | 61,206,392 |
| | | | | | | CAP29 | CONSTRUCTION OF CIUDAD DEL ESTE - ÑEEMBUCÚ RAILWAY | PA | G04 | ● | 2,800,000,000 |
| | | | | | | CAP37 | REHABILITATION OF THE C3 RAILWAY BRANCH LINE: RESISTENCIA - AVIA TERAI - PINEDO | AR | G01 | ● | 104,000,000 |
| | | | | | | CAP38 | REHABILITATION OF THE C12 RAILWAY BRANCH LINE: AVIA TERAI - METÁN | AR | G01 | ● | 212,000,000 |
| | | | | | | CAP39 | REHABILITATION OF THE C14 RAILWAY BRANCH LINE: SALTA - SOCOMPA | AR | G01 | ● | 60,000,000 |
| | | | | | | CAP52 | RAILWAY BRIDGE WITH FREIGHT YARD (CIUDAD DEL ESTE - FOZ DO IGUAÇU) | BR - PA | G03 | ● | 40,971,000 |
| | | | | | | CAP53 | BIOCEANIC RAILWAY CORRIDOR: PARANAGUÁ - CASCAVEL SECTION AND GUARAPUAVA - INGENIERO BLEY RAILWAY BYPASS | BR | G03 | ● | 1,500,000,000 |
| | | | | | | CAP91 | BIOCEANIC RAILWAY CORRIDOR, CHILEAN SECTION (ANTOFAGASTA - SOCOMPA) * | CH | G01 | ● | 0 |
| 12 | FOZ DO IGUAÇU - CIUDAD DEL ESTE - ASUNCIÓN - CLORINDA ROAD CONNECTION | 3 | AR - BR - PA | 774.2 | ● | CAP07 | OPTIMIZATION OF THE CLORINDA - ASUNCIÓN NODE | AR - PA | G01 | ● | 101,206,392 |
| | | | | | | CAP14 | NEW PUERTO PRESIDENTE FRANCO - PORTO MEIRA BRIDGE, WITH A PARAGUAY - BRAZIL INTEGRATED CONTROL AREA | BR - PA | G03 | ● | 173,000,000 |
| | | | | | | CAP18 | CONCESSION FOR THE IMPROVEMENT OF ROUTES No. 2 AND 7 (ASUNCIÓN - CIUDAD DEL ESTE) | PA | G03 | ● | 500,000,000 |
| 13 | ITAIPU - ASUNCIÓN - YACYRETÁ 500-KV TRANSMISSION LINE | 2 | BR - PA | 852.0 | ● | CAP67 | 500-KV TRANSMISSION LINE (ITAIPU - VILLA HAYES) | PA | G03 | ● | 555,000,000 |
| | | | | | | CAP68 | 500-KV TRANSMISSION LINE (YACYRETÁ - VILLA HAYES) | PA | G03 | ● | 297,000,000 |

| # | Structured Project Name | No. of Individual Projects | Countries | API amount (million US$) | Stage | Code | Name of the Individual Projects | Countries Involved | PG | Project Stage | Amount (US$) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 14 | REHABILITATION OF THE CARACAS - MANAUS ROAD | 1 | BR - VE | 407.0 | ● | GUY01 | REHABILITATION OF THE CARACAS - MANAUS ROAD | BR - VE | G01 | ● | 407,000,000 |
| 15 | BOA VISTA - BONFIM - LETHEM - LINDEN - GEORGETOWN ROAD | 3 | BR - GU | 250.0 | ● | GUY09 | LETHEM - LINDEN ROAD | GU | G02 | ● | 250,000,000 |
| | | | | | | GUY42 | BOA VISTA - BONFIM ROAD* | BR | G02 | ● | 0 |
| | | | | | | GUY43 | LINDEN - GEORGETOWN ROAD* | GU | G02 | ● | 0 |
| 16 | ROUTES INTERCONNECTING VENEZUELA (CIUDAD GUAYANA) - GUYANA (GEORGETOWN) - SURINAME (SOUTH DRAIN - APURA - ZANDERIJ - MOENGO - ALBINA), INCLUDING CONSTRUCTION OF THE BRIDGE OVER THE CORENTYNE RIVER | 2 | GU - SU VE | 301.8 | ● | GUY18 | ROUTES INTERCONNECTING VENEZUELA (CIUDAD GUAYANA) - GUYANA (GEORGETOWN) - SURINAME (APURA - ZANDERIJ - PARAMARIBO) | GU - SU VE | G03 | ● | 300,800,000 |
| | | | | | | GUY24 | CONSTRUCTION OF THE BRIDGE OVER THE CORENTYNE RIVER | GU - SU | G03 | ● | 1,000,000 |

| # | Structured Project Name | No. of Individual Projects | Countries | API amount (million US$) | Stage | Code | Name of the Individual Projects | Countries Involved | PG | Project Stage | Amount (US$) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 17 | IMPROVEMENT OF NAVIGATION CONDITIONS ON THE RIVERS OF THE PLATA BASIN | 10 | AR - BO - BR - PA - UY | 1,170.0 | | HPP07 | IMPROVEMENT OF NAVIGATION CONDITIONS ON THE PARAGUAY RIVER (BETWEEN APA AND CORUMBÁ) | BO - BR - PA | G01 | | 39,000,000 |
| | | | | | | HPP09 | IMPROVEMENT OF NAVIGATION CONDITIONS ON THE PARAGUAY RIVER (ASUNCIÓN - APA) | PA | G01 | | 110,000,000 |
| | | | | | | HPP106 | SYSTEM FOR WATER LEVEL PREDICTION IN THE PARAGUAY RIVER (APA - ASUNCIÓN) | BO - PA | G01 | | 0 |
| | | | | | | HPP108 | IMPROVEMENT OF NAVIGATION CONDITIONS ON THE ALTO PARANÁ RIVER (UPSTREAM OF SALTOS DEL GUAIRÁ) | BR | G02 | | 15,000,000 |
| | | | | | | HPP122 | REHABILITATION AND MAINTENANCE OF THE TAMENGO CANAL | BO | G01 | | 10,500,000 |
| | | | | | | HPP19 | IMPROVEMENT OF NAVIGATION CONDITIONS ON THE TIETÊ RIVER | BR | G02 | | 800,000,000 |
| | | | | | | HPP42 | BINATIONAL PROJECT FOR THE IMPROVEMENT OF NAVIGATION CONDITIONS ON THE PARAGUAY RIVER, FROM CONFLUENCIA TO ASUNCIÓN | AR - PA | G03 | | 45,498,216 |
| | | | | | | HPP44 | DEEPENING OF THE FAIRWAY IN THE PARANÁ RIVER FROM CONFLUENCIA TO THE PLATA RIVER | AR | G03 | | 110,000,000 |
| | | | | | | HPP72 | BINATIONAL PROJECT FOR THE IMPROVEMENT OF NAVIGATION CONDITIONS ON THE ALTO PARANÁ RIVER | AR - PA | G04 | | 0 |
| | | | | | | HPP88 | BINATIONAL PROJECT FOR THE IMPROVEMENT OF NAVIGATION CONDITIONS ON THE URUGUAY RIVER | AR - UY | G05 | | 40,000,000 |
| 18 | PARAGUAY - ARGENTINA - URUGUAY RAILWAY INTERCONNECTION | 4 | AR - PA - UY | 577.3 | | HPP103 | CONSTRUCTION AND REHABILITATION OF THE ASUNCIÓN - ARTIGAS RAILWAY | PA | G03 | | 300,000,000 |
| | | | | | | HPP65 | REHABILITATION AND IMPROVEMENT OF THE PIEDRA SOLA - SALTO GRANDE RAILWAY CORRIDOR | UY | G05 | | 127,300,000 |
| | | | | | | HPP76 | CONSTRUCTION AND REHABILITATION OF THE ARTIGAS - POSADAS RAILWAY | AR - PA | G04 | | 150,000,000 |
| | | | | | | HPP82 | REHABILITATION OF THE ZÁRATE - POSADAS RAILWAY BRANCH LINE | AR | G05 | | 0 |
| 19 | REHABILITATION OF THE CHAMBERLAIN - FRAY BENTOS RAILWAY BRANCH LINE | 1 | UY | 100.0 | | HPP120 | REHABILITATION OF THE ALGORTA - FRAY BENTOS RAILWAY BRANCH LINE | UY | G05 | | 100,000,000 |
| 20 | NUEVA PALMIRA BELTWAY AND PORT ACCESS ROADS NETWORK | 1 | UY | 15.0 | | HPP97 | NUEVA PALMIRA BELTWAY AND PORT ACCESS ROADS NETWORK | UY | G05 | | 15,000,000 |

| # | Structured Project Name | No. of Individual Projects | Countries | API amount (million US$) | Stage | Code | Name of the Individual Projects | Countries Involved | PG | Project Stage | Amount (US$) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 21 | PASSENGER AND CARGO HUB AIRPORT FOR SOUTH AMERICA (VIRU VIRU, SANTA CRUZ, INTERNATIONAL HUB AIRPORT) | 1 | BO | 20.0 | ● | IOC78 | PASSENGER AND CARGO HUB AIRPORT FOR SOUTH AMERICA (VIRU VIRU, SANTA CRUZ, INTERNATIONAL HUB AIRPORT) | BO | G03 | ● | 20,000,000 |
| 22 | IMPROVEMENT OF ROAD CONNECTIVITY IN THE CENTRAL INTEROCEANIC HUB | 4 | BO - BR | 431.5 | ● | IOC14 | CAMPO GRANDE BYPASS | BR | G02 | ● | 30,000,000 |
| | | | | | | IOC25 | PUERTO SUÁREZ - CORUMBÁ INTEGRATED CONTROL AREA | BO - BR | G03 | ● | 2,000,000 |
| | | | | | | IOC32 | TOLEDO - PISIGA ROAD | BO | G05 | ● | 130,500,000 |
| | | | | | | IOC80 | UPGRADE OF LA PAZ - SANTA CRUZ ROUTE TO A FOUR-LANE ROAD | BO | G05 | ● | 269,000,000 |
| 23 | INFANTE RIVAROLA - CAÑADA ORURO BORDER CROSSING | 1 | BO - PA | 1.9 | ● | IOC09 | INFANTE RIVAROLA - CAÑADA ORURO BORDER CROSSING | BO - PA | G01 | ● | 1,900,000 |
| 24 | CENTRAL BIOCEANIC RAILWAY CORRIDOR (BOLIVIAN SECTION) | 1 | BO | 6.7 | ● | IOC81 | CENTRAL BIOCEANIC RAILWAY CORRIDOR | BO | G05 | ● | 6,700,000 |

| # | Structured Project Name | No. of Individual Projects | Countries | API amount (million US$) | Stage | Code | Name of the Individual Projects | Countries Involved | PG | Project Stage | Amount (US$) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 25 | NORTHEASTERN ARGENTINA GAS PIPELINE | 1 | AR - BO | 1,000.0 | 🟡 | MCC68 | NORTHEASTERN ARGENTINA GAS PIPELINE | AR | G05 | 🟡 | 1,000,000,000 |
| 26 | CONSTRUCTION OF THE JAGUARÃO - RÍO BRANCO INTERNATIONAL BRIDGE | 1 | BR - UY | 93.5 | 🟡 | MCC22 | CONSTRUCTION OF THE JAGUARÃO - RÍO BRANCO INTERNATIONAL BRIDGE | BR - UY | G02 | 🟡 | 93,500,000 |
| 27 | MULTIMODAL TRANSPORTATION IN THE LAGUNA MERÍN AND LAGOA DOS PATOS SYSTEM | 5 | BR - UY | 40.4 | 🟡 | MCC157 | DREDGING OF THE TACUARÍ RIVER | BR | G02 | 🟢 | 1,350,000 |
| | | | | | | MCC158 | DREDGING OF AND INSTALLATION OF SIGNS, MARKERS AND AIDS TO NAVIGATION ON THE MIRIM LAKE - DOS PATOS LAKE SYSTEM | BR | G02 | 🔴 | 0 |
| | | | | | | MCC159 | LA CHARQUEADA PORT TERMINAL AND DREDGING OF THE CEBOLLATI RIVER | UY | G02 | 🟢 | 7,000,000 |
| | | | | | | MCC160 | PORT TERMINAL AND DREDGING OF TACUARÍ | UY | G02 | 🟡 | 7,000,000 |
| | | | | | | MCC85 | DREDGING OF MIRIM LAKE | BR | G02 | 🟡 | 25,000,000 |
| 28 | MONTEVIDEO - CACEQUI RAILWAY CORRIDOR | 2 | BR - UY | 139.9 | 🟢 | MCC115 | REHABILITATION OF THE RIVERA - SANTANA DO LIVRAMENTO - CACEQUI RAILWAY SECTION | BR - UY | G02 | 🔵 | 5,000,000 |
| | | | | | | MCC30 | REHABILITATION OF THE MONTEVIDEO - RIVERA RAILWAY | UY | G02 | 🟢 | 134,900,000 |
| 29 | OPTIMIZATION OF THE CRISTO REDENTOR BORDER CROSSING SYSTEM | 5 | AR - CH | 258.0 | 🟡 | MCC151 | INTEGRATED FREIGHT CONTROL CENTER AT USPALLATA (CRISTO REDENTOR SYSTEM OPTIMIZATION) | AR | G03 | 🟡 | 90,000,000 |
| | | | | | | MCC152 | PASSENGER CONTROL CENTER AT LOS HORCONES (CRISTO REDENTOR SYSTEM OPTIMIZATION) | AR | G03 | 🟡 | 80,000,000 |
| | | | | | | MCC153 | NEW LOS LIBERTADORES BORDER COMPLEX (CRISTO REDENTOR SYSTEM OPTIMIZATION) | CH | G03 | 🟡 | 70,000,000 |
| | | | | | | MCC154 | REHABILITATION OF THE CRISTO REDENTOR TUNNEL AND CARACOLES (CRISTO REDENTOR SYSTEM OPTIMIZATION) | AR - CH | G03 | 🟡 | 4,000,000 |
| | | | | | | MCC155 | BINATIONAL MANAGEMENT CONTROL SYSTEM AT THE CRISTO REDENTOR BORDER CROSSING (CRISTO REDENTOR SYSTEM OPTIMIZATION) | AR - CH | G03 | 🟡 | 14,000,000 |
| 30 | AGUA NEGRA BINATIONAL TUNNEL | 1 | AR - CH | 1,600.0 | 🟡 | MCC110 | AGUA NEGRA BINATIONAL TUNNEL | AR - CH | G04 | 🟡 | 1,600,000,000 |

| # | Structured Project Name | No. of Individual Projects | Countries | API amount (million US$) | Stage | Code | Name of the Individual Projects | Countries Involved | PG | Project Stage | Amount (US$) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 31 | PORTO VELHO - PERUVIAN COAST CONNECTION | 1 | BR - PE | 85.4 | ● | PBB64 | BRIDGE OVER THE MADEIRA RIVER IN ABUNÃ (BR-364/RO) | BR | G02 | ● | 85,350,000 |

* Individual project completed before the creation of API and incorporated into the Agenda because it supplements the connectivity network of the structured project.

## TABLE OF CONTENTS



## INTRODUCTION

The Strategic Action Plan (PAE) 2012-2022 provides for the continuous update of the COSIPLAN Project Information System (PIS)[1]. The PIS is the tool to support integration infrastructure planning and analysis containing systematized information on the COSIPLAN projects. This instrument enables the user to access the information on each project file (general data, scope, cost and financing, status, etc.) and create reports based on the query criteria selected. Each project file is kept updated by one responsible person per country or countries, depending on the geographical scope[2] of the project.

The first version of the PIS, known as "Project Database," was built in 2004 on the basis of the creation of IIRSA Project Portfolio with the purpose of consolidating in a single instrument all the basic information on each project. Between 2007 and 2010, important improvements were introduced into this IT tool, and the project files were regularly reviewed for information consistency.

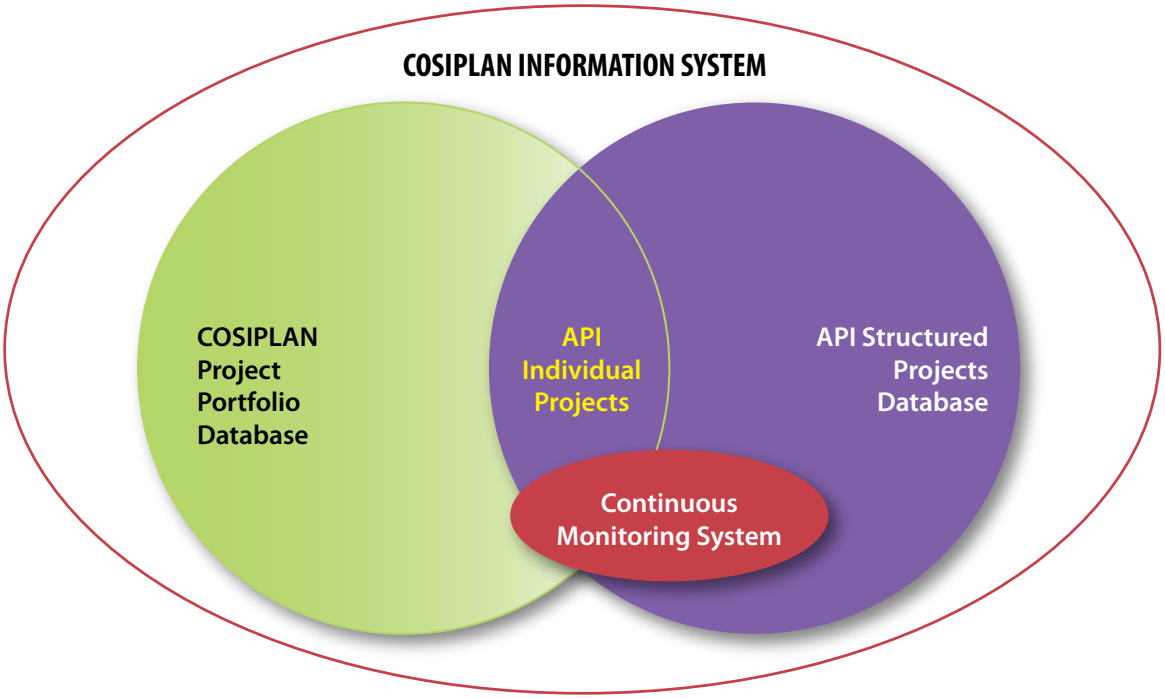
In 2011, the countries approved the Integration Priority Project Agenda (API), which is made up of a subset of COSIPLAN Portfolio projects. In order to record the progress made in the implementation of the API projects, it became necessary to add two new components associated with the Project Database: (i) a module to consolidate the information on the API projects, and (ii) a Continuous Monitoring System (CMS) to record the progress in the life cycle schedule of these projects.

[1] For more information on the PIS, visit http://www.iirsa.org/sip.asp, and to directly access the system, click http://www.iirsa.org/proyectos
[2] National, binational or multinational projects.

To incorporate these new instruments, technical and programming adjustments had to be made to the Project Database platform in place. In this context, the COSIPLAN Project Information System was developed in 2013, made up of three components: the COSIPLAN Project Portfolio Database, the API Structured Projects Database, and the Continuous Monitoring System.

The three components of the system are interconnected, as shown in Figure 1, even for data entering purposes, and can be accessed from the same IT platform using their respective sign-in buttons. The system was presented to the countries at the GTE Meeting on API and the CMS held in August 27 and 28, 2013, in Rio de Janeiro[3].

Figure 1 • **COSIPLAN Project Information System Relationship Diagram**




[3] GTE Meeting on API and the CMS, August 27 and 28, 2013, Rio de Janeiro, Brazil, http://www.iirsa.org/Event/Detail?Id=227

## 1. COSIPLAN PROJECT PORTFOLIO DATABASE

The COSIPLAN Project Portfolio Database is the PIS component that contains the files of each Portfolio project with general information organized in modules.

### *A) BACKGROUND*

The first version of the Project Database was built in 2004 on the basis of the creation of IIRSA Project Portfolio with the purpose of consolidating in a single instrument all the basic information related to each project. This instrument enabled the user to access the project files with general information and create reports based on the query criteria selected.

In 2007, a new IT tool was created to facilitate the online update of the projects information directly by the countries. New search engines, more information fields, project background (maps and other documents) and an intuitive and user-friendly design were incorporated. Between 2007 and 2008, users from the countries were trained in the use and administration of the Database. Between 2007 and 2010, important improvements were introduced into this IT tool, and the project files were regularly reviewed for information consistency.

In 2012 and 2013, new information fields were added, project files were organized in modules, and new reports were included. These adjustments were made in parallel with the development and implementation of the API Structured Projects Database and the Continuous Monitoring System (CMS).

### *B) COMPONENTS*

The files of the Portfolio projects, known as "individual projects," are organized in modules, according to the following detail:

- HEADER: This module includes the following information fields: Name, Code, Hub, Group, Countries, Stage, Scope, Sector, Sub-sector, Type of Works, API Project (yes/no) —should the project be an API Project, the Structured Project of which it forms part is also included—, Anchor Project (yes/no), and Total Investment.
- COMPLETED PROJECT INFORMATION: This module, exclusively devoted to completed projects, activates automatically and includes the following information fields: Results Indicators for Completed Projects by Type of Works (Descriptors), Final Project Investment in US$, Total Cost of Studies in US$, Start Date of Works, and Delivery Date of Works.
- PROJECT SCOPE: This module includes the following information fields: Objective, Description, Sections, Related Projects, Descriptors by Type of Works, Joint Status, Current Status per Country, and Comments.
- COST AND FINANCING: This module includes the following information fields: Type of Financing, Source, Total Investment in US$, Included in the National Budget and Year, Amount of Studies in US$, and Source of Financing of Studies.
- PROJECT STATUS: This module includes the following information fields: Project Stage, Estimated Date of Completion, Environmental License, and Studies Status. Should the project be monitored by the CMS, the estimated date of completion is automatically updated.
- PARTIES RESPONSIBLE FOR THE INFORMATION: This module includes contact details of the National Coordinator and of those responsible for updating information in each country concerned, as well as the date of the last update.
- SUPPLEMENTARY INFORMATION: This module includes links to the following information: Information on the Hub, Project Portfolio of the Hub, Business Vision, Map of the Area of Influence; Map of the Project Groups of the Hub, and Map of the Project Group within which the project is included.

This database enables the user to make queries and create reports based on the query criteria selected. The reports are organized in categories and at present the following are available:

- Project Scope
- Source of Financing by Sector
- Sectors:
  - Sector-based Breakdown
  - Sector-/subsector-based Breakdown
  - Project Details by Hub, Group and Sector
- Life Cycle:
  - Degree of Implementation Progress by Sector
  - Estimated Investment Amount and No. of Projects by Execution Stage and Hub
  - Estimated Investment Amount and No. of projects by Execution Stage and Country
- Summary of the Project Portfolio:
  - By Hub
  - By Country
- Type of Works:
  - Regulatory Harmonization in Communications
  - Regulatory Harmonization in Energy
  - Communications Interconnection
  - Energy Interconnection
  - Border Crossings
  - Air Transport
  - Road Transport
  - Rail Transport
  - Sea Transport
  - Multimodal Transport
- Create your own report

## 2. API STRUCTURED PROJECTS DATABASE

The API Structured Projects Database is the component of the PIS that contains the files of the 31 structured projects, with general information on them organized in modules.

### *A) BACKGROUND*

The Integration Priority Project Agenda (API) consists in a set of strategic structured projects having a high impact on the physical integration of the territory and the socioeconomic development of the region. API was approved by the COSIPLAN Ministers at their II Ordinary Meeting in 2011[4], and by the Presidents at the VI Meeting of UNASUR in 2012[5].

Between 2012 and 2013, design and implementation tasks were simultaneously carried out in the API Structured Projects Database, the Project Life Cycle Scheduling Methodology, and the Continuous Monitoring System (CMS), with the purpose of recording the general information on these projects and their progress. These tools became operational and were made available to users in 2013.

### *B) COMPONENTS*

The structured projects files are organized in modules and are linked to the files of the individual projects that make them up. The file module detail is as follows:

- HEADER: This module includes the following information fields: Name, Code, Hub, Scope, Countries, Source of Financing, Investment Amount in US$, Stage, and Estimated Date of Completion.
- PROJECT SCOPE: This module includes the following information fields: Rationale, Proposal, and List of Individual Projects Included.
- PROJECT STATUS: This module includes the Continuous Monitoring System, and the field Progress Analysis and Assessment.
- PARTIES RESPONSIBLE FOR THE INFORMATION: This module includes the contact details of the National Coordinator and of those responsible for updating the information in each of the countries involved, as well as the date of the last update.
- SUPPLEMENTARY INFORMATION: This module includes links to the following information: map of the structured project and other documents, photographs, and other material related to the project.

The API Structured Projects Database, just like the COSIPLAN Project Portfolio, enables the user to make queries and create reports on the basis of the query criteria selected. The reports are organized in categories, and at present the following are available:

- API Structured Projects
- API Structured Projects by Hub
- API Structured Projects by Country
- API Structured Projects by Life Cycle Stage

[4] II Ministerial Meeting of the COSIPLAN, November 30, 2011, Brasilia, Brazil, http://www.iirsa.org/Event/Detail?Id=182

[5] VI Meeting of UNASUR, November 30, 2012, Lima, Peru, http://www.iirsa.org/Event/Detail?Id=212

## 3. PROJECT LIFE CYCLE SCHEDULING METHODOLOGY

### *A) BACKGROUND*

As mentioned, with the purpose of recording the status and progress over time of the API projects, the Life Cycle Scheduling Methodology for the API individual projects was developed between 2012 and 2013[6]. This methodology is based on the four project life cycle stages agreed upon by the governments in 2008: profiling, pre-execution, execution and completed.

### *B) COMPONENTS*

Given the technical characteristics of the projects and the works involved, the pre-execution and execution stages of a project are the ones that take up most of the time in the project life cycle, a minimum of about 10 years (three to five years for the pre-execution stage, and seven to 10 years for the execution stage). This is why both stages were further broken down, in order to see the progress of a project more accurately. The table below shows the stages and sub-stages of the project life cycle:

Table 1 • **Project Life Cycle Schedule**

| INDIVIDUAL PROJECT STAGES AND SUB-STAGES | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **PROFILING 0%** | **PRE-EXECUTION 30%** | | | | | **EXECUTION 65%** | | | | **COMPLETED 5%** |
| 0% Initial status | 6% Resources for studies | 12% Studies underway | 18% Approved studies | 24% Permits granted | 30% Resources for works | 50% First quarter of works | 65% Second quarter of works | 80% Third quarter of works | 95% Fourth quarter of works | 100% Works handed over |

- PROFILING: This is the starting point in the project life cycle.

- PRE-EXECUTION: Normally, this stage involves studies (pre-feasibility, feasibility and investment), permits of various kinds (environmental, jurisdictional and others), and resource mobilization from various sources to finance the works and other actions that precede the execution of the physical works. Five main milestones are identified:

  **Resources for studies:** This sub-stage starts with the formalities required to secure the financial resources needed to carry out the studies, and is deemed completed when such resources are actually available and all the institutional arrangements for the studies to begin (e.g. awarding them through tender processes) have been made.

  **Studies underway:** This sub-stage is deemed to start when any pre-execution study has been launched, and the project will be recorded as such until completion of the study representing the highest level required by the project concerned.

  **Approved studies:** Once the studies have been completed, the project passes on to this sub-stage, and will remain at it until the studies are approved by the relevant authorities.

[6] For more information on the development of the Life Cycle Scheduling Methodology for the API projects, see CMS Progress Report 2012, http://www.iirsa.org/Document/Detail?Id=3416, and API Progress Report 2013, http://www.iirsa.org/Document/Detail?Id=3718

**Permits granted:** After the studies are approved, the project must comply with institutional requirements and regulations, which take the form of permits and authorizations that may be of different nature and impose different requirements and deadlines. Thus, for example, different kinds of environmental licenses for engineering works and installation of the work site may be required. Furthermore, submitting the background information required for a permit to be granted may demand some degree of interaction with the studies conducted in the previous sub-stage. This sub-stage will be deemed completed when all permits have been granted and/or all the institutional formalities required by the project have been carried out.

**Resources for works:** This sub-stage involves securing the financial resources needed to carry out the works and actions proposed in the project. It will be deemed completed when the project has been allocated the financial resources for executing the works and the required institutional formalities for such purpose have been carried out.

- EXECUTION: This stage has been broken down into quarters of works according to the time frames involved, the costs required or progress milestones, depending on the project concerned.

- COMPLETED: A project is deemed completed when the finished works have been handed over to the relevant authorities, and are open and functioning.

This breakdown into sub-stages makes it possible to focus on informing, from a regional perspective, about the advances attained by a very diverse set of projects, with different execution units and responsible agencies, and with different institutional modes that vary from country to country. The greatest detail about this kind of complex project is recorded in the national systems of each country.

## 4. CONTINUOUS MONITORING SYSTEM (CMS)

The primary purpose of the Continuous Monitoring System (CMS) is to record the progress of the API projects from a regional perspective, based on the individual project life cycle schedule, and to provide timely and reliable information for decision making by the competent government authorities. The CMS is a tool that supplements the domestic investment systems.

The CMS objectives, as agreed upon by the countries, are the following:

- Provide clear information about the progress attained by the projects.
- Generate information to solve obstacles in project management.
- Supply information for decision making in relation to:
  - The financing of studies.
  - The financing of works.

### *A) BACKGROUND*

Regarding the API follow-up, the PAE includes the action of creating a permanent monitoring mechanism (see Action 4.3, PAE 2012-2022). The task of designing and implementing the CMS was carried out between 2012 and 2013. These works were conducted in parallel with the development of the Life Cycle Scheduling Methodology described above. The CMS went online in 2013[7].

[7] For more information on the CMS development, see CMS Progress Report 2012, http://www.iirsa.org/Document/Detail?Id=3416, and API Progress Report 2013, http://www.iirsa.org/Document/Detail?Id=3718

At present, the CMS module is open to the public in the case of the structured project files, whereas in the individual project files such module is for the exclusive use of those authorized by the National Coordinators.

### *B) COMPONENTS*

The CMS module is a tool available in the individual project files as well as in the API structured project files.

- The CMS in the Individual Project Files

All the individual projects included in the Portfolio can make use of this module. For this purpose, the person responsible for the management of the file is required to accept this option. The CMS module helps monitor the progress of a project throughout its life cycle (based on the Methodology for Scheduling the Life Cycle of Projects) as well as identify any deviation and its causes, as shown below:

Figure 2 • **CMS Module in the Individual Project Files**

**CONTINUOUS MONITORING SYSTEM**

| PROFILING 0% | PRE-EXECUTION 30% | | | | | EXECUTION 65% | | | | COMPLETED 5% |
|---|---|---|---|---|---|---|---|---|---|---|
| 0% Initial status | 6% Resources for studies | 12% Studies underway | 18% Approved studies | 24% Permits granted | 30% Resources for works | 50% First quarter of works | 65% Second quarter of works | 80% Third quarter of works | 95% Fourth quarter of works | 100% Works handed over |
| Completion date | Completion date | Completion date | Completion date | Completion date | Completion date | Completion date | Completion date | Completion date | Completion date | Completion date |
| 09/2007 | 03/2009 | 12/2012 | 02/2013 | 03/2013 | 07/2013 | 10/2015 | 06/2016 | 02/2017 | 10/2017 | 12/2017 |

Completed Normal With difficulties Not completed

| Deviation type | Completion date | Sub-stage | Cause | Start date | Change date | Description | Status |
|---|---|---|---|---|---|---|---|
| | 07/2016 | Works handed over | Change in time period | 09/16/2014 | | Automatic deviation due to change in time period | In Progress |
| | 07/2015 | Second quarter of works | Change in time period | 09/16/2014 | | Automatic deviation due to change in time period | In Progress |
| | 12/2015 | Third quarter of works | Change in time period | 09/16/2014 | | Automatic deviation due to change in time period | In Progress |

As can be seen in the figure above, the CMS provides two types of information: (i) project stages and sub-stages, and (ii) schedule, progress and deviations.

#### *i. Project Stages and Sub-stages*

As detailed in section 3 in this document, the four project life cycle stages are profiling, pre-execution, execution, and completed. Each stage is assigned a relative weight. In addition, the pre-execution and execution stages are divided into sub-stages, which allow more detailed project monitoring. Each sub-stage is also assigned a relative weight, the sum of which is the weight of the stage. This percentage weight is used to obtain the average status and

progress of the structured project (see below). The percentages are fixed and the same for all the individual projects. Each sub-stage is identified with the aggregation of the relative weights of the preceding sub-stages. A project total weight is equal to 100%.

***ii. Schedule, Progress and Deviations***

The module includes a field, which is edited by each country's staff responsible for updating the information in a file, where the Completion Date of each sub-stage is defined (MM/YYYY format). This information can be changed at any time by the person responsible for the file. Such sub-stage Completion Date must be the same as or later than the Completion Date of the preceding sub-stage, as the sub-stages are consecutive.

The file administrator will also assign a status to each sub-stage as follows:

- **Completed:** The sub-stage was completed on the scheduled date (blue).
- **Not Completed:** The sub-stage was not completed on the scheduled date, and it is not possible to reschedule it yet (red).
- **Normal:** The sub-stage is expected to be completed on a future date (green).
- **With Difficulties:** The sub-stage is not expected to be completed on the scheduled date because there are known or anticipated difficulties (yellow).

The blue and red status represent facts, while the green and yellow status represent estimates by the staff entering the information.

The status of the sub-stages will be chosen by the file administrator. Only a red status will be automatically assigned. In other words, if the last day of the scheduled month and year of completion of a sub-stage arrives and the file administrator has not updated it, the next day the system will assign a red (not completed) status to the sub-stage. This red status will remain until the file administrator signs in to: i) move the sub-stage to the competed (blue) status, in case the activities involved have actually finished; ii) leave the sub-stage in the red status because it is actually not completed and a new completion date is unknown; or iii) reschedule the completion date of the sub-stage, which will appear in the green status if the sub-stage is expected to develop normally, or in the yellow status if any difficulty is anticipated.

For example, let us suppose that the scheduled completion date for a sub-stage is 01/2014 and no difficulties are expected (green status). If the responsible administrator does not sign into the file before such date, then on 01/02/2014 the system will move the sub-stage to the not completed (red) status. But if the administrator signs into the file and updates the status of the sub-stage before such date, the system will not change this status. Whenever a file administrator assigns a sub-stage the status of With Difficulties (yellow) or Not Completed (red), the system will display the following confirmation message: "Are you certain you want to change this sub-stage status from Not Completed to With Difficulties?" (or the reverse, as appropriate). If the administrator clicks Yes, then the Deviation Type management screen will pop up.

Only when the table shows a With Difficulties (yellow) or Not Completed (red) sub-stage and such status has been confirmed by the administrator, as described in the paragraph above, will the system automatically display another box in which the deviation and its causes can be entered. The information shown in this box is the following:

- **Deviation Type:** If a sub-stage is already in the With Difficulties (yellow) or the Not Completed (red) status, the relevant color will be automatically displayed in the table so that the user does not have to select it and may proceed to enter the data required.
- **Deviation Sub-Stage:** The name of the sub-stage in a red or yellow status is automatically shown.
- **Scheduled Completion Date:** The system will automatically provide this date based on the information in the project schedule box. This will be the completion date that appeared in the schedule in place for the sub-stage in the yellow or red status at the time the deviation occurred.

- **Deviation Start Date:** This shows the date on which the deviation occurred.
- **Deviation Change Date:** This shows the date on which the administrator signed in to change the deviation.
- **Deviation Causes:** The system will automatically display a cause (Other) so that the field is not empty. However, the file administrator can open a pop-up menu from which to select the general cause of the deviation. The list of causes —others may be added in the future— is the following:

  - Works interrupted for natural reasons
  - Works interrupted for institutional reasons
  - Cost increase
  - Delay in the disbursement of funds
  - Other

- **Deviation Description:** This descriptive field is filled out by the file administrator.
- **Status:** A pop-up menu will appear with the following options to be chosen by the administrator:

  - Ongoing
  - Overcome

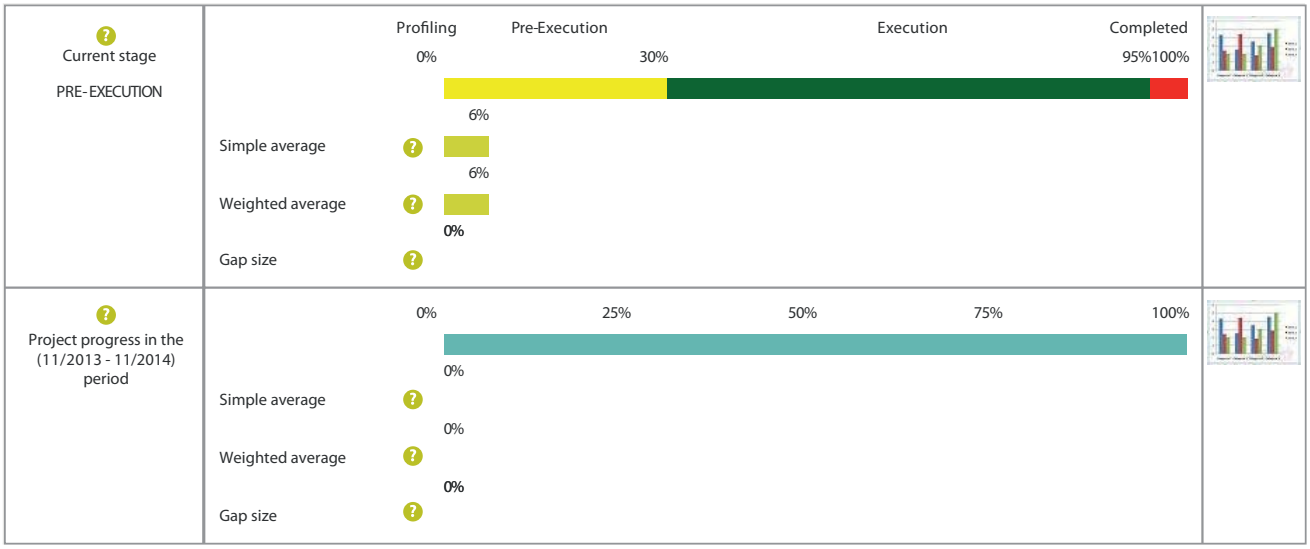
All the fields are mandatory and the system will not allow the administrator to save the changes unless they are completed. Furthermore, the box automatically displayed by the system will keep a history of all the times a sub-stage deviation (red or yellow) occurred. Should a sub-stage present more than one deviation, all of them will be recorded. The file administrator will not have the right to delete any deviation.

- The CMS in the Structured Project Files

The CMS module presents two major types of fields in the structured project files:

- Two automatic fields, the results of which are generated by the system by consolidating or aggregating the information entered in the relevant module of the individual projects that make up each structured project, and
- A descriptive field that must be completed/updated by the file administrator.

Figure 3 • **The CMS Module in the Structured Project Files**



The automatic fields present a series of aggregate indicators based on the information recorded in the respective module of the individual projects included. One of the major difficulties posed by the existence of this kind of projects is that they are made up of a series of individual projects, the progress of which conditions and defines the progress of the whole. Taking into account this specificity, the system presents: (i) an aggregate indicator of the current stage of the structured project, and (ii) an aggregate indicator of the progress of the structured project between two points in time.

Additionally, a descriptive information field is included to take stock of progress in the structured project and of the reasons that led to any project advancement and/or delay. Also in this module, the essential stages are described, i.e. the critical nodes that still need to be overcome to attain the objective pursued with the structured project and manage any project constraints.

The CMS fields and their respective indicators and sub-indicators are described below.

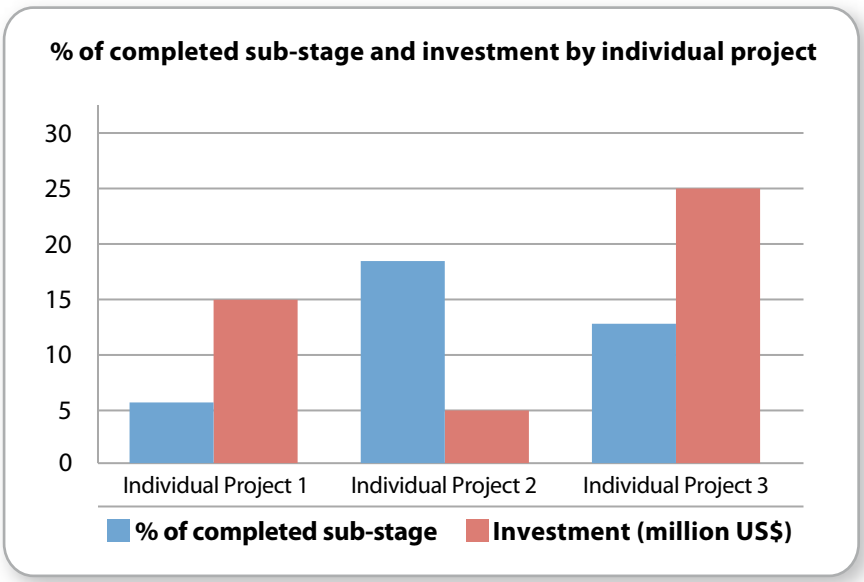
***i. Automatic Field: Current Stage Indicator***

The stage shown by the system (profiling, pre-execution, execution, or completed) is a simple average. For instance, in the figure above, the simple average of all the individual projects that make up the structured project is 14%. According to the relative weights assigned to each stage in the files of such projects, the 14% figure falls in the pre-execution stage.

Three indicators are shown in this information field: the Simple Average, the Weighted Average (using the investment amount as the weight), and the Gap Size. The system automatically calculates these indicators and presents them in a chart, as shown in Figure III. The formula used in each case can be seen by clicking the relevant question mark.

Along with these graphically displayed indicators, the system offers another chart that helps analyze the status of the structured project. This chart is displayed by clicking the icon on the right that links to the page of the chart (see Figure III). An example of the current stage charts is presented below.

Figure 4 • **Structured Project File – Current Stage Indicator Chart**



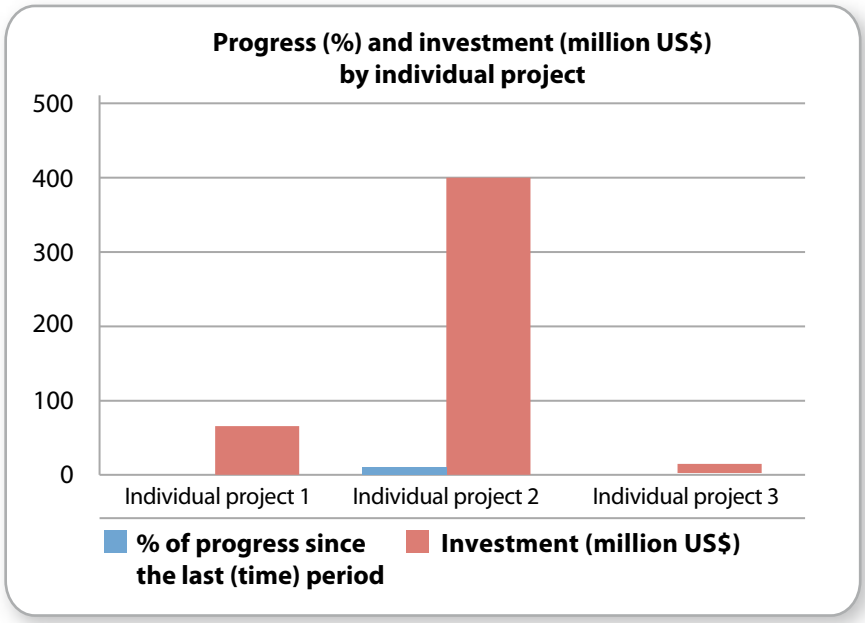
### *ii. Automatic Field: Progress in the Last Period Indicator*

Three indicators are used to show the progress of a structured project between two points in time: the system displays the progress made by the structured project —based on the progress of the individual projects that make it up— between the query date and one year before.

Such indicators are the Simple Average, the Weighted Average, and the Gap Size, and are automatically calculated by the system. The formula used can be seen by clicking the relevant question mark.

In addition to these indicators, as in the case of the Current Stage, the system offers other charts that help analyze the status of the structured project. The figure below shows one of these additional charts for the Progress in the Last Period component.

Figure 5 • **Structured Project File – "Progress in the Last Period" Indicator Chart**




### *iii. Descriptive Field: Progress Analysis and Assessment*

The third information field in the monitoring module of the structured project files is the Progress Analysis and Assessment field. This is a descriptive field that must be completed by each country's responsible staff.

It should be mentioned that for the system to be a "live" system, the National Coordinators and the staff responsible for entering structured project data will receive email alerts in the following cases:

- Each time a country's user responsible for entering data updates the structured project file or an individual project file if this affects the structured project information (amount, source of financing, etc.). In this case, the system will send an email to the addresses selected informing of: i) the user that made the update, including his/her country; ii) the file to which the change was made (code and name); and iii) the fields that were updated and their new content.

- When the scheduled completion date of a sub-stage of an individual project is near. Here, 10 days before the scheduled completion date, the system will send an email reminder provided such date has not been updated during the preceding days. This email alert will also be sent the first day of the month immediately following the scheduled completion date to inform that the deadline has expired and that the system has automatically changed the sub-stage status to red (not completed) since no update has been made. The date and the sub-stage involved will also be informed.

## 5. TASKS UNDERTAKEN IN 2014

As part of the Work Plan 2014, the countries carried out specific actions intended to enhance the quality and standardization of the Portfolio and API project data, and to better communicate their progress and outcomes. These lines of work were agreed upon at the GTE Meeting to Update the COSIPLAN Project Portfolio and API held in Bogotá, Colombia[8], and are described below:

**Organization of the information fields in the project files:** The information fields contained in the project files of the COSIPLAN Project Information System (SIP) were organized on the basis of internationally accepted project management dimensions: scope, cost and financing, and project status (deadlines). Furthermore, new information fields were included in each of these dimensions:

- Scope: The "related projects" and "descriptors by sector, subsector, and type of works" fields were added.
- Cost and financing: The "included in the national budget" and "year" fields were added to communicate the priority assigned to the project in the annual resource allocation exercise.
- Project status: The field "estimated date of completion" of the works was added.

**Specific descriptors by sector, subsector and type of works:** These descriptors help clearly identify the objectives of each individual project, report important technical features in an aggregate manner, and produce project indicators by country, Project Group, or Integration and Development Hub. These new information fields are divided into "primary" and "secondary" and apply to projects at the pre-execution and execution stages. The schedule agreed by the countries to enter the information for the descriptors in the PIS project files is the following:

- 2014: API and Anchor Projects at the pre-execution and execution stages
- 2015: Portfolio projects at the execution stage
- 2016: Portfolio projects at the pre-execution stage

**Results indicators for the projects already completed:** A new section including information fields that are specific to completed projects was incorporated. These new fields, which are also grouped into the scope, cost and financing, and deadlines dimensions, are: "completed projects results indicators by type of works" (descriptors), "final project investment in US$," "total cost of studies in US$," "start date of works," and "delivery date of works." The schedule agreed by the countries to enter the information for the fields specific to completed projects in the PIS project files is the following:

- 2014: API Projects and Anchor Projects
- 2015: The other Portfolio Projects

[8] GTE Meeting on the Nine Integration and Development Hubs to Update the COSIPLAN Project Portfolio and the Integration Priority Project Agenda (API), April 22 and 24, 2014, Bogotá, Colombia, http://www.iirsa.org/Event/Detail?Id=247

**Application of the Continuous Monitoring System (CMS) to the Project Portfolio:** The CMS enables the recording of API project progress from a regional perspective and the generation of timely and reliable information for relevant government authorities to make decisions. Until 2013, this monitoring module was only available for the API projects. The countries agreed to gradually use the CMS for all the Portfolio projects according to the following schedule:

- 2014: Anchor Projects
- 2015: Projects at the execution stage
- 2016: Projects at the pre-execution stage

**API progress indicators:** Access to the information included in the CMS is limited, only available to National Coordinations and their officials. With the aim of informing the general public about the API progress and results, it was decided to make public, in the structured project files, the information about the progress of these projects as shown in the CMS.

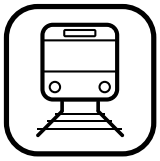
To carry out the enhancement and update tasks already mentioned, a number of functional and design adjustments were made to the PIS.

## Air Transportation

| | No. of Projects | | % of Projects | | Investment (million US$) | | % of Investment | |
|---|---|---|---|---|---|---|---|---|
| | 2013 | 2014 | 2013 | 2014 | 2013 | 2014 | 2013 | 2014 |
| Expansion of airports | 1 | 1 | 100.0 | 100.0 | 20.0 | 20.0 | 100.0 | 100.0 |
| TOTAL | **1** | **1** | **100.0** | **100.0** | **20.0** | **20.0** | **100.0** | **100.0** |

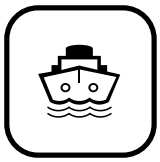
## Road Transportation

| | No. of Projects | | % of Projects | | Investment (million US$) | | % of Investment | |
|---|---|---|---|---|---|---|---|---|
| | 2013 | 2014 | 2013 | 2014 | 2013 | 2014 | 2013 | 2014 |
| Expansion of road capacity | 7 | 8 | 23.3 | 26.7 | 3,997.0 | 4,876.5 | 53.2 | 52.9 |
| Road and structure rehabilitation | 5 | 4 | 16.7 | 13.3 | 752.5 | 658.0 | 10.0 | 7.1 |
| Paving (new works) | 7 | 7 | 23.3 | 23.3 | 1,214.9 | 1,214.9 | 16.2 | 13.2 |
| Bridges (new and rehabilitation works) | 7 | 7 | 23.3 | 23.3 | 245.9 | 418.2 | 3.3 | 4.5 |
| Bypasses and city access roads | 2 | 2 | 6.8 | 6.8 | 45.0 | 45.0 | 0.6 | 0.5 |
| Tunnels (new and rehabilitation works) | 1 | 1 | 3.3 | 3.3 | 850.0 | 1,600.0 | 11.3 | 17.4 |
| Road maintenance | 1 | 1 | 3.3 | 3.3 | 407.0 | 407.0 | 5.4 | 4.4 |
| TOTAL | **30** | **30** | **100.0** | **100.0** | **7,512.3** | **9,219.6** | **100.0** | **100.0** |



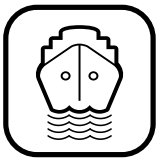
## Rail Transportation

| | No. of Projects | | % of Projects | | Investment (million US$) | | % of Investment | |
|---|---|---|---|---|---|---|---|---|
| | 2013 | 2014 | 2013 | 2014 | 2013 | 2014 | 2013 | 2014 |
| Railway construction | 6 | 6 | 37.5 | 35.3 | 2,310.3 | 4,671.7 | 70.4 | 78.8 |
| Railway rehabilitation | 10 | 11 | 62.5 | 64.7 | 971.1 | 1,255.2 | 29.6 | 21.2 |
| TOTAL | **16** | **17** | **100.0** | **100.0** | **3,281.4** | **5,926.9** | **100.0** | **100.0** |



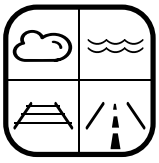
## River Transportation

| | No. of Projects | | % of Projects | | Investment (million US$) | | % of Investment | |
|---|---|---|---|---|---|---|---|---|
| | 2013 | 2014 | 2013 | 2014 | 2013 | 2014 | 2013 | 2014 |
| Upgrade of existing river ports | 2 | 2 | 7.7 | 8.0 | 64.6 | 64.6 | 4.3 | 4.4 |
| Construction of new river ports | 4 | 4 | 15.4 | 16.0 | 182.1 | 112.7 | 12.2 | 7.7 |
| Improvement of navigation conditions | 20 | 19 | 76.9 | 76.0 | 1,252.0 | 1,282.1 | 83.5 | 87.9 |
| TOTAL | **26** | **25** | **100.0** | **100.0** | **1,498.7** | **1,459.4** | **100.0** | **100.0** |



## Sea Transportation

| | No. of Projects | | % of Projects | | Investment (million US$) | | % of Investment | |
|---|---|---|---|---|---|---|---|---|
| | 2013 | 2014 | 2013 | 2014 | 2013 | 2014 | 2013 | 2014 |
| Expansion of land infrastructure in sea ports | 2 | 3 | 50.0 | 75.0 | 971.8 | 1,270.7 | 49.2 | 64.3 |
| Upgrade of sea ports | 2 | 0 | 50.0 | 0.0 | 1,003.8 | 0.0 | 50.8 | 0.0 |
| New sea ports | 0 | 1 | 0.0 | 25.0 | 0.0 | 704.8 | 0.0 | 35.7 |
| TOTAL | **4** | **4** | **100.0** | **100.0** | **1,975.6** | **1,975.5** | **100.0** | **100.0** |



## Multimodal Transportation

| | No. of Projects | | % of Projects | | Investment (million US$) | | % of Investment | |
|---|---|---|---|---|---|---|---|---|
| | 2012 | 2013 | 2012 | 2013 | 2012 | 2013 | 2012 | 2013 |
| Transfer stations | 6 | 6 | 100.0 | 100.0 | 253.4 | 165.9 | 100.0 | 100.0 |
| TOTAL | **6** | **6** | **100.0** | **100.0** | **253.4** | **165.9** | **100.0** | **100.0** |

## Border Crossings

| | No. of Projects | | % of Projects | | Investment (million US$) | | % of Investment | |
|---|---|---|---|---|---|---|---|---|
| | 2013 | 2014 | 2013 | 2014 | 2013 | 2014 | 2013 | 2014 |
| Infrastructure for the implementation of border control centers | 9 | 8 | 60.0 | 57.1 | 152.2 | 221.1 | 36.5 | 40.0 |
| Upgrade/Expansion of existing border control center infrastructure | 6 | 6 | 40.0 | 42.9 | 265.2 | 332.2 | 63.5 | 60.0 |
| TOTAL | **15** | **14** | **100.0** | **100.0** | **417.4** | **553.3** | **100.0** | **100.0** |

## Energy Interconnection

| | No. of Projects | | % of Projects | | Investment (million US$) | | % of Investment | |
|---|---|---|---|---|---|---|---|---|
| | 2013 | 2014 | 2013 | 2014 | 2013 | 2014 | 2013 | 2014 |
| Construction of new energy interconnection facilities | 3 | 3 | 100.0 | 100.0 | 1,755.0 | 1,852.0 | 100.0 | 100.0 |
| TOTAL | **3** | **3** | **100.0** | **100.0** | **1,755.0** | **1,852,0** | **100.0** | **100.0** |

| Code | Name of the Individual Projects | Countries Involved | Projects Group | Amount (US$) |
|---|---|---|---|---|
| AMA20 | PAITA LOGISTICS CENTER | PE | G03 | 47,650,000 |
| AMA21 | YURIMAGUAS LOGISTICS CENTER | PE | G03 | 15,000,000 |
| AMA30 | PUCALLPA INTERMODAL LOGISTICS CENTER | PE | G04 | 15,000,000 |
| AMA42 | IMPROVEMENT OF NAVIGATION CONDITIONS ON THE NAPO RIVER | EC - PE | G06 | 5,759,000 |
| AMA44 | IQUITOS LOGISTICS CENTER | PE | G06 | 15,000,000 |
| AMA65 | EL CALLAO LOGISTICS ACTIVITIES ZONE (ZAL CALLAO) | PE | G04 | 68,300,000 |
| CAP20 | CASCAVEL - FOZ DO IGUAÇU BIOCEANIC RAILWAY CORRIDOR | BR | G03 | 324,000,000 |
| CAP52 | RAILWAY BRIDGE WITH FREIGHT YARD (CIUDAD DEL ESTE - FOZ DO IGUAÇU) | BR - PA | G03 | 40,971,000 |
| CAP81 | LA QUIACA - VILLAZÓN BRIDGE AND BORDER CENTER | AR - BO | G02 | 15,000,000 |
| GUY18 | ROUTES INTERCONNECTING VENEZUELA (CIUDAD GUAYANA) - GUYANA (GEORGETOWN) - SURINAME (APURA - ZANDERIJ - PARAMARIBO) | GU - SU - VE | G03 | 300,800,000 |
| GUY24 | CONSTRUCTION OF THE BRIDGE OVER THE CORENTYNE RIVER | GU - SU | G03 | 1,000,000 |
| HPP72 | BINATIONAL PROJECT FOR THE IMPROVEMENT OF NAVIGATION CONDITIONS ON THE ALTO PARANÁ RIVER | AR - PA | G04 | 0 |
| HPP82 | REHABILITATION OF THE ZÁRATE - POSADAS RAILWAY BRANCH LINE | AR | G05 | 0 |
| HPP122 | REHABILITATION AND MAINTENANCE OF THE TAMENGO CANAL | BO | G01 | 10,500,000 |
| IOC78 | PASSENGER AND CARGO HUB AIRPORT FOR SOUTH AMERICA (VIRU VIRU, SANTA CRUZ, INTERNATIONAL HUB AIRPORT) | BO | G03 | 20,000,000 |
| MCC158 | DREDGING OF AND INSTALLATION OF SIGNS, MARKERS AND AIDS TO NAVIGATION ON THE MIRIM LAKE - DOS PATOS LAKE SYSTEM | BR | G02 | 0 |

| Code | Name of the Individual Projects | Countries Involved | Projects Group | Amount (US$) |
|---|---|---|---|---|
| AMA32 | LIMA - RICARDO PALMA EXPRESSWAY | PE | G04 | 242,000,000 |
| AMA38 | IMPROVEMENT OF NAVIGATION CONDITIONS ON THE PUTUMAYO - IÇÁ RIVER | CO - EC - PE | G06 | 15,000,000 |
| AMA39 | IMPROVEMENT OF NAVIGATION CONDITIONS ON THE MORONA RIVER | EC - PE | G06 | 2,000,000 |
| AMA40 | IMPROVEMENT OF NAVIGATION CONDITIONS ON THE HUALLAGA RIVER WATERWAY, BETWEEN YURIMAGUAS AND THE CONFLUENCE WITH MARAÑÓN RIVER | PE | G06 | 33,000,000 |
| AMA41 | IMPROVEMENT OF NAVIGATION CONDITIONS ON THE MARAÑÓN RIVER WATERWAY, BETWEEN SARAMERIZA AND THE CONFLUENCE WITH UCAYALI RIVER | PE | G06 | 11,000,000 |
| AMA43 | IMPROVEMENT OF NAVIGATION CONDITIONS ON THE UCAYALI RIVER WATERWAY, BETWEEN PUCALLPA AND THE CONFLUENCE WITH MARAÑÓN RIVER | PE | G06 | 19,000,000 |
| AMA45 | MORONA FREIGHT TRANSFER PORT | EC | G07 | 5,000,000 |
| AMA56 | MODERNIZATION OF IQUITOS PORT | PE | G06 | 39,550,000 |
| AMA63 | IIRSA CENTER, SECTION 2: RICARDO PALMA - LA OROYA - TURN OFF TO CERRO DE PASCO / LA OROYA - HUANCAYO | PE | G04 | 100,000,000 |
| AMA64 | IIRSA CENTER, SECTION 3: TURN OFF TO CERRO DE PASCO - TINGO MARÍA | PE | G04 | 115,606,060 |
| AMA71 | PROVIDENCIA PORT | EC | G02 | 25,000,000 |
| AMA104 | CONSTRUCTION OF NEW PUCALLPA PORT | PE | G04 | 54,959,720 |
| AND31 | BINATIONAL BORDER SERVICE CENTER (CEBAF) AT SAN MIGUEL | CO - EC | G06 | 25,000,000 |
| AND81 | IMPROVEMENT OF THE BORDER CROSSINGS IN THE NORTHERN DEPARTMENT OF SANTANDER AND THE TÁCHIRA STATE | CO - VE | G02 | 2,000,000 |
| AND82 | IMPLEMENTATION OF THE BINATIONAL BORDER SERVICE CENTER (CEBAF) AT THE TULCÁN - IPIALES (RUMICHACA) BORDER CROSSING | CO - EC | G02 | 65,000,000 |
| CAP07 | OPTIMIZATION OF THE CLORINDA - ASUNCIÓN NODE | AR - PA | G01 | 101,206,392 |
| CAP10 | CONSTRUCTION OF THE SALVADOR MAZZA - YACUIBA BINATIONAL BRIDGE AND BORDER CENTER | AR - BO | G02 | 45,000,000 |
| CAP11 | REHABILITATION OF JUJUY - LA QUIACA RAILWAY | AR | G02 | 62,000,000 |
| CAP18 | CONCESSION FOR THE IMPROVEMENT OF ROUTES No. 2 AND 7 (ASUNCIÓN - CIUDAD DEL ESTE) | PA | G03 | 500,000,000 |
| CAP23 | STUDY FOR THE OPTIMIZATION OF THE ÑEEMBUCÚ - BERMEJO NODE | AR - PA | G04 | 61,206,392 |
| CAP29 | CONSTRUCTION OF CIUDAD DEL ESTE - ÑEEMBUCÚ RAILWAY | PA | G04 | 2,800,000,000 |
| CAP37 | REHABILITATION OF THE C3 RAILWAY BRANCH LINE: RESISTENCIA - AVIA TERAI - PINEDO | AR | G01 | 104,000,000 |
| CAP38 | REHABILITATION OF THE C12 RAILWAY BRANCH LINE: AVIA TERAI - METÁN | AR | G01 | 212,000,000 |
| CAP39 | REHABILITATION OF THE C14 RAILWAY BRANCH LINE: SALTA - SOCOMPA | AR | G01 | 60,000,000 |

| Code | Name of the Individual Projects | Countries Involved | Projects Group | Amount (US$) |
|---|---|---|---|---|
| CAP50 | PAVING OF NATIONAL ROUTE No. 40, MINING CORRIDOR PATH (BORDER WITH BOLIVIA) | AR | G02 | 400,000,000 |
| CAP53 | BIOCEANIC RAILWAY CORRIDOR: PARANAGUÁ - CASCAVEL SECTION AND GUARAPUAVA - INGENIERO BLEY RAILWAY BYPASS | BR | G03 | 1,500,000,000 |
| GUY09 | LETHEM - LINDEN ROAD | GU | G02 | 250,000,000 |
| HPP07 | IMPROVEMENT OF NAVIGATION CONDITIONS ON THE PARAGUAY RIVER (BETWEEN APA AND CORUMBÁ) | BO - BR - PA | G01 | 39,000,000 |
| HPP09 | IMPROVEMENT OF NAVIGATION CONDITIONS ON THE PARAGUAY RIVER (ASUNCIÓN - APA) | PA | G01 | 110,000,000 |
| HPP76 | CONSTRUCTION AND REHABILITATION OF THE ARTIGAS - POSADAS RAILWAY | AR - PA | G04 | 150,000,000 |
| HPP97 | NUEVA PALMIRA BELTWAY AND PORT ACCESS ROADS NETWORK | UY | G05 | 15,000,000 |
| HPP103 | CONSTRUCTION AND REHABILITATION OF THE ASUNCIÓN - ARTIGAS RAILWAY | PA | G03 | 300,000,000 |
| HPP106 | SYSTEM FOR WATER LEVEL PREDICTION IN THE PARAGUAY RIVER (APA - ASUNCIÓN) | BO - PA | G01 | 0 |
| HPP120 | REHABILITATION OF THE ALGORTA - FRAY BENTOS RAILWAY BRANCH LINE | UY | G05 | 100,000,000 |
| IOC81 | CENTRAL BIOCEANIC RAILWAY CORRIDOR | BO | G05 | 6,700,000 |
| MCC22 | CONSTRUCTION OF THE JAGUARÃO - RÍO BRANCO INTERNATIONAL BRIDGE | BR - UY | G02 | 93,500,000 |
| MCC68 | NORTHEASTERN ARGENTINA GAS PIPELINE | AR | G05 | 1,000,000,000 |
| MCC85 | DREDGING OF MIRIM LAKE | BR | G02 | 25,000,000 |
| MCC110 | AGUA NEGRA BINATIONAL TUNNEL | AR - CH | G04 | 1,600,000,000 |
| MCC151 | INTEGRATED FREIGHT CONTROL CENTER AT USPALLATA (CRISTO REDENTOR SYSTEM OPTIMIZATION) | AR | G03 | 90,000,000 |
| MCC152 | PASSENGER CONTROL CENTER AT LOS HORCONES (CRISTO REDENTOR SYSTEM OPTIMIZATION) | AR | G03 | 80,000,000 |
| MCC153 | NEW LOS LIBERTADORES BORDER COMPLEX (CRISTO REDENTOR SYSTEM OPTIMIZATION) | CH | G03 | 70,000,000 |
| MCC154 | REHABILITATION OF THE CRISTO REDENTOR TUNNEL AND CARACOLES (CRISTO REDENTOR SYSTEM OPTIMIZATION) | AR - CH | G03 | 4,000,000 |
| MCC155 | BINATIONAL MANAGEMENT CONTROL SYSTEM AT THE CRISTO REDENTOR BORDER CROSSING (CRISTO REDENTOR SYSTEM OPTIMIZATION) | AR - CH | G03 | 14,000,000 |
| MCC160 | PORT TERMINAL AND DREDGING OF TACUARÍ | UY | G02 | 7,000,000 |
| PBB64 | BRIDGE OVER THE MADEIRA RIVER IN ABUNÃ (BR-364/RO) | BR | G02 | 85,350,000 |

| Code | Name of the Individual Projects | Countries Involved | Projects Group | Amount (US$) |
|---|---|---|---|---|
| AMA26 | IMPROVEMENT OF TINGO MARÍA - PUCALLPA ROAD | PE | G04 | 438,352,770 |
| AMA31 | MODERNIZATION OF EL CALLAO PORT (NEW CONTAINER DOCK) | PE | G04 | 704,835,670 |
| AMA66 | EL CALLAO MULTI-PURPOSE NORTHERN TERMINAL | PE | G04 | 883,482,448 |
| AMA102 | CONSTRUCTION OF NEW YURIMAGUAS PORT | PE | G03 | 43,730,000 |
| AND02 | BINATIONAL BORDER SERVICE CENTER (CEBAF) AT PARAGUACHÓN | VE | G01 | 2,000,000 |
| AND05 | BOGOTÁ - CÚCUTA ROAD CORRIDOR | CO | G02 | 1,559,000,000 |
| AND07 | BOGOTÁ - BUENAVENTURA ROAD CORRIDOR | CO | G02 | 1,791,000,000 |
| AND28 | AUTOPISTA DEL SOL EXPRESSWAY: IMPROVEMENT AND REHABILITATION OF THE SULLANA - AGUAS VERDES SECTION (INCLUDING TUMBES BYPASS) | PE | G05 | 515,478,715 |
| AND47 | DESAGUADERO BINATIONAL BORDER SERVICE CENTER (CEBAF) | BO - PE | G08 | 40,231,927 |
| AND79 | IMPROVEMENT AND PAVING OF THE MOCOA - SANTA ANA - SAN MIGUEL ROAD SECTION | CO | G06 | 133,629,000 |
| CAP14 | NEW PUERTO PRESIDENTE FRANCO - PORTO MEIRA BRIDGE, WITH A PARAGUAY - BRAZIL INTEGRATED CONTROL AREA | BR - PA | G03 | 173,000,000 |
| CAP68 | 500-KV TRANSMISSION LINE (YACYRETÁ - VILLA HAYES) | PA | G03 | 297,000,000 |
| GUY01 | REHABILITATION OF THE CARACAS - MANAUS ROAD | BR - VE | G01 | 407,000,000 |
| HPP19 | IMPROVEMENT OF NAVIGATION CONDITIONS ON THE TIETÊ RIVER | BR | G02 | 800,000,000 |
| HPP42 | BINATIONAL PROJECT FOR THE IMPROVEMENT OF NAVIGATION CONDITIONS ON THE PARAGUAY RIVER, FROM CONFLUENCIA TO ASUNCIÓN | AR - PA | G03 | 45,498,216 |
| HPP44 | DEEPENING OF THE FAIRWAY IN THE PARANÁ RIVER FROM CONFLUENCIA TO THE PLATA RIVER | AR | G03 | 110,000,000 |
| HPP65 | REHABILITATION AND IMPROVEMENT OF THE PIEDRA SOLA - SALTO GRANDE RAILWAY CORRIDOR | UY | G05 | 127,300,000 |
| HPP88 | BINATIONAL PROJECT FOR THE IMPROVEMENT OF NAVIGATION CONDITIONS ON THE URUGUAY RIVER | AR - UY | G05 | 40,000,000 |
| HPP108 | IMPROVEMENT OF NAVIGATION CONDITIONS ON THE ALTO PARANÁ RIVER (UPSTREAM OF SALTOS DEL GUAIRÁ) | BR | G02 | 15,000,000 |
| IOC09 | INFANTE RIVAROLA - CAÑADA ORURO BORDER CROSSING | BO - PA | G01 | 1,900,000 |
| IOC14 | CAMPO GRANDE BYPASS | BR | G02 | 30,000,000 |
| IOC25 | PUERTO SUÁREZ - CORUMBÁ INTEGRATED CONTROL AREA | BO - BR | G03 | 2,000,000 |
| IOC32 | TOLEDO - PISIGA ROAD | BO | G05 | 130,500,000 |
| IOC80 | UPGRADE OF LA PAZ - SANTA CRUZ ROUTE TO A FOUR-LANE ROAD | BO | G05 | 269,000,000 |
| MCC30 | REHABILITATION OF THE MONTEVIDEO - RIVERA RAILWAY | UY | G02 | 134,900,000 |
| MCC157 | DREDGING OF THE TACUARÍ RIVER | BR | G02 | 1,350,000 |
| MCC159 | LA CHARQUEADA PORT TERMINAL AND DREDGING OF THE CEBOLLATI RIVER | UY | G02 | 7,000,000 |

| Code | Name of the Individual Projects | Countries Involved | Projects Group | Amount (US$) |
|---|---|---|---|---|
| AMA16 | TARAPOTO - YURIMAGUAS ROAD* | PE | G03 | 0 |
| AMA24 | PAITA PORT | PE | G03 | 266.922.000 |
| AMA25 | PAITA - TARAPOTO ROAD* | PE | G03 | 0 |
| AMA67 | EL CALLAO MINERAL SHIPPING TERMINAL | PE | G04 | 120.300.000 |
| AND13 | IMPROVEMENT OF JOSÉ ANTONIO PÁEZ BRIDGE* | CO | G03 | 0 |
| AND91 | CONSTRUCTION OF THE NEW INTERNATIONAL RUMICHACA BRIDGE AND IMPROVEMENT OF THE EXISTING BRIDGE | CO - EC | G02 | 4.100.000 |
| CAP67 | 500-KV TRANSMISSION LINE (ITAIPU - VILLA HAYES) | PA | G03 | 555.000.000 |
| CAP91 | BIOCEANIC RAILWAY CORRIDOR, CHILEAN SECTION (ANTOFAGASTA - SOCOMPA)* | CH | G01 | 0 |
| GUY42 | BOA VISTA - BONFIM ROAD* | BR | G02 | 0 |
| GUY43 | LINDEN - GEORGETOWN ROAD* | GU | G02 | 0 |
| MCC115 | REHABILITATION OF THE RIVERA - SANTANA DO LIVRAMENTO - CACEQUI RAILWAY SECTION | BR - UY | G02 | 5.000.000 |

(*) This individual project was completed before the creation of API and incorporated into the Agenda because it supplements the connectivity network of the structured project. Therefore, its investment amount will not be added to the structured project or to the Agenda total amount.

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