

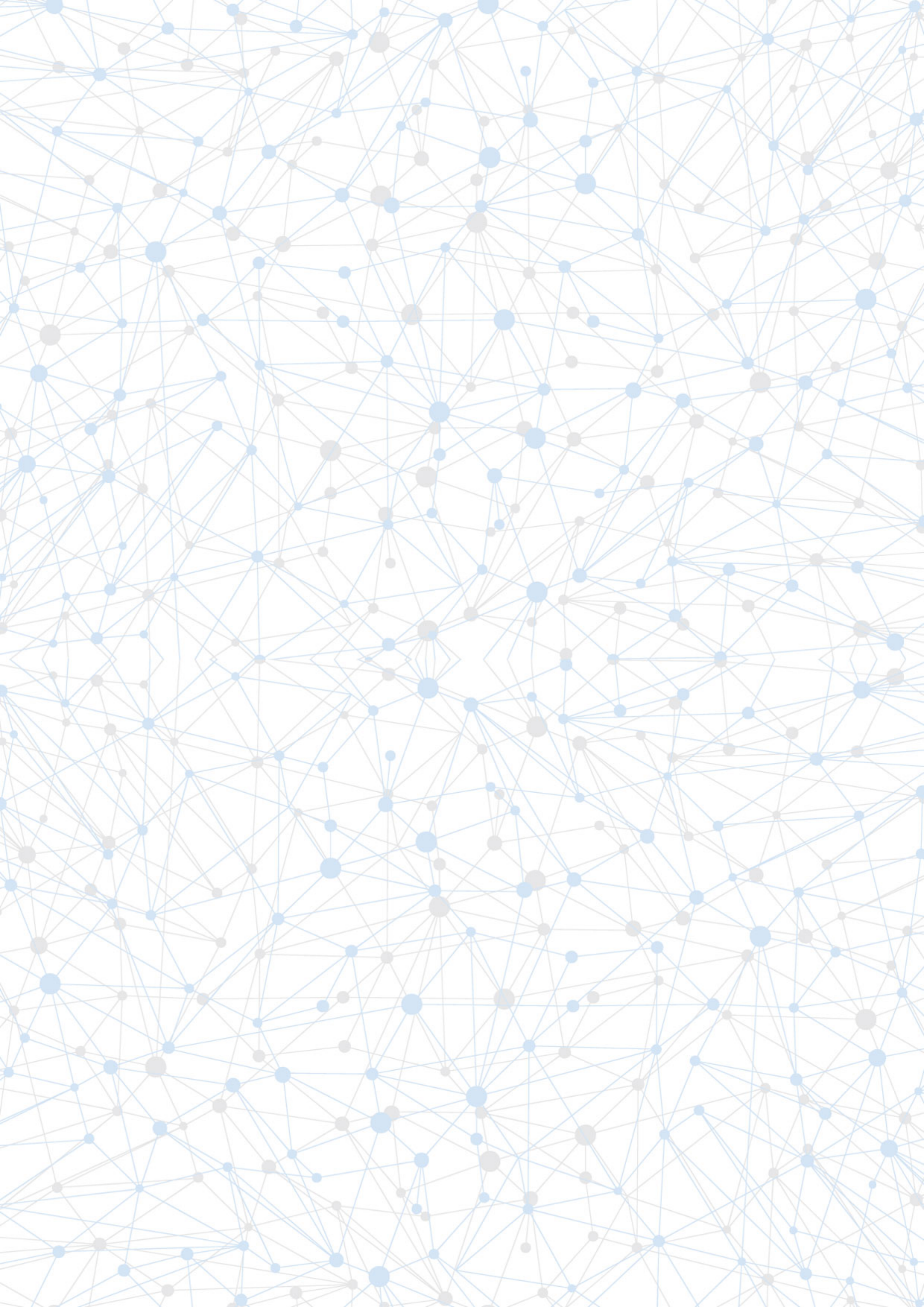


UNASUR
COSIPLAN



Project
Portfolio
2016

South American
Infrastructure and
Planning Council





Project
Portfolio
2016

IIRSA Technical Forum

With the cooperation of the Technical Coordination Committee



Institute for the Integration of Latin America and the Caribbean























Note

The information about the projects presented here is built on the data contained in the COSIPLAN Project Information System (SIP) (<http://www.iirsa.org/proyectos>) as of August 10, 2016. The information in such system is permanently updated by the UNASUR Member States.


The maps in this document have been prepared by IIRSA Technical Coordination 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

1. Projects

	Navigability		Ring Railway
	Oil/Gas Pipeline		Tunnel
	Electric Transmission Line		Navigability
	Road		Bridge
	Rail		Environmental Program
	Telecommunications Line		Multimodal Transportation
	Border Crossing, CEFAB		Inland Port
	Port		Electricity Generation
	Logistics Center		Gas
	Airport		River
	Ring Road		Telecommunications Infrastructure

2. Geographical Legend

	Country Capital		Existing Waterway
	City		Existing Railroad
	Country Border		Existing Road

LEGEND

1. Project Life Cycle Stages



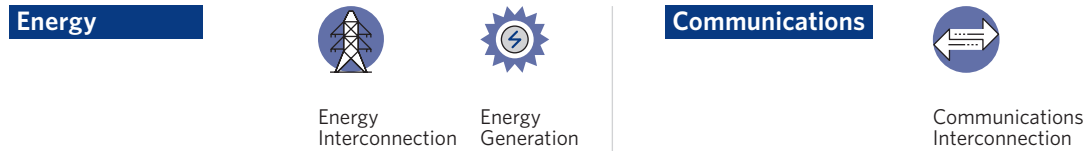
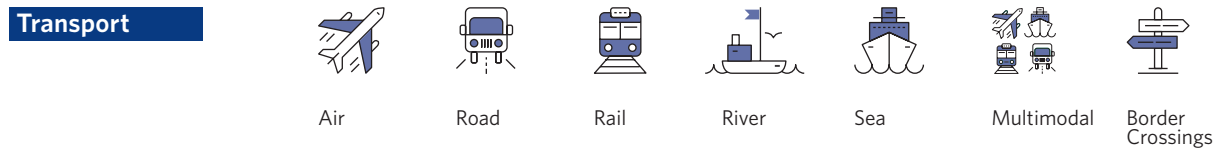
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3. Sectors



4. Subsectors



5. Types of Financing

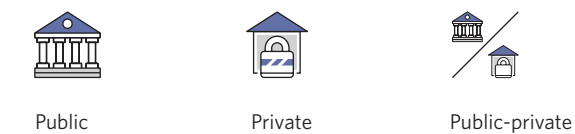


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www.iirsa.org/cartera2016.asp

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Overview

This Sixth Report on the COSIPLAN Project Portfolio, provided for in the COSIPLAN-IIRSA Work Plan 2016, presents an overall assessment of the Portfolio and reflects the results of the territorial planning work conducted by the countries.

Chapter 1 presents the COSIPLAN Project Portfolio by means of an analysis of the entire Portfolio, with its 581 projects; the active Portfolio, i.e. the projects that are currently at the profiling, pre-execution or execution stages; and the completed projects.

Chapter 2 analyzes the progress made by the Portfolio projects. First, it describes the evolution of the Portfolio throughout more than a decade (2004-2016), and then presents the changes that took place between 2015 and 2016 as a result of the update process undertaken by the countries this year.

Chapter 3 describes the projects of each of the nine Integration and Development Hubs, including a brief socioeconomic and environmental characterization of the Hubs.

Chapter 4 presents the territorial planning process undertaken in South America. It stresses the importance of the territory as a space to achieve sustainable development, and explains the concept of the Integration and Development Hubs. Next, it describes the Indicative Territorial Planning Methodology and its application, which led to the creation of the Project Portfolio. Furthermore, it presents the COSIPLAN Project Information System (SIP) as the technological platform designed to gain better insight into the Portfolio and API projects.

Executive Summary

The Union of South American Nations (UNASUR) was created by the South American presidents in 2008 as a forum for high-level political dialogue and coordination among the twelve countries of the region. In 2009, within this institutional framework, a number of sectoral councils at ministerial level, one of which is the **South American Infrastructure and Planning Council (COSIPLAN)**, were created. COSIPLAN is the forum where political and strategic discussions are held with a view to planning and implementing the UNASUR Member Countries' regional infrastructure integration.

The work undertaken by the Initiative for the Integration of Regional Infrastructure in South America (IIRSA) between 2000 and 2010 and by COSIPLAN since 2011 has focused from the start on infrastructure project planning as a key component of territorial development.

The creation of the **Integration Infrastructure Project Portfolio** (hereinafter, the COSIPLAN Project Portfolio) was possible thanks to the **Indicative Territorial Planning Methodology**. The COSIPLAN Project Portfolio is a set of works with a powerful impact on regional integration and socioeconomic development. It is made up of transport, energy and communications projects that promote regional connectivity and create sustainable economic and social development in South America.

The technological platform enabling users to gain insight into the Portfolio projects is **the COSIPLAN Project Information System (SIP)**: this tool is unique in the region as it offers free access online to official and quality data on the works undertaken.

1. The Project Portfolio in 2016

The COSIPLAN Project Portfolio. In terms of their territorial scope, 83% of the projects in the Portfolio are national, while only 16% and 1% are binational and multinational, respectively. The same percentages hold for estimated investments. There are 51 anchor projects, amounting to an investment estimated at US\$20,334 million, which means 11% of the financial investment in the whole Portfolio. Regarding the subsector-based breakdown, most of the Portfolio projects fall in the transport sector: 89%. These works account for 70% of the estimated investment, while energy projects account for 29% due to their scope and nature. The Portfolio is mostly financed by the public sector (61% of the estimated investment), while the rest of the investment comes from the private sector (19%) and from public-private initiatives (the remaining 20%). As for the project stages, almost a third of the total projects are at the execution stage, of which more than 90% involve transportation works. The estimated investment in the works in execution accounts for almost 40% of the total Portfolio.

The Active Portfolio. The projects in the active portfolio, i.e. the projects underway (at the profiling, pre-execution or execution stage), are 453 and account for an investment estimated at US\$163,291 million. The 10 projects with the greatest estimated investment represent 45% of the total investment in the COSIPLAN active portfolio. There are 123 projects at the profiling stage, accounting for an investment estimated at US\$38,229 million. Almost 90% of these projects have been at the profiling stage for more than four years (since before 2012). Of the 131 projects that include information on their estimated completion date, 85% will be completed in the next three years (before the end of 2019), which involves the implementation of US\$58,435 million, based on the investment estimated for these projects.

The COSIPLAN Project Portfolio currently includes 581 integration projects, with an estimated investment of US\$191,420 million. They are distributed in the entire South American territory and are organized into 47 Project Groups and 9 Integration and Development Hubs.

Completed Projects. There are 128 completed projects in the Portfolio for a total investment of US\$28,129 million. Having completed 13 works between 2015 and 2016, this means that over 22% of the physical integration projects prioritized by the countries have already been completed. Almost half of the completed projects (44%) fall in the road subsector, and as for the investment amount, these account for 40% of the set of projects. The completed works falling in the energy interconnection subsector account for almost 13% of all completed projects, having required, however, almost 30% of the total investments made. Of the total completed works, 82% were financed with public funds. In terms of investment amount, the public sector contributed 63%. Most completed projects are national in scope (84%), while the other ones are binational. This ratio rises in relation to the investment amount, with the national share accounting for almost 95%. However, several national projects must be seen in terms of their contribution to cross-national connectivity.

2. Evolution of the COSIPLAN Project Portfolio

Evolution of the Project Portfolio between 2004 and 2016. The portfolio grew, on average, by 20 projects and US\$12,000 million per year between 2004 and 2016. In 2016, the estimated investment grew by 5% vis-à-vis last year. In the 2008-2016 period, completed projects more than doubled each year.

Changes in the Project Portfolio between 2015 and 2016. In 2016, online meetings of the Executive Technical Groups to Update the Projects in the COSIPLAN Portfolio and API were held. A meeting was held for each Integration and Development Hub,⁽¹⁾ using an online video-conferencing tool.

In preparation for the above-mentioned meetings and as a result of the discussions held at them, the countries worked on the update of the Portfolio projects in the COSIPLAN Project Information System, and updated 85% of the projects included in the active Portfolio. This has been possible thanks to the participation of multidisciplinary technical teams from different governmental areas of the South American countries.

The total number of projects in the Portfolio dropped from 593 to 581, as 17 projects were excluded and five were included. The total estimated amount grew from US\$182,436 million to US\$191,420 million.

3. Integration and Development Hubs

The **Amazon Hub** comprises 72 projects organized into eight Groups for an investment estimated at US\$27,023 million. There are 50 projects in its active portfolio, amounting to an investment estimated at US\$20,129 million. It is expected that 33% of the investment amount estimated for the Hub will have been made by the end of 2019. The 22 completed projects in the Hub demanded a total investment of US\$6,894 million, equal to almost 25% of the total investment for the Portfolio.

The **Andean Hub** comprises 66 projects organized into 9 Groups for an investment estimated at US\$28,000. There are 46 projects in its

¹ The only meeting that could not be held was that on the Guianese Shield Hub, and the countries involved were asked to update the information about their projects directly in the SIP.

active portfolio, amounting to an investment estimated at US\$27,002 million. Thirteen of these projects will be completed in the next four years (2016-2019), involving 18% of the investment amount estimated for the Hub's portfolio. The completed projects are 20 and demanded a US\$994 million investment.

The **Capricorn Hub** comprises 81 projects organized into five Groups for an investment estimated at US\$16,691 million. There are 67 projects in its active portfolio, amounting to an investment estimated at US\$14,095 million. It is expected that 26% of the investment amount estimated for the Hub's portfolio will have been made by the end of 2019. The completed projects are 14 and required a total investment of US\$2,632 million, equal to 16% of the total projected investment.

The **Southern Hub** comprises 47 projects organized into two Groups for an investment estimated at US\$4,507 million. There are 42 projects in its active portfolio, amounting to an investment estimated at US\$4,064 million. Taking into account the 14 projects that are currently at the execution stage, it is expected that, once they are completed, 41% of the estimated investment amount for the Hub will have been made. The completed projects are five and required a total of US\$443 million; two of them involved electric interconnection works that account for 95% of the amount invested.

The **Guianese Shield Hub** comprises 20 projects organized into four Groups for an investment estimated at US\$4,581 million. There are 14 projects in the active portfolio of the Hub, amounting to an investment estimated at US\$4,495 million. Two of these projects will be completed in the next four years (2016-2019), involving 17% of the investment amount estimated for the Hub. The completed projects are six and demanded a total investment of US\$87 million, equal to almost 2% of the total investment for the Portfolio.

The **Paraguay-Paraná Waterway Hub** comprises 89 projects organized into five Groups for an investment estimated at US\$6,325 million. There are 74 projects in its active portfolio, amounting to an investment estimated at US\$4,679 million. Sixteen of these projects will be completed in the next four years (2016-2019), involving more than 50% of the investment amount estimated for the Hub. The completed projects are 15 and required a total investment of US\$1,646 million.

The **Central Interoceanic Hub** comprises 63 projects organized into five Groups for an investment estimated at almost US\$11,500 million. There are 46 projects in its active portfolio, amounting to an investment estimated at US\$10,835 million. Ten of these projects will be completed in the next four years (2016-2019), involving 23% of the investment amount estimated for the Hub. The completed projects are 17 and required a total investment of US\$663 million.

The **MERCOSUR-Chile Hub** comprises 120 projects organized into six Groups for an investment of US\$60,971 million. There are 96 projects in its active portfolio, amounting to an investment estimated at US\$52,181 million. Thirteen of these projects will be completed in the next four years (2016-2019), involving about 15% of the investment amount estimated for the Hub. The completed projects are 24 and required US\$8,790 million.

The **Peru-Brazil-Bolivia** Hub comprises 24 projects organized into three Groups for an investment estimated at US\$32,008 million. There are 19 projects in its active portfolio, amounting to an investment estimated at US\$26,028 million. Taking into account the seven projects currently at the execution stage, it is expected that, once they are completed, almost 78% of the investment amount estimated for the Hub will have been made. The completed projects are five and required a total investment of US\$5,980 million.

4. The Territory and Integration Infrastructure Planning

The distinctive feature of the cooperation and dialogue process aimed at securing a greater and more sustainable physical integration in the region has been **infrastructure planning in the transportation, energy and communications sectors with a regional perspective**. With a focus on the territory, this process is intended to enhance the competitiveness of the economies of the region, contribute to reducing regional disparities and social inequality, and improve life expectancy and quality of life in every country and in the region as a whole.

In order to frame infrastructure planning, theoretical and practical tools linking the territory and infrastructure were used, which helped set up the **Integration Infrastructure Project Portfolio**. This was possible thanks to the development and application of the **Indicative Territorial Planning Methodology**, which is based on the identification of **Integration and Development Hubs** that organize the South American territory and structure the Portfolio.

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 all the information on the API projects, and (ii) a **Continuous Monitoring System (CMS)** for these projects, based on the **Methodology for Scheduling the Life Cycle** of the API individual 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 (SIP)**, comprising three online interconnected components for both access and data entry, was developed in 2013.

In 2016, a diagnosis was made of the quality of the project information contained in the SIP, placing special emphasis on reviewing projects with inconsistent information and on completing any data fields that were empty or included partial information. A review was also made of the projects at the pre-execution stage to detail their progress and current status as accurately as possible so as to facilitate their implementation. Furthermore, the SIP home page was updated to include visualizations and infographics of the projects. An explanatory video of the system was also developed.

Introduction

The origins of South American physical integration can be traced as far back as more than a decade ago. Indeed, since 2000, the South American governments have been making a major effort of cooperation with the purpose of securing a greater and more sustainable physical integration in the region. The First South American Presidential Summit, held in Brasilia that year, marked the beginning of an integration and cooperation process in different fields among the twelve independent South American countries: Argentina, Bolivia, Brazil, Chile, Colombia, Ecuador, Guyana, Paraguay, Peru, Suriname, Uruguay, and Venezuela. Among other actions, the **Initiative for the Integration of Regional Infrastructure in South America (IIRSA)** was launched that same year.

In 2008, the South American presidents created the **Union of South American Nations (UNASUR)** as a forum for high-level political and strategic discussion and coordination involving the twelve countries in the region. In this institutional context, several sectoral councils at ministerial level were established in 2009, and one of them was the **South American Infrastructure and Planning Council (COSIPLAN)**,⁽¹⁾ which is the forum for political and strategic discussion aimed at planning and implementing the integration of regional infrastructure in the UNASUR Member States.

In 2012, the presidents approved the COSIPLAN Strategic Action Plan (PAE) 2012-2022⁽²⁾ and the COSIPLAN Integration Priority Project Agenda (API),⁽³⁾ the two instruments that would structure its work in the next ten years.

The work undertaken by IIRSA between 2000 and 2010 and by COSIPLAN since 2011 has focused from the start on infrastructure project planning as a key component of territorial development.

The **Indicative Territorial Planning Methodology** was the instrument that enabled an **Integration Infrastructure Project Portfolio** (hereinafter, the COSIPLAN Project Portfolio) to be set up. This methodology is based on the identification of **Integration and Development Hubs**,⁽⁴⁾ which organize the South American territory and structure the Project Portfolio.

The COSIPLAN Project Portfolio consists in a set of high-impact works for the integration and socioeconomic development of the region. It is made up of transport, energy and communications projects that promote regional connectivity and create sustainable economic and social development in South America.

This Portfolio is reviewed and updated on a yearly basis by the South American countries and is one of the main tools of COSIPLAN to implement the integration of infrastructure in the region. The technological platform enabling users to gain insight into the Portfolio projects is the **COSIPLAN Project Information System (SIP)**.⁽⁵⁾ This tool is unique in the region as it offers free access online to official and quality data on the works undertaken. The system serves to support decision making and strategic planning processes in the South American countries in order to attain regional connectivity. Furthermore, it confers transparency to the work being undertaken by the countries, thus promoting access to information and the participation of civil society in the integration process.

1 See <http://www.iirsa.org/cosiplan>

2 See <http://www.iirsa.org/pae>

3 See <http://www.iirsa.org/api>

4 See <http://www.iirsa.org/ejes>

5 See <http://www.iirsa.org/proyectos>

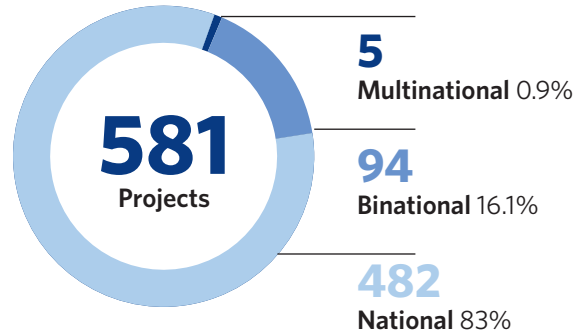


COSIPLAN PORTFOLIO

Estimated Investment

US\$ million

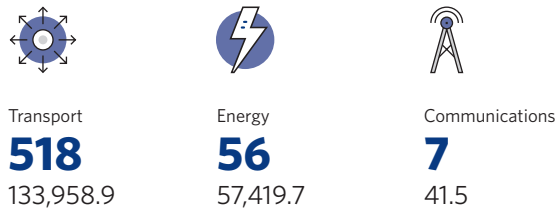
191,420.1



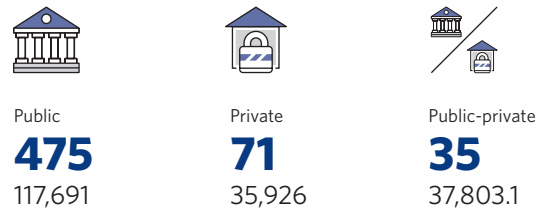
Projects by Stage



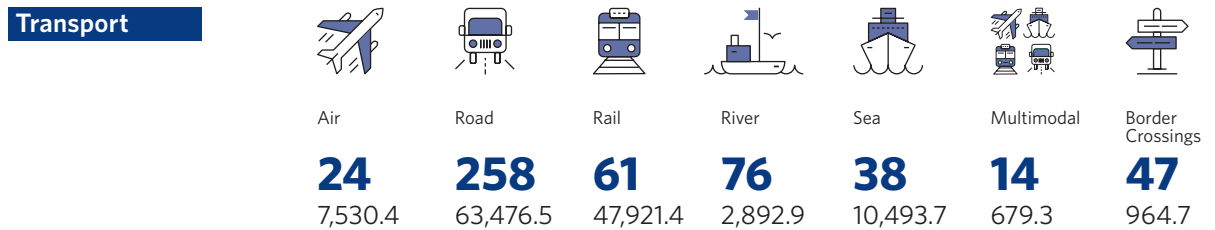
Projects by Sector



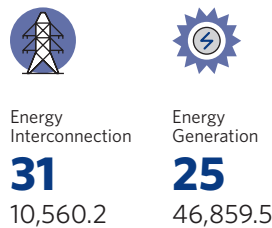
Projects by Type of Financing



Projects by Subsector



Energy



Communications



Projects by Country



ARGENTINA

178
48,565.9



BOLIVIA

52
10,578.7



BRAZIL

94
82,413.8



CHILE

73
16,105



COLOMBIA

33
4,743.6



ECUADOR

40
19,609.1



GUYANA

8
911.9



PARAGUAY

66
18,002.6



PERU

73
11,801.7



SURINAME

7
3,831.9



URUGUAY

42
5,445.2

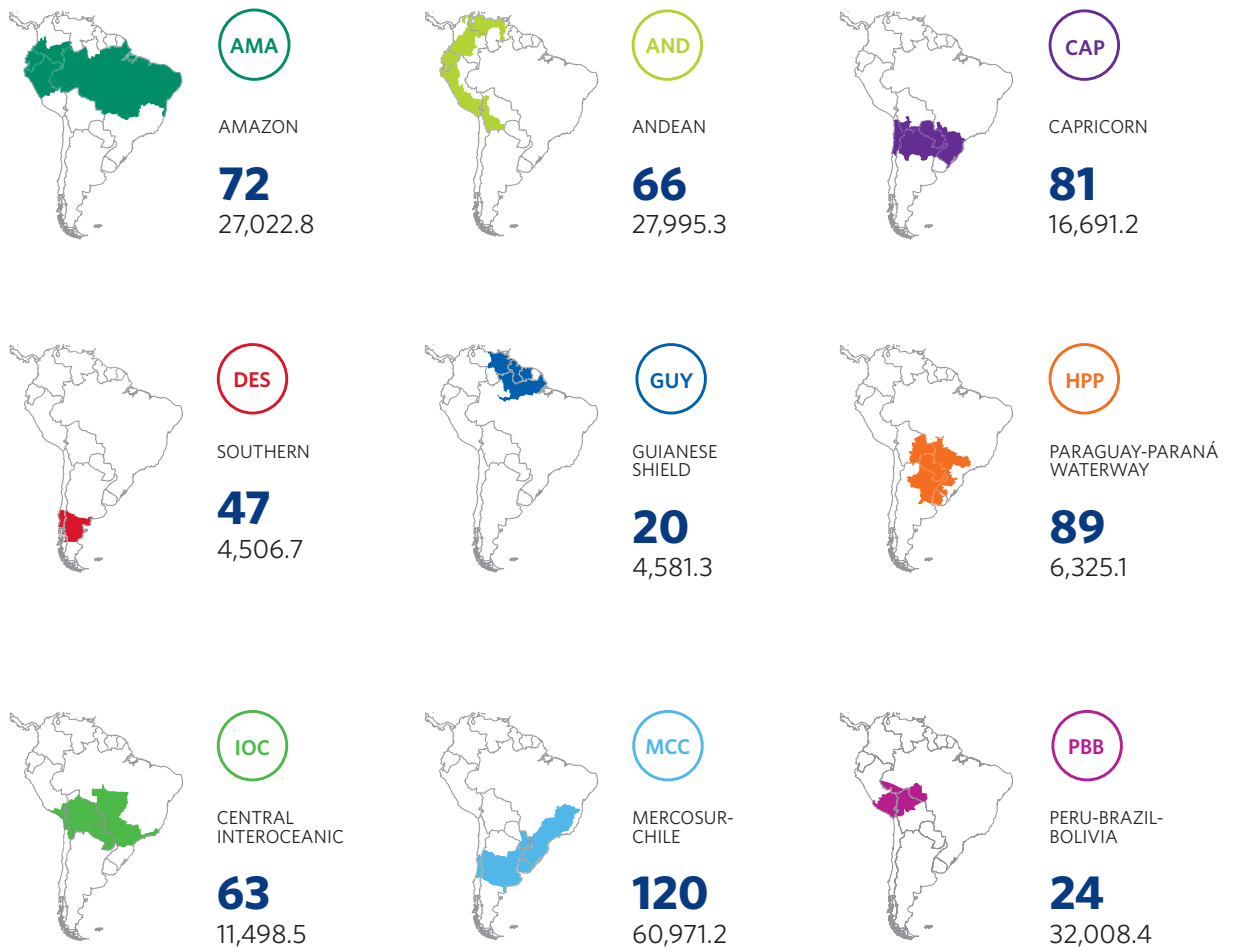


VENEZUELA

20
2,109.5

● Number of Projects ● US\$ million

Projects by Hub



● Number of Projects ● US\$ million

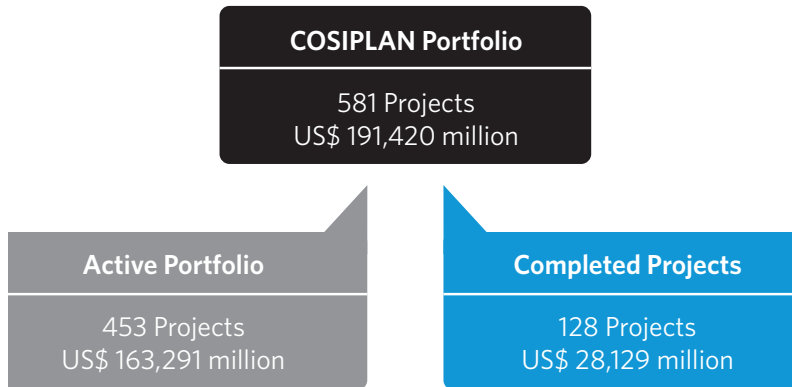
Chapter 1

The Project Portfolio in 2016

This chapter presents the status of the COSIPLAN projects throughout 2016 by analyzing the total portfolio (581 projects); the active Portfolio, i.e. the projects that are currently at the profiling, pre-execution, or execution stage; and, finally, the completed projects.

1.1. The COSIPLAN Portfolio⁽¹⁾

The physical integration of South America is a key issue for the peoples of the region and a priority to government agencies. COSIPLAN is constantly working on the update and analysis of its projects, the improvement of its information quality, and the dissemination of its results and benefits.



1.1.1. Territorial Scope of the Projects

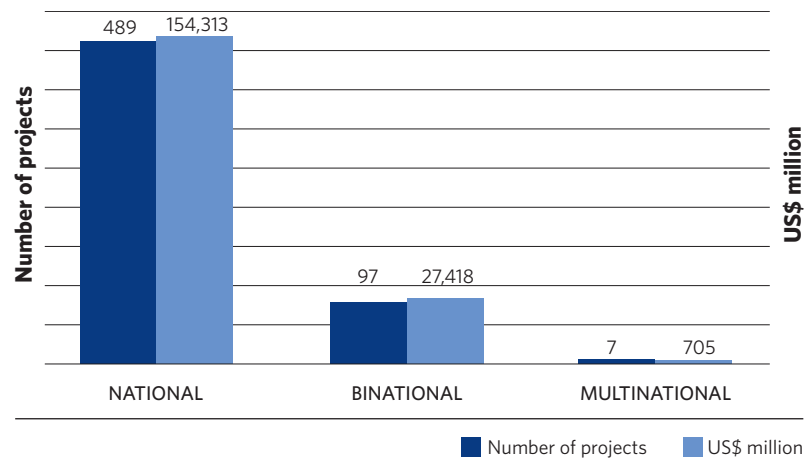
Of all the Portfolio projects, 83% are national, while only 16% and 1% are binational and multinational, respectively. Similar percentages hold for their estimated investments.

Many national projects are essential to solve cross-national connectivities (in many cases, several national projects together provide a solution to the same, e.g. cross-border, connectivity). Furthermore, working on international connectivities to encourage national projects within national borders sometimes contributes to a more fluid management of the latter.

In fact, during the annual exercises to update the portfolio carried out by the countries in the first half of the year, some binational projects were divided into their respective national sections to facilitate their analysis, information gathering and follow-up: this is the case, for example, of the Southern Panamerican Road projects: Ica - Turn off to Quirca (AND87, Peru) and Turn off to Quirca - Border with Chile (AND103, Chile).

¹ All the data in this report are taken from the COSIPLAN Project Information System (<http://www.iirsa.org/proyectos/>) as of August 10, 2016.

TERRITORIAL SCOPE OF THE PROJECTS



Multinational projects involve Bolivia, Brazil, Colombia, Ecuador, Guyana, Paraguay, Peru, Suriname, and Venezuela in seven projects. Brazil, Guyana and Suriname are the countries with the greatest number of these projects (each country participating in three projects).

As for national and binational projects, Argentina and Brazil include more projects than all the other countries. If only national projects are considered, Chile ranks third, followed by Peru. Instead, Paraguay stands out for the number of binational projects in which it is involved.

NUMBER OF PROJECTS AND TERRITORIAL SCOPE BY COUNTRY

Country	National	Binational	Multinational
Argentina	144	34	
Bolivia	32	19	1
Brazil	67	24	3
Chile	57	17	
Colombia	19	13	1
Ecuador	20	19	1
Guyana	3	2	3
Paraguay	43	22	1
Peru	50	21	1
Suriname	3	1	3
Uruguay	33	9	
Venezuela	11	7	2





1.1.2 Anchor Projects

Anchor Projects give meaning to the grouping process and make synergies viable. They are identified as the bottleneck or missing link in the infrastructure network hindering the optimum use of the combined effects of the group for the sake of economic and social development. They are not necessarily the largest-sized projects or those involving the greatest estimated investment.

At present, there are 51 anchor projects, amounting to an investment estimated at US\$20,334 million, which means 11% of the financial investment in the whole Portfolio.

All the project groups include an anchor project. However, in some groups, the countries identified two anchor projects to coordinate more effectively the other projects involved.

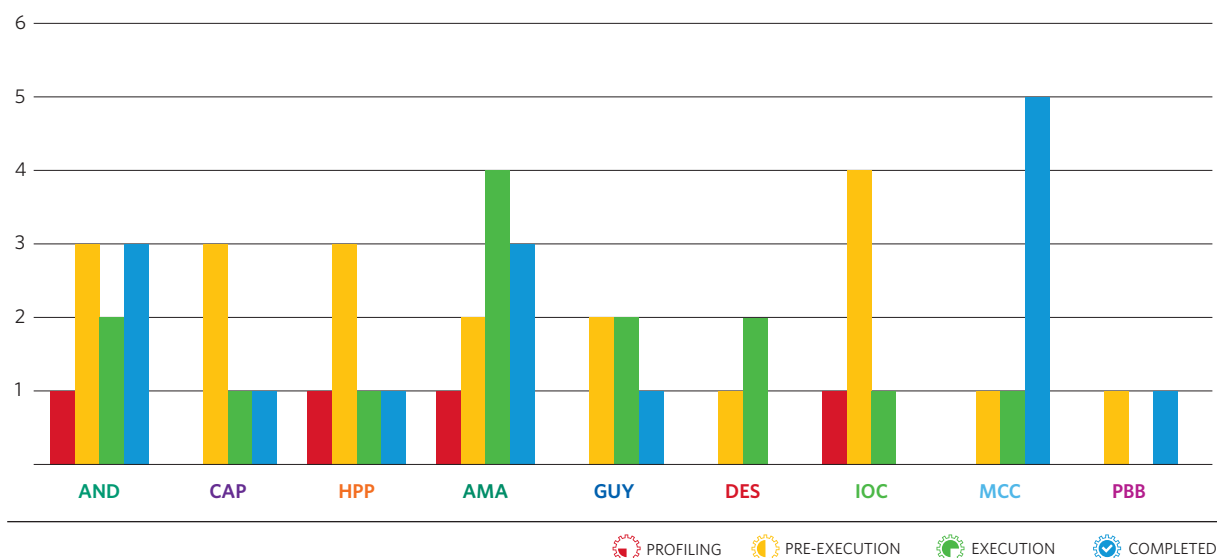
ANCHOR PROJECTS STAGES *US\$ million

	No. of Projects	% of Projects	Investment*	% of Investment
	4	7.8	71.0	0.3
	20	39.2	8,388.7	41.2
	14	27.5	8,418.0	41.4
	13	25.5	3,466.7	17.0
TOTAL	51	100.0	20,344.4	100.0

 PROFILING
  PRE-EXECUTION
  EXECUTION
  COMPLETED

Two anchor projects were completed this year. Most anchor projects (27) are at the execution stage, or have already been completed, accounting for 58% of the investment estimated for this set of projects. Completed anchor projects are located mainly in the MERCOSUR-Chile, Amazon and Andean Hubs, although there is one in the Capricorn and in the Peru-Brazil-Bolivia Hubs. The greatest number of anchor projects at the execution stage belongs to the Andean and Amazon Hubs. As for the amount invested in this kind of project, the Amazon Hub ranks first, followed by the MERCOSUR-Chile Hub.

NUMBER OF ANCHOR PROJECTS AND THEIR STAGES BY HUB



Nearly all of them (50) fall in the transport sector, there being only one anchor project in the energy sector. With regard to the anchor projects in the transport sector, most of them fall in the road subsector (26), followed by the river (8) and border crossings subsectors (8), the rail subsector (6), and multimodal projects (2).

ANCHOR PROJECTS - SUBSECTORS *US\$ million

Subsector	No. of Projects	% of Projects	Investment*	% of Investment
Road	26	51.0	8,150.4	40.1
Rail	6	11.8	11,650.0	57.3
River	8	15.7	299.5	1.5
Multimodal	2	3.9	25.0	0.1
Border crossings	8	15.7	219.5	1.1
Energy Generation	1	2.0	0.0	0.0
TOTAL	51	100	20,344.5	100

Although most anchor projects fall in in the road subsector, those in the rail subsector are the ones that require the greatest financial effort, as with only 12% of the anchor projects, it involves almost 60% of the total estimated investment.

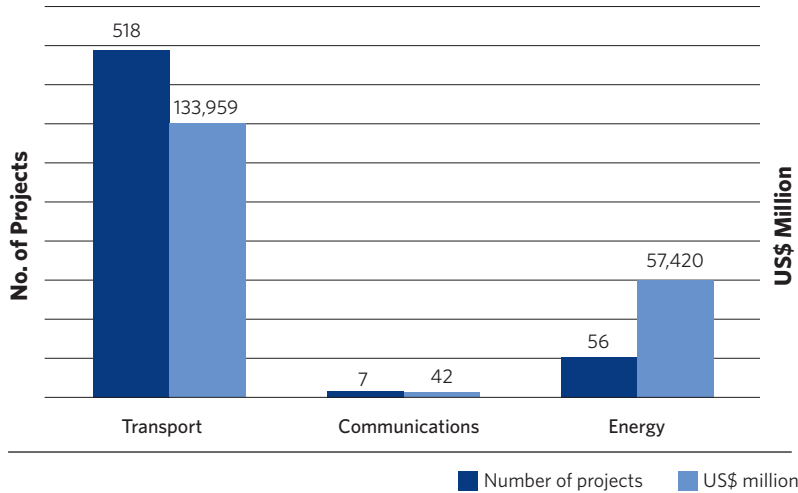
1.1.3 Sectors and Subsectors

The COSIPLAN Project Portfolio is mostly made up of transport projects, accounting for 89% of the Portfolio. However, transport works alone account for 70% of the estimated investment, as energy projects account for 29% given their scope and nature.

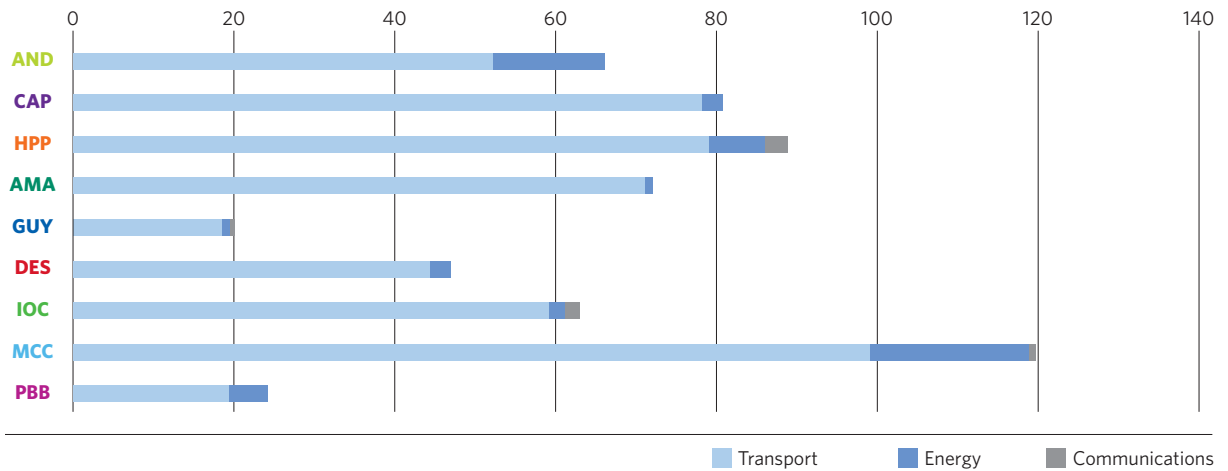
Energy projects are mainly located in the MERCOSUR-Chile, Andean and Paraguay-Paraná Waterway Hubs, but there is one energy project in each of the other hubs. As for the communications sector, this kind of

project has been incorporated only into the Paraguay-Paraná Waterway, Central Interoceanic, Guianese Shield and MERCOSUR-Chile Hubs.

PROJECT SECTORS



NUMBER OF PROJECT AND SECTORS BY HUB



Each sector of physical infrastructure works (transport, communications and energy) is further broken down into subsectors, as the projects are characterized by specificities related to their technical and regulatory requirements, economic dimension and implementation terms.



Air subsector. A third of the airport projects belong to the MERCOSUR-Chile Hub, and if the second hub in terms of these projects, i.e. the Central Interoceanic Hub, is considered, they both host more than half of the air projects in the entire Portfolio (33% and 25%, respectively). In terms of the estimated investment, the former hub accounts for 85% of the total amount of the subsector. Six projects have already been completed and another nine are at an advanced execution stage, which means that almost two thirds of the subsector projects are advancing satisfactorily.

The Enlargement of Campinas Airport project stands out, as it is the eighth project with the highest estimated investment of the Portfolio: US\$3,550 million.



Road subsector. This is the subsector involving the largest number of Portfolio projects (almost half of the total), and accounting for one third of the estimated investment amount. More than 60% of the road projects have been completed or are at the execution stage. Road projects are mainly located in the MERCOSUR-Chile and Capricorn Hubs, although all of the Hubs include at least ten projects of this subsector. Half of the projects (and of their estimated investment) involve the improvement, expansion or maintenance of existing roads, whereas more than a third of the projects involve the construction of new roads, accounting for 27% of the total investment in the subsector. However, the greatest estimated investment is related to expansion works, amounting to 36%. Furthermore, twenty-seven major bridges, 15 beltways and three tunnels complete the picture. Forty-two percent of the projects are at the execution stage and 22% have already been completed. Only 8% of the projects are at the profiling stage, which means that all these projects have made substantial progress.



Rail subsector. The rail projects, unlike the road-related ones, are mostly at an early stage of development (more than 70% are at the profiling or pre-execution stage), because of the magnitude and scope of the connectivity works proposed for this mode of transport. The other projects are equally distributed between the execution and completed stages. Almost half of the projects entail the rehabilitation of existing rail tracks, 43% are new railroad works, and the remaining 9% are ring railway works. However, due to the striking difference in the magnitude of the works involved, new rail construction projects represent more than 70% of the investment. The greatest amount of estimated investment is allocated to the Andean Hub (38%), which, however, accounts for only 3% of the subsector in terms of the number of projects involved. Instead, this subsector is much more relevant in the Capricorn Hub (28%) and in the Paraguay-Paraná Waterway Hub (18%).



River subsector. Most river projects fall within the Paraguay-Paraná Waterway Hub (57% of the projects involving 71% of the investment) and in the Amazon Hub (25% of the projects involving 19% of the investment), on account of the nature of their territories. As in the case of rail projects, almost 70% are at an early stage (profiling and pre-execution), while the remaining 30% are almost equally divided into those at the execution stage and those already completed. However, regarding the estimated investment, almost half of the funds are allocated to the last two stages mentioned. Projects involve the construction of 11 ports, upgrade works in 32 existing ports, and the improvement of navigation conditions on 33 river sections. This last type of works absorbs almost 70% of the estimated investment for the subsector.



Sea subsector. Of the 38 projects included, only seven involve new works, whereas the others consist in the enlargement of existing infrastructure. Most projects are located in the Amazon and MERCOSUR-Chile Hubs, each of them including nine projects, followed by the Southern Hub, including eight projects. However, almost a third of the resources estimated for this subsector falls within the Guianese Shield Hub, which includes only three projects. Almost 40% of the ports are at the execution stage and, so far, only 21% have been completed.



Multimodal subsector. Most of these projects are still at an early stage of development (profiling and pre-execution). So far, there are no projects at the execution stage, but there is one project that was completed this year: the Mineral Concentrate Reception, Storage and Shipping System at the Matarani Port. Most multimodal centers are located in the Amazon Hub, while the 70% of the estimated investment is allocated mainly to the Paraguay-Paraná Waterway and Central Interoceanic Hubs.



Border crossings subsector. New border control centers make up two thirds of the projects in this subsector (34), whereas 13 projects consist in the upgrade or enlargement of existing centers, although the estimated investment is distributed almost in equal parts (55% and 45%, respectively). Most of the projects belong to the Andean Hub, due to the nature of its territory. However, the investment is higher in the MERCOSUR-Chile Hub projects. Thirty-four percent of the border crossings projects are at the pre-execution stage, 25% are at the execution stage, and 23% of the works are completed.



Energy generation subsector. Of the 25 projects in this subsector, 21 are evenly distributed among the pre-execution, execution and completed stages. However, more than half of the estimated investment is allocated to projects at the execution stage (51%). Nearly half of the plants to be built are hydroelectric power plants, which helps improve the energy matrix of the region. More than half of the projects belong to the MERCOSUR-Chile Hub, although, in terms of estimated investment, more than half of the resources are allocated to the only three projects that are located in the Peru-Brazil-Bolivia Hub.



Energy interconnection subsector. Most energy interconnection projects are located in the Andean Hub (32%), and almost all of them involve new connections, half of which (55%) have already been completed (investing 78% of the total investment amount).



Communications interconnection subsector. This subsector includes only seven projects, four of which are binational. Most of the estimated investment in this subsector is allocated to the only project that is currently at the execution stage, involving 72% of the total. Most projects fall within the Paraguay-Paraná Waterway Hub (three).

PROJECT SUBSECTORS *US\$ million

	No. of Projects	% of Projects	Estimated Investment*	% of Investment
Air	24	4.1	7,530.4	3.9
Road	258	44.4	63,476.5	33.2
Rail	61	10.5	47,921.4	25.0
River	76	13.1	2,892.9	1.5
Sea	38	6.5	10,493.7	5.5
Multimodal	14	2.4	679.3	0.4
Border Crossings	47	8.1	964.7	0.5
Energy Generation	25	4.3	46,859.5	24.5
Energy Interconnection	31	5.3	10,560.2	5.5
Communications Interconnection	7	1.2	41.5	0.0
TOTAL	581	100.0	191,420.1	100.0

1.1.4. Project Financing

Most financing of the Portfolio comes from the public sector (61% of the estimated investment), while the rest of the investment is divided between the private sector (19% of the total amount) and public-private initiatives (the remaining 20%). When analyzed from the point of view of the number of projects, the participation of the public sector becomes even more evident: 82% of the projects are financed with public funds, 12% with private funds, and only 6% through public-private partnerships.

It is important to underscore the role of national governments in the execution of the Portfolio projects. More than 60% of the total projects are financed by the countries themselves, which proves their commitment to making headway with the physical integration of the region.

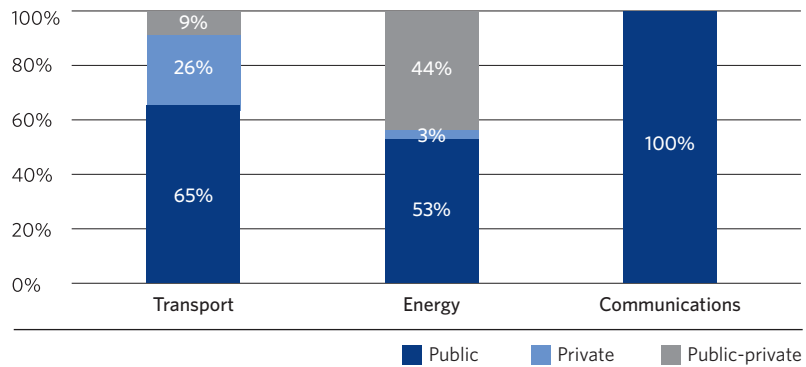
The private sector ranks second, as it finances 15% of the Portfolio projects, whereas 13% of the projects have no specified source of financing yet.

SOURCE OF FINANCING *US\$ million

Source of Financing	No. of Projects	Estimated Investment*	Amount Invested*
National Government	354	72,368.4	14,435.9
Private Sector	88	48,728.8	5,574.7
To be defined	78	42,312.9	170.0
IDB	39	4,629.2	1,150.9
CAF	30	2,855.5	795.1
Provincial Governments	18	1,875.0	200.0
Binational	13	9,647.8	1,408.8
FOCEM	10	819.0	419.3
Varios	8	1,939.0	1,342.0
FONPLATA	6	298.9	0.0
To be defined (Public Sector)	6	403.0	0.0
To be defined (Private sector)	5	1,149.6	388.0
Private Banks	4	108.0	0.0
World Bank	4	172.5	68.5
European Union	4	179.5	75.3
JBIC	3	185.9	0.0
Chinese Government	3	400.0	0.0
BNDES	2	157.1	0.0
Local Government	2	2,100.0	2,100.0
Miscellaneous (Private Sector)	2	719.9	0.0
Miscellaneous (Public Sector)	2	370.1	0.0
TOTAL		191,420.1	28,128.5

Most transportation projects are financed by the public sector, while the public sector and public-private initiatives have a similar share in the financing of works related to energy integration. Instead, the communications sector is entirely financed by the public sector.

TYPE OF FINANCING BY SECTOR



The private sector is more consistently involved in the transport sector —particularly in the MERCOSUR-Chile Hub (accounting for almost 40% of the private resources committed)— and in the rail subsector (more than 40%).

As for the number of projects, the Hub including the greatest number of privately financed projects is the Amazon Hub. However, private projects in this Hub do not involve huge amounts, as most of them are river projects.

Almost a third of the public-private initiatives fall in the Amazon Hub and, to a lesser degree, in the Andean and MERCOSUR-Chile Hubs. However, if investment amounts allocated are analyzed, the highest percentage goes to the Peru-Brazil-Bolivia Hub, which receives 68% of public-private financing in only two projects. This is justified as these two projects are the ones with the highest investment amounts estimated for the COSIPLAN Portfolio. One is the Madeira River Hydroelectric Power Complex (Santo Antônio and Jirau Hydroelectric Power Stations), and the other, a project already completed, the Transmission Line between the two Madeira River Hydroelectric Power Stations and the Central System, in which US\$3,823 million were invested.

TYPE OF FINANCING BY HUB

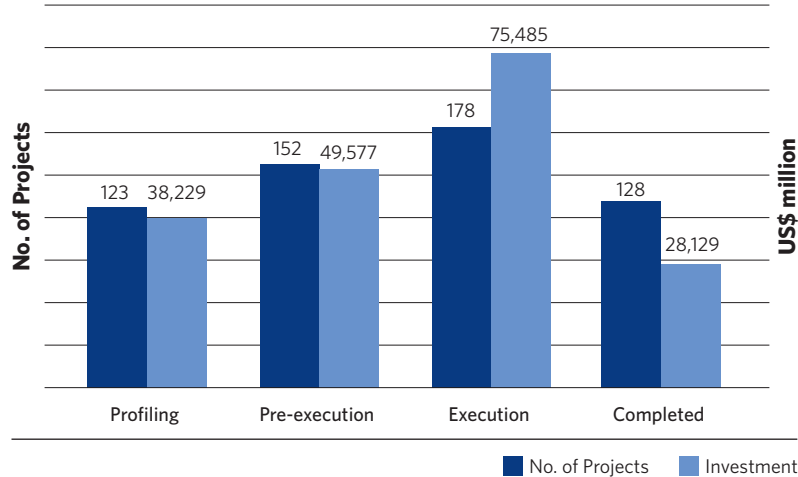
	AMA	AND	CAP	DES	GUY	HPP	IOC	MCC	PBB
Private	29%	5%	10%	2%	0%	1%	22%	15%	21%
Public	57%	85%	86%	96%	90%	99%	71%	79%	71%
Public-private	14%	11%	4%	2%	10%	0%	5%	6%	8%
No. of Projects	72	66	81	47	20	89	63	120	24

Note: Red: from 0% to 6% of the investment. Yellow: from 7% to 30% of the investment. Green: from 31% to 100%.

1.1.5. Project Stages by Sector

Almost a third of the total projects are at the execution stage, of which more than 90% involve transportation works. The estimated investment in the works in execution accounts for almost 40% of the total Portfolio.





PROJECT STAGE



The completed projects represent almost 20% of the total, and the same holds true for projects at the profiling stage, although the investment actually made in the former only represents 15% of all the estimated investment. Among these projects, 80% fall in the transport sector, 19% in the energy sector, and only 1% in the communications sector.

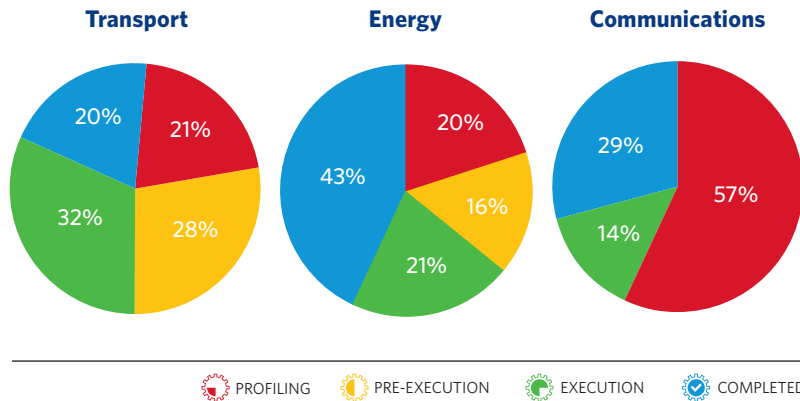
Almost a third of the transport projects are at the execution stage and, if the completed projects of the sector are also considered, the number rises to more than half of the projects. The ratio improves when considering the energy projects, as the ones at the execution stage and the ones already completed account for 64% of the total.

PROJECT STAGES BY SECTOR

	Projects					Estimated Investment	
	Transport	Energy	Communications	Total	%	US\$ Million	%
	108	11	4	123	21.2	38,229.4	20.0
	143	9	0	152	26.2	49,577.4	25.9
	165	12	1	178	30.6	75,484.7	39.4
	102	24	2	128	22.0	28,128.6	14.7
Total	518	56	7	581	100,0	191.420,1	100,0

 PROFILING  PRE-EXECUTION  EXECUTION  COMPLETED

PROJECT STAGES BY SECTOR



 PROFILING  PRE-EXECUTION  EXECUTION  COMPLETED

1.2. The Active Portfolio











The projects in the active portfolio, i.e. the projects underway (at the profiling, pre-execution or execution stage), are 453 and account for an investment estimated at US\$163,291 million.



1.2.1. The 10 Projects with the Highest Estimated Investment

The 10 projects with the greatest estimated investment represent 45% of the total estimated investment for the active projects of the COSIPLAN Portfolio.

Of these 10 projects, seven involve hydroelectric or railroad works, showing that the works in these subsectors demand a significant financial effort. The other three projects involve the construction of a road, the enlargement of an airport, and an integrated coastal protection plan. The first three projects in terms of investment are described below.

THE FIRST 10 PROJECTS RANKED IN ORDER OF ESTIMATED INVESTMENT *US\$ million

Code	Name	Group	Stage	Estimated Investment*	Countries
PBB16	MADEIRA RIVER HYDROELECTRIC POWER COMPLEX (SANTO ANTÔNIO AND JIRAU HYDROELECTRIC POWER STATIONS)	G03		18,209.0	BR
AND95	ECUADOR'S ELECTRIC FREIGHT TRAIN	G05		17,800.0	EC
MCC62	CONSTRUCTION OF THE CORPUS CHRISTI HYDROELECTRIC POWER STATION	G05		8,000.0	AR - PY
AMA33	CUIABÁ - SANTARÉM ROAD (BR-163 / MT / PA)	G05		6,500.0	BR
MCC33	RAILWAY PROJECT BETWEEN LOS ANDES, CHILE AND MENDOZA, ARGENTINA (CENTRAL TRANS-ANDEAN RAILWAY)	G03		5,100.0	AR - CH
PBB17	BINATIONAL HYDROELECTRIC POWER STATION (BOLIVIA - BRAZIL)	G03		5,000.0	BO - BR
IOC17	IMPROVEMENT OF THE BAURU - SANTOS (SP) RAILWAY SECTION	G02		3,700.0	BR
MCC06	ENLARGEMENT OF CAMPINAS AIRPORT	G01		3,550.0	BR
GUY40	INTEGRATED MASTERPLAN OF COASTAL PROTECTION ALBINA-NICKERIE	G04		3,020.0	SU
AMA73	NEW CROSS-NORTHEASTERN RAILWAY PHASE I (SUAPE - SALGUEIRO / PECÉM - ELISEU MARTINS)	G05		3,000.0	BR
TOTAL				73,879.0	

 PROFILING
  PRE-EXECUTION
  EXECUTION
  COMPLETED

Madeira River Hydroelectric Power Complex (Santo Antônio and Jirau Hydroelectric Power Stations) is the project with the highest estimated investment of all the 581 projects in the COSIPLAN Portfolio, with US\$18,209 million. This new complex in Brazil involves the construction of two hydroelectric power stations fed by the water resources of the Madeira river with a view to diversifying the energy matrix of the territory. It is being financed by the BNDES (Brazilian Development Bank) and by a consortium of private banks. Being at an advanced execution stage, it is scheduled to be completed in March 2017.

Project Ecuador's Electric Freight Train has been recently added to the Andean Hub. It is at the profiling stage and consists in the construction of an electric rail network for freight transport in order to integrate current and future Ecuadorian production centers with the ports on the Pacific ocean and with Ecuador's border connections with Peru and Colombia.

Project Construction of the Corpus Christi Hydroelectric Power Station is a binational project at the pre-execution stage, as some of the pre-feasibility studies are underway. It is financed by the public sector and involves the construction of a power plant over the Paraná river that will enable the generation of more than 123,000 GWh of hydroelectric energy annually. The size and geographical location of Corpus Christi make this project a particularly important alternative for the integration of the electric systems in the MERCOSUR region.

1.2.2. Projects at the Profiling Stage

There are 123 projects at the profiling stage, with an investment estimated at US\$38,229 million. Almost 90% of these projects have been at the profiling stage for more than four years (since some time before 2012). Anyway, despite the difficulties in making headway with them, they are still included in the Project Portfolio because of their strategic significance for the integration of the countries involved.

Most of these projects are river, rail and road projects (32%, 23% and 19%, respectively), and for this reason almost a third of this group belongs to the Paraguay-Paraná Waterway Hub. More than 84% of the estimated investment in these projects is allocated to rail works, particularly in the Andean Hub (51%). However, it should be pointed out that most of the projects at the profiling stage do not have an estimated amount yet. Argentina is the country with the greatest number of projects at this stage (30%), followed by Peru and Paraguay (12%).

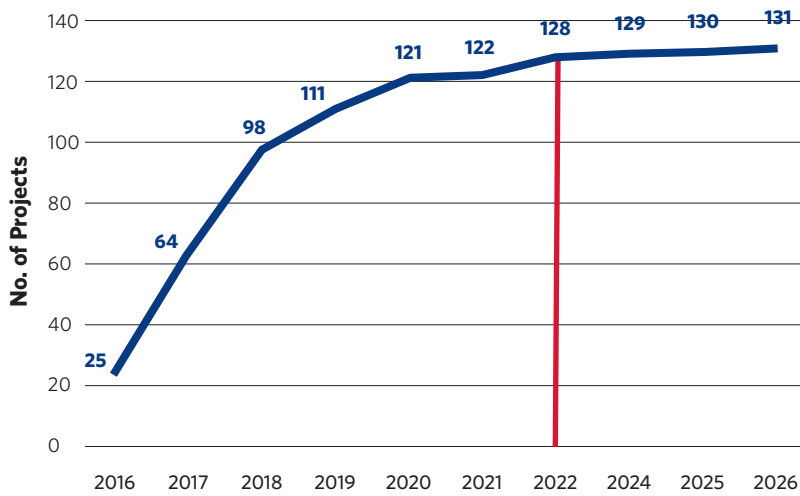
YEAR OF INCLUSION OF THE PROJECTS AT THE PROFILING STAGE IN THE PORTFOLIO

At the profiling stage since...	No. of Projects
2004	37
2007	39
2008	11
2009	3
2010	7
2011	11
2012	1
2013	5
2015	9
TOTAL	123

1.2.3. Estimated Completion Date

The estimated date of completion is known in the case of 30% of the 453 active projects within the Portfolio. Of these 131 projects whose estimated completion date is available, 85% are scheduled to be completed in the next three years (before the end of 2019), which involves the expenditure of US\$58,434 million, according to the estimated investment in these projects.

These figures can be represented in a diagram, as shown below. The curve shows an accelerated growth for the 2016-2020 period, since approximately 100 projects are expected to be completed in a five-year term. The other projects with available estimated completion dates are expected to be completed between 2020 and 2026.

PROJECT COMPLETION BY YEAR

1.3 Completed Projects

There are 128 completed projects in the Portfolio for a total investment of US\$28,129 million. This means that more than 22% of the physical integration projects prioritized by the countries have already been completed, with 13 projects finished between 2015 and 2016.

All the Hubs, as well as 41 of the 47 Project Groups, include projects that have already been completed. The Groups with the greatest number of completed projects are Group 1 of the Capricorn Hub (Antofagasta - Paso De Jama Border Crossing - Jujuy - Resistencia - Formosa - Asunción) and Group 5 of the Central Interoceanic Hub (Connections of the Hub to the Pacific: Ilo / Matarani - Desaguadero - La Paz + Arica - La Paz + Iquique - Oruro - Cochabamba - Santa Cruz). However, the Hub with the greatest number of completed projects is MERCOSUR-Chile with 24 projects (19%), followed by the Amazon and Andean Hubs (17% and 16%). In terms of the investment made, the MERCOSUR-Chile Hub accounts for 31% of the total investment in the completed projects.

The opposite situation can be observed in the Central Interoceanic Hub: although completed projects amount to 13%, they only represent 2% of the investment.

COMPLETED PROJECTS BY HUB US\$ million

	No. of Groups	No. of Projects	% of Projects	Estimated Investment*	% of Investment
AND	7	20	15.6	993.6	3.5
AMA	7	22	17.2	6,893.6	24.5
CAP	4	14	10.9	2,632.0	9.4
DES	2	5	3.9	443.1	1.6
GUY	3	6	4.7	86.5	0.3
HPP	5	15	11.7	1,646.3	5.9
IOC	5	17	13.3	663.1	2.4
MCC	6	24	18.8	8,790.3	31.3
PBB	2	5	3.9	5,980.0	21.3
TOTAL	41	128	100.0	28,128.5	100.0

The country that completed the greatest number of projects is Brazil, with 23, and at present almost a third (30%) of its national project portfolio is already completed. Argentina ranks second, with 22 completed projects, although only 13% belong to its national portfolio. Colombia is the country with the greatest number of completed works in terms of its national projects, having completed 42% of them.

COMPLETED PROJECTS BY COUNTRY *US\$ million

Country	Total No. of Projects	No. of Completed Projects	% of Projects	Investment Amount*	% of Investment
Argentina	178	23	15.4	6,215.0	21.0
Bolivia	53	5	3.4	17.0	0.1
Brazil	94	28	18.8	13,296.6	44.8
Chile	74	22	14.8	2,065.7	7.0
Colombia	33	14	9.4	726.5	2.4
Ecuador	40	16	10.7	813.5	2.7
Guyana	8	2	1.3	10.0	0.0
Paraguay	66	11	7.4	1,994.8	6.7
Peru	72	19	12.8	3,914.5	13.2
Uruguay	42	7	4.7	481.1	1.6
Venezuela	20	2	1.3	125.2	0.4

Almost half of the completed projects (44%) fall in the road subsector, and as for the investment amount, they account for 40%. The energy interconnection projects already completed represent almost 13% of the total completed projects, although they demanded almost 30% of the amount invested.

COMPLETED PROJECTS SUBSECTORS *US\$ million

Subsector	No. of Projects	% of Projects	Investment Amount*	% of Investment
Air	6	4.7	168.3	0.6
Road	56	43.8	11,215.6	39.9
Rail	8	6.3	3,739.0	13.3
River	12	9.4	136.7	0.5
Sea	8	6.3	1,005.0	3.6
Multimodal	1	0.8	230.0	0.8
Border crossings	11	8.6	118.5	0.4
Energy generation	7	5.5	3,324.0	11.8
Energy interconnection	17	13.3	8,191.4	29.1
Communications interconnection	2	1.6	0.0	0.0
TOTAL	128	100.0	28,128.5	100.0

Of the total completed works, 82% were financed with public funds. In terms of their investment amount, the public sector contributed 63%. The private sector financed 15% of the projects, accounting for almost the same percentage of the invested amount. Public-private partnerships financed 7% of the projects, but their contribution accounted for 22% of the total amount invested.

TYPE OF FINANCING OF THE COMPLETED PROJECTS *US\$ million

	No. of Projects	% of Projects	Investment Amount*	% of Investment
Private	19	14.8	4,338.4	15.4
Public	100	78.2	17,722.3	63.0
Public-private	9	7.0	6,067.8	21.6
TOTAL	128	100.0	28,128.5	100.0

Most completed projects are national in scope (84%), while the other ones are binational. This ratio rises in relation to the investment amount, with the national share accounting for almost 95%.

TERRITORIAL SCOPE OF THE COMPLETED PROJECTS *US\$ million

Territorial Scope	No. of Projects	% of Projects	Investment Amount*	% of Investment
National	107	83.6	26,596.9	94.6
Binational	21	16.4	1,531.6	5.4
TOTAL	128	100.0	28,128.5	100.0

Chapter 2

Evolution of the Project Portfolio

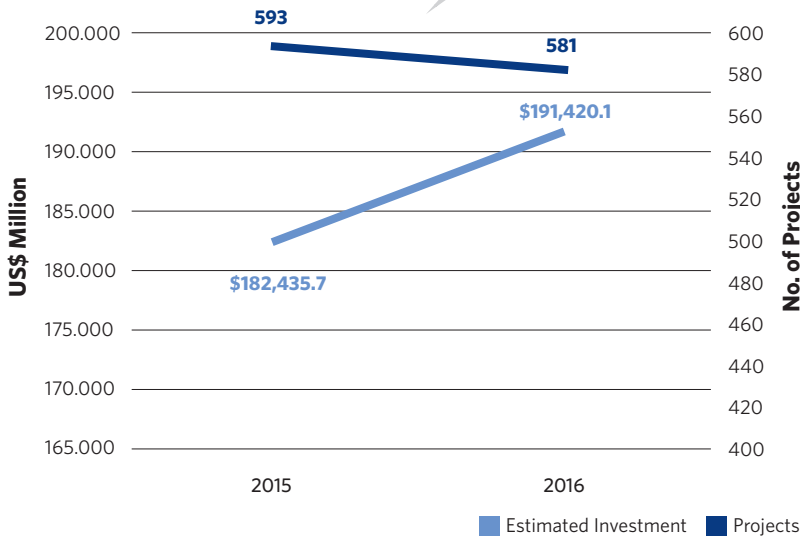
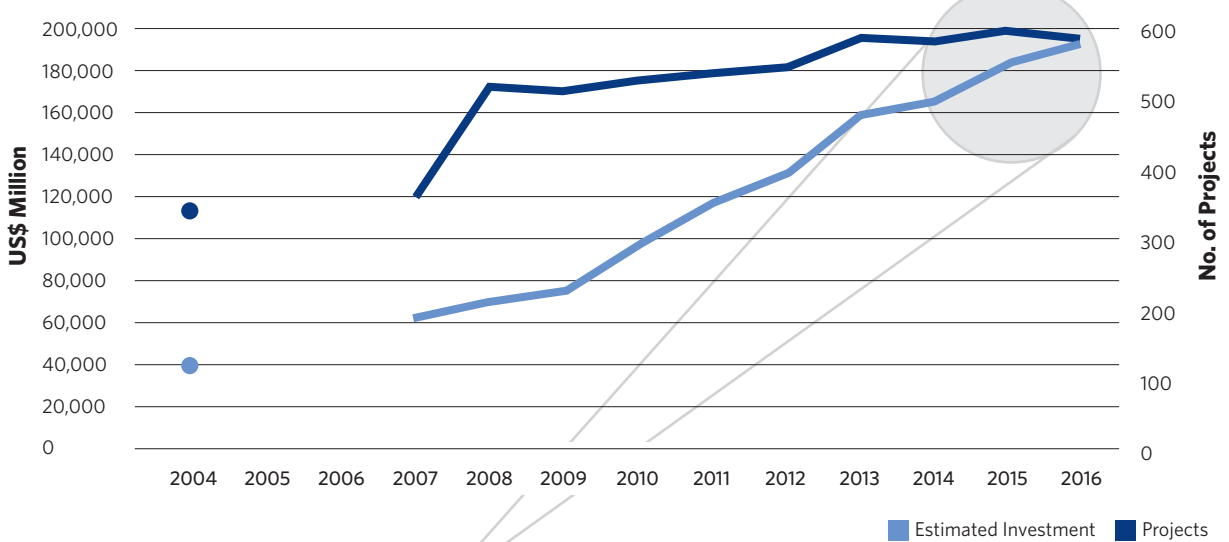
This chapter analyzes the progress made by the Project Portfolio. First, it describes the evolution of the Portfolio throughout more than a decade (2004-2016), and then presents the changes that took place between 2015 and 2016 as a result of the update process undertaken by the countries this year.

2.1. Evolution of the Project Portfolio between 2004 and 2016

Throughout the last decade, the structuring of the Project Portfolio was modified and was subject to successive updates as a result of the territorial planning process undertaken by the countries. The number of projects and estimated investment grew year after year, except for 2014 when, as a result of a thorough analysis by the countries, projects that had not made any progress since 2008 or before were excluded. In 2015, the number of projects increased again, as a result of a redefinition of the area of influence of the Southern Hub, which added several territories in the south of Chile and Argentina.

In 2016, the total number of projects in the Portfolio was reduced once again. A great number of the projects excluded belonged to Argentina and Brazil. This is due to a deep review of the investment priorities performed by the new government authorities in both countries.

EVOLUTION OF THE PROJECT PORTFOLIO 2004-2016



The Portfolio grew, on average, by 20 projects and US\$12,000 million per year between 2004 and 2016. In 2016, the estimated investment rose 5% vis-à-vis last year.

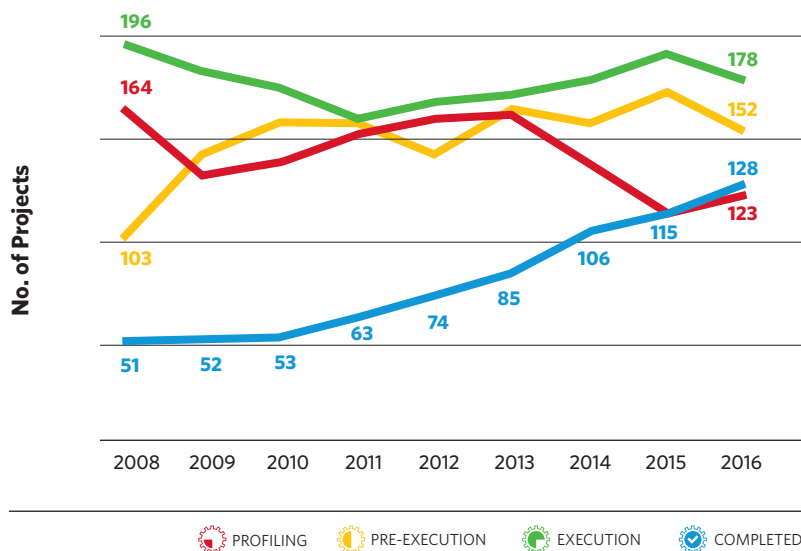
ANNUAL CHANGES IN THE PROJECTS BY HUB (2004-2016)

	Integration and Development Hubs									TOTAL
	AMA	AND	CAP	DES	GUY	HPP	IOC	MCC	PBB	
2003-2004										
No. of Projects	44	74	34	21	32		44	68	18	335
US\$ million	2,011.0	4,975.0	2,031.0	1,072.0	366.0		3,306.0	12,076.0	11,588.0	37,425.0
2005-2006										
No. of Projects	54	73	36	21	32		44	71	18	349
US\$ million	2,382.0	4,975.0	2,031.0	1,071.0	366.0		3,306.0	12,161.0	11,588.0	37,880.0
2007										
No. of Projects	57	65	63	26	32	98	49	91	23	504
US\$ million	3,208.4	6,097.0	6,083.0	2,530.0	5,847.0	2,829.0	4,651.0	19,465.0	17,561.0	68,271.4
2008-2009										
No. of Projects	57	65	69	26	25	88	54	105	23	510
US\$ million	5,281.0	7,050.0	7,945.0	2,533.0	927.0	3,974.0	4,576.0	29,399.0	12,888.0	74,542.0
2010										
No. of Projects	58	64	72	27	25	95	55	107	23	524
US\$ million	5,401.9	7,478.0	9,421.4	2,713.0	1,694.9	6,677.4	5,525.1	35,836.2	21,402.3	96,119.2
2011										
No. of Projects	64	64	76	27	18	93	61	105	25	531
US\$ million	6,099.9	9,343.5	8,979.1	2,738.0	4,540.3	6,514.7	4,112.7	44,389.8	29,557.8	116,120.6
2012										
No. of Projects	64	64	80	27	18	94	61	113	25	544
US\$ million	8,867.6	8,692.4	11,959.1	2,817.0	4,465.4	8,460.7	5,209.2	50,974.4	28,878.7	130,139.1
2013										
No. of Projects	88	65	80	28	20	94	62	122	26	583
US\$ million	28,948.9	9,183.5	13,974.6	2,762.0	4,560.4	7,865.1	8,830.5	52,701.1	29,089.8	157,730.5
2014										
No. of Projects	82	64	83	28	20	95	61	123	25	579
US\$ million	25,070.2	9,962.1	17,929.5	2,744.6	4,581.3	7,574.4	8,907.6	54,608.3	32,131.9	163,324.5
2015										
No. of Projects	74	67	82	49	20	92	63	124	24	593
US\$ million	22,420.8	28,614.0	16,314.7	4,146.6	4,581.3	7,328.2	11,614.8	56,168.9	31,431.9	182,435.7
2016										
No. of Projects	72	66	81	47	20	89	63	120	24	581
US\$ million	27,023.1	27,995.3	16,691.2	4,506.7	4,581.3	6,325.1	11,498.5	60,971.2	32,008.4	191,420.1

Concerning the number of projects, some Hubs have remained relatively unchanged since 2007, such as the Andean and the Peru-Brazil-Bolivia Hubs. Other Hubs have gradually reduced the number of projects, such as the Guianese Shield Hub, whereas a third group experienced a constant increase: the most representative example is the MERCOSUR-Chile Hub, which in the period under consideration almost doubled its original number of projects, and it was only this year that it slightly reduced its number of projects, though not its estimated investment amount.

As this is not a closed portfolio, the total number of projects changes year after year, either because new projects are added or because existing projects are removed. New projects may be added at different life cycle stages,⁽¹⁾ thus making it impossible to set 2004 as the baseline year to make year-to-year comparisons and analyze the Portfolio progress accordingly.

ANNUAL CHANGES IN THE PROJECTS BY STAGE (2008-2016)



The Portfolio projects make headway at a different pace depending on the following particular features of the physical integration works involved:

- their size and technical complexity;
- the need for inter-governmental coordination in the case of binational or multinational projects;
- their investment amount and the budget constraints faced by some governments, as well as competition for the resources available with other initiatives in the countries;
- the reformulation of their scope, which may involve moving back to previous life cycle stages.

In addition, some projects may appear as if they had remained stagnant, since they have been at the pre-execution stage for a long period. This is because, according to what the countries have agreed, this stage includes all the studies required to define the project as well as the arrangements required to secure the funds. Therefore, these projects may be

¹ The stages in the life cycle of the Portfolio projects are profiling, pre-execution, execution, and completed. For more information, see Chapter 4 in this publication.

making headway within the stage, and this progress is recorded in the Continuous Monitoring System.

Hence, a way of measuring the progress made by the Portfolio is to consider the completed projects. As shown in the figure above, the completed projects grew and even more than doubled every year in the 2008-2016 period.

2.2. Changes in the Portfolio between 2015 and 2016

In 2016, online meetings of the Executive Technical Groups to Update the Projects in the COSIPLAN Portfolio and API were held. A meeting was held for each Integration and Development Hub⁽²⁾ using an online video-conferencing tool.

GTE MEETINGS TO UPDATE THE COSIPLAN PROJECT PORTFOLIO AND API IN 2016

Date	Hubs	Countries
May 10	Amazon	BR - CO - EC - PE
May 20	Central Interoceanic-Peru-Brazil-Bolivia	BO - BR - CH - PE - PY
May 27	MERCOSUR-Chile	AR - BR - CH - PY - UY
June 7	Paraguay-Paraná Waterway	AR - BO - BR - PY - UY
June 9	Capricorn-Southern	AR - BO - BR - CH - PY

The objectives of the update work in 2016 were: i) comply with the schedule decided by the countries in 2014 to review descriptors, completed project modules and information in the Continuous Monitoring System; ii) review the projects with inconsistent information and complete any data fields that were empty or included partial information; iii) review especially the projects at the pre-execution stage to detail as accurately as possible their progress and current status in order to facilitate their implementation.

In preparation for the above-mentioned meetings and as a result of the discussions held at them, the countries worked on the update of the Portfolio projects in the COSIPLAN Project Information System.

Eighty-five percent of the projects included in the COSIPLAN active portfolio were updated by them. This has been possible thanks to the participation of multidisciplinary technical teams from different governmental areas of all the South American countries.

It should be pointed out that, during the online meeting to update the Andean Hub, delegates decided to eliminate Group 10, Communications Systems and Connectivity, on the grounds that there is no precise information as to the telecommunications projects that make up this group and, consequently, as to the nature of the data to include. In addition, it was agreed to move the discussions on any such specific project to the COSIPLAN Working Group on Telecommunications to deal with this topic in a jointly manner. Concrete projects, once defined, will be added to the COSIPLAN Portfolio.

² The only meeting that could not be held was that on the Guianese Shield Hub, and the countries involved were asked to update the information about their projects directly in the SIP.

ANNUAL CHANGES IN THE PROJECTS BY HUB (2015-2016) *US\$ million

Hub	No. of Projects			Estimated Investment*		
	2015	2016	Change	2015	2016	Change
AMA	74	72	-2	22,420.8	27,022.8	4,602.0
AND	67	66	-1	28,614.0	27,995.3	-618.7
CAP	82	81	-1	16,314.7	16,691.2	376.5
DES	49	47	-2	4,146.6	4,506.7	360.1
GUY	20	20	0	4,581.3	4,581.3	0.0
HPP	92	89	-3	7,328.2	6,325.1	-1,003.1
IOC	63	63	0	11,614.8	11,498.5	-116.3
MCC	124	120	-4	56,168.9	60,971.2	4,802.3
PBB	24	24	0	31,431.9	32,008.4	576.5
TOTAL ⁽¹⁾	593	581	-12	182,435.7	191,420.1	8,984.4





(1) Investments made in two existing projects before IIRSA was launched are not included. These projects are Road Corridor Connecting Santa Marta - Paraguachón, in the Andean Hub, and Itaipu System, in the MERCOSUR-Chile Hub. In addition, there is a hinge project (i.e. a project that plays a role in more than one Hub or articulates two or more Hubs or Project Groups in the same Hub), Pircas Negras Border Crossing, belonging to the CAP and MCC Hubs; therefore, the totals in the No. of Projects and Estimated Investment columns do not match the arithmetic sum of the totals by Hub.

Concerning changes in project life cycle stages, the following can be stated:

- Eight projects that were at the profiling stage moved on as follows: five to the pre-execution stage, two to the execution stage, and one was completed.
- Eighteen projects that were at the pre-execution stage changed as follows: 12 moved on to the execution stage, whereas six projects underwent a change in their scope and are currently at the profiling stage.
- Eighteen projects that were at the execution stage changed as follows: nine were completed and other nine projects underwent a change in their scope, of which five are now at the pre-execution stage and four at the profiling stage.
- One project recorded as completed underwent a change in its scope and is now at the execution stage.

In addition to these changes, it is important to consider the projects that have been included and excluded and the results in the balance of changes between stages.

CHANGES BETWEEN STAGES IN THE PROJECT PORTFOLIO (2015-2016)


	No. of Projects according to Report 2015	No. of Projects Included in the GTE	No. of Projects Excluded in the GTE	Change Balance between Stages	Change 2015-2016	No. of Projects as of August 2016
	114	0	-3	12	9	123
	173	2	-5	-18	-21	152
	191	2	-9	-6	-13	178
	115	1	0	12	13	128
TOTAL	593	5	-17	0	-12	581

 PROFILING  PRE-EXECUTION  EXECUTION  COMPLETED

Analyzing each stage more in detail, the number of projects included, excluded or incorporated into a stage, as well as of those that moved on, can be observed. It should be noted that most of the projects incorporated into a stage belong now to the profiling stage, since several projects were re-evaluated, thus redefining their scope and the timeframe of some of their works. The stage from which more projects were removed vis-à-vis last year was the pre-execution stage, with 35 projects excluded. Furthermore, it should be stated that one previously completed project moved back to the execution stage, when its scope was reviewed by the country involved. Another project was split into two and as one of them had been finished, it was therefore incorporated into the Portfolio as a completed project.

CHANGES IN THE PROJECT PORTFOLIO (2015-2016)



 Excluded  New  Moved on  Moved back  Incorporated into a stage

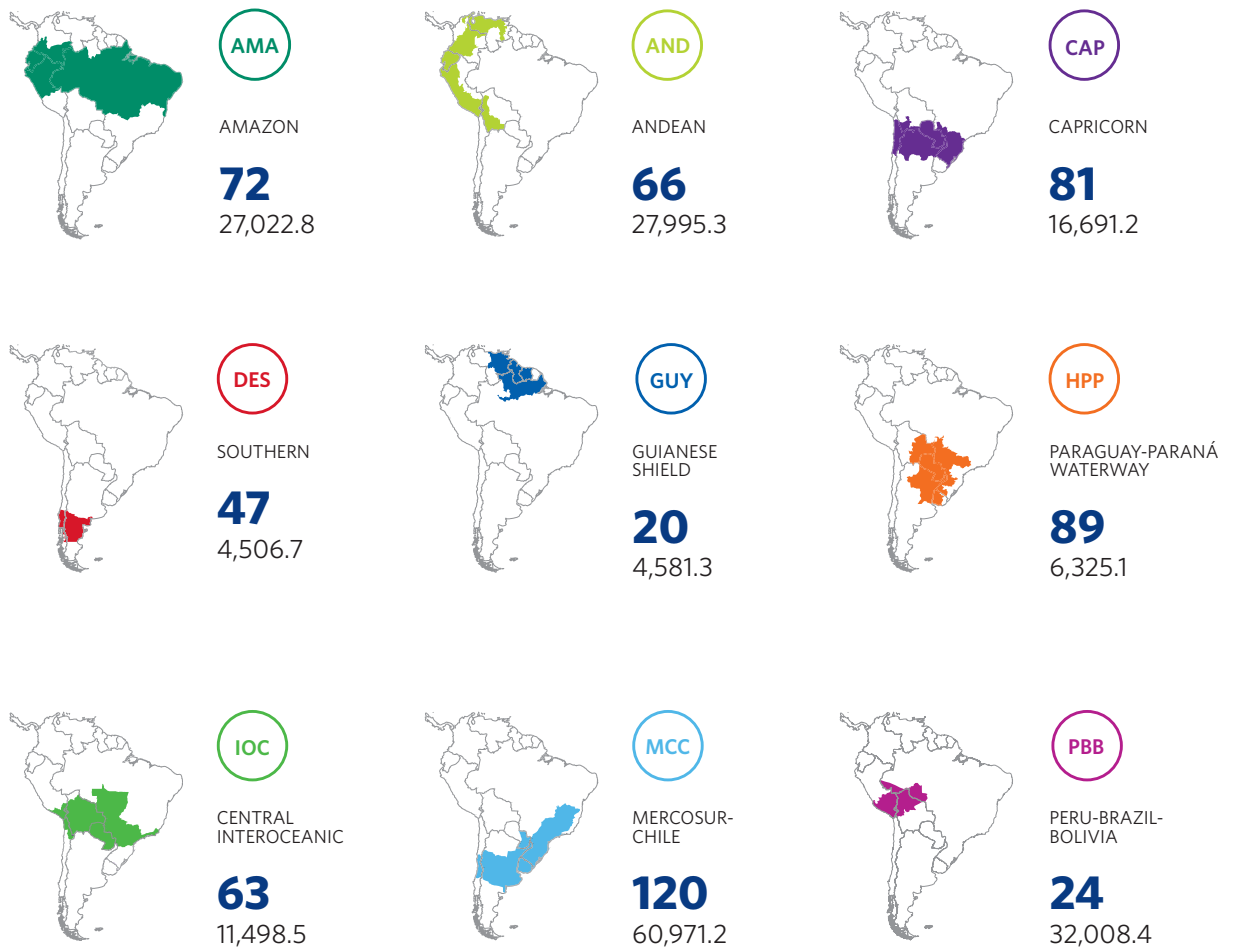
 PROFILING  PRE-EXECUTION  EXECUTION  COMPLETED

Chapter 3

Integration and Development Hubs



Projects by Hub



AMA AMAZON

Integration and Development Hub



Population: 132,687,257
Population density: 16.5 people/km²
Area: 8,059,085 km²

GDP: US\$ 844,689 million

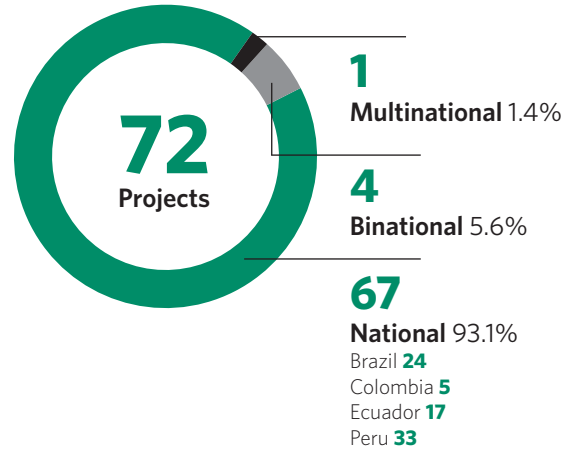
Services	75.1%
Industries	13.0%
Mining and quarrying	6.1%
Agriculture	5.7%



Estimated Investment

US\$ million

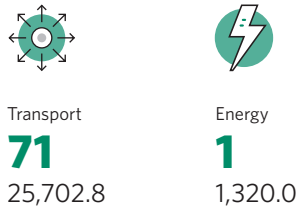
27,022.8



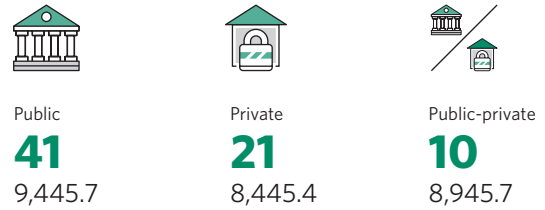
Projects by Stage



Projects by Sector

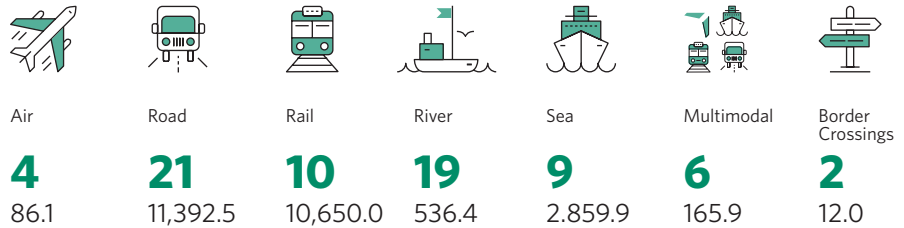


Projects by Type of Financing

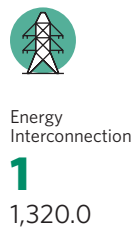


Projects by Subsector

Transport



Energy



AMAZON

Presentation of the Hub

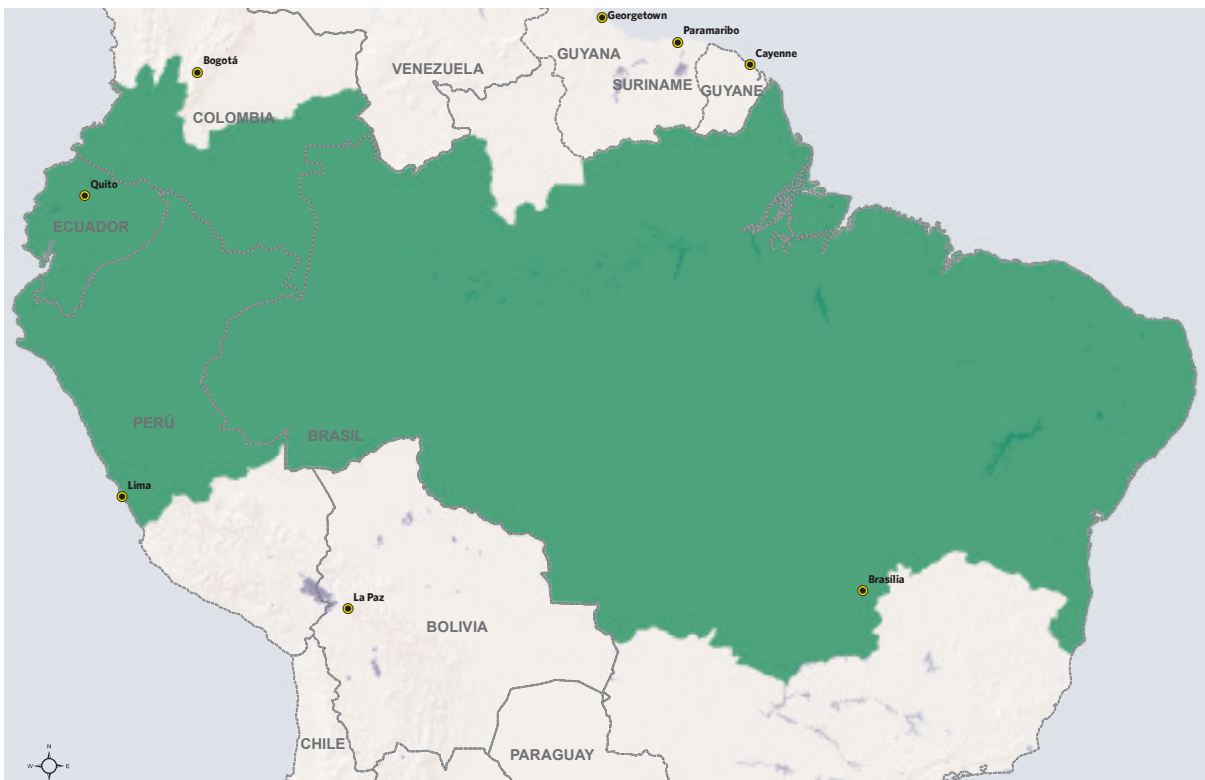
The Amazon Hub⁽¹⁾ comprises Brazil's Amazon and northeastern regions and the states of Goiás and Tocantins, the central-southern area of Colombia, the entire continental territory of Ecuador, and the central-northern area of Peru.

This Hub is the largest of the nine Hubs of the Portfolio, its area —30% of which is under some type of environmental protection— being equivalent to 45% of that of the South American continent (8,059,085 km²).

Furthermore, this Hub ranks second in population and fifth in Gross Domestic Product (GDP), as it accounts for 32% (132,687,257 inhabitants) of the population and 19% of the GDP of South America (US\$844,689 million).⁽²⁾

In this Hub, existing and planned infrastructure is marked by the presence of the Andes and the vast Amazon Basin, the largest river basin in the world.

AREA OF INFLUENCE OF THE AMAZON HUB



¹ See "Caracterización Socioeconómica y Ambiental del Eje del Amazonas," COSIPLAN-IIRSA, 2015, at <http://www.iirsa.org/amazonas.asp>

² At 2013 current prices.

Thus, two rather different realities coexist. On the one hand, there is a territory framed between the Andes and the Pacific ocean, where road transportation prevails, followed by a small proportion of railways, both of which enable a connection with a network of major ports located along the Pacific coast and shared by Colombia, Ecuador, and Peru. On the other hand, there is the Amazon basin, which has its source in the eastern slopes of the Andes and finds its way to the Atlantic ocean through a vast network of navigable rivers.

As regards infrastructure, the total length of the **road network** of the countries involved in the Amazon Hub is 2,012,551 km, 12% of which (some 238,414 km) are paved. The **rail network** is 36,984 km long. The **port system** of the Hub is made up of 40 major ports, nine of which handle more than 10 million tons per year. Most **river transportation** activities in the region are carried out along the Amazon basin and its major tributaries, such as the Negro, Putumayo, Ucayali, Madeira, Juruá, and Purus rivers, among others. Concerning **electricity generation**, as of 2012 the countries involved in the Hub had a joint installed power of about 147,186 MW.

The presence and diversity of **indigenous communities** is significant in the Hub, as there are more than 200 peoples living in the four countries, their relative share of the population being different in each nation. Peru has the most important share, as native peoples account for 34% of its population. This figure is 7% in Ecuador, 3% in Colombia, and less than 1% in Brazil.

At present, there are more than 2,000 territorial units in the Hub with some degree of **environmental protection**. In Brazil, the states of Pará and Amazonas stand out, with more than 1,400,000 km² of protected territory, which accounts for approximately 60% of the Hub's total protected area.

The most frequent **natural hazards** in the Andean region are earthquakes, tsunamis and volcanic eruptions, whereas in the Amazon basin, in which the four countries are involved, the most recurring ones are large floods.

The countries involved in the Amazon Hub plan to invest US\$27,023 million in 72 physical integration projects.

In relative terms, Ecuador contributes 91% of its GDP to the Hub and Peru 73%. Brazil and Colombia are the countries that contribute less: 24% and 17% of their GDP, respectively. In absolute terms, Brazil accounts for 63% of the Hub's aggregate GDP, followed by Peru (18%), and by Ecuador and Colombia (11% and 8%, respectively).

A noticeable trend in the Hub's global economic performance is its growth rate in the 2007-2013 period, as it reached an average of 5%, which is above the 3% growth rate of Latin America and the Caribbean in the same period.

The Hub shares some regions of its area of influence with other five Hubs: the Guianese Shield (GUY), the Paraguay-Paraná Waterway (HPP), the Peru-Brazil-Bolivia (PBB), the Andean (AND), and the Central Interoceanic (IOC) Hubs.

AMAZON

Project Portfolio

The development of the Amazon Hub depends on river connectivity, for which it is necessary to improve standards and consolidate the vast network of navigable rivers in this Hub. By developing a waterway system to structure the road, rail, and airport networks, it will be possible to interconnect the interior of the continent with its mountains and coasts, thus promoting local economies.

To this end, the works to be carried out in the Amazon Hub are intended to: (i) reinforce the interconnection of a vast series of territories in the Hub with the Amazon basin through six waterways and a trans-continental train running across the southern and northern northeastern area of Brazil; (ii) improve the navigation conditions of the Amazon basin's rivers; (iii) strengthen the connection of scarcely populated Amazon territories with more economically developed areas of mountains and coasts; (iv) offer access to new ports and promote regional trade among economically complementary areas; (v) encourage rail transportation by enhancing its environmental benefits and energy efficiency; and (vi) design new routes as well as improve the existing ones.

PROJECT GROUPS OF THE AMAZON HUB

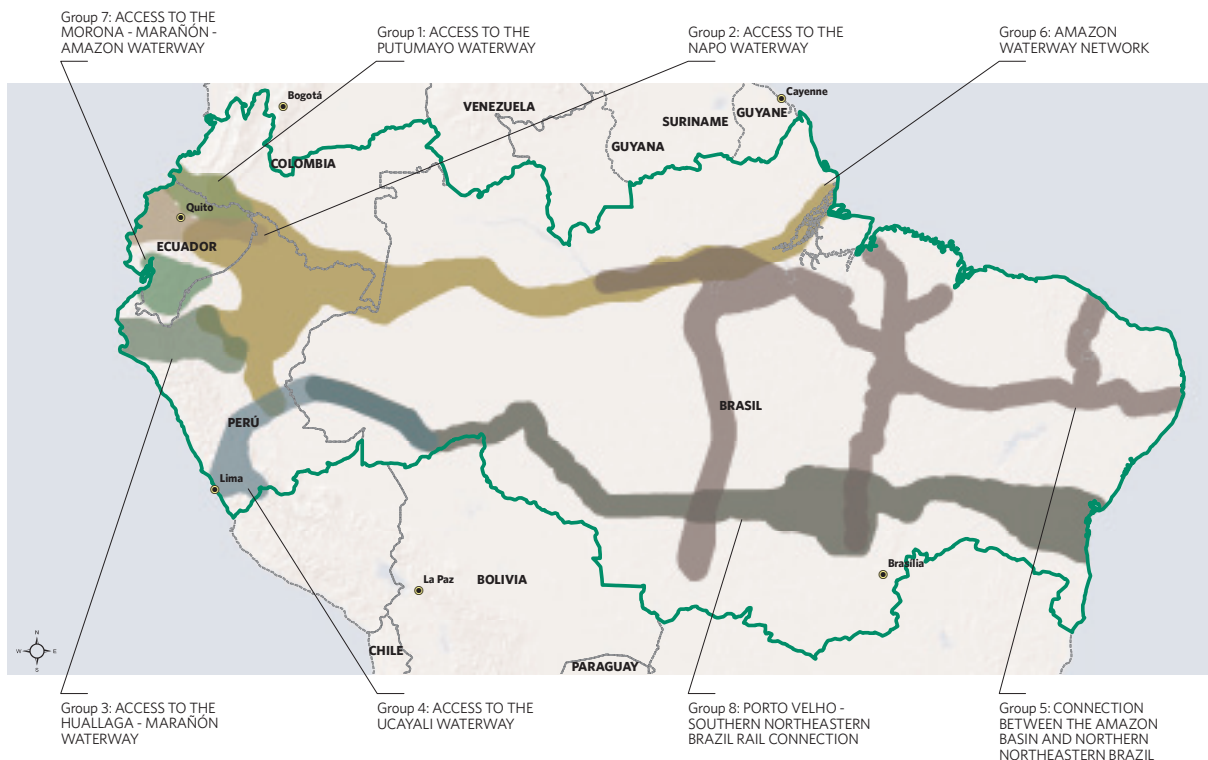


TABLE 1. PROJECT GROUPS OF THE AMAZON HUB *US\$ million

Group	Name	No. of Projects	Estimated Investment*
1	ACCESS TO THE PUTUMAYO WATERWAY	6	497
2	ACCESS TO THE NAPO WATERWAY	6	104.5
3	ACCESS TO THE HUALLAGA - MARAÑÓN WATERWAY	10	1,247.2
4	ACCESS TO THE UCAYALI WATERWAY	14	3,091.0
5	CONNECTION BETWEEN THE AMAZON BASIN AND NORTHERN NORTHEASTERN BRAZIL	12	15,197.0
6	AMAZON WATERWAY NETWORK	12	320.6
7	ACCESS TO THE MORONA - MARAÑÓN - AMAZON WATERWAY	5	414.7
8	PORTO VELHO - SOUTHERN NORTHEASTERN BRAZIL RAIL CONNECTION	7	6,150.0
TOTAL		72	27,022.8














There are 50 projects in the active portfolio of the Hub, amounting to an investment estimated at US\$20,129 million.

Of the eight Groups, six are designed to strengthen the Amazon basin waterway system, while the other two are intended to create a trans-continental railway in the southern and northern northeastern area of Brazil. This railway network and its associated works require 48% of the total investment in the Hub.

Of the 50 active projects, there is information available on the estimated completion date of 21. Thirteen projects are scheduled to be completed in the next four years (2016-2019), and it is worth mentioning that all of them are national in scope, mostly Peruvian (9) and Ecuadorian (3).

According to estimations, by the end of 2019, 33% of the investment amount estimated for the Hub's portfolio will have been made.

TABLE 2. PROJECTS TO BE COMPLETED IN THE NEXT FOUR YEARS *US\$ million






Code	Name	Group	Stage	Estimated Investment*	Countries	Estimated Completion Date
AMA45	MORONA FREIGHT TRANSFER PORT	7		5.0	EC	October 2016
AMA61	IMPLEMENTATION OF THE NEW COCA AIRPORT	2		14.9	EC	December 2016
AMA26	IMPROVEMENT OF TINGO MARÍA - PUCALLPA ROAD	4		438.4	PE	February 2017
AMA72	REHABILITATION AND IMPROVEMENT OF THE LIMA - CANTA - UNISH ROAD	4		308.1	PE	February 2017
AMA63	IIRSA CENTER, SECTION 2: RICARDO PALMA - LA OROYA - TURN OFF TO CERRO DE PASCO / LA OROYA - HUANCAYO	4		100.0	PE	July 2017
AMA32	LIMA - RICARDO PALMA EXPRESSWAY	4		200.0	PE	December 2017
AMA31	MODERNIZATION OF EL CALLAO PORT (NEW CONTAINER DOCK)	4		704.8	PE	March 2018
AMA64	IIRSA CENTER, SECTION 3: TURN OFF TO CERRO DE PASCO - TINGO MARÍA	4		115.6	PE	December 2018
AMA106	IMPROVEMENT OF NAVIGATION CONDITIONS ON THE NAPO RIVER (PERUVIAN SECTION)	6		5.8	PE	September 2019
AMA42	IMPROVEMENT OF NAVIGATION CONDITIONS ON THE NAPO RIVER (ECUADORIAN SECTION)	6		5.8	EC	September 2019
AMA104	CONSTRUCTION OF NEW PUCALLPA PORT	4		55.0	PE	December 2019
AMA30	PUCALLPA INTERMODAL LOGISTICS CENTER	4		15.0	PE	December 2019
AMA38	IMPROVEMENT OF NAVIGATION CONDITIONS ON THE PUTUMAYO - IÇÁ RIVER	6		15.0	BR - CO - EC - PE	December 2019

 PROFILING  PRE-EXECUTION  EXECUTION  COMPLETED

Of the first five projects—in order of estimated investment amount—, three are stages of the transcontinental railway, while one involves a sea port and the first in the list is a major road, both associated with such railway. These five projects account for 55% of the estimated investment in the active portfolio of the Hub.

Most of these five projects are at the execution stage, are predominantly financed by the private sector, and aim at integrating the Brazilian southern and northern northeastern region with the waterway system of the Amazon basin.

TABLE 3. THE FIVE ACTIVE PORTFOLIO PROJECTS WITH THE GREATEST ESTIMATED INVESTMENT *US\$ million

Code	Name	Group	Stage	Estimated Investment*	Countries	Type of Financing
AMA33	CUIABÁ - SANTARÉM ROAD (BR-163 / MT / PA)	5		6,500.0	BR	Public-private
AMA73	NEW CROSS-NORTHEASTERN RAILWAY PHASE I (SUAPE - SALGUEIRO / PECÉM - ELISEU MARTINS)	5		3,000.0	BR	Private
AMA89	WEST - EAST INTEGRATION RAILWAY - PHASE I (ILHÉUS - BARREIRAS)	8		2,000.0	BR	Public
AMA90	CENTER - WEST INTEGRATION RAILWAY - PHASE I (CAMPINORTE - LUCAS DO RIO VERDE)	8		2,000.0	BR	Private
AMA101	NEW PORT IN THE AREA OF ILHÉUS	8		1,400.0	BR	Private
TOTAL				14,900.0		

 PROFILING
  PRE-EXECUTION
  EXECUTION
  COMPLETED

The Hub features 22 completed projects, which required a total investment of US\$6,894 million, equivalent to almost 25% of the total Portfolio investment.

TABLE 4. COMPLETED PROJECTS IN THE HUB *US\$ million

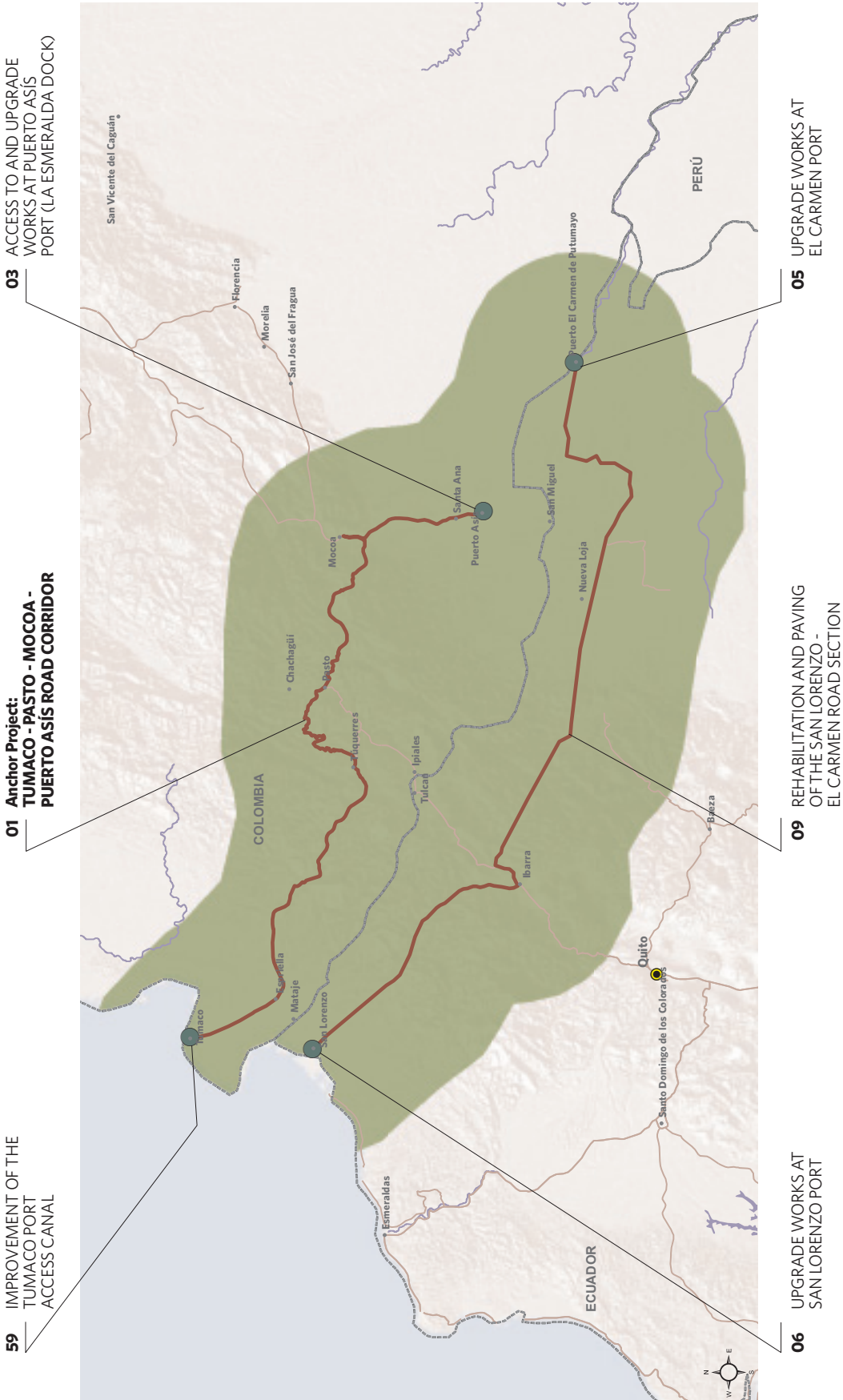
Code	Name	Estimated Investment*	Countries
AMA03	ACCESS TO AND UPGRADE WORKS AT PUERTO ASÍS PORT (LA ESMERALDA DOCK)	3.0	CO
AMA09	REHABILITATION AND PAVING OF THE SAN LORENZO - EL CARMEN ROAD SECTION	76.0	EC
AMA11	CONSTRUCTION OF A NEW AIRPORT IN TENA	54.6	EC
AMA16	TARAPOTO - YURIMAGUAS ROAD	231.7	PE
AMA22	BAYÓVAR PORT	70.0	PE
AMA24	PAITA PORT	176.7	PE
AMA25	PAITA - TARAPOTO ROAD	273.7	PE
AMA34	ENVIRONMENTAL AND TERRITORIAL MANAGEMENT PROGRAM (CUIABÁ - SANTARÉM ROUTE)	12.0	BR
AMA36	IMPROVEMENT OF NAVIGATION CONDITIONS IN THE SOLIMÕES - AMAZON RIVERS SYSTEM	8.0	BR
AMA39	IMPROVEMENT OF NAVIGATION CONDITIONS ON THE MORONA RIVER	5.2	EC - PE
AMA46	IMPROVEMENT OF THE GUAYAQUIL - EL TRIUNFO - LA TRONCAL - ZHUD - EL TAMBO - CAÑAR - AZOGUES - PAUTE - AMALUZA - MÉNDEZ ROAD, AND ENLARGEMENT AND IMPROVEMENT OF THE MÉNDEZ - PUERTO MORONA ROAD SECTION	140.0	EC
AMA47	IMPROVEMENT OF THE PUERTO BOLÍVAR - SANTA ROSA - BALSAS - CHAGUARPAMBA - LOJA - ZAMORA - YANTZAZA - EL PANGUI - GUALAQUIZA - GRAL. LEÓNIDAS PLAZA - MÉNDEZ ROAD SECTION	167.7	EC
AMA48	IMPROVEMENT OF THE PUERTO BOLÍVAR - PASAJE - SANTA ISABEL - GIRÓN - CUENCA - PAUTE - AMALUZA - MÉNDEZ - PUERTO MORONA ROAD SECTION	100.0	EC


TABLE 4. COMPLETED PROJECTS IN THE HUB (CONT.) *US\$ million

Code	Name	Estimated Investment*	Countries
AMA55	RIO BRANCO - CRUZEIRO DO SUL ROAD CONNECTION (BR-364 / AC)	573.0	BR
AMA66	EL CALLAO MULTI-PURPOSE NORTHERN TERMINAL	390.2	PE
AMA67	EL CALLAO MINERAL SHIPPING TERMINAL	113.2	PE
AMA70	LETICIA DOCK	3.3	CO
AMA71	PROVIDENCIA PORT	25.0	EC
AMA78	NORTH-SOUTH RAILWAY - PHASE II (AÇAILÂNDIA-PALMAS)	2,500.0	BR
AMA87	500-KV TRANSMISSION LINE (TUCURUÍ - MANAUS)	1,320.0	BR
AMA102	CONSTRUCTION OF NEW YURIMAGUAS PORT	50.3	PE
AMA105	NORTH-SOUTH RAILWAY - PHASE III (PALMAS-CAMPINORTE)	600.0	BR
22		6,893.6	

Among the projects already completed, three anchor projects stand out: Improvement of Navigation Conditions in the Solimões - Amazon Rivers System, which is vitally important as this section of the Amazon river flows to Manaus and receives the traffic from the waterway network; project Tarapoto - Yurimaguas Road, which offers access to one of the five waterways involved in the Portfolio projects; and Providencia Port, a highly efficient, high performing port for freight transportation on the left bank of the Napo river, in the province of Sucumbíos.

ACCESS TO THE PUTUMAYO WATERWAY





AMA GROUP 1

Strategic Function

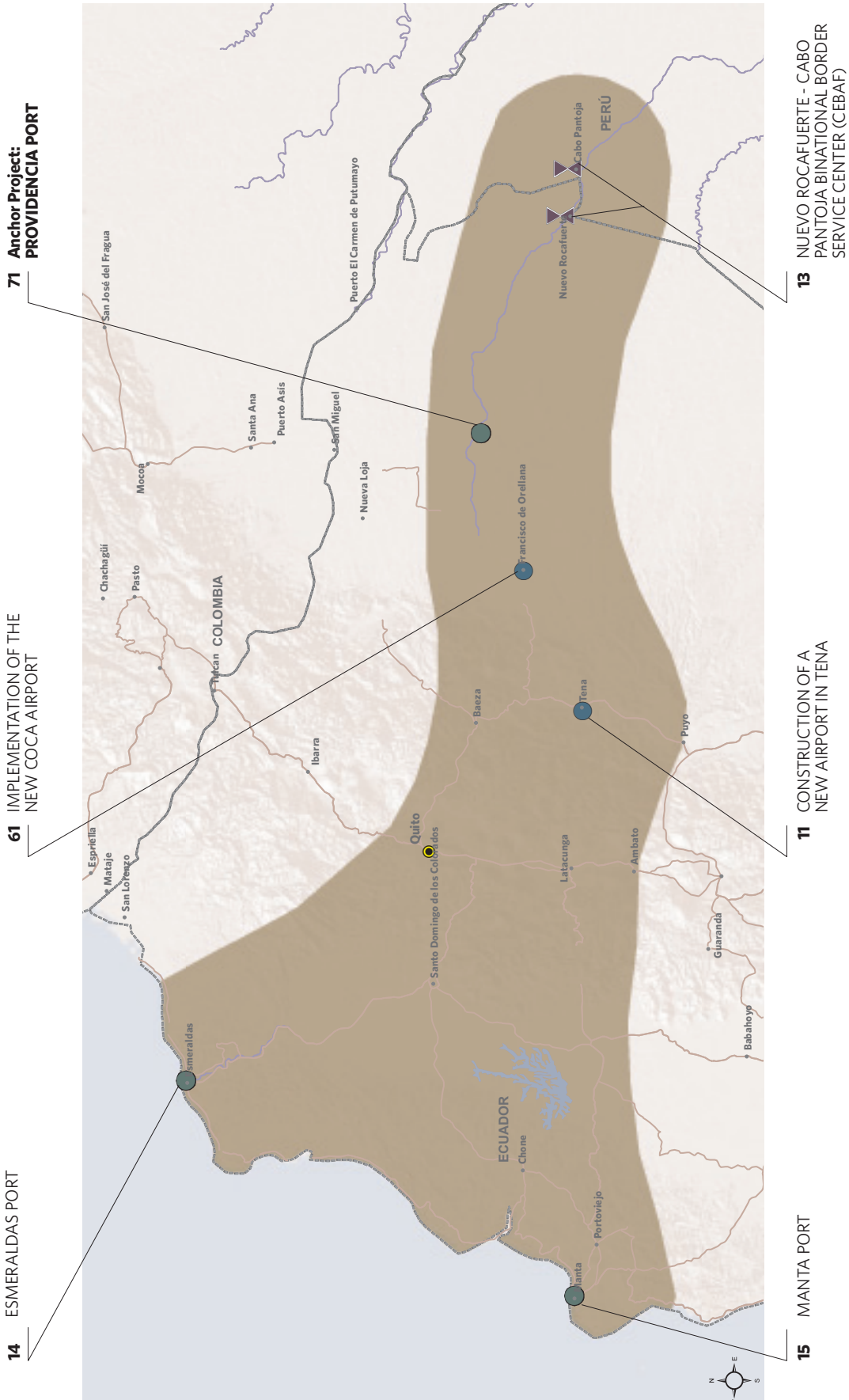
- Improve the logistics of national integration between production areas of the south of Colombia, department of Nariño, and the Amazon departments of Putumayo and Amazonas, and their integration with northern Ecuador (especially the province of Sucumbíos).
- Improve the logistics of integration with Brazil and Peru.
- Reinforce the interconnection of the continent's hinterlands with the Pacific Basin.

*US\$ million

Code	Name	Stage	Estimated Investment*	Countries
AMA01	TUMACO - PASTO - MOCOA - PUERTO ASÍS ROAD CORRIDOR		4048	CO
AMA03	ACCESS TO AND UPGRADE WORKS AT PUERTO ASÍS PORT (LA ESMERALDA DOCK)		3.0	CO
AMA05	UPGRADE WORKS AT EL CARMEN PORT PROFILING		3.0	EC
AMA06	UPGRADE WORKS AT SAN LORENZO PORT		6.0	EC
AMA09	REHABILITATION AND PAVING OF THE SAN LORENZO - EL CARMEN ROAD SECTION		76.0	EC
AMA59	IMPROVEMENT OF THE TUMACO PORT ACCESS CANAL		5.0	CO
6			497.8	

PROFILING
 PRE-EXECUTION
 EXECUTION
 COMPLETED

ACCESS TO THE NAPO WATERWAY





AMA GROUP 2

Strategic Function

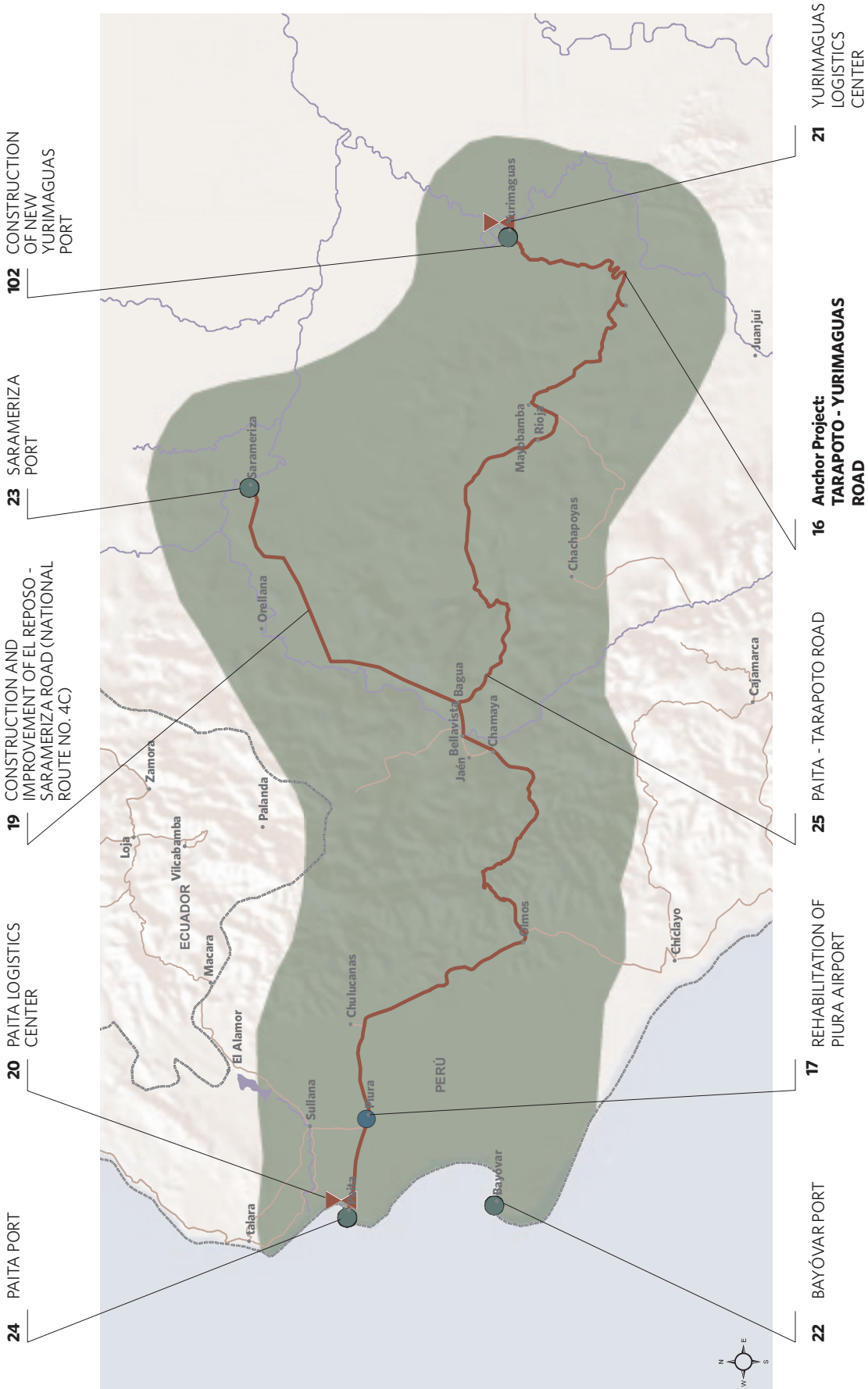
- Strengthen national Ecuadorian integration in the Amazon area (provinces of Napo and Orellana), with the sierras and coast in the central and northern part of the country. In addition, consolidate the opportunity of having an Ecuadorian river for Amazon international integration towards Manaus.
- Reinforce the interconnection of the continent's hinterlands with the Pacific Basin.

*US\$ million

Code	Name	Stage	Estimated Investment*	Countries
AMA11	CONSTRUCTION OF A NEW AIRPORT IN TENA		54.6	EC
AMA13	NUEVO ROCAFUERTE - CABO PANTOJA BINATIONAL BORDER SERVICE CENTER (CEBAF)		10.0	EC - PE
AMA14	ESMERALDAS PORT		0.0	EC
AMA15	MANTA PORT		0.0	EC
AMA61	IMPLEMENTATION OF THE NEW COCA AIRPORT		14.9	EC
AMA71	PROVIDENCIA PORT		25.0	EC
6			104.5	

PROFILING
 PRE-EXECUTION
 EXECUTION
 COMPLETED

ACCESS TO THE HUALLAGA - MARAÑÓN WATERWAY





AMA GROUP 3

Strategic Function

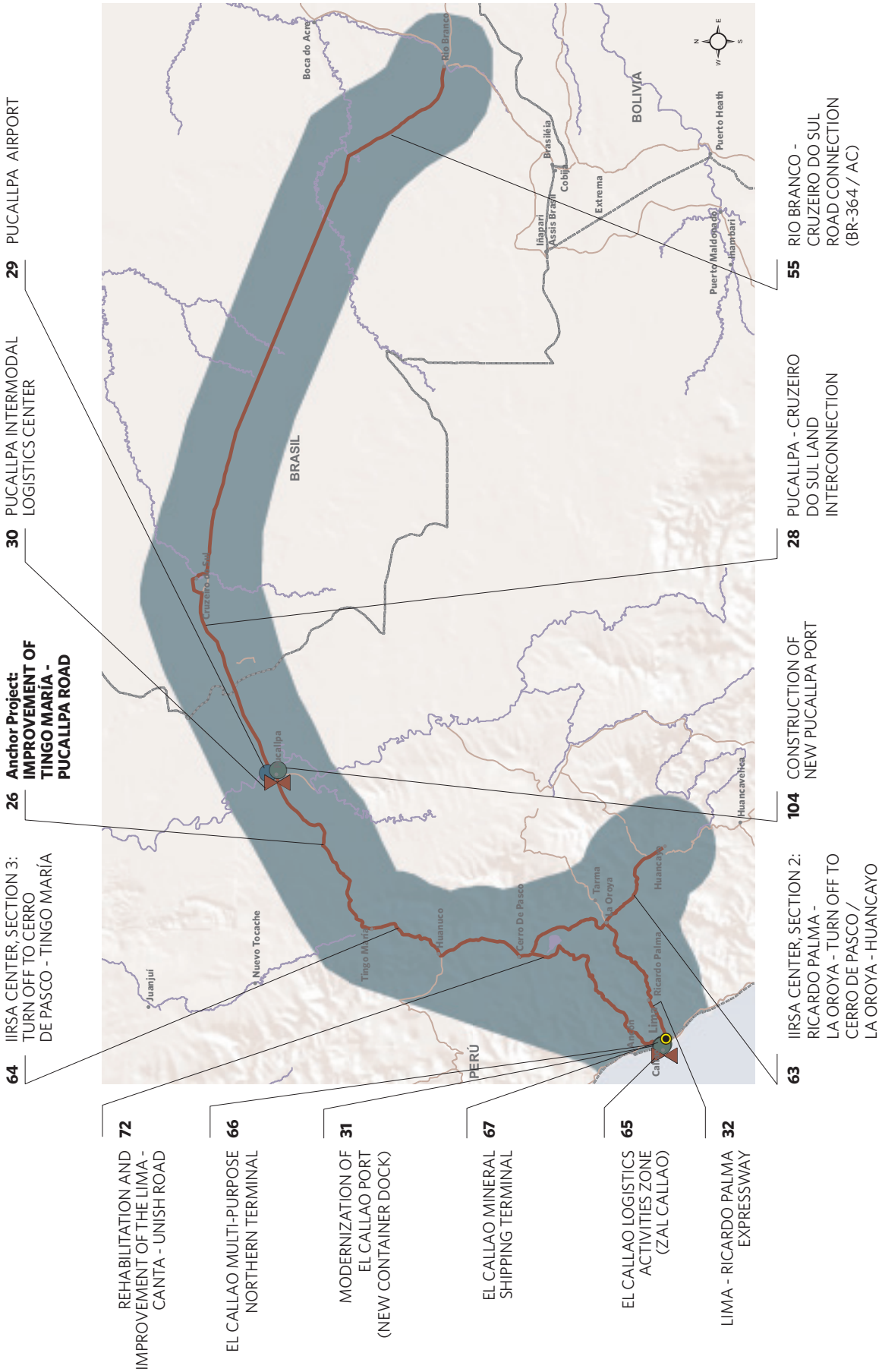
- Improve the navigation conditions on and access logistics to the Huallaga and Marañón waterways so as to consolidate the corridor as a factor for integrating the Sierra and the Amazonia in Peru and its complementarity with the states of Amazonas and Pará, Brazil.
- Articulate the south and southeastern regions of Ecuador with the Peruvian Amazon to become the interconnection road with the Atlantic Basin.

*US\$ million

Code	Name	Stage	Estimated Investment*	Countries
AMA16	TARAPOTO - YURIMAGUAS ROAD		231.7	PE
AMA17	REHABILITATION OF PIURA AIRPORT		7.2	PE
AMA19	CONSTRUCTION AND IMPROVEMENT OF EL REPOSO - SARAMEERZA ROAD (NATIONAL ROUTE No. 4C)		371.5	PE
AMA20	PAITA LOGISTICS CENTER		47.6	PE
AMA21	YURIMAGUAS LOGISTICS CENTER		15.0	PE
AMA22	BAYÓVAR PORT		70.0	PE
AMA23	SARAMEERZA PORT		3.5	PE
AMA24	PAITA PORT		176.7	PE
AMA25	PAITA - TARAPOTO ROAD		273.7	PE
AMA102	CONSTRUCTION OF NEW YURIMAGUAS PORT		50.3	PE
10			1,247.2	

PROFILING
 PRE-EXECUTION
 EXECUTION
 COMPLETED

ACCESS TO THE UCAYALI WATERWAY





AMA GROUP 4

Strategic Function

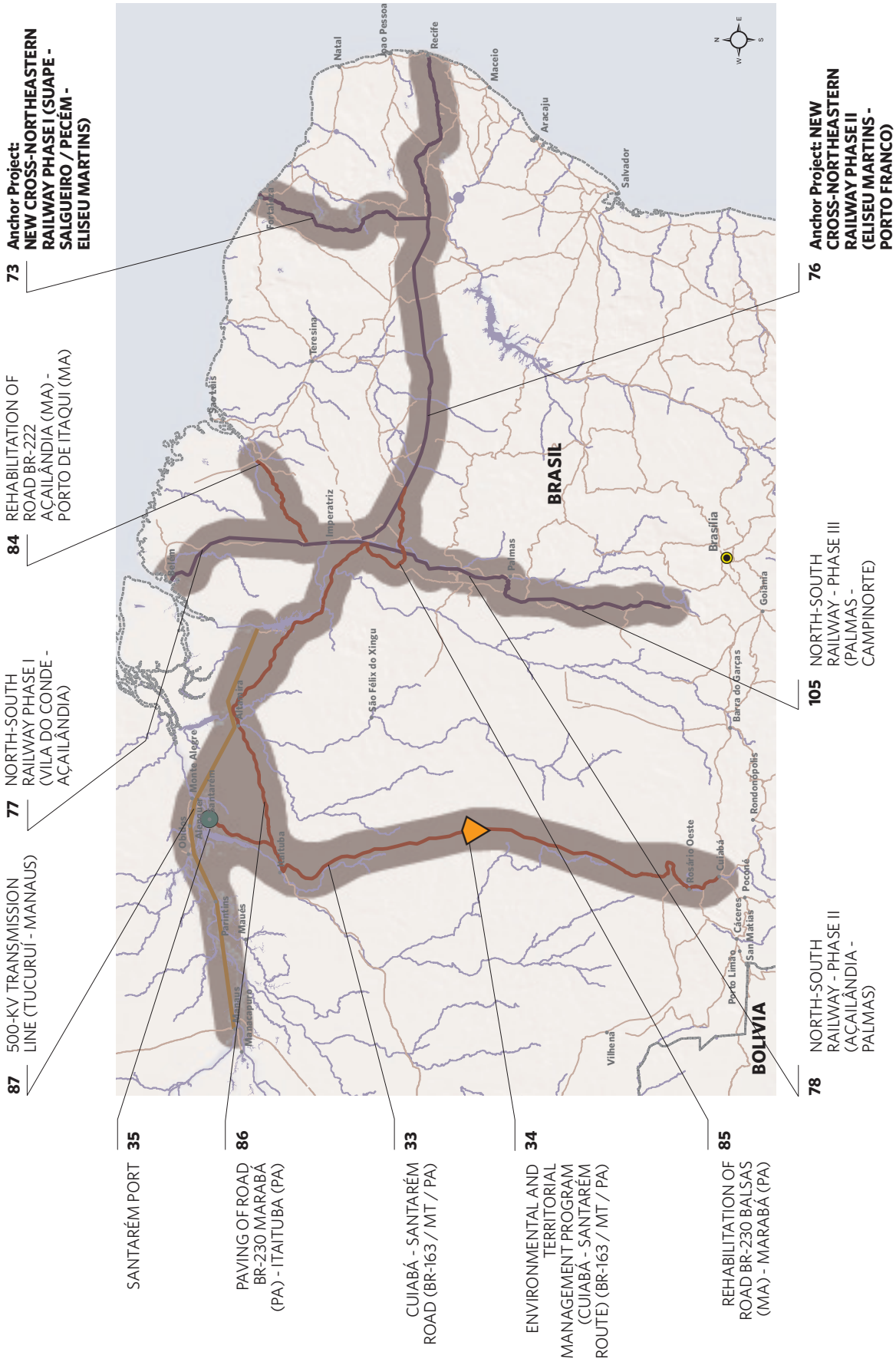
- Consolidate the Peruvian coast, sierra, and rainforest association and integration, and interconnect the main urban/industrial center and the central area of the country with the states of Amazonas and Pará, Brazil.
- Reinforce the interconnection of the central eastern area of the continent with the Pacific and Atlantic basins.

*US\$ million

Code	Name	Stage	Estimated Investment*	Countries
AMA26	IMPROVEMENT OF TINGO MARÍA - PUCALLPA ROAD		438.4	PE
AMA28	PUCALLPA - CRUZEIRO DO SUL LAND INTERCONNECTION		0.0	BR - PE
AMA29	PUCALLPA AIRPORT		9.4	PE
AMA30	PUCALLPA INTERMODAL LOGISTICS CENTER		15.0	PE
AMA31	MODERNIZATION OF EL CALLAO PORT (NEW CONTAINER DOCK)		704.8	PE
AMA32	LIMA - RICARDO PALMA EXPRESSWAY		200.0	PE
AMA55	RIO BRANCO - CRUZEIRO DO SUL ROAD CONNECTION (BR-364 / AC)		573.0	BR
AMA63	IIRSA CENTER, SECTION 2: RICARDO PALMA - LA OROYA - TURN OFF TO CERRO DE PASCO / LA OROYA - HUANCAYO		100.0	PE
AMA64	IIRSA CENTER, SECTION 3: TURN OFF TO CERRO DE PASCO - TINGO MARÍA		115.6	PE
AMA65	EL CALLAO LOGISTICS ACTIVITIES ZONE (ZAL CALLAO)		68.3	PE
AMA66	EL CALLAO MULTI-PURPOSE NORTHERN TERMINAL		390.2	PE
AMA67	EL CALLAO MINERAL SHIPPING TERMINAL		113.2	PE
AMA72	REHABILITATION AND IMPROVEMENT OF THE LIMA - CANTA - UNISH ROAD		308.1	PE
AMA104	CONSTRUCTION OF NEW PUCALLPA PORT		55.0	PE
14			3,091.0	

PROFILING
 PRE-EXECUTION
 EXECUTION
 COMPLETED

CONNECTION BETWEEN THE AMAZON BASIN AND NORTHERN NORTHEASTERN BRAZIL





AMA GROUP 5

Strategic Function

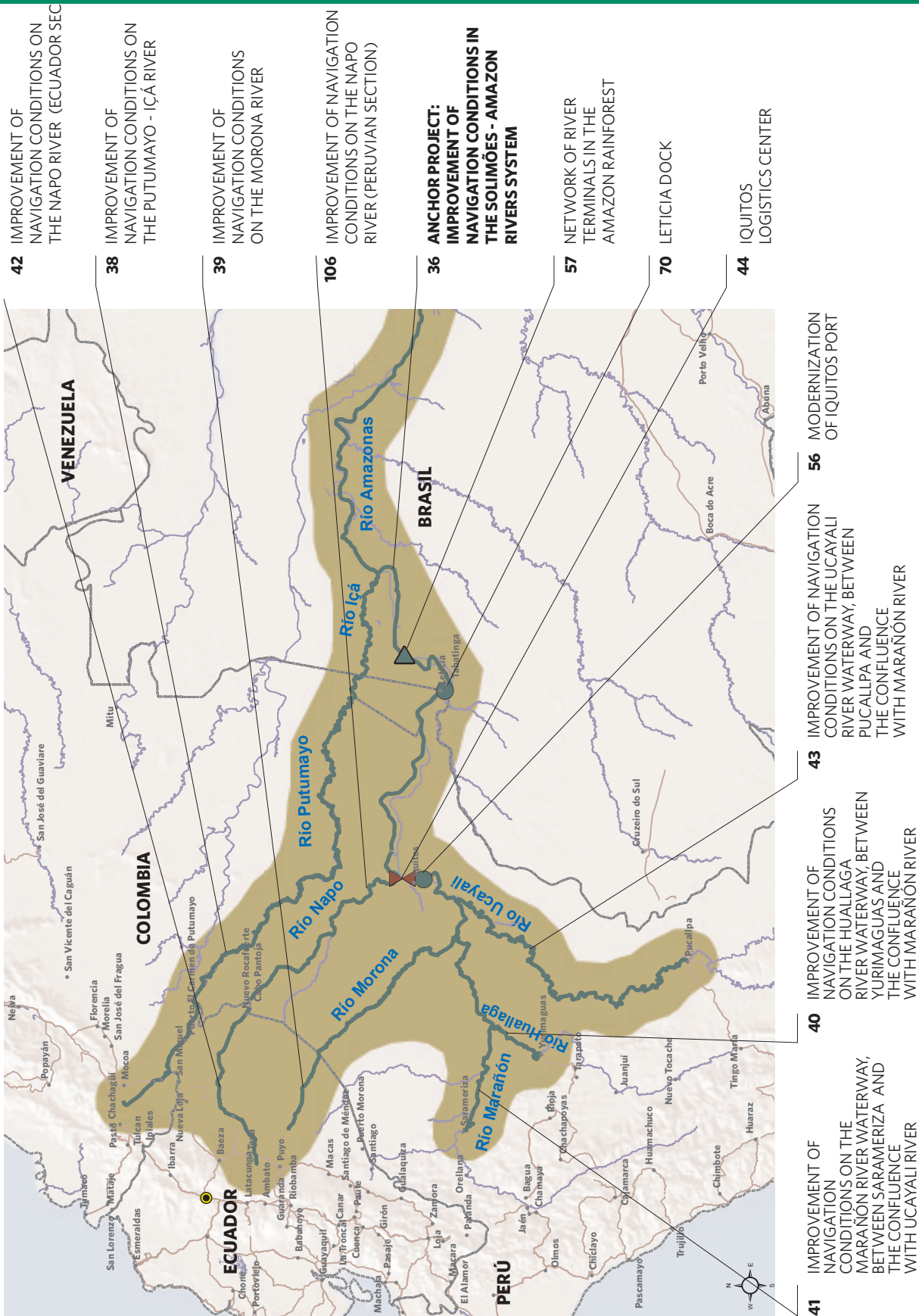
- Enlarge the connection and transportation alternatives between central-western and northern northeastern Brazil, and the access to new ports and markets in the region.
- Reduce the logistics costs associated with the supply of raw materials and the distribution of products to facilitate the integration between northern northeastern Brazil and the Amazon basin.
- Provide an efficient transportation infrastructure to attract productive activities to the region.
- Incorporate Manaus to the Brazilian interconnected electric system, with positive impacts on the economy and the environment.

*US\$ million

Code	Name	Stage	Estimated Investment*	Countries
AMA33	CUIABÁ - SANTARÉM ROAD (BR-163 / MT / PA)		6,500.0	BR
AMA34	ENVIRONMENTAL AND TERRITORIAL MANAGEMENT PROGRAM (CUIABÁ - SANTARÉM ROUTE) (BR-163 / MT / PA)		12.0	BR
AMA35	SANTARÉM PORT		85.0	BR
AMA73	NEW CROSS-NORTHEASTERN RAILWAY PHASE I (SUAPE - SALGUEIRO / PECÉM - ELISEU MARTINS)		3,000.0	BR
AMA76	NEW CROSS-NORTHEASTERN RAILWAY PHASE II (ELISEU MARTINS - PORTO FRANCO)		0.0	BR
AMA77	NORTH-SOUTH RAILWAY PHASE I (VILA DO CONDE - AÇAILÂNDIA)		0.0	BR
AMA78	NORTH-SOUTH RAILWAY - PHASE II (AÇAILÂNDIA-PALMAS)		2,500.0	BR
AMA84	REHABILITATION OF ROAD BR-222 AÇAILÂNDIA (MA) - PORTO DE ITAQUI (MA)		180.0	BR
AMA85	REHABILITATION OF ROAD BR-230 BALSAS (MA) - MARABÁ (PA)		0.0	BR
AMA86	PAVING OF ROAD BR-230 MARABÁ (PA) - ITAITUBA (PA)		1,000.0	BR
AMA87	500-KV TRANSMISSION LINE (TUCURUÍ - MANAUS)		1,320.0	BR
AMA105	NORTH-SOUTH RAILWAY - PHASE III (PALMAS-CAMPINORTE)		600.0	BR
12			15,197.0	

PROFILING
 PRE-EXECUTION
 EXECUTION
 COMPLETED

AMAZON WATERWAY NETWORK





AMA GROUP 6

Strategic Function

- Improve the navigation condition of the Amazon basin's rivers in order to promote the sustainable integration and development of the region in the economic, social and environmental dimensions and generate long distance transport flows.

*US\$ million

Code	Name	Stage	Estimated Investment*	Countries
AMA36	IMPROVEMENT OF NAVIGATION CONDITIONS IN THE SOLIMÕES - AMAZON RIVERS SYSTEM		8.0	BR
AMA38	IMPROVEMENT OF NAVIGATION CONDITIONS ON THE PUTUMAYO - IÇÁ RIVER		15.0	BR - CO - EC - PE
AMA39	IMPROVEMENT OF NAVIGATION CONDITIONS ON THE MORONA RIVER COMPLETED		5.2	EC - PE
AMA40	IMPROVEMENT OF NAVIGATION CONDITIONS ON THE HUALLAGA RIVER WATERWAY, BETWEEN YURIMAGUAS AND THE CONFLUENCE WITH MARAÑÓN RIVER		33.0	PE
AMA41	IMPROVEMENT OF NAVIGATION CONDITIONS ON THE MARAÑÓN RIVER WATERWAY, BETWEEN SARAMERIZA AND THE CONFLUENCE WITH UCAYALI RIVER		11.0	PE
AMA42	IMPROVEMENT OF NAVIGATION CONDITIONS ON THE NAPO RIVER (ECUADORIAN SECTION)		5.8	EC
AMA43	IMPROVEMENT OF NAVIGATION CONDITIONS ON THE UCAYALI RIVER WATERWAY, BETWEEN PUCALLPA AND THE CONFLUENCE WITH MARAÑÓN RIVER		19.0	PE
AMA44	IQUITOS LOGISTICS CENTER		15.0	PE
AMA56	MODERNIZATION OF IQUITOS PORT		39.5	PE
AMA57	NETWORK OF RIVER TERMINALS IN THE AMAZON RAINFOREST		160.0	BR
AMA70	LETICIA DOCK		3.3	CO
AMA106	IMPROVEMENT OF NAVIGATION CONDITIONS ON THE NAPO RIVER (PERUVIAN SECTION)		5.8	PE
12			320.6	

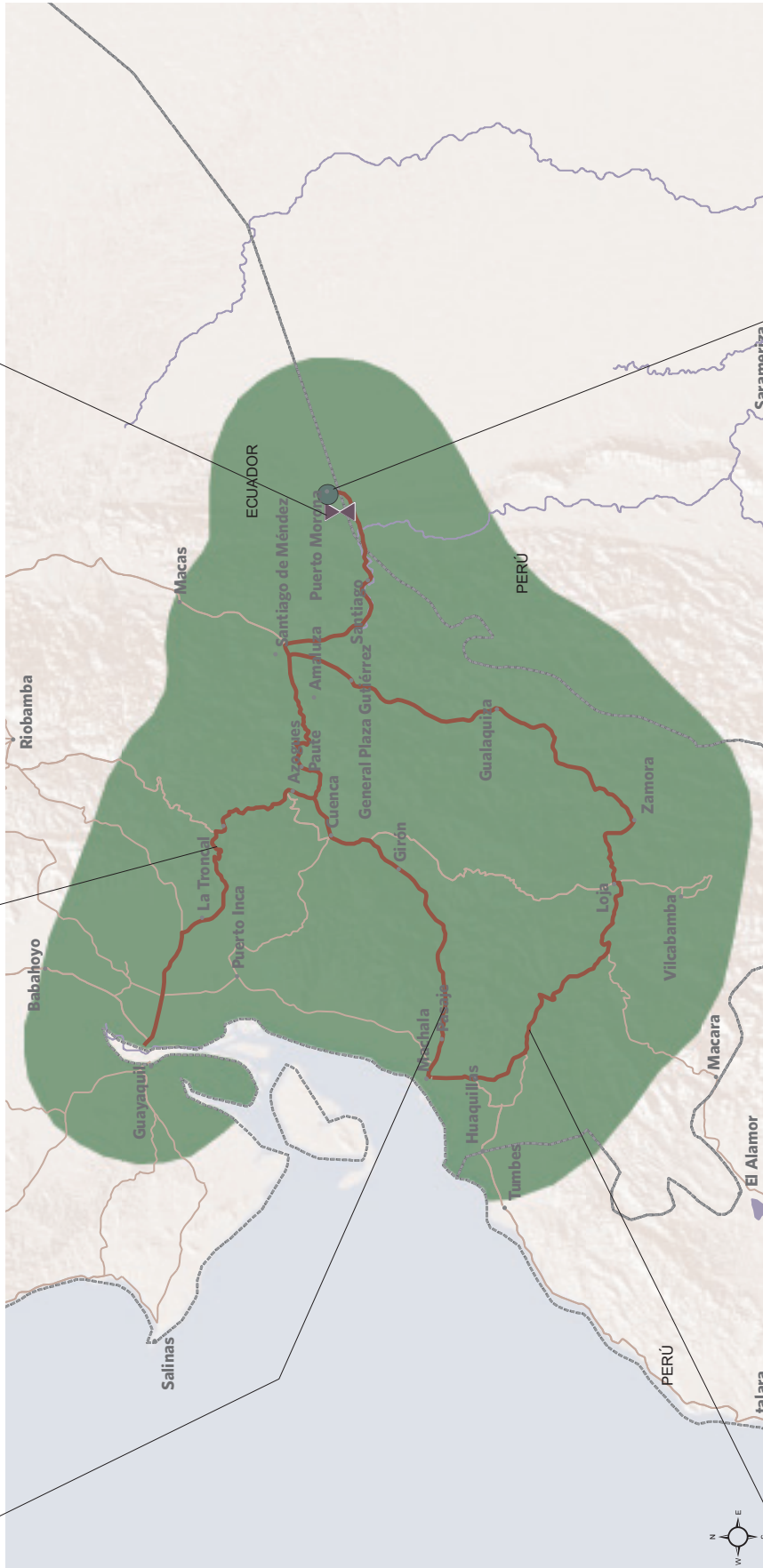
PROFILING
 PRE-EXECUTION
 EXECUTION
 COMPLETED

ACCESS TO THE MORONA - MARAÑÓN - AMAZON WATERWAY

54 BORDER CROSSING BY THE MORONA RIVER

46 IMPROVEMENT OF THE GUAYAQUIL - EL TRIUNFO - LA TRONCAL - ZHUD - EL TAMBOCANAR - AZOGUES - PAUTE - AMALUZA - MENEZ ROAD, AND ENLARGEMENT AND IMPROVEMENT OF THE MENEZ - PUERTO MORONA ROAD SECTION

48 IMPROVEMENT OF THE PUERTO BOLIVAR - PASAJE - SANTA ISABEL - GIRÓN - CUENCA - PAUTE - AMALUZA - MENEZ - PUERTO MORONA ROAD SECTION



45 ANCHOR PROJECT: MORONA FREIGHT TRANSFER PORT

47 IMPROVEMENT OF THE PUERTO BOLIVAR - SANTA ROSA - BALSAS - CHAGUARPAMBA - LOJA - ZAMORA - YANTAZA - EL PANGUI - GUALAQUIZA - GRAL. LEÓNIDAS PLAZA - MENEZ ROAD SECTION



AMA GROUP 7

Strategic Function

- Improve the logistics of integration among the southern provinces of Ecuador and the northeastern portion of Peru with the state of Amazonas in Brazil through a river route towards Manaus.

*US\$ million

Code	Name	Stage	Estimated Investment*	Countries
AMA45	MORONA FREIGHT TRANSFER PORT		5.0	EC
AMA46	IMPROVEMENT OF THE GUAYAQUIL - EL TRIUNFO - LA TRONCAL - ZHUD - EL TAMBO - CAÑAR - AZOGUES - PAUTE - AMALUZA - MÉNDEZ ROAD, AND ENLARGEMENT AND IMPROVEMENT OF THE MÉNDEZ - PUERTO MORONA ROAD SECTION		140.0	EC
AMA47	IMPROVEMENT OF THE PUERTO BOLÍVAR - SANTA ROSA - BALSAS - CHAGUARPAMBA - LOJA - ZAMORA - YANTAZA - EL PANGUI - GUALAQUIZA - GRAL. LEÓNIDAS PLAZA - MÉNDEZ ROAD SECTION		167.7	EC
AMA48	IMPROVEMENT OF THE PUERTO BOLÍVAR - PASAJE - SANTA ISABEL - GIRÓN - CUENCA - PAUTE - AMALUZA - MÉNDEZ - PUERTO MORONA ROAD SECTION		100.0	EC
AMA54	BORDER CROSSING BY THE MORONA RIVER		2.0	EC - PE
5			414.7	

PROFILING
 PRE-EXECUTION
 EXECUTION
 COMPLETED

PORTO VELHO - SOUTHERN NORTHEASTERN BRAZIL RAIL CONNECTION DE BRASIL

98 ENLARGEMENT OF ROAD BR-242 SÃO ROQUE DO PARAGUACU (BA) - SORRISO (MT)

101 NEW PORT IN THE AREA OF ILHEUS

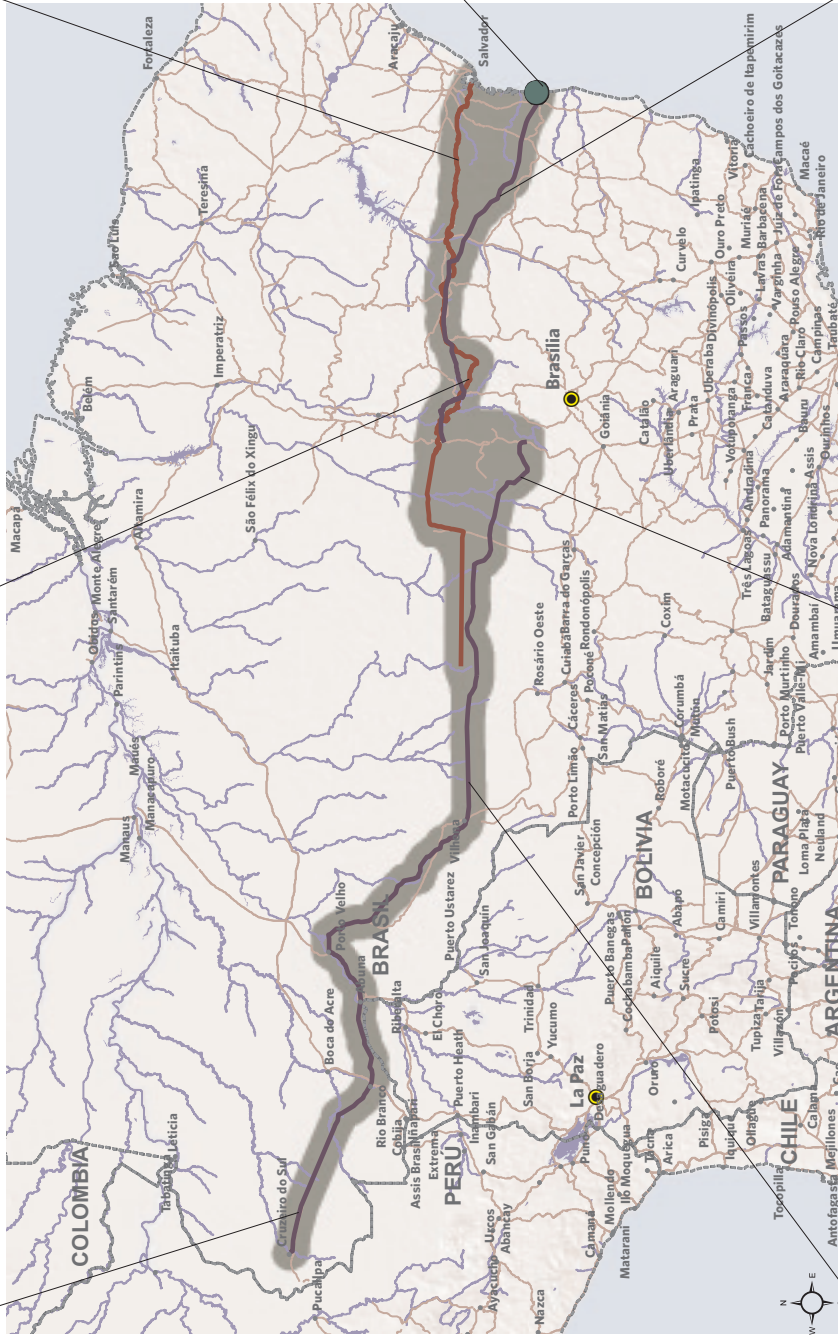
89 Anchor Project: WEST - EAST INTEGRATION RAILWAY - PHASE I (ILHEUS - BARREIRAS)

88 Anchor Project: WEST - EAST INTEGRATION RAILWAY - PHASE II (BARREIRAS - FIGUEIRÓPOLIS)

90 CENTER - WEST INTEGRATION RAILWAY - PHASE I (CAMPINORTE - LUCAS DO RIO VERDE)

68 CENTER - WEST INTEGRATION RAILWAY - PHASE III (PORTO VELHO - RIO BRANCO - CRUZEIRO DO SUL)

91 CENTER - WEST INTEGRATION RAILWAY - PHASE II (LUCAS DO RIO VERDE - PORTO VELHO)





AMA GROUP 8

Strategic Function

- Reduce the logistics costs associated with the supply of raw materials and the distribution of products, and facilitate access to the regional markets and the ports on the Atlantic and Pacific.
- Encourage railway transportation to enhance environmental and energy efficiency benefits.
- Create better conditions for intra-regional trade.

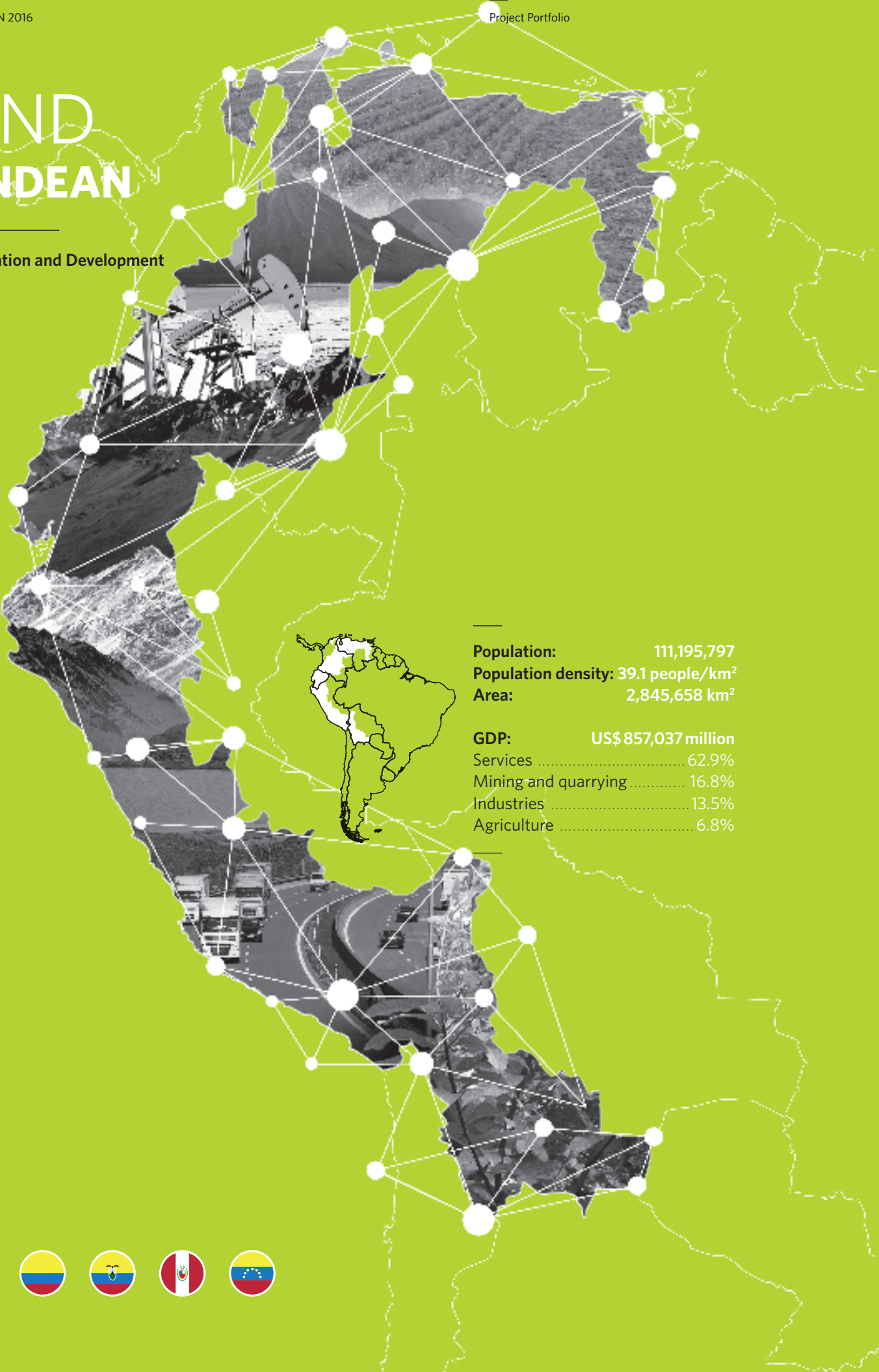
*US\$ million

Code	Name	Stage	Estimated Investment*	Countries
AMA68	CENTER-WEST INTEGRATION RAILWAY - PHASE III (PORTO VELHO - RIO BRANCO - CRUZEIRO DO SUL)		0.0	BR
AMA88	WEST - EAST INTEGRATION RAILWAY - PHASE II (BARREIRAS - FIGUEIRÓPOLIS)		550.0	BR
AMA89	WEST - EAST INTEGRATION RAILWAY - PHASE I (ILHÉUS - BARREIRAS)		2,000.0	BR
AMA90	CENTER - WEST INTEGRATION RAILWAY - PHASE I (CAMPINORTE - LUCAS DO RIO VERDE)		2,000.0	BR
AMA91	CENTER-WEST INTEGRATION RAILWAY - PHASE II (LUCAS DO RIO VERDE- PORTO VELHO)		0.0	BR
AMA98	ENLARGEMENT OF ROAD BR-242 SÃO ROQUE DO PARAGUAÇU (BA) - SORRISO (MT)		200.0	BR
AMA101	NEW PORT IN THE AREA OF ILHÉUS		1,400.0	BR
7			6,150.0	

PROFILING
 PRE-EXECUTION
 EXECUTION
 COMPLETED

AND ANDEAN

Integration and Development
Hub



Population: 111,195,797
Population density: 39.1 people/km²
Area: 2,845,658 km²

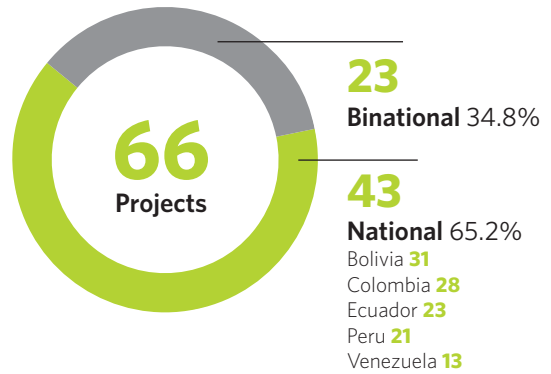
GDP: US\$ 857,037 million
Services 62.9%
Mining and quarrying 16.8%
Industries 13.5%
Agriculture 6.8%



Estimated Investment

US\$ million

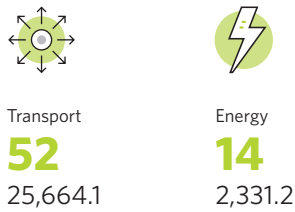
27,995.3



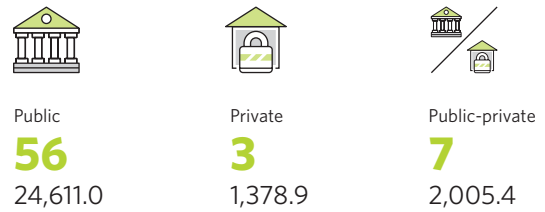
Projects by Stage



Projects by Sector

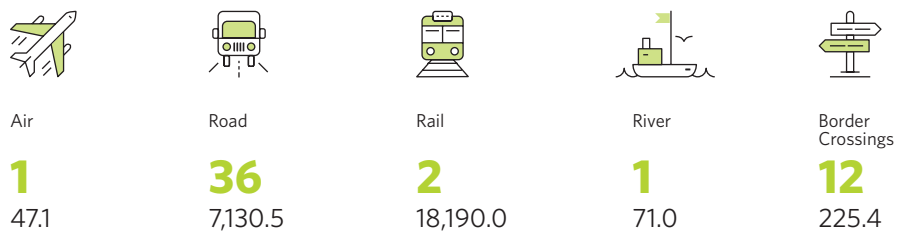


Projects by Type of Financing

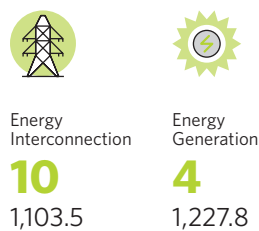


Projects by Subsector

Transport



Energy



ANDEAN

Presentation of the Hub

The Andean Hub⁽¹⁾ extends from the coasts of the Caribbean Sea in Venezuela and Colombia to the southern border of Bolivia, with Argentina, including the Andes (in Colombia, Ecuador, Peru, Bolivia, and all the territory of Venezuela, with the exception of the state of Amazonas), as well as the Pacific coasts of Colombia, Ecuador and Peru.

AREA OF INFLUENCE OF THE ANDEAN HUB



¹ See "Caracterización Socio-Económica y Ambiental del Eje del Andino," COSIPLAN-IIRSA, 2014, at <http://www.iirsa.org/andino.asp>

The Hub accounts for 16% of the South American territory (2,845,658 km²) and 28% of its population (111,195,797 inhabitants), i.e. it is the third more densely populated Hub after the MERCOSUR-Chile and the Amazon Hubs. Furthermore, it has 21% of the GDP of the region (US\$857,037 million)⁽²⁾ and hosts 80% of the economies of the countries involved in it.

The Hub's infrastructure is determined by the presence of the Andes, which gives rise to two distinct territorial spaces.

On the one hand, there is the western side of the Andes along the Pacific coast and the Caribbean sea, which has an infrastructure network made up of 30 sea ports, and a great number of roads connecting them with one another and with the interior of the countries. The national capital cities, other important cities and centers of economic activity are located here. On the other hand, there is the eastern side of the Andes, which extends up to the Amazon basin and, in general, features administrative units with limited infrastructure in terms of land connectivity as well as a considerably lower population density and economic development.

The matrix of pre-existing and planned connectivity infrastructure focuses mainly on the road and, to a lesser extent, on the rail subsectors.

Although river transportation is present in the Hub, it is not significant enough, as the tributaries of the Amazon basin are at their source and, therefore, are not deep enough for vessel draft. Thus, when the river depth so allows it, deeper draft vessels that navigate regularly are in the area of influence of the Amazon Hub.

The Hub is also characterized by the presence of a great number of ports distributed along the Pacific and Atlantic coasts, which determines that the transportation of goods is mainly carried out by sea given its lower costs and better operational facilities.

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, and the Marginal Highway of the Jungle. These longitudinal corridors are crossed by various transversal corridors (roads and rivers) that connect them with the Guianese Shield (GUY), Amazon (AMA), Peru-Brazil-Bolivia (PBB) and Central Interoceanic (IOC) Hubs.

The entire **road network** of the countries that make up the Hub covers 443,588 km, 16% of which are paved (about 69,986 km). The **railway network** totals 11,216 km, approximately 75% of which are active lines. The **sea port system** of the Andean Hub features 30 major ports, most of them located on the Pacific ocean, except for those on the Caribbean coasts of Venezuela and Colombia. Most **river transportation** activities in the region are carried out along the Orinoco, Magdalena and Amazon basins and their tributaries. Concerning **electricity generation**, as of 2012 the countries involved in the Hub had a joint installed power of about 53,747 MW.

The presence and diversity of **indigenous communities** is significant in the Hub, as there are approximately 270 indigenous peoples in all the countries that make it up, reaching a total population of about 7,000,000 inhabitants. This is very important in many subnational

² At 2012 current prices.

administrative units, where indigenous population accounts for more than 70% of the total.

Regarding the **protected areas** in the Hub, there are more than 600 administrative units with some degree of environmental protection, totaling approximately 774,000 km², which accounts for 27% of the Hub's total area. Many of these administrative units are inhabited by native communities and are characterized by their high biological diversity, a low degree of human intervention and the presence of high flora and fauna endemism rates.

Of the **natural hazards** affecting the Hub, four global and/or regional hazards have been considered, namely: earthquakes, volcanoes, tsunamis and floods of large basins. In addition, in the Cordilleran areas, a localized though frequent and damaging hazard are landslides.

The countries involved in the Andean Hub plan investments for almost US\$28 billion in 66 physical integration projects. This Hub ranks third in terms of estimated investment.

Ecuador contributes almost 95% of its GDP to the Hub, and Peru almost 90%, Venezuela approximately 80%, Colombia 76% and, finally, Bolivia 54%. In absolute terms, Venezuela and Colombia contribute 35% and 33%, respectively, to the Hub's aggregate GDP; Peru accounts for 21%, while Ecuador and Bolivia for only 9% and 2%, respectively.

A noteworthy trend in the Hub's global economic performance is its growth rate in the 2008-2012 period, which reached an average of 4%.

The Hub shares some regions of its area of influence with other six Hubs: the Amazon (AMA), the Guianese Shield (GUY), the Peru-Brazil-Bolivia (PBB), the Central Interoceanic (IOC), the Paraguay-Paraná Waterway (HPP) and the Capricorn (CAP) Hubs.

ANDEAN

Project Portfolio

The projects of this Hub are intended to: (i) create and improve road corridors to enhance regional trade and tourism as well as incorporate new regions to international trade, for example, through a bioceanic corridor; (ii) improve the operation of the border crossings between Ecuador, Colombia and Venezuela that create bottlenecks to the traffic of goods and services; (iii) integrate the energy systems to promote the development of high value-added sectors as well as the development of populations in border areas; (iv) eliminate deficits in telephone coverage and allow the expansion of value-added services (e-government, distance learning, remote health care, and so on) as well as incorporate urban and rural populated areas that still lack these services.

PROJECT GROUPS OF THE ANDEAN HUB

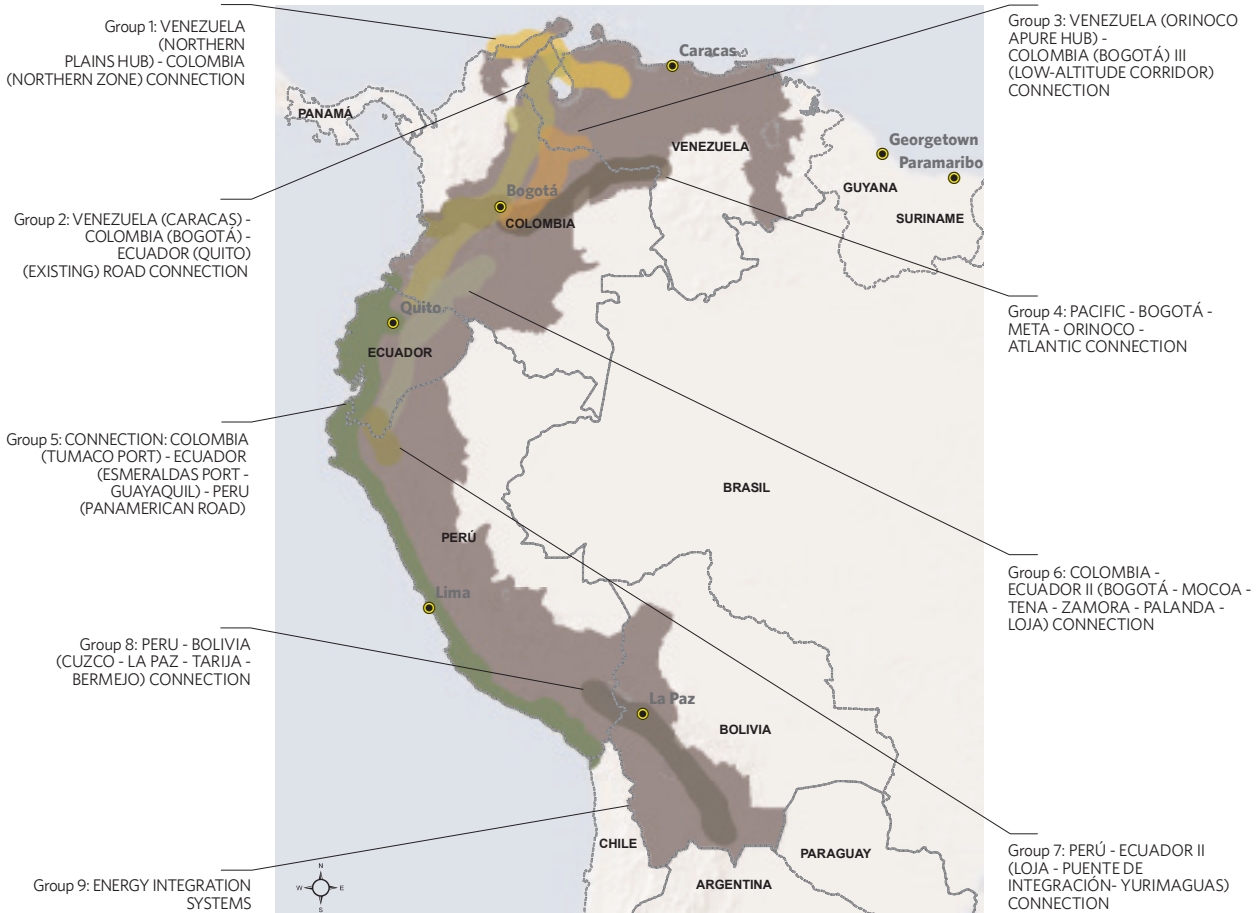


TABLE 1. PROJECT GROUPS OF THE ANDEAN HUB⁽¹⁾ *US\$ million

Group	Name	No. of Projects	Estimated Investment*
1	VENEZUELA (NORTHERN PLAINS HUB) - COLOMBIA (NORTHERN ZONE) CONNECTION	3	2.0
2	VENEZUELA (CARACAS) - COLOMBIA (BOGOTÁ) - ECUADOR (QUITO) (EXISTING) ROAD CONNECTION	11	3,183.0
3	VENEZUELA (ORINOCO APURE HUB) - COLOMBIA (BOGOTÁ) III (LOW-ALTITUDE CORRIDOR) CONNECTION	5	24.2
4	PACIFIC - BOGOTÁ - META - ORINOCO - ATLANTIC CONNECTION	4	2,048.0
5	CONNECTION: COLOMBIA (TUMACO PORT) - ECUADOR (ESMERALDAS PORT - GUAYAQUIL) - PERU (PANAMERICAN ROAD)	20	20,637.0
6	COLOMBIA - ECUADOR II (BOGOTÁ - MOCOA - TENA - ZAMORA - PALANDA - LOJA) CONNECTION	5	496.4
7	PERU - ECUADOR II (LOJA - PUENTE DE INTEGRACIÓN - YURIMAGUAS) CONNECTION	2	146.7
8	PERU - BOLIVIA (CUSCO - LA PAZ - TARIJA - BERMEJO) CONNECTION	4	1,079.6
9	ENERGY INTEGRATION SYSTEMS	13	2,328.4
TOTAL		66	27,995.3

(1) The Bogotá - Buenaventura Road Corridor (AND07) is a hinge project belonging to both Group 2 and Group 4 of the Andean Hub; therefore, its amount is included only once in the list. Furthermore, investments in project AND01 (Road Corridor connecting Santa Marta - Paraguachón) are not included, as they were mostly made before IIRSA was created.

The Hub's active portfolio features 46 projects with an estimated investment of US\$27,002 million.


These projects are distributed in nine groups presenting two main purposes: land connectivity in eight groups, and one group that seeks to reinforce the energy matrix of the Hub.

Of the 44 active projects, there is information available on the completion date of 14, 13 of which are scheduled to be completed in the next four years (2016-2019).

After having completed these 13 projects, it is expected that only 18% of the investment amount estimated for the Hub's portfolio will have been made, which is easily understandable as more than 70% of the investment (US\$19,850 million) estimated for the Hub is targeted for projects at the profiling stage. In other words, investments in projects that have made some degree of progress amount to US\$7,162 million.

TABLE 2. PROJECTS TO BE COMPLETED IN THE NEXT FOUR YEARS *US\$ million

Code	Name	Group	Stage	Estimated Investment*	Countries	Estimated Completion Date
AND23	LA ESPRIELLA - MATAJE PROJECT, INCLUDING A BRIDGE OVER THE MATAJE RIVER	5		43.8	CO - EC	August 2016
AND27	AUTOPISTA DEL SOL EXPRESSWAY: IMPROVEMENT AND REHABILITATION OF THE ANCÓN - PATIVILCA SECTION	5		212.6	PE	August 2016
AND47	DESAGUADERO BINATIONAL BORDER SERVICE CENTER (CEBAF)	8		30.0	BO - PE	October 2016
AND22	MATAJE RIVER BINATIONAL BORDER SERVICE CENTER (CEBAF)	5		4.0	CO - EC	March 2017
AND75	UPGRADE OF THE CERRO AZUL - ICA ROAD SECTION TO A FOUR-LANE ROAD	5		293.9	PE	July 2017
AND39	PAVING OF VILCABAMBA - PUENTE DE INTEGRACIÓN (INTEGRATION BRIDGE) - JAÉN	7		126.7	EC - PE	August 2017
AND81	IMPROVEMENT OF THE BORDER CROSSINGS IN THE NORTHERN DEPARTMENT OF SANTANDER AND THE TÁCHIRA STATE	2		14.0	CO - VE	December 2017
AND100	REHABILITATION AND CONSTRUCTION OF BRIDGES ALONG THE SULLANA - TUMBES - TURN-OFF TO THE INTERNATIONAL BYPASS ROAD	5		139.1	PE	July 2018
AND29	AUTOPISTA DEL SOL EXPRESSWAY: IMPROVEMENT AND REHABILITATION OF THE PATIVILCA - TRUJILLO SECTION	5		456.4	PE	July 2018
AND07	BOGOTÁ - BUENAVENTURA ROAD CORRIDOR	2 - 4		1,950.0	CO	August 2018
AND30	AUTOPISTA DEL SOL EXPRESSWAY: IMPROVEMENT AND REHABILITATION OF THE TRUJILLO - SULLANA SECTION	5		441.2	PE	December 2018
AND79	IMPROVEMENT AND PAVING OF THE MOCOYA - SANTA ANA - SAN MIGUEL ROAD SECTION	6		210.4	CO	December 2019
AND82	IMPLEMENTATION OF THE BINATIONAL BORDER SERVICE CENTER (CEBAF) AT THE TULCÁN - IPIALES (RUMICHACA) BORDER CROSSING	2		104.7	CO - EC	December 2019

 PROFILING  PRE-EXECUTION  EXECUTION  COMPLETED





The five projects with the greatest estimated investment account for 78% of the investment in the Hub's active portfolio, and the project with the highest investment of all accounts for 64%.

It should be noted that all the projects are national in scope and are almost entirely financed by the public sector. One of the projects mentioned is a hinge project, i.e. it belongs to two project groups within the Hub and is key to their connectivity. One is the Bogotá - Buenaventura Road Corridor, which will connect the Pacific and Atlantic oceans through links to river waterways and multimodal projects.

Three of these five projects are at the execution stage, while the Ecuador's Electric Freight Train is at the profiling stage, and the Cúcuta-Bogotá Road Corridor is at the pre-execution stage. An analysis by

sector and subsector shows that there are two projects serving the purpose of generating energy: a hydroelectric project, intended to diversify the Hub's energy matrix, and a coal-fired power plant. The other three projects concern transportation: two road and one rail projects.

TABLE 3. THE FIVE PROJECTS OF THE ACTIVE PORTFOLIO WITH THE GREATEST ESTIMATED INVESTMENT *US\$ million

Code	Name	Group	Stage	Estimated Investment*	Countries	Type of Financing
AND95	ECUADOR'S ELECTRIC FREIGHT TRAIN	5		17,800.0	EC	Public
AND07	BOGOTÁ - BUENAVENTURA ROAD CORRIDOR	2 - 4		1,950.0	CO	Public
AND05	BOGOTÁ - CÚCUTA ROAD CORRIDOR	2		875.7	CO	Public
AND62	SANTO DOMINGO COAL-FIRED POWER PLANT	9		625.0	VE	Private
AND97	CHONTAL HYDROELECTRIC PROJECT (194 MW)	9		594.9	EC	Public
				21,845.6		

 PROFILING  PRE-EXECUTION  EXECUTION  COMPLETED

There are 20 completed projects in the Hub for a total investment of US\$994 million.⁽¹⁾

TABLE 4. COMPLETED PROJECTS IN THE HUB *US\$ million

Code	Name	Estimated Investment*	Countries
AND01	ROAD CORRIDOR CONNECTING SANTA MARTA - PARAGUACHÓN	411.2	CO
AND08	REHABILITATION OF THE RUMICHACA - PASTO - CHACHAGÜÍ ROAD	164.0	CO
AND12	COMPLETION OF THE PAVING OF THE TAME - VILLAVICENCIO ROAD	3.6	CO
AND13	IMPROVEMENT OF JOSÉ ANTONIO PÁEZ BRIDGE	1.3	CO
AND14	COMPLETION OF THE PAVING OF THE TAME - ARAUCA ROAD	10.6	CO
AND18	PAVING OF SECTIONS BETWEEN VILLAVICENCIO AND PUERTO LÓPEZ	26.0	CO
AND21	BINATIONAL BORDER SERVICE CENTER (CEBAF) - ROAD AXIS No. 1	15.9	EC - PE
AND25	NEW SANTA ROSA REGIONAL AIRPORT	47.1	EC
AND26	PUERTO INCA - HUAQUILLAS ROAD AND HUAQUILLAS - AGUAS VERDES INTERNATIONAL BRIDGE, HUAQUILLAS BYPASS	85.8	EC - PE
AND31	BINATIONAL BORDER SERVICE CENTER (CEBAF) AT SAN MIGUEL	0.0	CO - EC

>>

¹ The total does not include investment in AND01 project, Road Corridor connecting Santa Marta - Paraguachón, as they were mostly made before IIRSA was created.

**TABLE 4. COMPLETED PROJECTS IN THE HUB (CONT.)** *US\$ million

Code	Name	Estimated Investment*	Countries
AND35	IMPROVEMENT AND REHABILITATION OF THE BELLA UNIÓN - GUALAQUIZA ROAD SECTION	23.2	EC
AND38	IMPROVEMENT AND REHABILITATION OF THE NARUPA - GUAMANIYACU ROAD SECTION	23.5	EC
AND56	STRENGTHENING OF THE CUATRICENTENARIO - CUESTECITAS AND EL COROZO - SAN MATEO INTERCONNECTIONS	125.2	CO - VE
AND57	ELECTRICITY INTERCONNECTION PROJECT BETWEEN COLOMBIA AND ECUADOR: A 230 KV-LINE BETWEEN PASTO (COLOMBIA) AND QUITO (ECUADOR) SUBSTATIONS	45.4	CO - EC
AND60	EXTENSION OF THE NOR-PERUANO OIL PIPELINE	0.0	EC - PE
AND61	GAS INTERCONNECTION PROJECTS	335.0	CO
AND64	ELECTRICITY INTERCONNECTION PROJECT BETWEEN PUERTO NUEVO - PUERTO PÁEZ (VENEZUELA) AND PUERTO CARREÑO (COLOMBIA)	5.0	CO
AND88	SULLANA - EL ALAMOR ROAD	29.5	PE
AND89	SULLANA - MACARÁ - LOJA ROAD	48.4	PE
AND91	CONSTRUCTION OF THE NEW INTERNATIONAL RUMICHACA BRIDGE AND IMPROVEMENT OF THE EXISTING BRIDGE	4.1	CO - EC
20		993.6*	

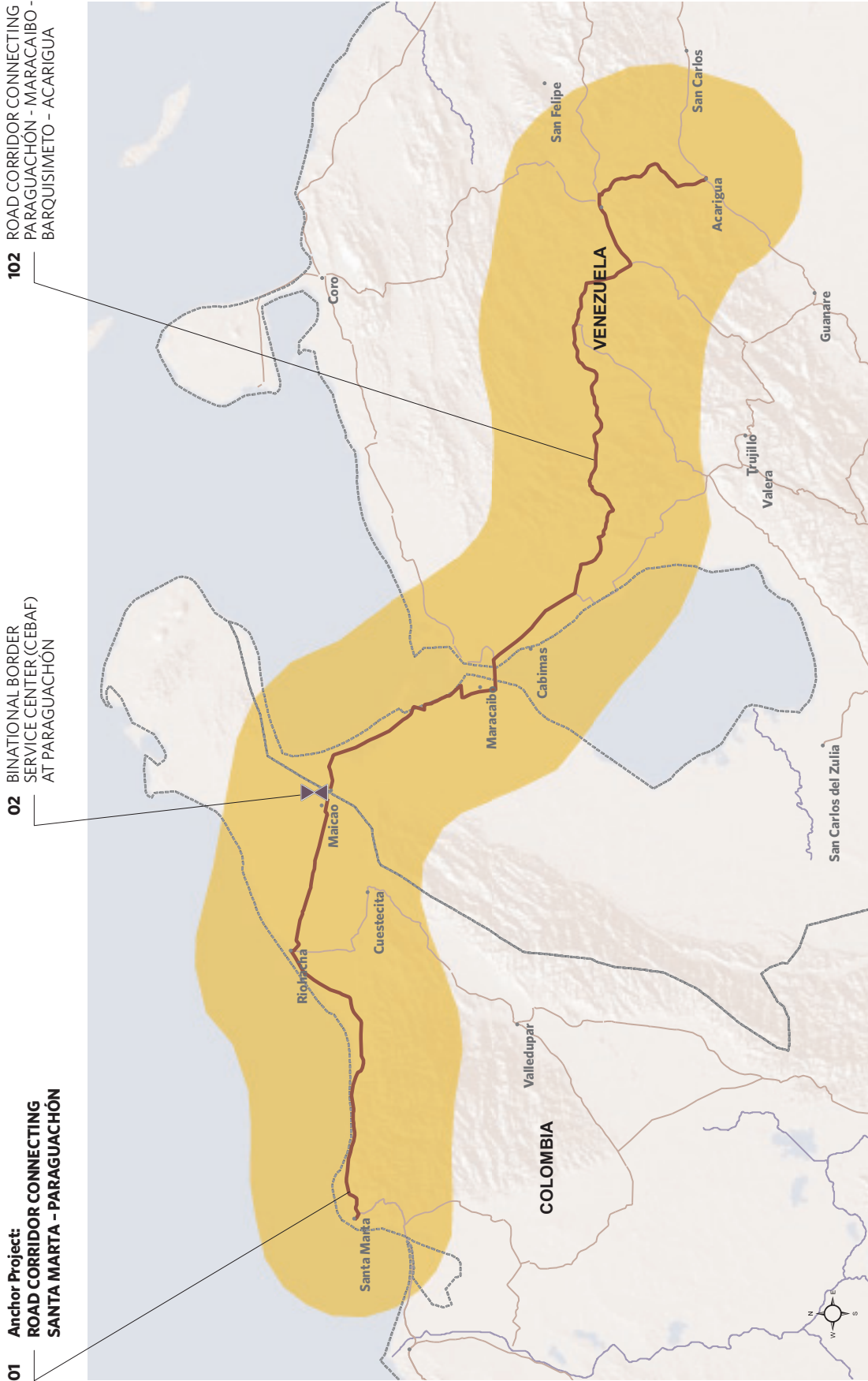
Eighteen of such projects were financed by the public sector, which invested more than half of the amount in the energy sector and the rest in transportation projects.

Among the 20 completed projects, there is a binational center categorized as an Anchor Project, an airport, and three roads that, together with other three roads in the Amazon Hub, provide an advanced regional connectivity between Peru and Ecuador. The roads already completed in this connectivity consolidate the road axis along the coast, while others facilitate access to the other border centers.

TABLE 5. COMPLETED PROJECTS ASSOCIATED WITH CONNECTIVITY BETWEEN ECUADOR AND PERU *US\$ million

Code	Name	Estimated Investment*	Countries	Group	Subsector
AND21	BINATIONAL BORDER SERVICE CENTER (CEBAF) - ROAD AXIS No. 1	15.9	EC - PE	5	Border Crossings
AND26	PUERTO INCA - HUAQUILLAS ROAD AND HUAQUILLAS - AGUAS VERDES INTERNATIONAL BRIDGE, HUAQUILLAS BYPASS	85.8	EC - PE	5	Road
AND25	NEW SANTA ROSA REGIONAL AIRPORT	47.1	EC	5	Air
AND88	SULLANA - EL ALAMOR ROAD	29.5	PE	5	Road
AND89	SULLANA - MACARÁ - LOJA ROAD	48.4	PE	5	Road
AMA46	IMPROVEMENT OF THE GUAYAQUIL - EL TRIUNFO - LA TRONCAL - ZHUD - EL TAMBO - CAÑAR - AZOGUES - PAUTE - AMALUZA - MÉNDEZ ROAD, AND ENLARGEMENT AND IMPROVEMENT OF THE MÉNDEZ - PUERTO MORONA ROAD SECTION	140	EC	7	Road
AMA47	IMPROVEMENT OF THE PUERTO BOLÍVAR - SANTA ROSA - BALSAS - CHAGUARPAMBA - LOJA - ZAMORA - YANTZAZA - EL PANGUI - GUALAQUIZA - GRAL. LEÓNIDAS PLAZA - MÉNDEZ ROAD SECTION	167.7	EC	7	Road
AMA48	IMPROVEMENT OF THE PUERTO BOLÍVAR - PASAJE - SANTA ISABEL - GIRÓN - CUENCA - PAUTE - AMALUZA - MÉNDEZ - PUERTO MORONA ROAD SECTION	26.8	EC	7	Road
TOTAL		561.2			

VENEZUELA (NORTHERN PLAINS HUB) - COLOMBIA (NORTHERN ZONE) CONNECTION





AND GROUP 1

Strategic Function

- Consolidate the economic integration between Colombia's northern Atlantic area and Venezuela's northern plains through an existing paved road.

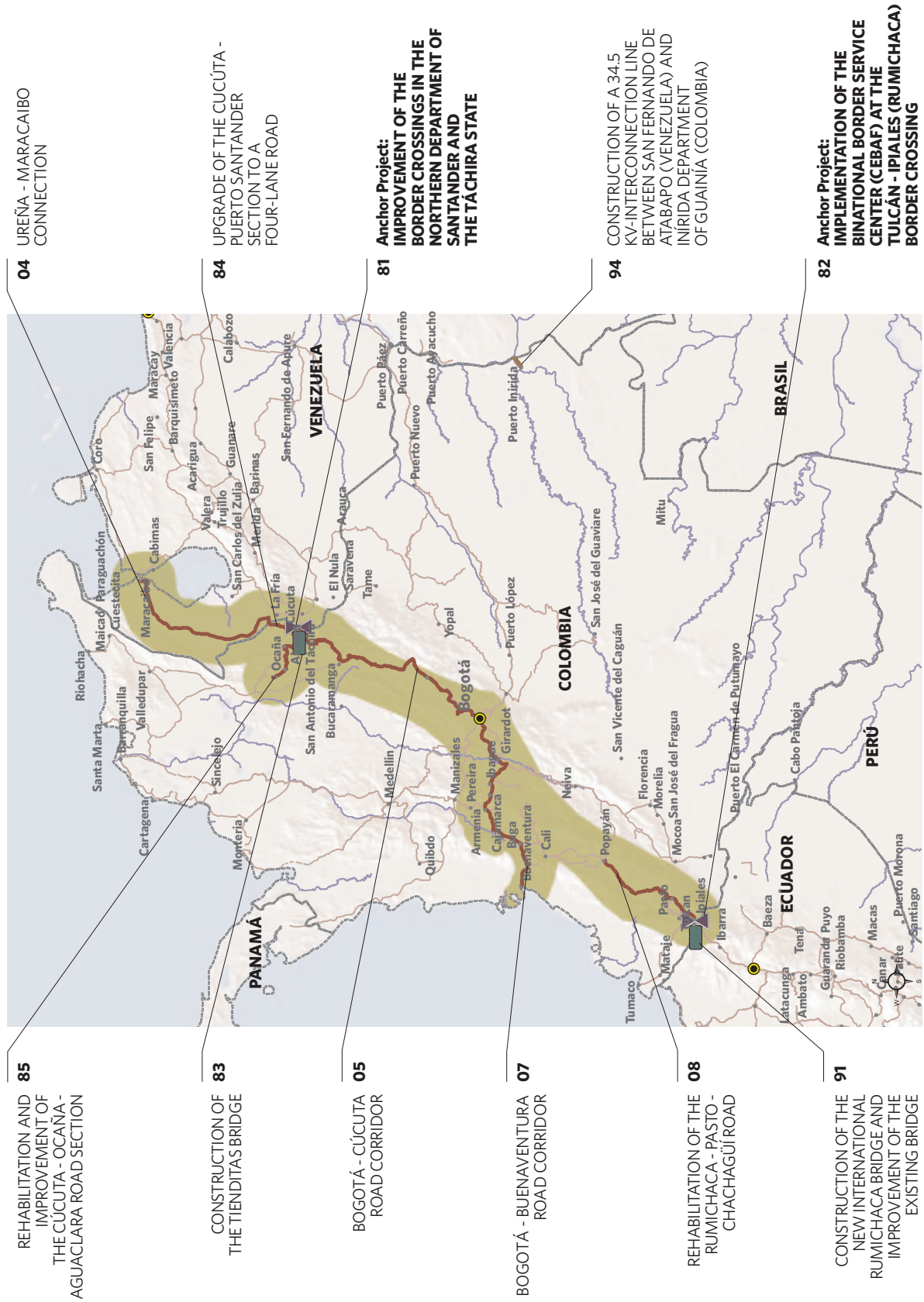
*US\$ million

Code	Name	Stage	Estimated Investment*	Countries
AND01	ROAD CORRIDOR CONNECTING SANTA MARTA - PARAGUACHÓN		411.2	CO
AND02	BINATIONAL BORDER SERVICE CENTER (CEBAF) AT PARAGUACHÓN		2.0	VE
AND102	ROAD CORRIDOR CONNECTING PARAGUACHÓN - MARACAIBO - BARQUISIMETO - ACARIGUA		0.0	VE
3			2.0⁽¹⁾	

PROFILING
 PRE-EXECUTION
 EXECUTION
 COMPLETED

(1) The total does not include investments in AND01 project (Road Corridor connecting Santa Marta - Paraguachón), as they were mostly made before IIRSA was created.

VENEZUELA (CARACAS) - COLOMBIA (BOGOTÁ) - ECUADOR (QUITO) (EXISTING) ROAD CONNECTION





AND GROUP 2

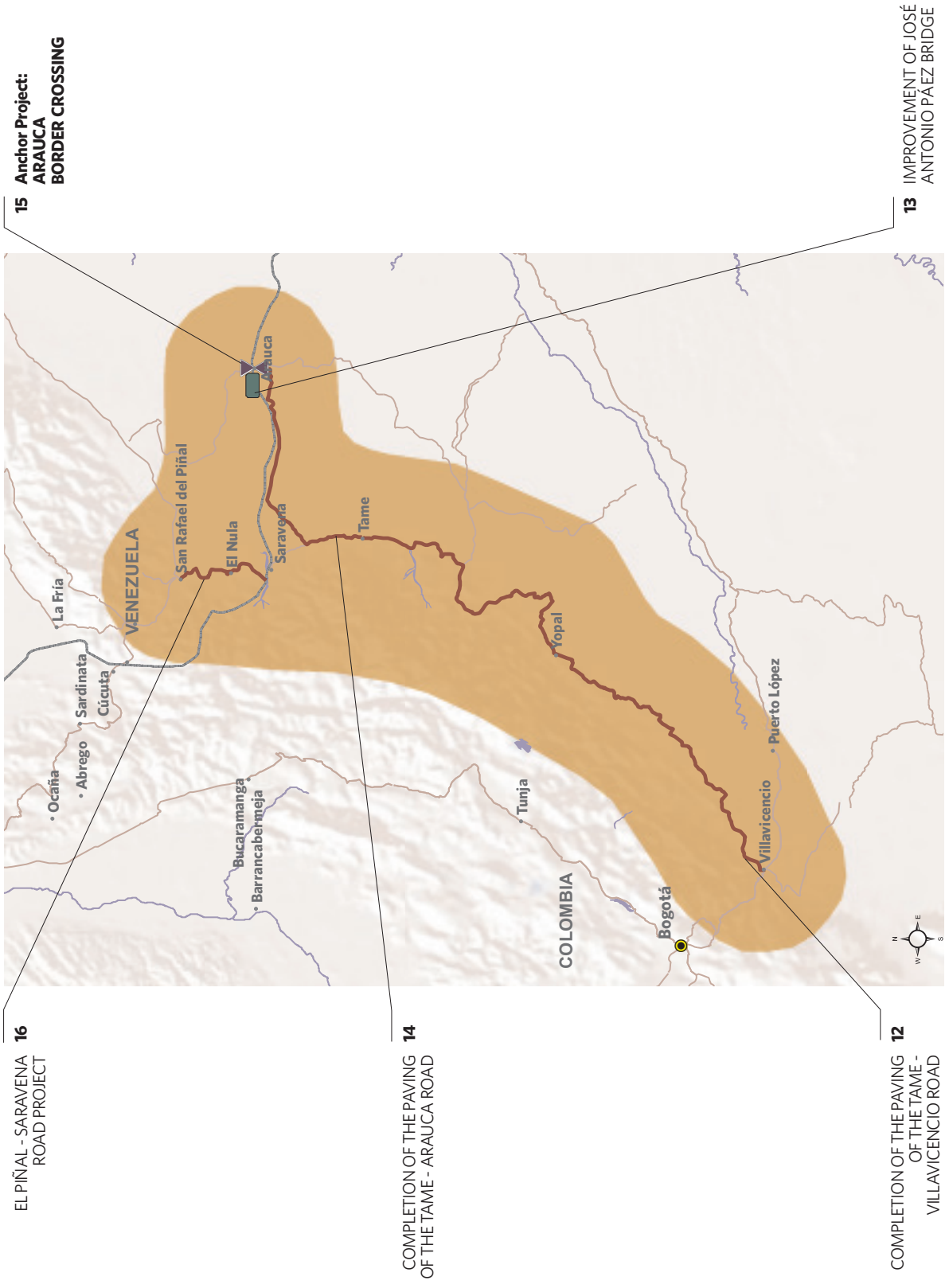
Strategic Function

- Reinforce the socioeconomic relations of Ecuador, Colombia, and Venezuela through existing paved roads, which entails improving their border crossings and finding solutions to specific bottlenecks.

					*US\$ million
Code	Name	Stage	Estimated Investment*	Countries	
AND04	UREÑA - MARACAIBO CONNECTION		0,0	VE	
AND05	BOGOTÁ - CÚCUTA ROAD CORRIDOR		875,7	CO	
AND07	BOGOTÁ - BUENAVENTURA ROAD CORRIDOR		1.950,0	CO	
AND08	REHABILITATION OF THE RUMICHACA - PASTO - CHACHAGÜÍ ROAD		164,0	CO	
AN D81	IMPROVEMENT OF THE BORDER CROSSINGS IN THE NORTHERN DEPARTMENT OF SANTANDER AND THE TÁCHIRA STATE		14,0	CO - VE	
AND82	IMPLEMENTATION OF THE BINATIONAL BORDER SERVICE CENTER (CEBAF) AT THE TULCÁN - IPIALES (RUMICHACA) BORDER CROSSING		104,7	CO - EC	
AND83	CONSTRUCTION OF THE TIENDITAS BRIDGE		32,9	CO - VE	
AND84	UPGRADE OF THE CUCÚTA - PUERTO SANTANDER SECTION TO A FOUR-LANE ROAD		1,4	CO	
AND85	REHABILITATION AND IMPROVEMENT OF THE CÚCUTA - OCAÑA - AGUACLARA ROAD SECTION		33,3	CO	
AND91	CONSTRUCTION OF THE NEW INTERNATIONAL RUMICHACA BRIDGE AND IMPROVEMENT OF THE EXISTING BRIDGE		4,1	CO - EC	
AND94	CONSTRUCTION OF A 34.5 KV-INTERCONNECTION LINE BETWEEN SAN FERNANDO DE ATABAPO (VENEZUELA) AND INÍRIDA DEPARTMENT OF GUAINIA (COLOMBIA)		2,9	CO - VE	
11			3.183,0		

PROFILING
 PRE-EXECUTION
 EXECUTION
 COMPLETED

VENEZUELA (ORINOCO APURE HUB) - COLOMBIA (BOGOTÁ) III (LOW-ALTITUDE CORRIDOR) CONNECTION





AND GROUP 3

Strategic Function

- Develop an international corridor for long-distance cargo transport with significantly lower operating costs and traveling times than the current Caracas - Bogotá corridor.
- This corridor will allow the participation in international trade of new regions in Colombia (Arauca) and Venezuela (Barinas).

*US\$ million

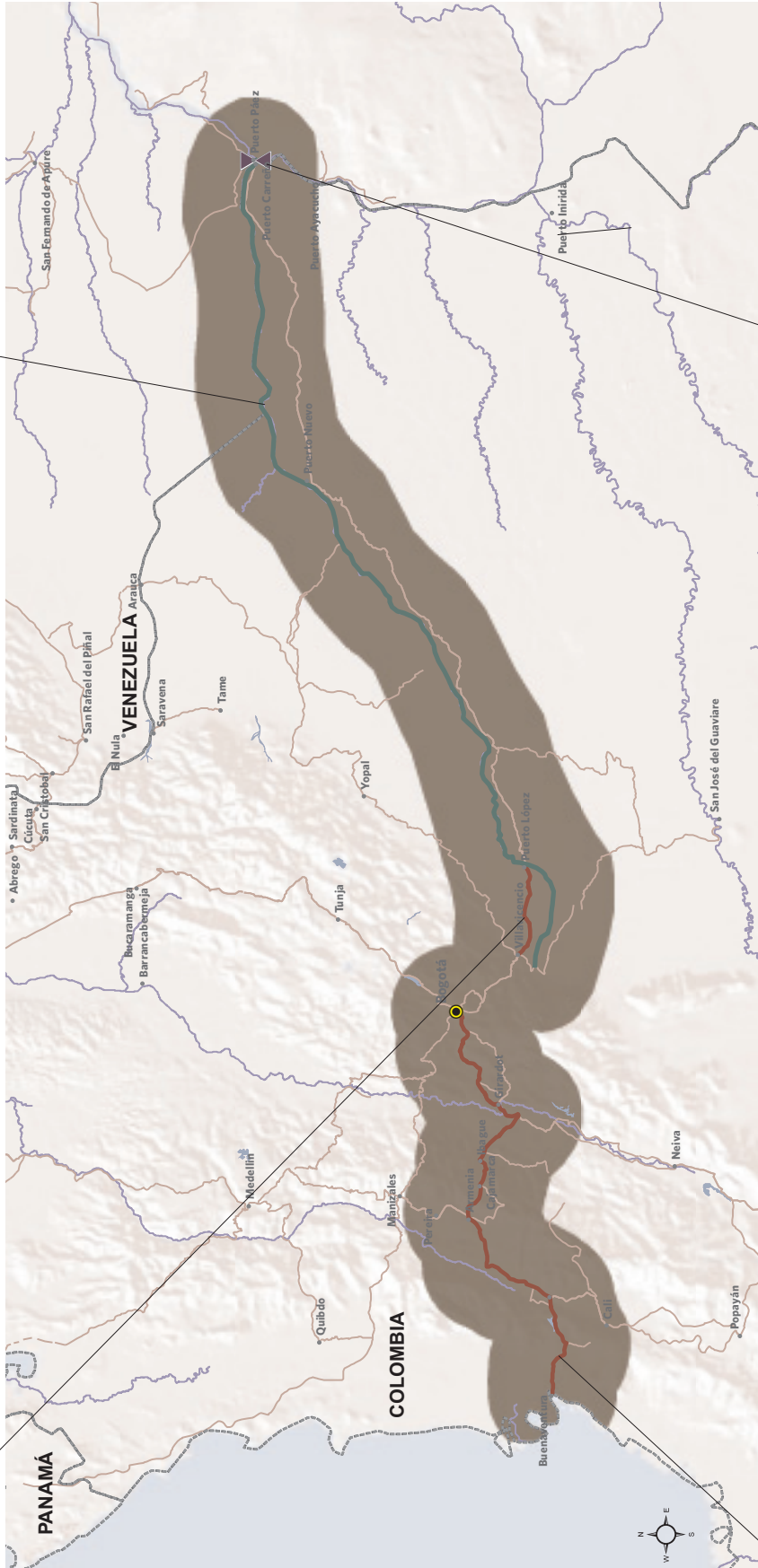
Code	Name	Stage	Estimated Investment*	Countries
AND12	COMPLETION OF THE PAVING OF THE TAME - VILLAVICENCIO ROAD		3.6	CO
AND13	IMPROVEMENT OF JOSÉ ANTONIO PÁEZ BRIDGE		1.3	CO
AND14	COMPLETION OF THE PAVING OF THE TAME - ARAUCA ROAD		10.5	CO
AND15	ARAUCA BORDER CROSSING		2.0	CO - VE
AND16	EL PIÑAL - SARAVERA ROAD PROJECT		6.8	VE
5			24.2	

PROFILING
 PRE-EXECUTION
 EXECUTION
 COMPLETED

PACIFIC - BOGOTÁ - META - ORINOCO - ATLANTIC CONNECTION

17 Anchor Project:
**PUERTO GAITÁN - PUERTO
 CARREÑO MULTIMODAL PROJECT,
 INCLUDING IMPROVEMENT OF
 THE NAVIGATION CONDITIONS
 ON THE META RIVER**

18 PAVING OF SECTIONS
 BETWEEN VILLAVICENCIO
 AND PUERTO LOPEZ



19 PUERTO CARREÑO
 BORDER CROSSING

07 BOGOTÁ - BUENAVENTURA
 ROAD CORRIDOR



AND GROUP 4

Strategic Function

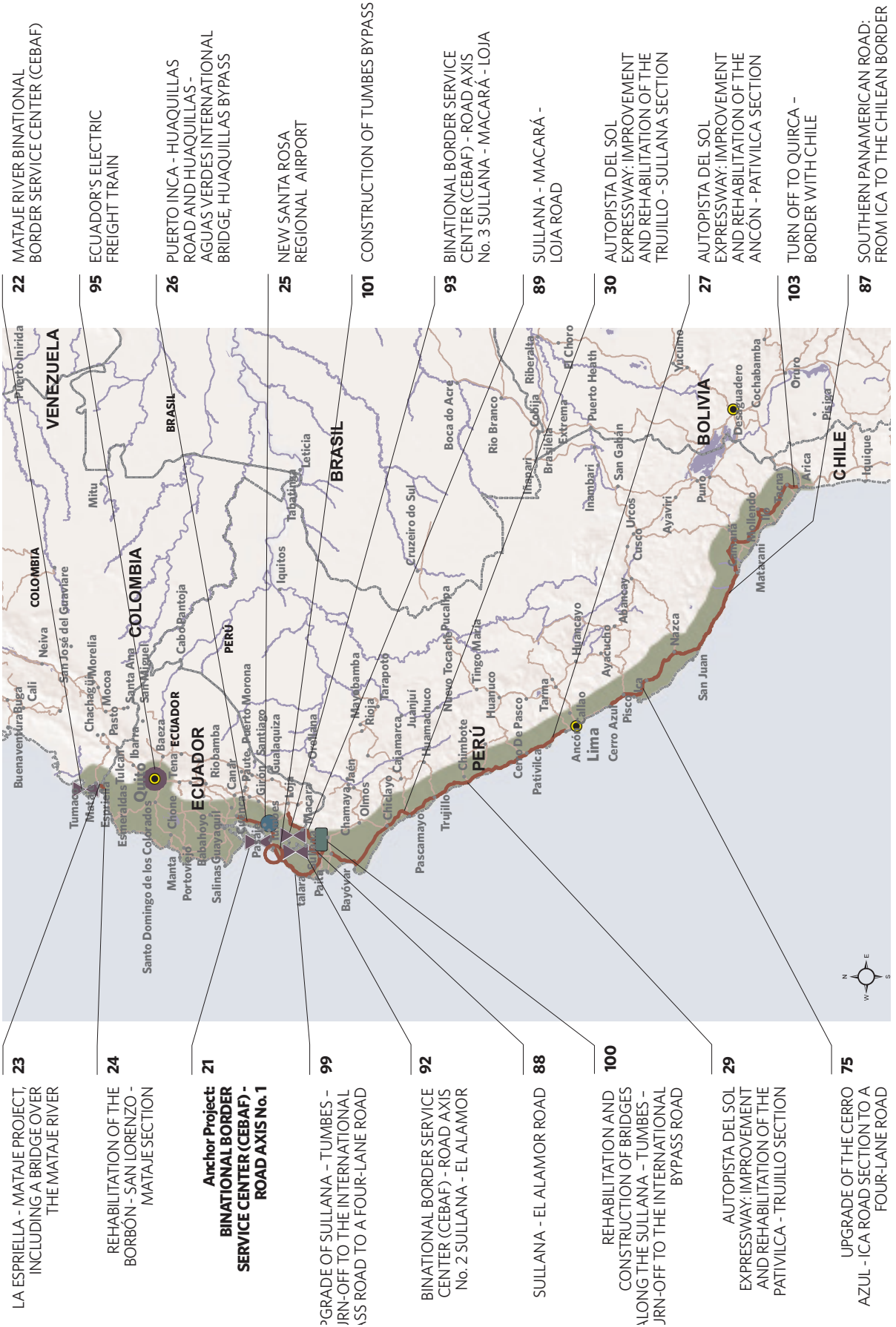
- Develop a Pacific-Bogotá-Meta-Orinoco-Atlantic bioceanic corridor for fostering trade among regions in Colombia (Orinoquía, Andina, and Pacífico) and Venezuela (the Plains, including the states of Anzoátegui and Monagas, Guayana, Orinoco Delta) and for opening up these regions to international markets.

*US\$ million

Code	Name	Stage	Estimated Investment*	Countries
AND07	BOGOTÁ - BUENAVENTURA ROAD CORRIDOR		1,950.0	CO
AND17	PUERTO GAITÁN - PUERTO CARREÑO MULTIMODAL PROJECT, INCLUDING IMPROVEMENT OF THE NAVIGATION CONDITIONS ON THE META RIVER		71.0	CO
AND18	PAVING OF SECTIONS BETWEEN VILLAVICENCIO AND PUERTO LÓPEZ		26.0	CO
AND19	PUERTO CARREÑO BORDER CROSSING		1.0	VE
4			2,048.0	

PROFILING
 PRE-EXECUTION
 EXECUTION
 COMPLETED

CONNECTION: COLOMBIA (TUMACO PORT) - ECUADOR (ESMERALDAS PORT - GUAYAQUIL) - PERU (PANAMERICAN ROAD)





AND GROUP 5

Strategic Function

- Reinforce programs and projects of the main road corridor articulating the coastal areas of Peru and Ecuador as well as the Southern Pacific Colombian areas in order to make the production and trade capacity more dynamic and improve the quality of life of populations in border areas.

					*US\$ million
Code	Name	Stage	Estimated Investment*	Countries	
AND21	BINATIONAL BORDER SERVICE CENTER (CEBAF) - ROAD AXIS No. 1		15.8	EC - PE	
AND22	MATAJE RIVER BINATIONAL BORDER SERVICE CENTER (CEBAF)		4.0	CO - EC	
AND23	LA ESPRIELLA - MATAJE PROJECT, INCLUDING A BRIDGE OVER THE MATAJE RIVER		43.8	CO - EC	
AND24	REHABILITATION OF THE BORBÓN - SAN LORENZO - MATAJE SECTION		0.0	EC	
AND25	NEW SANTA ROSA REGIONAL AIRPORT		47.1	EC	
AND26	PUERTO INCA - HUAQUILLAS ROAD AND HUAQUILLAS - AGUAS VERDES INTERNATIONAL BRIDGE, HUAQUILLAS BYPASS		85.9	EC - PE	
AND27	AUTOPISTA DEL SOL EXPRESSWAY: IMPROVEMENT AND REHABILITATION OF THE ANCÓN - PATIVILCA SECTION		212.6	PE	
AND29	AUTOPISTA DEL SOL EXPRESSWAY: IMPROVEMENT AND REHABILITATION OF THE PATIVILCA - TRUJILLO SECTION		456.4	PE	
AND30	AUTOPISTA DEL SOL EXPRESSWAY: IMPROVEMENT AND REHABILITATION OF THE TRUJILLO - SULLANA SECTION		441.2	PE	
AND75	UPGRADE OF THE CERRO AZUL - ICA ROAD SECTION TO A FOUR-LANE ROAD		293.9	PE	
AND87	SOUTHERN PANAMERICAN ROAD: ICA - TURN OFF TO QUIRCA		460.0	PE	
AND88	SULLANA - EL ALAMOR ROAD		29.5	PE	
AND89	SULLANA - MACARÁ - LOJA ROAD		48.4	PE	
AND92	BINATIONAL BORDER SERVICE CENTER (CEBAF) - ROAD AXIS No. 2 SULLANA - EL ALAMOR		20.0	EC - PE	
AND93	BINATIONAL BORDER SERVICE CENTER (CEBAF) - ROAD AXIS No. 3 SULLANA - MACARÁ - LOJA		12.0	EC - PE	
AND95	ECUADOR'S ELECTRIC FREIGHT TRAIN		17,800.0	EC	
AND99	UPGRADE OF SULLANA - TUMBES - TURN-OFF TO THE INTERNATIONAL BYPASS ROAD TO A FOUR-LANE ROAD		472.4	PE	
AND100	REHABILITATION AND CONSTRUCTION OF BRIDGES ALONG THE SULLANA - TUMBES - TURN-OFF TO THE INTERNATIONAL BYPASS ROAD		139.1	PE	
AND101	CONSTRUCTION OF TUMBES BYPASS		54.9	PE	
AND103	TURN OFF TO QUIRCA - BORDER WITH CHILE		0.0	PE	
20			20,637.0		



AND GROUP 6

Strategic Function

- Develop a corridor that would enhance trade relations between central and southern Colombia and Amazon provinces of northern and central Ecuador.

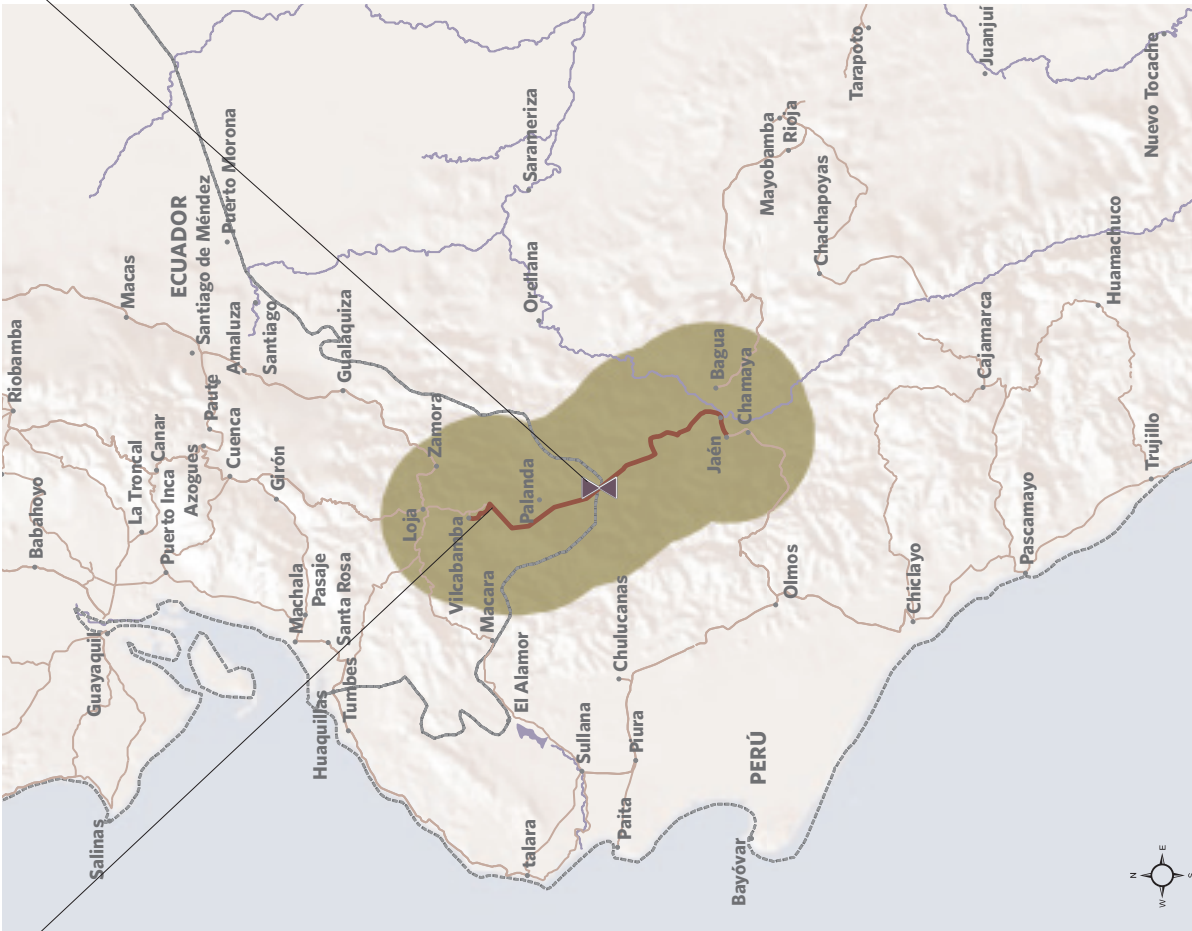
*US\$ million

Code	Name	Stage	Estimated Investment*	Countries
AND31	BINATIONAL BORDER SERVICE CENTER (CEBAF) AT SAN MIGUEL		0.0	CO - EC
AND35	IMPROVEMENT AND REHABILITATION OF THE BELLA UNIÓN - GUALAQUIZA ROAD SECTION		23.2	EC
AND38	IMPROVEMENT AND REHABILITATION OF THE NARUPA - GUAMANIYACU ROAD SECTION		23.5	EC
AND79	IMPROVEMENT AND PAVING OF THE MOCOA - SANTA ANA - SAN MIGUEL ROAD SECTION		210.4	CO
AND90	PAVING AND IMPROVEMENT OF THE SAN VICENTE DEL CAGUÁN - SAN JOSÉ DE FRAGUA - EL PORVENIR ROAD SECTION		239.3	CO
5			496.4	

PROFILING
 PRE-EXECUTION
 EXECUTION
 COMPLETED

PERU - ECUADOR II (LOJA - PUENTE DE INTEGRACIÓN - YURIMAGUAS) CONNECTION

43 BINATIONAL BORDER SERVICE CENTER (CEBAF) - ROAD AXIS No. 4 PUENTE DE INTEGRACIÓN (INTEGRATION BRIDGE)





39 Anchor Project: PAVING OF VILCABAMBA - PUENTE DE INTEGRACIÓN (INTEGRATION BRIDGE) - JAÉN



AND GROUP 7

Strategic Function

- Develop an international trade corridor by improving the roads that connect the cities of Loja Vilcabamba, Tarapoto, and Yurimaguas. This corridor will join the southern Andean region of Ecuador with the northern rainforest of Peru and its projection to the Amazon waterways.

					*US\$ million
Code	Name	Stage	Estimated Investment*	Countries	
AND39	PAVING OF VILCABAMBA - PUENTE DE INTEGRACIÓN (INTEGRATION BRIDGE) - JAÉN		126.7	EC - PE	
AND43	BINATIONAL BORDER SERVICE CENTER (CEBAF) - ROAD AXIS No. 4 PUENTE DE INTEGRACIÓN (INTEGRATION BRIDGE)		20	EC - PE	
2			146.7		



PROFILING



PRE-EXECUTION



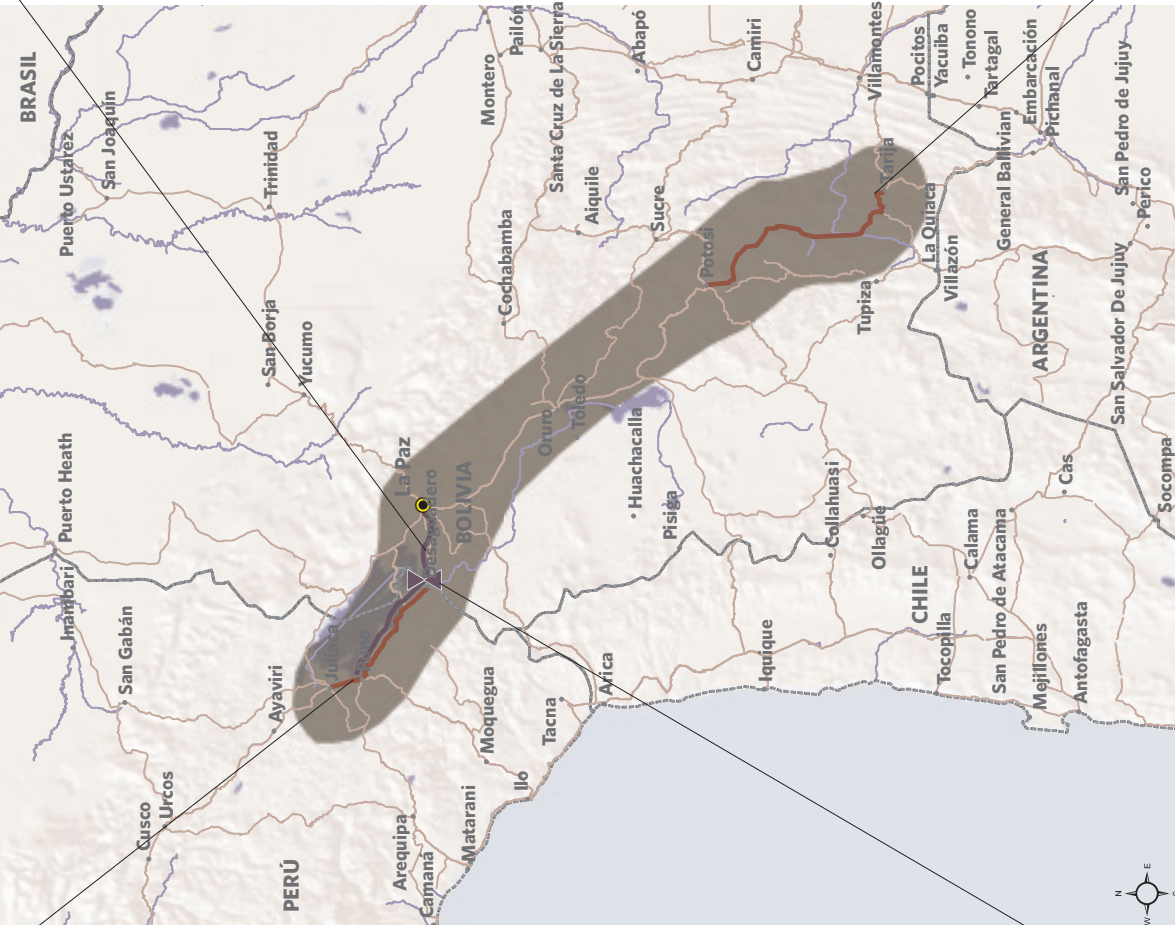
EXECUTION



COMPLETED

PERU - BOLIVIA (CUSCO - LA PAZ - TARIJA - BERMEJO) CONNECTION

54 CONSTRUCTION OF THE RAILWAY CONNECTION BETWEEN BOLIVIA AND PERU



51 EXPANSION AND REHABILITATION OF THE JULIACA - DESAGUADERO ROAD

47 Anchor Project: DESAGUADERO BINATIONAL BORDER SERVICE CENTER (CEBAF)

48 COMPLETION OF THE PAVING OF THE POTOSÍ - TARIJA ROAD



AND GROUP 8

Strategic Function

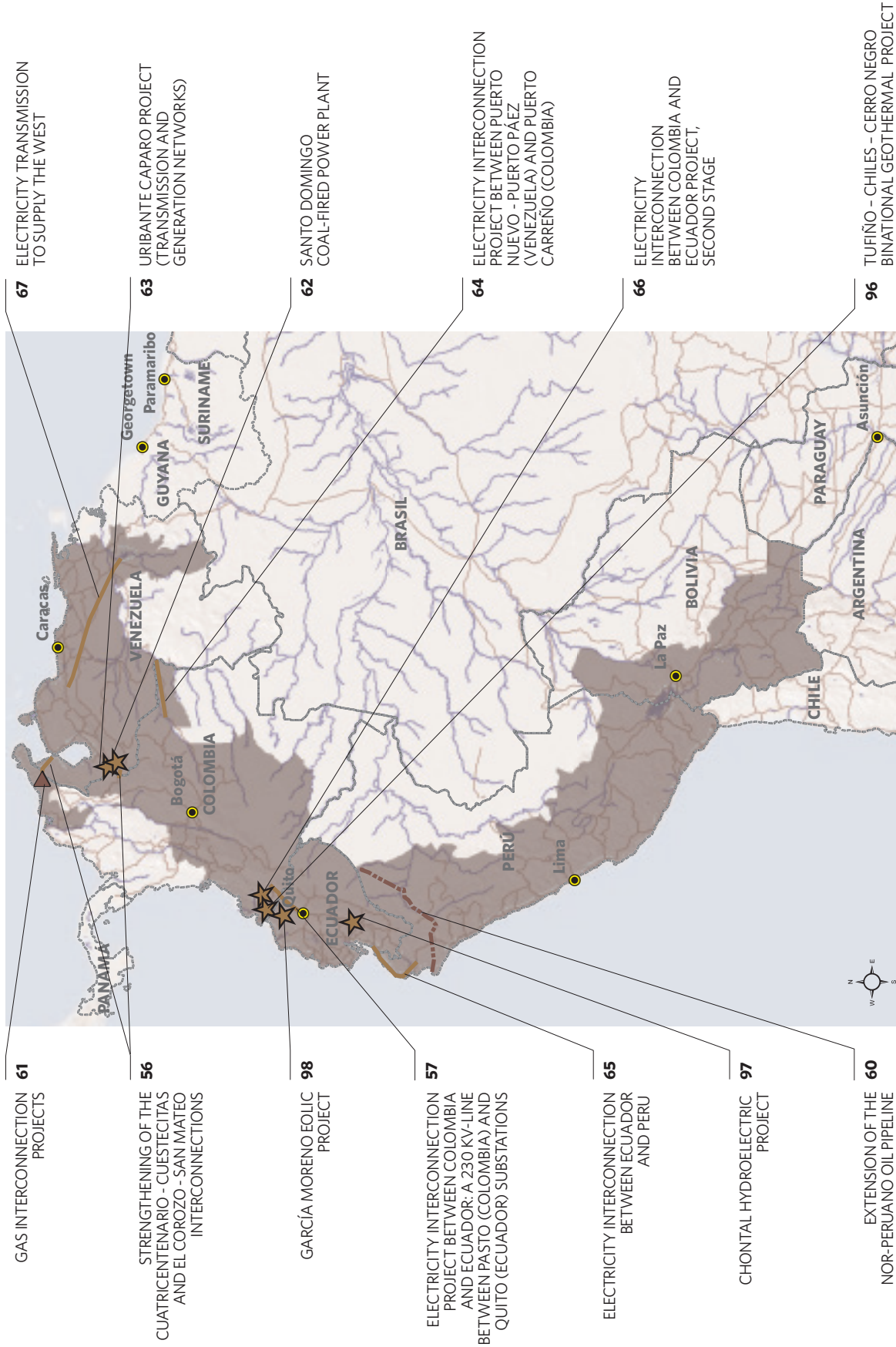
- Reinforce tourism and economic relations among the Andean cities of Peru (Cusco, Puno) and Bolivia (La Paz, Tarija) that operate along roads, and extend these to the central Andean area of Peru and northwestern Argentina.

*US\$ million

Code	Name	Stage	Estimated Investment*	Countries
AND47	DESAGUADERO BINATIONAL BORDER SERVICE CENTER (CEBAF)		29.9	BO - PE
AND48	COMPLETION OF THE PAVING OF THE POTOSÍ - TARIJA ROAD		238.2	BO
AND51	EXPANSION AND REHABILITATION OF THE JULIACA - DESAGUADERO ROAD		421.5	PE
AND54	CONSTRUCTION OF THE RAILWAY CONNECTION BETWEEN BOLIVIA AND PERU		390.0	BO - PE
4			1,079.6	

PROFILING
 PRE-EXECUTION
 EXECUTION
 COMPLETED

ENERGY INTEGRATION SYSTEMS





AND GROUP 9

Strategic Function

- Integrate energy systems to improve the efficiency and reliability of energy generation, transmission and distribution in order to promote the development of high value-added sectors, as well as the development of populations in border areas.

					*US\$ million
Code	Name	Stage	Estimated Investment*	Countries	
AND56	STRENGTHENING OF THE CUATRICENTENARIO - CUESTECITAS AND EL COROZO - SAN MATEO INTERCONNECTIONS		125.2	CO - VE	
AND57	ELECTRICITY INTERCONNECTION PROJECT BETWEEN COLOMBIA AND ECUADOR: A 230 KV-LINE BETWEEN PASTO (COLOMBIA) AND QUITO (ECUADOR) SUBSTATIONS		45.4	CO - EC	
AND60	EXTENSION OF THE NOR-PERUANO OIL PIPELINE		0.0	EC - PE	
AND61	GAS INTERCONNECTION PROJECTS		335.0	CO	
AND62	SANTO DOMINGO COAL-FIRED POWER PLANT		625.0	VE	
AND63	URIBANTE CAPARO PROJECT (TRANSMISSION AND GENERATION NETWORKS)		0.0	VE	
AND64	ELECTRICITY INTERCONNECTION PROJECT BETWEEN PUERTO NUEVO - PUERTO PÁEZ (VENEZUELA) AND PUERTO CARREÑO (COLOMBIA)		5.0	CO	
AND65	ELECTRICITY INTERCONNECTION BETWEEN ECUADOR AND PERU		0.0	EC - PE	
AND66	ELECTRICITY INTERCONNECTION BETWEEN COLOMBIA AND ECUADOR PROJECT, SECOND STAGE		0.0	CO - EC	
AND67	ELECTRICITY TRANSMISSION TO SUPPLY THE WEST		590.0	VE	
AND96	TUFIÑO - CHILES - CERRO NEGRO BINATIONAL GEOTHERMAL PROJECT		6.9	CO - EC	
AND97	CHONTAL HYDROELECTRIC PROJECT, 194 MW		594.9	EC	
AND98	GARCÍA MORENO EOLIC PROJECT		1.0	EC	
13			2,328.4		

PROFILING
 PRE-EXECUTION
 EXECUTION
 COMPLETED

CAP CAPRICORN

Integration and Development Hub



Population: 53,509,280
Population density: 19.7 people/km²
Area: 2,722,534 km²

GDP: US\$ 575,422 million

Services	75.0%
Industries	13.9%
Agriculture	5.9%
Mining and quarrying	5.2%

Estimated Investment

US\$ million

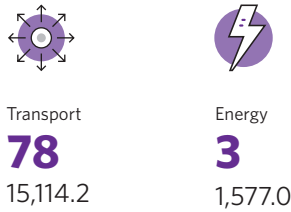
16,691.2



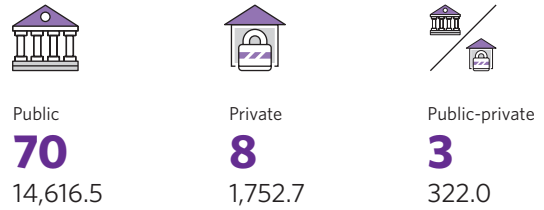
Projects by Stage



Projects by Sector

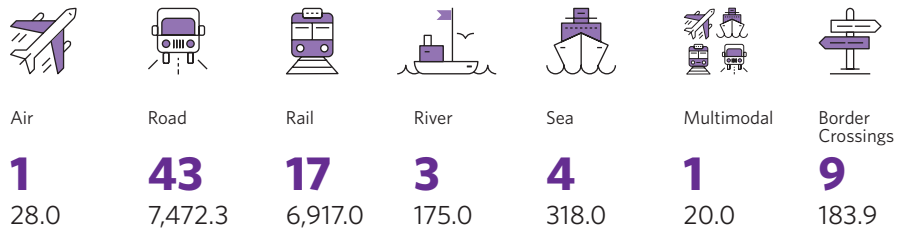


Projects by Type of Financing



Projects by Subsector

Transport



Energy



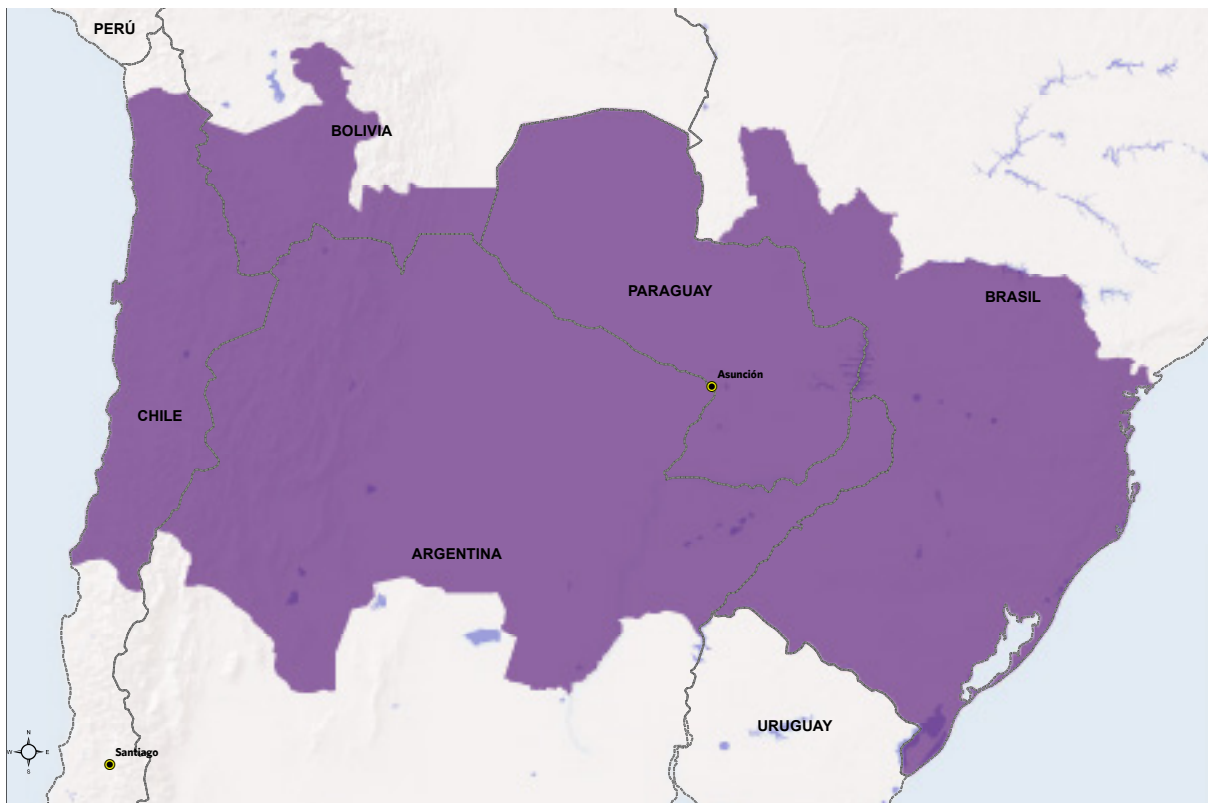
CAPRICORN

Presentation of the Hub

The Capricorn Hub⁽¹⁾ runs along the Pacific coast of Chile, cuts across the Andean region of Bolivia, reaches the north of Argentina, covers the whole of Paraguay, and includes the Brazilian states on the Atlantic coast (Rio Grande do Sul, Santa Catarina, Paraná, and a portion of Mato Grosso do Sul). It accounts for 15% of the territory (2,722,534 km²), 13% of the population (53,509,280 inhabitants), and 13% of the Gross Domestic Product (GDP) of South America, amounting to US\$575,422 million.⁽²⁾

The Capricorn Hub ranks sixth in terms of its share of South America's population, area, and GDP.

AREA OF INFLUENCE OF THE CAPRICORN HUB



The **road network** of the countries involved in the Hub covers a total length of 2,117,539 km, of which only 15% are paved. There are several road corridors connecting agricultural production areas and mineral extraction centers located in the central region of the Hub with ports on the Paraguay and Paraná rivers as well as ports located on the Brazilian Atlantic coastline. The **railway network** covers 61,424 km, of which approximately 87% are in operating condition. There are important railway connections in different degree of preservation and condition

¹ See "Caracterización Socioeconómica y Ambiental del Eje de Capricornio," COSIPLAN-IIRSA, 2014. <http://www.iirsa.org/capricornio.asp>

² At 2013 current prices.

for operation running mostly from east to west, connecting the ports on both oceans with the interior of the countries. However, it is necessary to link the existing sections in order to connect the ports of Paranaguá on the Atlantic and Antofagasta on the Pacific. The **sea and river port system** is made up of 25 major ports—four of which handle more than 10,000,000 tons—that are located mainly on the coasts of the Atlantic ocean and along the Paraná and Paraguay rivers, to which the Chilean ports on the Pacific should be added. Most **river transportation** activities in the region are carried out along the Paraná and Paraguay rivers, which jointly make up the major river communication route in the region and which are vitally important for Paraguayan and Bolivian agricultural production to reach the sea ports. The **airport system** features 39 major airports, 17 of which are international. Passenger service is adequate, with good airport infrastructure and several connections to the main cities in the interior of the countries. Cargo transportation by air is very limited and is mainly concerned with the import of industrial manufactures from countries other than those included in the Hub. Concerning **electricity generation**, as of 2013 the countries involved in the Hub had a joint installed power of about 184,656 MW.

The presence of **indigenous communities** in the territory of the Capricorn Hub is very significant, particularly in Bolivia and the northern area of Argentina and, to a lesser extent, in the eastern region of Paraguay, whereas their presence is limited in Brazil and Chile.

At present, there are approximately 400 administrative units with some degree of **environmental protection**, totaling about 162,100 km², which account for 6% of the total area of the Hub.

The **natural hazards** affecting the Capricorn Hub include earthquakes, volcanic activity, tsunamis, and floods of large basins. Landslides are also considered, which though localized, are frequent and highly damaging.

The countries involved in the Capricorn Hub plan investments for US\$16,691 million in 81 physical integration projects.

Paraguay contributes 100% of its economy, whereas the other countries contribute about 14% and 17% of their GDP to the Hub. In absolute terms, Brazil contributes 68% to the Hub's aggregate GDP, followed by Argentina (19%), Chile (7%), and Paraguay and Bolivia (4% and 1%, respectively).

Brazil and Argentina account for more than 74% of the trade among the countries in the Hub. In particular, Brazil is the main destination of the other four countries' exports, receiving more than 60% of their foreign trade. The main destination of Brazilian exports within the Hub is Argentina, accounting for 68% of its total export operations.

The Hub shares some regions of its area of influence with the MERCOSUR-Chile (MCC), Central Interoceanic (IOC), and Paraguay-Paraná Waterway (HPP) Hubs.

CAPRICORN

Project Portfolio

The projects of this Hub are intended to: (i) reinforce the connectivity of the territories involved towards the Pacific and the Paraguay-Paraná Waterway; (ii) improve the conditions for production integration and competitiveness in the northwestern region of Argentina, the southern area of Bolivia, and Paraguay; (iii) reinforce the socioeconomic development of the territories involved; and (iv) take profit from the complementary opportunities for the development of integrated tourism (northwestern Argentina, south of Bolivia and north of Chile).

An important percentage of the road and rail projects of this Hub is located in the Argentine territory, which shows the willingness to support the relatively less developed regions of the country (the northwestern and northeastern areas), as well as to promote the integration process of the Hub taking into account its bioceanic condition. Furthermore, the projects seek to coordinate the connections of the Capricorn, MERCOSUR-Chile, Central Interoceanic, and Paraguay-Paraná Waterway Hubs.

PROJECT GROUPS OF THE CAPRICORN HUB

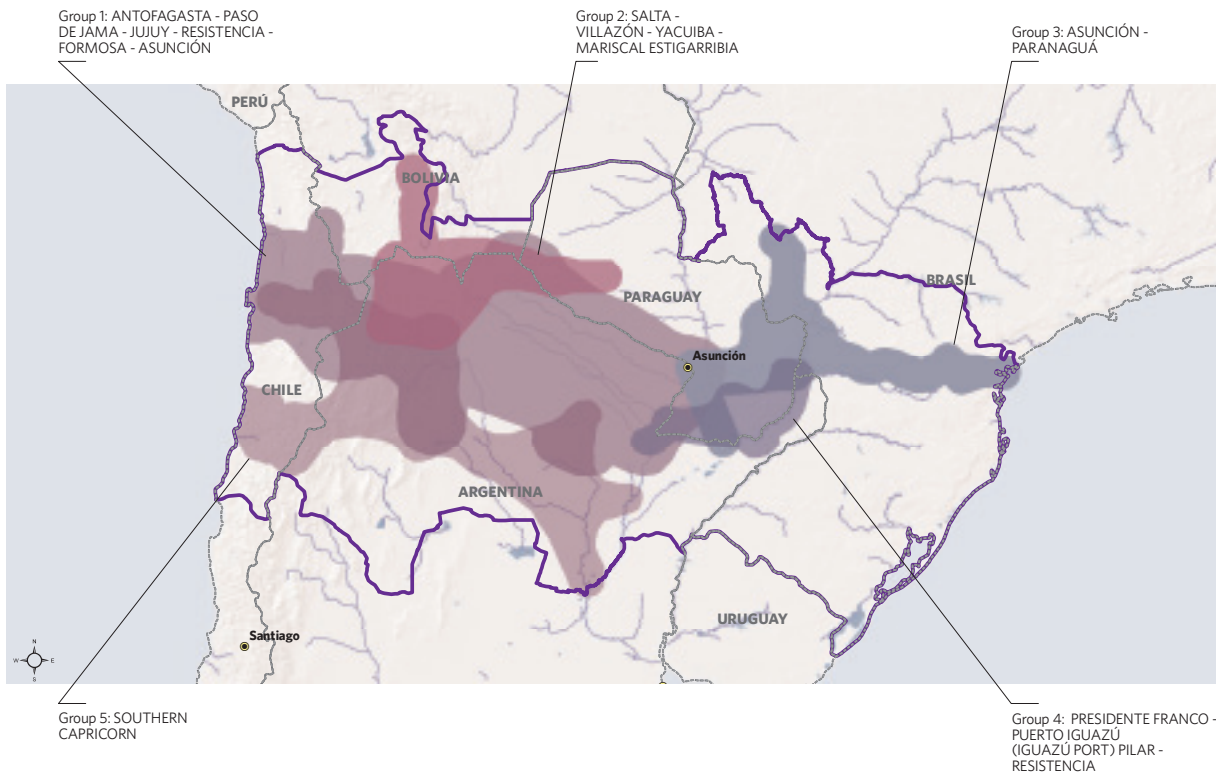


TABLE 1. PROJECT GROUPS OF THE CAPRICORN HUB *US\$ million

Group	Name	No. of Projects	Estimated Investment*
1	ANTOFAGASTA - PASO DE JAMA BORDER CROSSING - JUJUY - RESISTENCIA - FORMOSA - ASUNCIÓN	24	4,198.9
2	SALTA - VILLAZÓN - YACUIBA - MARISCAL ESTIGARRIBIA	10	1,299.6
3	ASUNCIÓN - PARANAGUÁ	16	4,264.5
4	PRESIDENTE FRANCO - PUERTO IGUAZÚ - PILAR - RESISTENCIA	13	4,110.5
5	SOUTHERN CAPRICORN	18	2,817.8
TOTAL		81	16,691.3









The Hub's active portfolio features 67 projects with an estimated investment of US\$14,059 million.

Almost all of the Hub's active portfolio projects are concerned with transportation. The road subsector is the one with the largest number and highest estimated investment, followed closely by the rail subsector in terms of estimated investment but with notably fewer projects (33% less).

Of the 67 active projects, there is information available on the estimated completion date of 16. Ten of these will be completed in the next four years (2016-2019), and it is worthy of note that almost all (eight) are national in scope and are equally distributed between Argentina and Paraguay (four projects each).

According to estimations, by the end of 2019, 26% of the investment planned for the portfolio of the Hub will have been made vis-à-vis the 16% spent so far.

TABLE 2. PROJECTS TO BE COMPLETED IN THE NEXT FOUR YEARS *US\$ million

Code	Name	Group	Stage	Estimated Investment*	Countries	Estimated Completion Date
CAP32	CONSTRUCTION OF NATIONAL ROUTE No. 8, FROM CAAZAPÁ TO CORONEL BOGADO	4		212.0	PY	September 2016
CAP100	PAVING OF THE GUARANÍ - CORPUS CHRISTI - PINDOTY PORÁ INTERSECTION ROAD	3		43.0	PY	February 2017
CAP68	500-KV TRANSMISSION LINE (YACYRETÁ - VILLA HAYES)	3		297.0	PY	August 2017
CAP33	IMPROVEMENT AND CONCESSION OF NATIONAL ROUTE No. 6, CIUDAD DEL ESTE - ENCARNACIÓN SECTION	4		136.0	PY	Diciembre 2018
CAP37	REHABILITATION OF THE C3 RAILWAY BRANCH LINE: RESISTENCIA - AVIA TERAI - PINEDO	1		100.0	AR	December 2018
CAP38	REHABILITATION OF THE C12 RAILWAY BRANCH LINE: AVIA TERAI - METÁN	1		200.0	AR	December 2018
CAP39	REHABILITATION OF THE C14 RAILWAY BRANCH LINE: SALTA - SOCOMPA	1		100.0	AR	December 2018
CAP50	PAVING OF NATIONAL ROUTE No. 40, MINING CORRIDOR PATH (BORDER WITH BOLIVIA)	2		400.0	AR	December 2018
CAP10	CONSTRUCTION OF THE SALVADOR MAZZA - YACUIBA BINATIONAL BRIDGE AND BORDER CENTER	2		45.0	AR - BO	December 2019
CAP14	NEW PUERTO PRESIDENTE FRANCO - PORTO MEIRA BRIDGE, WITH A PARAGUAY - BRAZIL INTEGRATED CONTROL AREA	3		173.0	BR - PY	December 2019






 PROFILING
  PRE-EXECUTION
  EXECUTION
  COMPLETED

The first two projects with the highest estimated investment involve the construction of rail corridors. The two that follow are road projects. The fifth place is occupied by another railway project. All the projects are national in scope with the participation of Paraguay (3), Brazil (1) and Argentina (1), and are mainly financed by the public sector. These five projects account for 44% of the estimated investment for the Hub's active portfolio.

The Ciudad del Este-Ñeembucú Railway is the project with the greatest estimated investment in the Hub and is currently at the pre-execution stage. Its aim is to diversify the Hub's infrastructure in connection with the second bridge between Paraguay and Brazil, the Guaraní Airport in the city of Minga Guazú, the Ñeembucú-Río Bermejo Bridge, and the Multimodal Port designed for such area.

The Bioceanic Railway Corridor: Paranaguá-Cascavel Section and Guarapuava-Ingeniero Bley Railway Bypass is the second project with the highest estimated investment in the Hub, for approximately half the amount of the first project. It is at the profiling stage and its goal is to integrate the southern region of Brazil in order to promote the development of the grain-producing areas of the country.

TABLE 3. THE FIVE PROJECTS OF THE ACTIVE PORTFOLIO WITH THE GREATEST ESTIMATED INVESTMENT *US\$ million

Code	Name	Group	Stage	Estimated Investment*	Countries	Type of Financing
CAP29	CONSTRUCTION OF THE CIUDAD DEL ESTE - ÑEEMBUCÚ RAILWAY	4		2,800.0	PY	Public
CAP53	BIOCEANIC RAILWAY CORRIDOR: PARANAGUÁ - CASCAVEL SECTION AND GUARAPUAVA - INGENIERO BLEY RAILWAY BYPASS	3		1,500.0	BR	Public
CAP60	RECONQUISTA - GOYA ROAD BRIDGE	5		850.0	AR	Public
CAP18	CONCESSION FOR THE IMPROVEMENT OF ROUTES No. 2 AND 7 (ASUNCIÓN - CIUDAD DEL ESTE)	3		500.0	PY	Private
CAP19	CONSTRUCTION OF ASUNCIÓN - CIUDAD DEL ESTE RAILWAY	3		500.0	PY	Public

 PROFILING  PRE-EXECUTION  EXECUTION  COMPLETED

The Hub features 14 completed projects, having required a total investment of US\$2,632 million, equivalent to 16% of the total investment estimated for the Portfolio projects of the Hub.

TABLE 4. COMPLETED PROJECTS IN THE HUB *US\$ million

Code	Name	Estimated Investment*	Countries
CAP01	ACCESS ROADS TO PASO DE JAMA BORDER CROSSING (NATIONAL ROUTE No. 52 - INTERSECTION WITH NATIONAL ROUTE No. 9 - BORDER WITH CHILE)	54.0	AR
CAP02	IMPLEMENTATION OF INTEGRATED (ONE-STOP) BORDER CONTROL AT JAMA BORDER CROSSING	4.0	AR - CH
CAP03	ELECTRICITY INTERCONNECTION BETWEEN THE ARGENTINE NORTHWESTERN AND NORTHEASTERN REGIONS	725.0	AR
CAP06	PAVING OF NATIONAL ROUTE No. 81 BETWEEN LAS LOMITAS AND THE INTERSECTION WITH NATIONAL ROUTE No. 34	100.0	AR
CAP08	ENLARGEMENT OF THE MEJILLONES PORT COMPLEX (PHASE I)	120.0	CH
CAP09	UPGRADE WORKS AT ANTOFAGASTA PORT	18.0	CH
CAP46	CONCESSION OF ANTOFAGASTA EXPRESSWAY	370.0	CH
CAP56	CONSTRUCTION OF A BYPASS OF NATIONAL ROUTE No. 12 AROUND POSADAS CITY (MISIONES PROVINCE)	35.0	AR
CAP61	PAVING OF NATIONAL ROUTE No. 95 BETWEEN VILLA ÁNGELA AND THE INTERSECTION WITH PROVINCIAL (SANTA FE) ROUTE No. 286	37.0	AR
CAP67	500-KV TRANSMISSION LINE (ITAIPU - VILLA HAYES)	555.0	PY
CAP77	BARRANCAS BLANCAS INTEGRATED CONTROL CENTER (PIRCAS NEGRAS BORDER CROSSING)	5.0	AR - CH
CAP80	MEJILLONES PORT COMPLEX	80.0	CH
CAP88	ANTOFAGASTA AIRPORT	28.0	CH
CAP91	BIOCEANIC RAILWAY CORRIDOR, CHILEAN SECTION (ANTOFAGASTA - SOCOMPA)	501.0	CH
14		2,632.0	












Of these completed projects, 10 that belong to Group 1 relate to a connectivity deemed strategically important for the development of socioeconomically disadvantaged areas in Chile, Paraguay, and northern Argentina, which involved an investment of US\$2 billion.

The completed projects that required the greatest investment effort enabled the electric interconnection of the northern areas of Argentina and the laying of a 500-kV transmission line in Paraguay. Furthermore, more than 200 km of roads leading to Paso de Jama, the second most important border crossing between Chile and Argentina, were paved. This road is the Group's anchor project, which together with the implementation of an integrated (one-stop) border control, has improved access from Jujuy, the northwestern and northeastern provinces of Argentina, the southern area of Bolivia, Paraguay, and the southern states of Brazil to the deep-water ports on the Pacific in three regions (Tarapacá, Antofagasta and Atacama). The remaining six projects have improved ports in two of these regions (Atacama and Antofagasta), an airport, as well as rail and road sections.

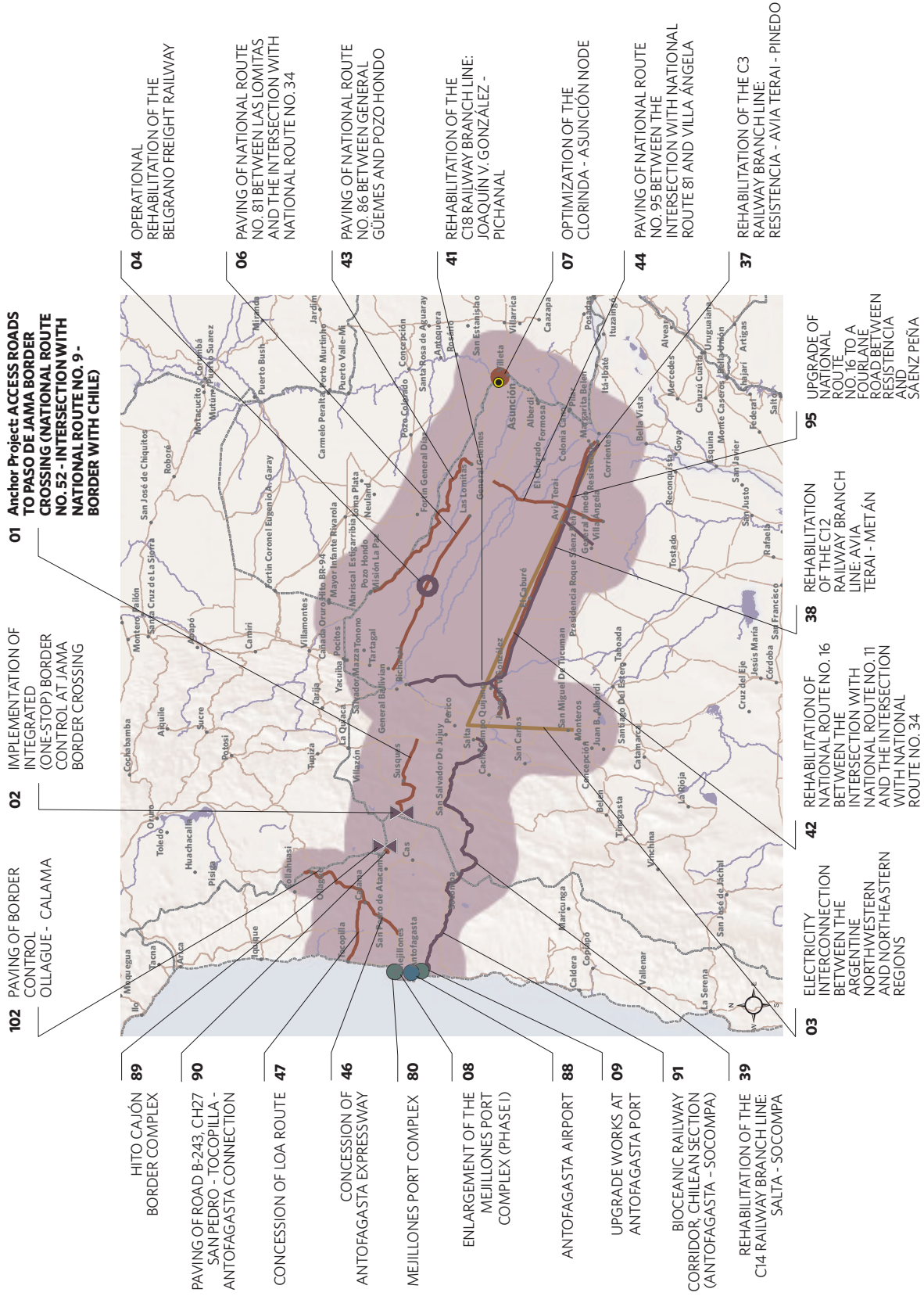
TABLE 5. COMPLETED PROJECTS ASSOCIATED WITH CONNECTIVITY BETWEEN ARGENTINA AND CHILE *US\$ million

Code	Name	Estimated Investment*	Countries	Subsector
CAP01	ACCESS ROADS TO PASO DE JAMA BORDER CROSSING (NATIONAL ROUTE No. 52 - INTERSECTION WITH NATIONAL ROUTE No. 9 - BORDER WITH CHILE)	54.0	AR	Road
CAP02	IMPLEMENTATION OF INTEGRATED (ONE-STOP) BORDER CONTROL AT JAMA BORDER CROSSING	4.0	AR - CH	Border Crossings
CAP03	ELECTRICITY INTERCONNECTION BETWEEN THE ARGENTINE NORTHWESTERN AND NORTHEASTERN REGIONS	725.0	AR	Energy Interconnection
CAP06	PAVING OF NATIONAL ROUTE No. 81 BETWEEN LAS LOMITAS AND THE INTERSECTION WITH NATIONAL ROUTE No. 34	100.0	AR	Road
CAP08	ENLARGEMENT OF THE MEJILLONES PORT COMPLEX (PHASE I)	120.0	CH	Sea
CAP09	UPGRADE WORKS AT ANTOFAGASTA PORT	18.0	CH	Sea
CAP46	CONCESSION OF ANTOFAGASTA EXPRESSWAY	370.0	CH	Road
CAP80	MEJILLONES PORT COMPLEX	80.0	CH	Sea
CAP88	ANTOFAGASTA AIRPORT	28.0	CH	Air
CAP91	BIOCEANIC RAILWAY CORRIDOR, CHILEAN SECTION (ANTOFAGASTA - SOCOMPA)	501.0	CH	Rail
TOTAL		2,000.0		

TABLE 6. OTHER ACTIVE PROJECTS AMOUNTING TO US\$2,294 MILLION THAT FORM PART OF THIS CONNECTIVITY *US\$ million

Code	Name	Estimated Investment*	Stage	Countries	Subsector
CAP42	REHABILITATION OF NATIONAL ROUTE No. 16 BETWEEN THE INTERSECTION WITH NATIONAL ROUTE No. 11 AND THE INTERSECTION WITH NATIONAL ROUTE No. 34	350.0		AR	Road
CAP43	PAVING OF NATIONAL ROUTE No. 86 BETWEEN GENERAL GÜEMES AND POZO HONDO	200.0		AR	Road
CAP44	PAVING OF NATIONAL ROUTE No. 95 BETWEEN THE INTERSECTION WITH NATIONAL ROUTE 81 AND VILLA ÁNGELA	90.0		AR	Road
CAP47	CONCESSION OF LOA ROUTE	389.0		CH	Road
CAP04	OPERATIONAL REHABILITATION OF THE BELGRANO FREIGHT RAILWAY	350.0		AR	Rail
CAP07	OPTIMIZATION OF THE CLORINDA - ASUNCIÓN NODE	101.2		AR - PY	Border Crossings
CAP37	REHABILITATION OF THE C3 RAILWAY BRANCH LINE: RESISTENCIA - AVIA TERAI - PINEDO	100.0		AR	Rail
CAP38	REHABILITATION OF THE C12 RAILWAY BRANCH LINE: AVIA TERAI - METÁN	200.0		AR	Rail
CAP39	REHABILITATION OF THE C14 RAILWAY BRANCH LINE: SALTA - SOCOMPA	100.0		AR	Rail
CAP41	REHABILITATION OF THE C18 RAILWAY BRANCH LINE: JOAQUÍN V. GONZÁLEZ - PICHANAL	50.0		AR	Rail
CAP95	UPGRADE OF NATIONAL ROUTE No. 16 TO A FOUR-LANE ROAD BETWEEN RESISTENCIA AND SÁENZ PEÑA	300.0		AR	Road

ANTOFAGASTA - PASO DE JAMA BORDER CROSSING - JUJUY - RESISTENCIA - FORMOSA - ASUNCIÓN





CAP GROUP 1

Strategic Function

- Improve the production integration and competitiveness conditions in the northwest region in Argentina, the south of Bolivia and Paraguay.
- Reinforce the connectivity of the territories involved towards the Pacific and the Paraná-Paraguay Waterway.
- Take profit from the complementary opportunities for the development of integrated tourism (northwestern Argentina, south of Bolivia and north of Chile).
- Facilitate the flow of people among the countries of the Group.







*US\$ million

Code	Name	Stage	Estimated Investment*	Countries
CAP01	ACCESS ROADS TO PASO DE JAMA BORDER CROSSING (NATIONAL ROUTE No. 52 - INTERSECTION WITH NATIONAL ROUTE No. 9 - BORDER WITH CHILE)		54.0	AR
CAP02	IMPLEMENTATION OF INTEGRATED (ONE-STOP) BORDER CONTROL AT JAMA BORDER CROSSING		4.0	AR - CH
CAP03	ELECTRICITY INTERCONNECTION BETWEEN THE ARGENTINE NORTHWESTERN AND NORTHEASTERN REGIONS		725.0	AR
CAP04	OPERATIONAL REHABILITATION OF THE BELGRANO FREIGHT RAILWAY		350.0	AR
CAP06	PAVING OF NATIONAL ROUTE No. 81 BETWEEN LAS LOMITAS AND THE INTERSECTION WITH NATIONAL ROUTE No. 34		100.0	AR
CAP07	OPTIMIZATION OF THE CLORINDA - ASUNCIÓN NODE		106.2	AR - PY
CAP08	ENLARGEMENT OF THE MEJILLONES PORT COMPLEX (PHASE I)		120.0	CH
CAP09	UPGRADE WORKS AT ANTOFAGASTA PORT		18.0	CH
CAP37	REHABILITATION OF THE C3 RAILWAY BRANCH LINE: RESISTENCIA - AVIA TERAI - PINEDO		100.0	AR
CAP38	REHABILITATION OF THE C12 RAILWAY BRANCH LINE: AVIA TERAI - METÁN		200.0	AR
CAP39	REHABILITATION OF THE C14 RAILWAY BRANCH LINE: SALTA - SOCOMPA		100.0	AR
CAP41	REHABILITATION OF THE C18 RAILWAY BRANCH LINE: JOAQUÍN V. GONZÁLEZ - PICHANAL		50.0	AR
CAP42	REHABILITATION OF NATIONAL ROUTE No. 16 BETWEEN THE INTERSECTION WITH NATIONAL ROUTE No. 11 AND THE INTERSECTION WITH NATIONAL ROUTE No. 34		350.0	AR
CAP43	PAVING OF NATIONAL ROUTE No. 86 BETWEEN GENERAL GÜEMES AND POZO HONDO		200.0	AR
CAP44	PAVING OF NATIONAL ROUTE No. 95 BETWEEN THE INTERSECTION WITH NATIONAL ROUTE 81 AND VILLA ÁNGELA		90.0	AR
CAP46	CONCESSION OF ANTOFAGASTA EXPRESSWAY		370.0	CH
CAP47	CONCESSION OF LOA ROUTE		280.0	CH
CAP80	MEJILLONES PORT COMPLEX		80.0	CH

ANTOFAGASTA - PASO DE JAMA BORDER CROSSING - JUJUY - RESISTENCIA - FORMOSA - ASUNCIÓN

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*US\$ million

Code	Name	Stage	Estimated Investment*	Countries
CAP88	ANTOFAGASTA AIRPORT		28.0	CH
CAP89	HITO CAJÓN BORDER COMPLEX		1.2	CH
CAP90	PAVING OF ROAD B-243, CH27 SAN PEDRO - TOCOPILLA - ANTOFAGASTA CONNECTION		1.5	CH
CAP91	BIOCEANIC RAILWAY CORRIDOR, CHILEAN SECTION (ANTOFAGASTA - SOCOMPA)		501.0	CH
CAP95	UPGRADE OF NATIONAL ROUTE No. 16 TO A FOUR-LANE ROAD BETWEEN RESISTENCIA AND SÁENZ PEÑA		300.0	AR
CAP102	PAVEMENT OF THE ROAD BETWEEN OLLAGÜE BORDER CROSSING AND CALAMA		70.0	CH
24			4,198.9	



PROFILING



PRE-EXECUTION

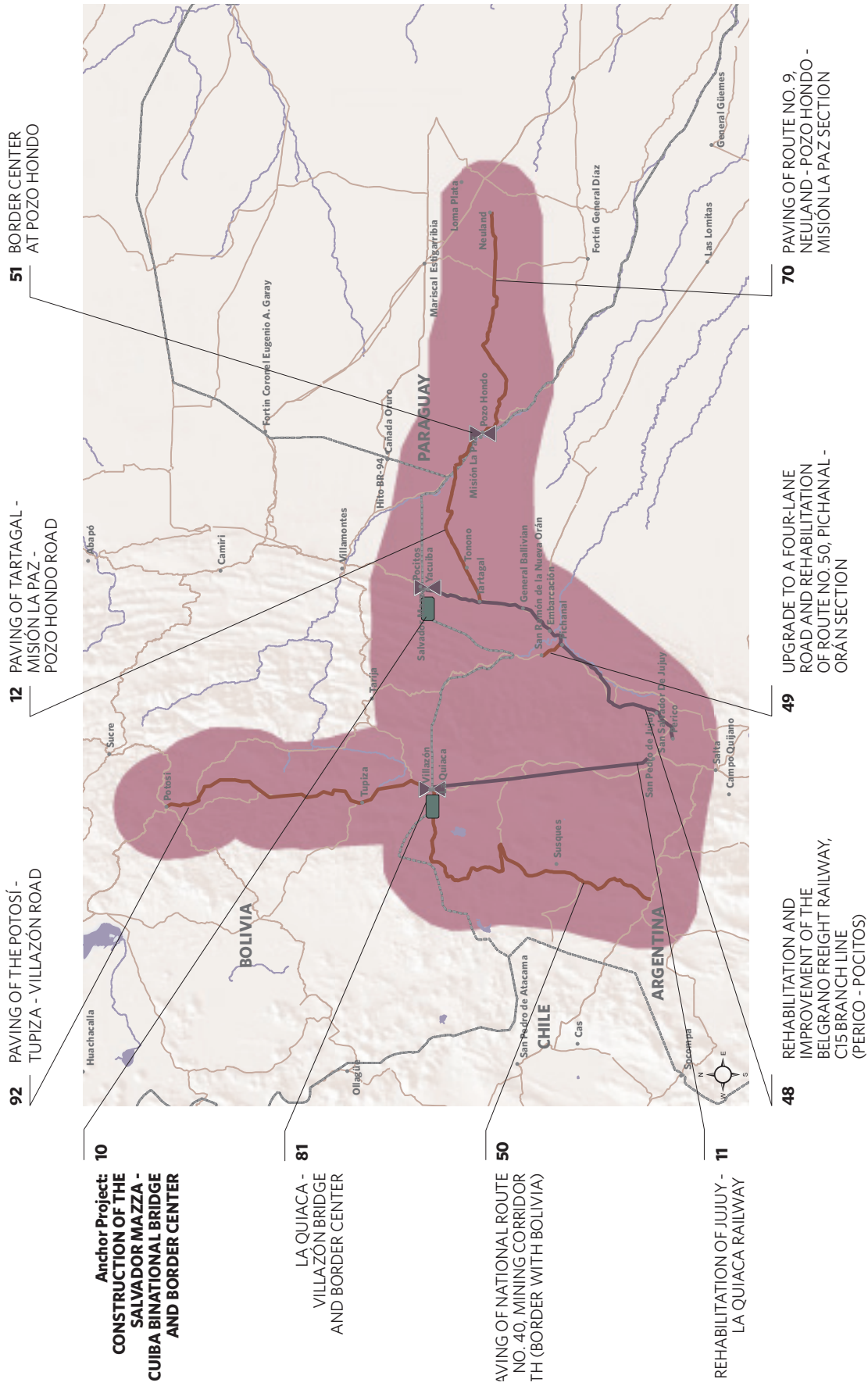


EXECUTION



COMPLETED

SALTA - VILLAZÓN - YACUIBA - MARISCAL ESTIGARRIBIA





CAP GROUP 2

Strategic Function

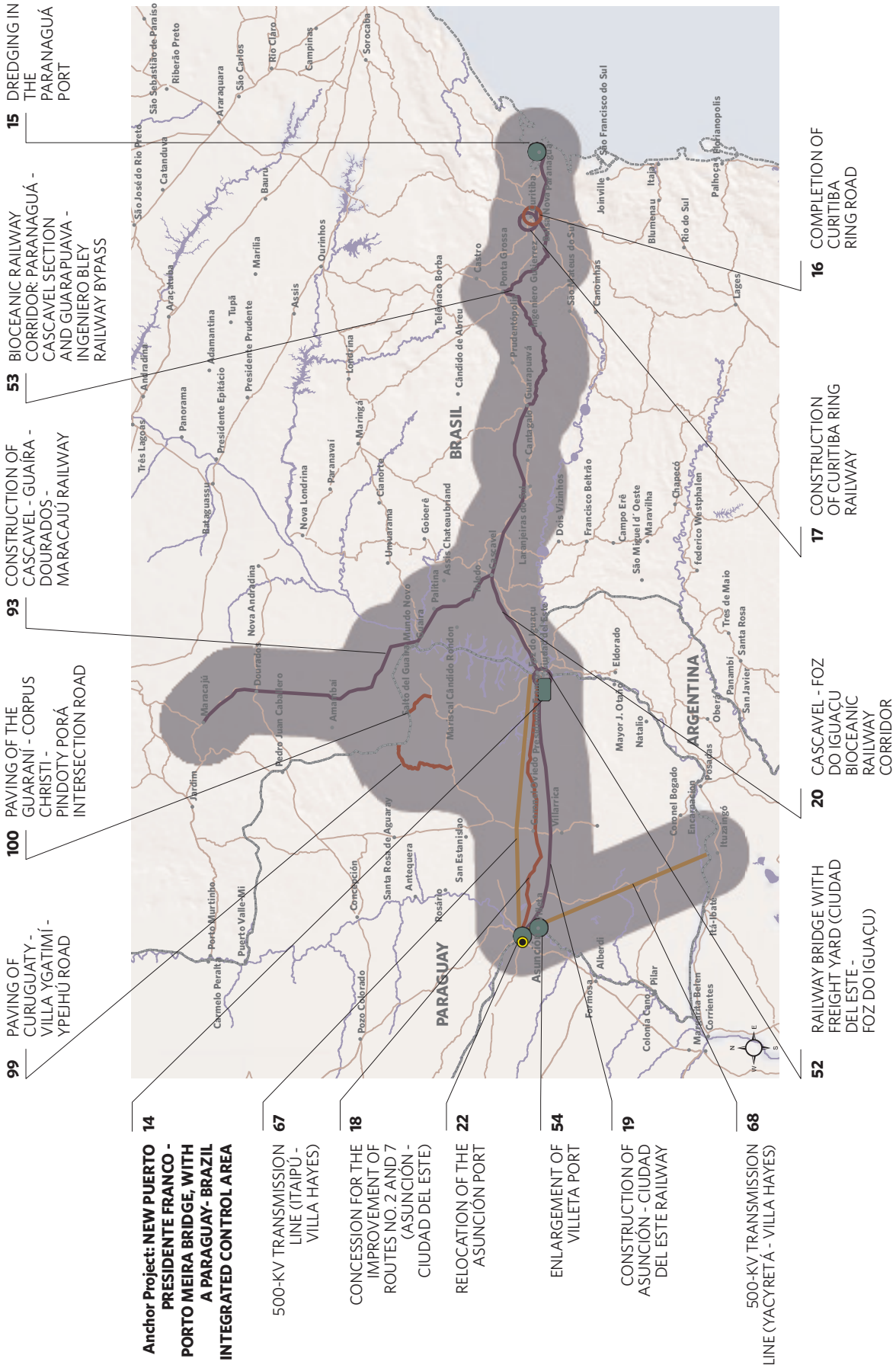
- Reduce costs and provide greater security to trade in goods and services among Argentina - Bolivia - Paraguay.
- Facilitate the flow of people among the countries of the Group.
- Articulate the Central Interoceanic and Capricorn Hubs.
- Organization of territorial dynamics and reduction of its environmental impact.

*US\$ million

Code	Name	Stage	Estimated Investment*	Countries
CAP10	CONSTRUCTION OF THE SALVADOR MAZZA - YACUIBA BINATIONAL BRIDGE AND BORDER CENTER		45.0	AR - BO
CAP11	REHABILITATION OF JUJUY - LA QUIACA RAILWAY PRE-EXECUTION		62.0	AR
CAP12	PAVING OF TARTAGAL - MISIÓN LA PAZ - POZO HONDO ROAD		160.0	AR
CAP48	REHABILITATION AND IMPROVEMENT OF THE BELGRANO FREIGHT RAILWAY, C15 BRANCH LINE (PERICO - POCITOS)		60.0	AR
CAP49	UPGRADE TO A FOUR-LANE ROAD AND REHABILITATION OF ROUTE No. 50, PICHANAL - ORÁN SECTION		35.0	AR
CAP50	PAVING OF NATIONAL ROUTE No. 40, MINING CORRIDOR PATH (BORDER WITH BOLIVIA)		400.0	AR
CAP51	BORDER CENTER AT POZO HONDO		1.5	PY
CAP70	PAVEMENT OF THE CRUCE CENTINELA - MARISCAL ESTIGARRIBIA - POZO HONDO - MISIÓN LA PAZ ROAD SECTION		340.7	PY
CAP81	LA QUIACA - VILLAZÓN BRIDGE AND BORDER CENTER		15.0	AR - BO
CAP92	PAVING OF THE POTOSÍ - TUPIZA - VILLAZÓN ROAD		180.4	BO
10			1,299.6	

PROFILING
 PRE-EXECUTION
 EXECUTION
 COMPLETED

ASUNCIÓN - PARANAGUÁ





CAP GROUP 3

Strategic Function

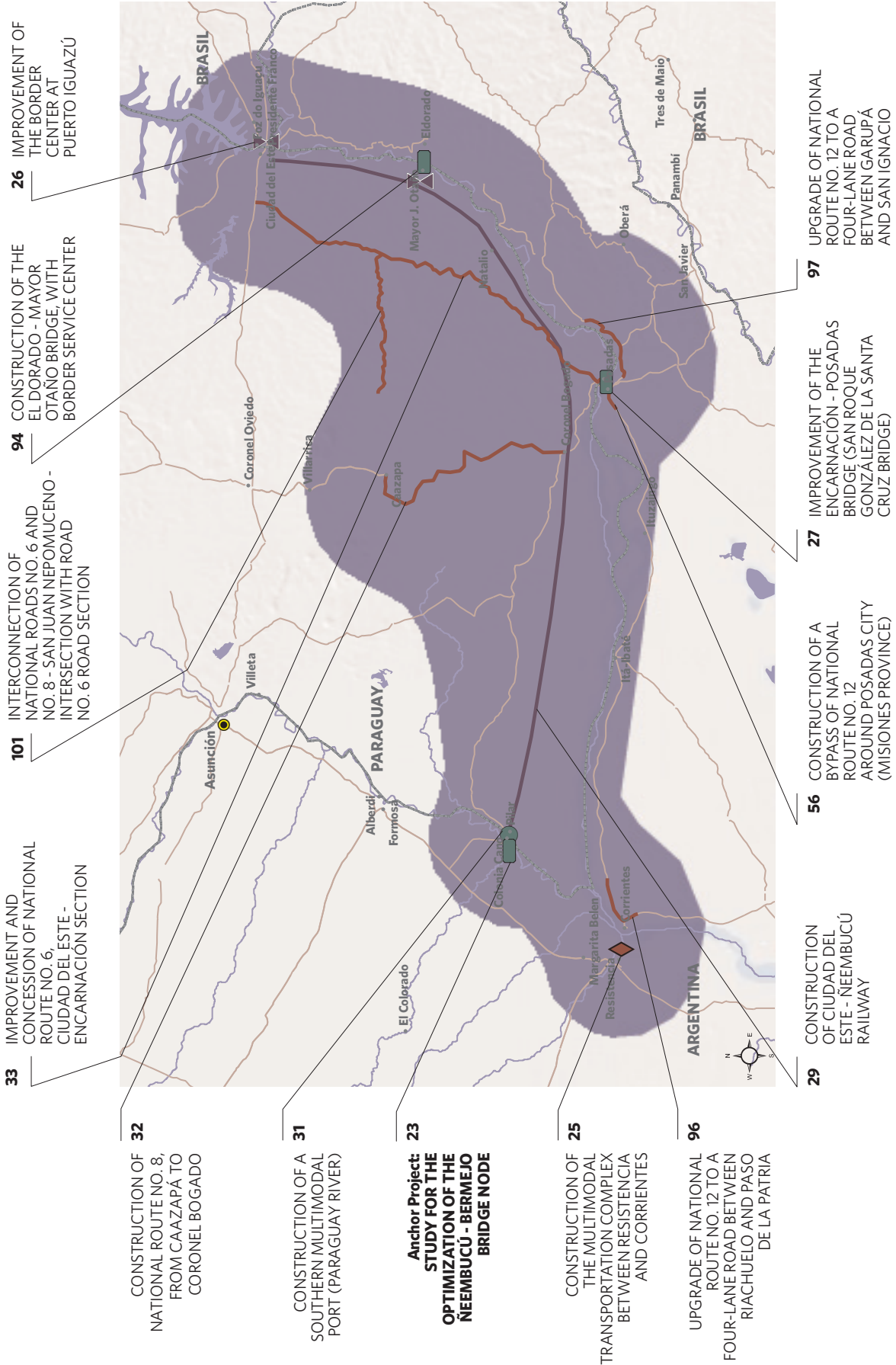
- Consolidate a high-capacity, low-cost system for moving bulk cargo from the region to international markets.
- Promote socioeconomic regional development.

*US\$ million

Code	Name	Stage	Estimated Investment*	Countries
CAP14	NEW PUERTO PRESIDENTE FRANCO - PORTO MEIRA BRIDGE, WITH A PARAGUAY - BRAZIL INTEGRATED CONTROL AREA		173.0	BR - PY
CAP15	DREDGING IN THE PARANAGUÁ PORT		100.0	BR
CAP16	COMPLETION OF CURITIBA RING ROAD		140.0	BR
CAP17	CONSTRUCTION OF CURITIBA RING RAILWAY		0.0	BR
CAP18	CONCESSION FOR THE IMPROVEMENT OF ROUTES No. 2 AND 7 (ASUNCIÓN - CIUDAD DEL ESTE)		500.0	PY
CAP19	CONSTRUCTION OF ASUNCIÓN - CIUDAD DEL ESTE RAILWAY		500.0	PY
CAP20	CASCAVEL - FOZ DO IGUAÇU BIOCEANIC RAILWAY CORRIDOR		324.0	BR
CAP22	RELOCATION OF THE ASUNCIÓN PORT		25.0	PY
CAP52	RAILWAY BRIDGE WITH FREIGHT YARD (CIUDAD DEL ESTE - FOZ DO IGUAÇU)		0.0	BR - PY
CAP53	BIOCEANIC RAILWAY CORRIDOR: PARANAGUÁ - CASCAVEL SECTION AND GUARAPUAVA - INGENIERO BLEY RAILWAY BYPASS		1,500.0	BR
CAP54	ENLARGEMENT OF VILLETA PORT		30.0	PY
CAP67	500-KV TRANSMISSION LINE (ITAIPU - VILLA HAYES)		555.0	PY
CAP68	500-KV TRANSMISSION LINE (YACYRETÁ - VILLA HAYES)		297.0	PY
CAP93	CONSTRUCTION OF CASCAVEL - GUAÍRA - DOURADOS - MARACAJÚ RAILWAY		0.0	BR
CAP99	PAVING OF CURUGUATY - VILLA YGATIMÍ - YPEJHÚ ROAD		77.5	PY
CAP100	PAVING OF THE GUARANÍ - CORPUS CHRISTI - PINDOTY PORÁ INTERSECTION ROAD		43.0	PY
16			4,264.5	

PROFILING
 PRE-EXECUTION
 EXECUTION
 COMPLETED

PRESIDENTE FRANCO - PUERTO IGUAZÚ - PILAR - RESISTENCIA





CAP GROUP 4

Strategic Function

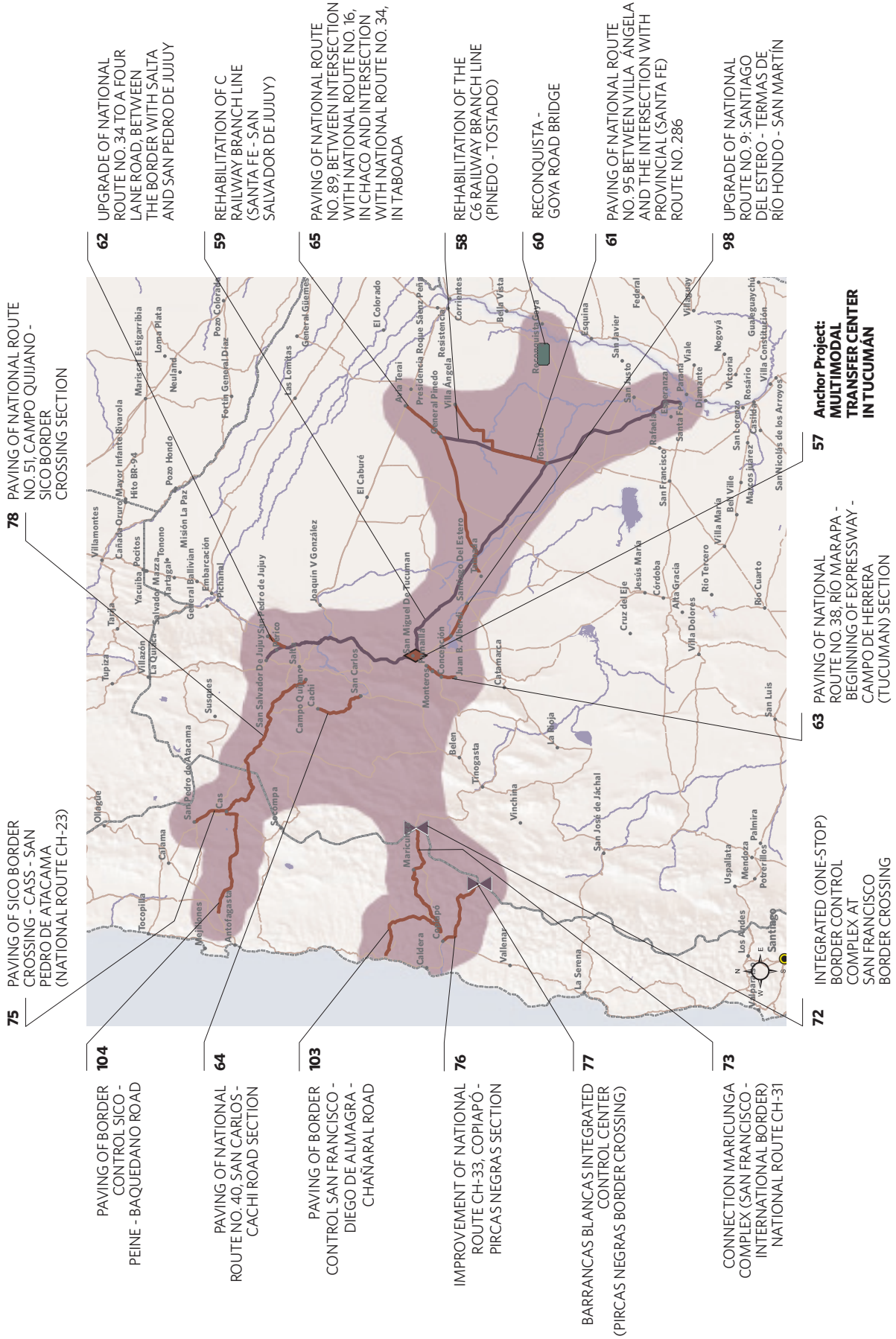
- Make intra-regional economic development more dynamic.
- Improve options so as to have outlets for the region's products towards the Paraguay-Paraná Waterway.
- Provide basic conditions for border facilitation.
- Facilitate the flow of people among the countries of the Group.

*US\$ million

Code	Name	Stage	Estimated Investment*	Countries
CAP23	STUDY FOR THE OPTIMIZATION OF THE ÑEEMBUCÚ -BERMEJO NODE		301.2	AR - PY
CAP25	CONSTRUCTION OF THE MULTIMODAL TRANSPORTATION COMPLEX BETWEEN RESISTENCIA AND CORRIENTES		175.0	AR
CAP26	IMPROVEMENT OF THE BORDER CENTER AT PUERTO IGUAZÚ		2.0	AR
CAP27	IMPROVEMENT OF THE ENCARNACIÓN - POSADAS BRIDGE (SAN ROQUE GONZÁLEZ DE LA SANTA CRUZ BRIDGE)		52.3	AR - PY
CAP29	CONSTRUCTION OF CIUDAD DEL ESTE - PILAR ÑEEMBUCÚ RAILWAY		2,800.0	PY
CAP31	CONSTRUCTION OF A SOUTHERN MULTIMODAL PORT (PARAGUAY RIVER)		120.0	PY
CAP32	CONSTRUCCIÓN DE LA RUTA NACIONAL N° 8, TRAMO CAAZAPÁ - CORONEL BOGADO		212.0	PY
CAP33	IMPROVEMENT AND CONCESSION OF NATIONAL ROUTE No. 6, CIUDAD DEL ESTE - ENCARNACIÓN SECTION		136.0	PY
CAP56	CONSTRUCTION OF A BYPASS OF NATIONAL ROUTE No. 12 AROUND POSADAS CITY (MISIONES PROVINCE)		35.0	AR
CAP94	CONSTRUCTION OF THE EL DORADO - MAYOR OTAÑO BRIDGE, WITH BORDER SERVICE CENTER		0.0	AR - PY
CAP96	UPGRADE OF NATIONAL ROUTE No. 12 TO A FOUR-LANE ROAD BETWEEN RIACHUELO AND PASO DE LA PATRIA		80.0	AR
CAP97	UPGRADE OF NATIONAL ROUTE No. 12 TO A FOUR-LANE ROAD BETWEEN GARUPÁ AND SAN IGNACIO		92.0	AR
CAP101	INTERCONNECTION OF NATIONAL ROADS No. 6 AND No. 8 - SAN JUAN NEPOMUCENO -INTERSECTION WITH ROAD No. 6 ROAD SECTION		105.0	PY
13			4,110.5	

PROFILING
 PRE-EXECUTION
 EXECUTION
 COMPLETED

SOUTHERN CAPRICORN





CAP GROUP 5

Strategic Function

- Implement intermodal articulation among the groups of the Capricorn Hub, the MERCOSUR-Chile Hub, the Central Interoceanic Hub, and the Paraguay-Paraná Waterway Hub.
- Improve sustainable social and economic development, connectivity, and intra-regional integration.
- Enable a new option for trade flows between the region and the Pacific markets.
- Facilitate the flow of people among the countries in the Group.

					*US\$ million
Code	Name	Stage	Estimated Investment*	Countries	
CAP57	MULTIMODAL TRANSFER CENTER IN TUCUMÁN		20.0	AR	
CAP58	REHABILITATION OF THE C6 RAILWAY BRANCH LINE (PINEDO - TOSTADO)		100.0	AR	
CAP59	REHABILITATION OF C RAILWAY BRANCH LINE (SANTA FE - SAN SALVADOR DE JUJUY)		270.0	AR	
CAP60	RECONQUISTA - GOYA ROAD BRIDGE		850.0	AR	
CAP61	PAVING OF NATIONAL ROUTE No. 95 BETWEEN VILLA ÁNGELA AND THE INTERSECTION WITH PROVINCIAL (SANTA FE) ROUTE No. 286		37.0	AR	
CAP62	UPGRADE OF NATIONAL ROUTE No. 34 TO A FOUR-LANE ROAD, BETWEEN THE BORDER WITH SALTA AND SAN PEDRO DE JUJUY		140.0	AR	
CAP63	PAVING OF NATIONAL ROUTE No. 38, RÍO MARAPA - BEGINNING OF EXPRESSWAY - CAMPO DE HERRERA (TUCUMÁN) SECTION		300.0	AR	
CAP64	PAVING OF NATIONAL ROUTE No. 40, SAN CARLOS - CACHI ROAD SECTION		250.0	AR	
CAP65	PAVING OF NATIONAL ROUTE No. 89, BETWEEN INTERSECTION WITH NATIONAL ROUTE No. 16, IN CHACO AND INTERSECTION WITH NATIONAL ROUTE No. 34, IN TABOADA		95.0	AR	
CAP72	INTEGRATED (ONE-STOP) BORDER CONTROL COMPLEX AT SAN FRANCISCO BORDER CROSSING		4.0	AR - CH	
CAP73	CONNECTION MARICUNGA COMPLEX (SAN FRANCISCO - INTERNATIONAL BORDER) NATIONAL ROUTE CH-31		52.0	CH	
CAP75	PAVING OF SICO BORDER CROSSING - CASS- SAN PEDRO DE ATACAMA (NATIONAL ROUTE CH-23)		30.0	CH	
CAP76	IMPROVEMENT OF NATIONAL ROUTE CH-33, COIAPÓ - PIRCAS NEGRAS SECTION		95.0	CH	
CAP77	BARRANCAS BLANCAS INTEGRATED CONTROL CENTER (PIRCAS NEGRAS BORDER CROSSING)		5.0	AR - CH	
CAP78	PAVING OF NATIONAL ROUTE No. 51, CAMPO QUIJANO - SICO BORDER CROSSING SECTION		180.0	AR	
CAP98	UPGRADE OF NATIONAL ROUTE No. 9: SANTIAGO DEL ESTERO - TERMAS DE RÍO HONDO - SAN MARTÍN		275.0	AR	
CAP103	PAVEMENT OF THE SAN FRANCISCO BORDER CROSSING - DIEGO DE ALMAGRO - CHAÑARAL ROAD		24.8	CH	
CAP104	PAVEMENT OF THE SICO BORDER CROSSING - PEINE - BAQUEDANO ROAD		90.0	CH	
18			2,817.8		

DES SOUTHERN

Integration and Development Hub



Population: 6,473,238
Population density: 9.4 people/km²
Area: 686,527 km²

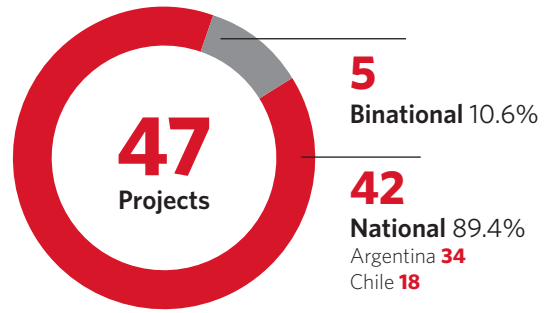
GDP: US\$ 71,888 million

Services	72.5%
Industries	13.8%
Agriculture	7.2%
Mining and quarrying	6.5%

Estimated Investment

US\$ million

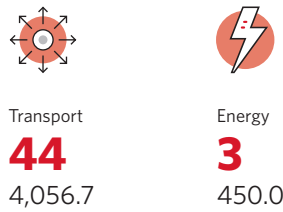
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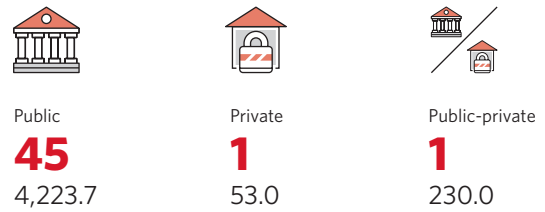
Projects by Stage



Projects by Sector

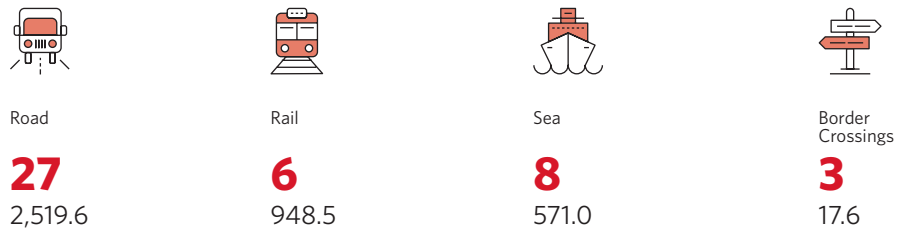


Projects by Type of Financing



Projects by Subsector

Transport



Energy



SOUTHERN

Presentation of the Hub

The Southern Hub⁽¹⁾ covers a portion of the southernmost end of the South American continent that stretches from the Pacific coast, in the Chilean regions of Bío Bío, Araucanía, Los Lagos, and Los Ríos, and then climbs up and down the western and eastern slopes of the Andean massifs (Chile and Argentina), to run in Argentina across the Patagonian plateau to the Atlantic coast, including on its way the provinces of Chubut, Neuquén, and Río Negro, as well as the southern area of the province of Buenos Aires.

The Hub accounts for 4% of the area (686,527 km²), 2% of the population (6,473,238 inhabitants), and 2% of the GDP of South America (US\$71,888 million),⁽²⁾ ranking last and next to last in such parameters vis-à-vis the other Hubs. Furthermore, it is the least densely populated Hub, with 9.4 inhabitants per km².

AREA OF INFLUENCE OF THE SOUTHERN HUB



¹ See "Caracterización Socioeconómica y Ambiental del Eje del Sur," COSIPLAN-IIRSA, 2015, at <http://www.iirsa.org/del-sur.asp>

² At current 2013 prices.

With regard to infrastructure, the **road network** of the countries that make up the Southern Hub is 323,009 km long, 26% of which are paved. The **rail network** totals 34,857 km. The **sea port system** of the Southern Hub is made up of 14 major ports distributed along the Pacific and Atlantic coasts. Four of these ports handle more than five million tons per year. The **airport system** features 17 airports, six of which are international and 11 domestic. As far as **electricity generation** is concerned, as of 2012 the countries involved in the Hub had an installed power capacity of about 53,141 MW.

The presence of **indigenous communities** in its territory is very significant, as there are indigenous people living in almost the whole Hub, though they are fewer in the region of the Argentine Atlantic coast.

Concerning **protected areas**, there are about 63 territorial units with some degree of protection, covering approximately 74.000 km², which accounts for 11% of the Hub's total territory. Protected areas include two biosphere reserves, two Ramsar sites, and 18 national parks.

Overall, all the Andean territory of the Hub is exposed to **natural hazards** resulting mostly from seismic and volcanic geodynamic processes, whereas the eastern area of the Patagonian plateau and its river valleys are exposed to meteorological and hydrological hazards due to heavy rains that cause floods and waterlogging, mainly in the basins of the Negro and Colorado rivers (Argentina) and the Bío Bío river (Chile). The Pacific coastline is exposed to tsunamis generated by earthquakes. In addition, landslides are common in the Andes, with their steep slopes and high precipitation rates.

The countries that make up the Southern Hub plan investments for US\$4,507 million in 47 physical integration projects.

Argentina contributes 37% of its economy to the Hub, and Chile, 13%. In absolute terms, Argentina contributes 52% to the Hub's GDP, while Chile contributes 48%

The Southern Hub (DES) shares some regions of its area of influence with the Andean Hub (AND).

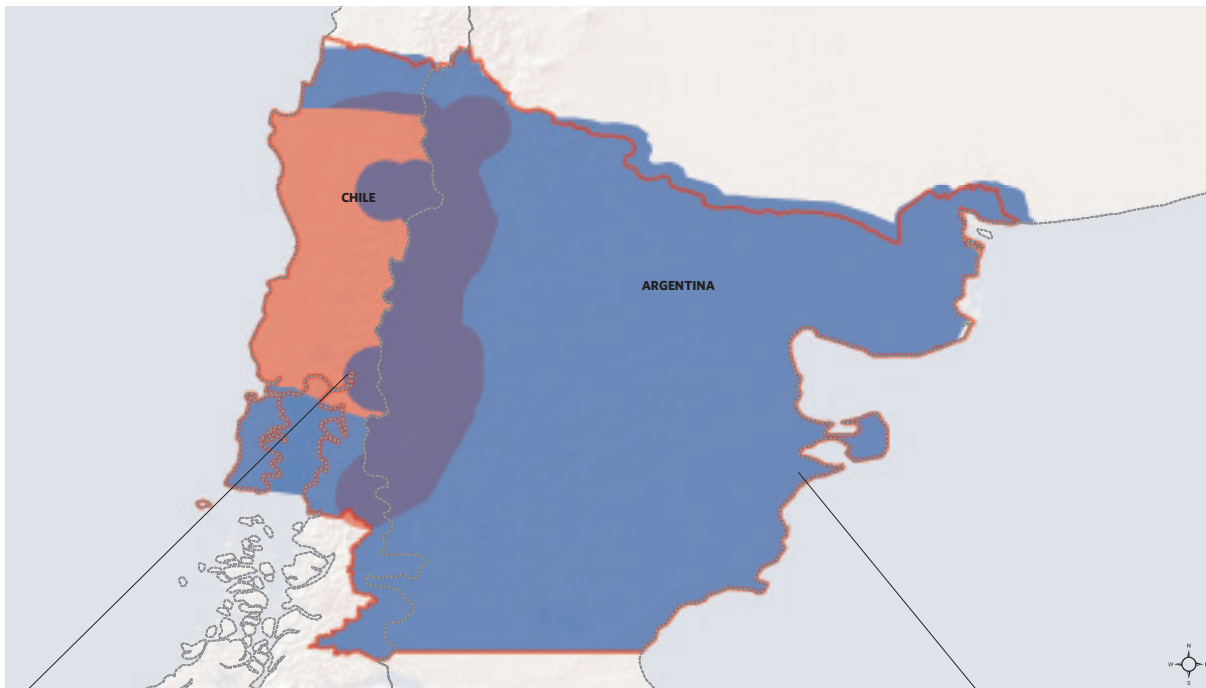
SOUTHERN

Project Portfolio

The projects included in the Southern Hub are intended to reduce transportation costs in order to increase trade in goods and services between Argentina and Chile, taking into account the preservation of environmental resources and the strengthening of a binational tourist system in the lakes area.

It should be noted that at the last meeting of the Executive Technical Group on the Southern Hub to Update the COSIPLAN Portfolio and API, the Argentine and Chilean National Coordinators enlarged the Hub's area of influence by incorporating the province of Chubut (Argentina) and the Aysén Region of General Carlos Ibáñez del Campo up to the province of Coihaique (Chile).

PROJECT GROUPS OF THE SOUTHERN HUB



Group 2: BINATIONAL TOURIST CIRCUIT OF THE LAKES AREA

Group 1: CONCEPCIÓN - BAHÍA BLANCA - SAN ANTONIO ESTE PORT

TABLE 1. PROJECT GROUPS OF THE SOUTHERN HUB *US\$ million



Group	Name	No. of Projects	Estimated Investment*
1	CONCEPCIÓN - BAHÍA BLANCA - SAN ANTONIO ESTE PORT	26	2,148.6
2	BINATIONAL TOURIST CIRCUIT OF THE LAKES AREA	21	2,358.1
TOTAL		47	4,506.7

The active portfolio of the Hub includes 42 projects with an estimated investment of US\$4,064 million.

Of the 42 active projects included, there is information available on the estimated completion date of only two: both will be completed in the next two years (2016-2017). National Route 3 —where it connects the Bahía Blanca port with San Antonio Este— covers approximately 259 km along which, on an annual average, daily traffic is 8,000 vehicles. Improvements are expected to be finished by mid-2016.

The upgrade of the 300-km Interlagos Route will contribute to the international integration of Chilean and Argentine regions that stand out for their high-quality tourist sites. By mid-2017, connectivity improvements will encourage further the development of production and commercial activities associated with tourism, as well as tourism itself.

TABLE 2. PROJECTS TO BE COMPLETED IN THE NEXT FOUR YEARS *US\$ million

Code	Name	Group	Stage	Estimated Investment*	Countries	Estimated Completion Date
DES09	IMPROVEMENT OF NATIONAL ROUTE No. 3 BETWEEN BAHÍA BLANCA AND CARMEN DE PATAGONES	1		68.0	AR	February 2017
DES18	UPGRADE AND MAINTENANCE OF THE INTERLAGOS ROUTE IN ARGENTINA	2		200.0	AR	May 2017

 PROFILING  PRE-EXECUTION  EXECUTION  COMPLETED

The 14 projects that are at the execution stage, together with other five projects that have already been completed, account for 51% of the investment amount estimated for the Hub's Portfolio. In other words, more than half of the investment planned is allocated to 26 projects that are at their early (profiling and pre-execution) stages. The five projects with the greatest estimated investment account for 48% of the total investment in the Hub's active portfolio.






It should be noted that most of them (3) are at an early stage of their life cycle: the Bahía Blanca - San Carlos de Bariloche Railway Branch Line and the Enlargement of Bahía Blanca Port are at the profiling stage, and project Railway Ring and Accesses to Bahía Blanca Port is at the pre-execution stage. The three projects are aimed at enhancing connectivity in the Bahía Blanca hub towards both the Andes and international markets.

The other two projects are being undertaken in Chile and seek to

reinforce land connectivity with Argentina. One of them is an anchor project and requires 40% of the investment estimated for the five projects together: the Upgrade and Maintenance of the Interlagos Route.

All the projects belong to the transport sector, and fall in the road, rail and sea subsectors. Also, they are all national in scope, and Argentina and Chile have a balanced share in them. Almost all the projects are financed by the public sector, except for the Bahía Blanca port, the investment in which comes from a public-private partnership.

TABLE 3. THE FIVE PROJECTS OF THE ACTIVE PORTFOLIO WITH THE GREATEST ESTIMATED INVESTMENT *US\$ million

Code	Name	Group	Stage	Estimated Investment*	Countries	Type of Financing
DES16	UPGRADE AND MAINTENANCE OF THE INTERLAGOS ROUTE IN CHILE	2		776.0	CH	Public
DES26	BAHÍA BLANCA - SAN CARLOS DE BARILOCHE RAILWAY BRANCH LINE	2		400.0	AR	Public
DES46	IMPROVEMENT OF ROUTE CH-181 BETWEEN CURACAUTÍN AND PINO HACHADO	2		303.0	CH	Public
DES22	RAILWAY RING AND ACCESSES TO BAHÍA BLANCA PORT	1		250.0	AR	Public
DES25	ENLARGEMENT OF BAHÍA BLANCA PORT	1		230.0	AR	Public-private

 PROFILING  PRE-EXECUTION  EXECUTION  COMPLETED

The Hub features five completed projects for a total amount of US\$443 million: two of them involve electricity interconnections, accounting for 95% of the investments.

The portfolio of this Hub includes only one additional energy project, also involving electricity interconnection, which is at its profiling stage.

The interconnection between Comahue and Cuyo for US\$350 million ranks third in terms of the investment amount made within this Hub, considering all 47 projects. It consists in a 707-km long, 500-kV transmission line, already completed, which decreased substantially the risks of a collapse as a result of isolation and the energy costs in the area of Cuyo. Furthermore, the chances for interconnection with the central system of Chile increased.

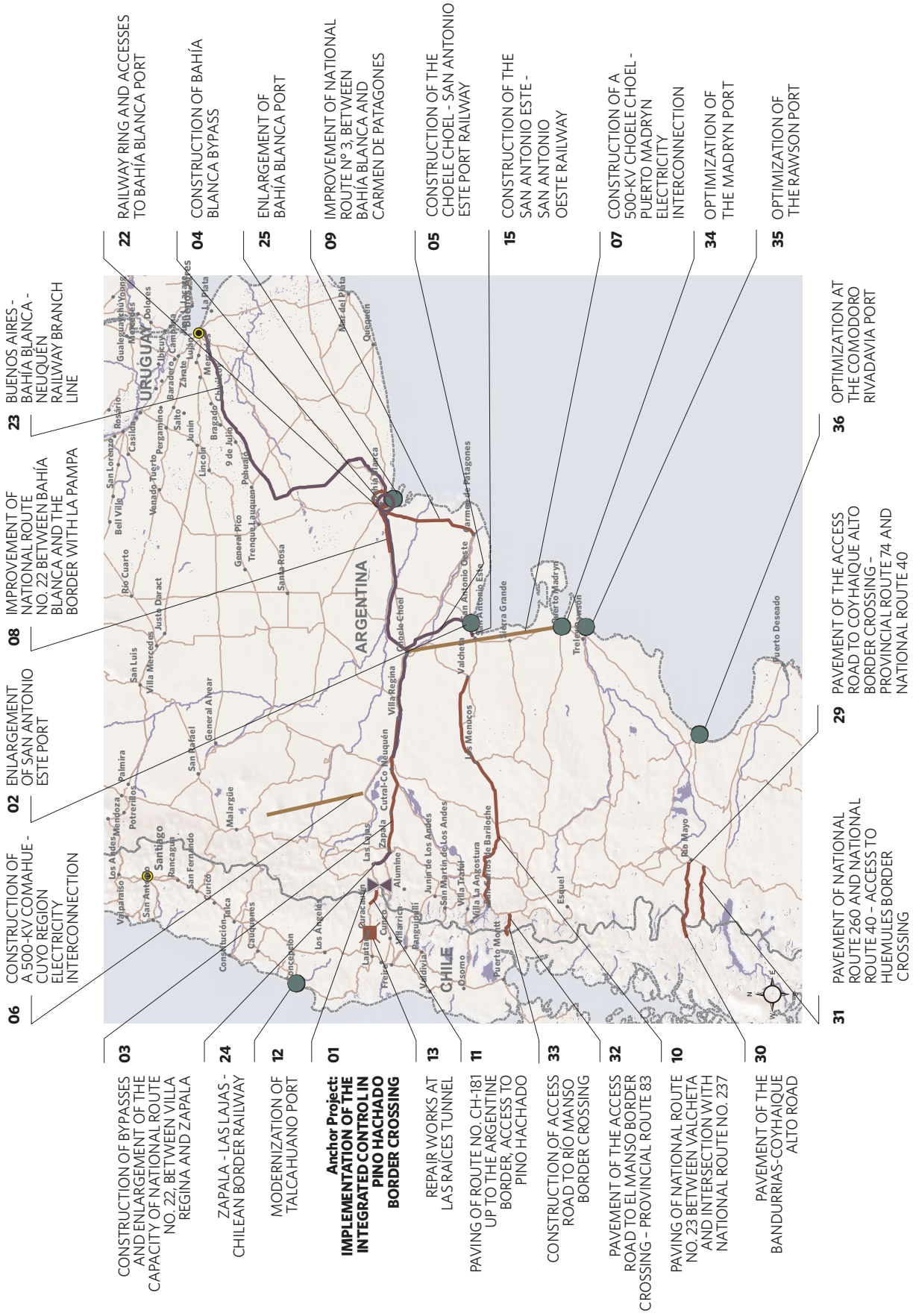
Another completed project, which amounts to US\$70 million, is a 500-kV electricity interconnection line that runs along 350 km between Choele Choel and Puerto Madryn, which may be extended in the future to the town of Pico Truncado, in Santa Cruz.

The other three projects deal with the transport sector and are located in the Chilean-Argentine border region, on the Chilean side, and favor the flow of goods, services and people between both countries.

TABLE 4. COMPLETED PROJECTS IN THE HUB *US\$ million

Code	Name	Investment Amount*	Countries
DES06	CONSTRUCTION OF A 500-KV COMAHUE - CUYO REGION ELECTRICITY INTERCONNECTION	350.0	AR
DES07	CONSTRUCTION OF A 500-KV CHOELE CHOEL - PUERTO MADRYN ELECTRICITY INTERCONNECTION	70.0	AR
DES13	REPAIR WORKS AT LAS RAÍCES TUNNEL	10.5	CH
DES28	CONSTRUCTION OF THE HUA HUM BORDER COMPLEX	7.6	CH
DES11	PAVING OF ROUTE No. CH-181 UP TO THE ARGENTINE BORDER, ACCESS TO PINO HACHADO	5.0	CH
5		4,956.7	

CONCEPCIÓN - BAHÍA BLANCA - SAN ANTONIO ESTE PORT





Strategic Function

- Reduce transportation costs and thus enhance trade in goods and services and economic complementariness between the countries.
- Create sustainable economic and social development opportunities.
- Facilitate the flow of people between the countries of the Group.








*US\$ million

Code	Name	Stage	Estimated Investment*	Country
DES01	IMPLEMENTATION OF INTEGRATED BORDER CONTROL IN PINO HACHADO BORDER CROSSING		8.0	AR - CH
DES02	ENLARGEMENT OF SAN ANTONIO ESTE PORT		0.0	AR
DES03	CONSTRUCTION OF BYPASSES AND ENLARGEMENT OF THE CAPACITY OF NATIONAL ROUTE No. 22, BETWEEN VILLA REGINA AND ZAPALA		100.0	AR
DES04	CONSTRUCTION OF BAHÍA BLANCA BYPASS		8.0	AR
DES05	CONSTRUCTION OF THE CHOELE CHOEL - SAN ANTONIO ESTE PORT RAILWAY		40.0	AR
DES06	CONSTRUCTION OF A 500-KV COMAHUE - CUYO REGION ELECTRICITY INTERCONNECTION		350.0	AR
DES07	CONSTRUCTION OF A 500-KV CHOELE CHOEL - PUERTO MADRYN ELECTRICITY INTERCONNECTION		70.0	AR
DES08	IMPROVEMENT OF NATIONAL ROUTE No. 22 BETWEEN BAHÍA BLANCA AND THE BORDER WITH LA PAMPA		30.0	AR
DES09	IMPROVEMENT OF NATIONAL ROUTE No. 3 BETWEEN BAHÍA BLANCA AND CARMEN DE PATAGONES		68.0	AR
DES10	PAVING OF NATIONAL ROUTE No. 23 BETWEEN VALCHETA AND INTERSECTION WITH NATIONAL ROUTE No. 237		225.0	AR
DES11	PAVING OF ROUTE No. CH-181 UP TO THE ARGENTINE BORDER, ACCESS TO PINO HACHADO		5.0	CH
DES12	MODERNIZATION OF TALCAHUANO PORT		53.0	CH
DES13	REPAIR WORKS AT LAS RAÍCES TUNNEL		10.5	CH
DES15	CONSTRUCTION OF THE SAN ANTONIO ESTE - SAN ANTONIO OESTE RAILWAY		8.5	AR
DES22	RAILWAY RING AND ACCESSES TO BAHÍA BLANCA PORT		250.0	AR
DES23	BUENOS AIRES - BAHÍA BLANCA - NEUQUÉN RAILWAY BRANCH LINE		180.0	AR
DES24	ZAPALA - LAS LAJAS - CHILEAN BORDER RAILWAY PRE-EXECUTION		70.0	AR
DES25	ENLARGEMENT OF BAHÍA BLANCA PORT		230.0	AR
DES29	PAVEMENT OF THE ACCESS ROAD TO COYHAIQUE ALTO BORDER CROSSING - PROVINCIAL ROUTE 74 AND NATIONAL ROUTE 40		5.0	AR

CONCEPCIÓN - BAHÍA BLANCA - SAN ANTONIO ESTE PORT

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*US\$ million

Code	Name	Stage	Estimated Investment*	Country
DES30	PAVEMENT OF THE BANDURRIAS - COYHAIQUE ALTO ROAD		31.0	CH
DES31	PAVEMENT OF NATIONAL ROUTE 260 AND NATIONAL ROUTE 40 - ACCESS TO HUEMULES BORDER CROSSING		24.0	AR
DES32	PAVEMENT OF THE ACCESS ROAD TO EL MANSO BORDER CROSSING - PROVINCIAL ROUTE 83		112.0	AR
DES33	CONSTRUCTION OF ACCESS ROAD TO RÍO MANSO BORDER CROSSING		74.6	CH
DES34	OPTIMIZATION OF THE MADRYN PORT		35.0	AR
DES35	OPTIMIZATION OF THE RAWSON PORT		7.0	AR
DES36	OPTIMIZATION AT THE COMODORO RIVADAVIA PORT		154.0	AR
26			2,148.6	



PROFILING



PRE-EXECUTION

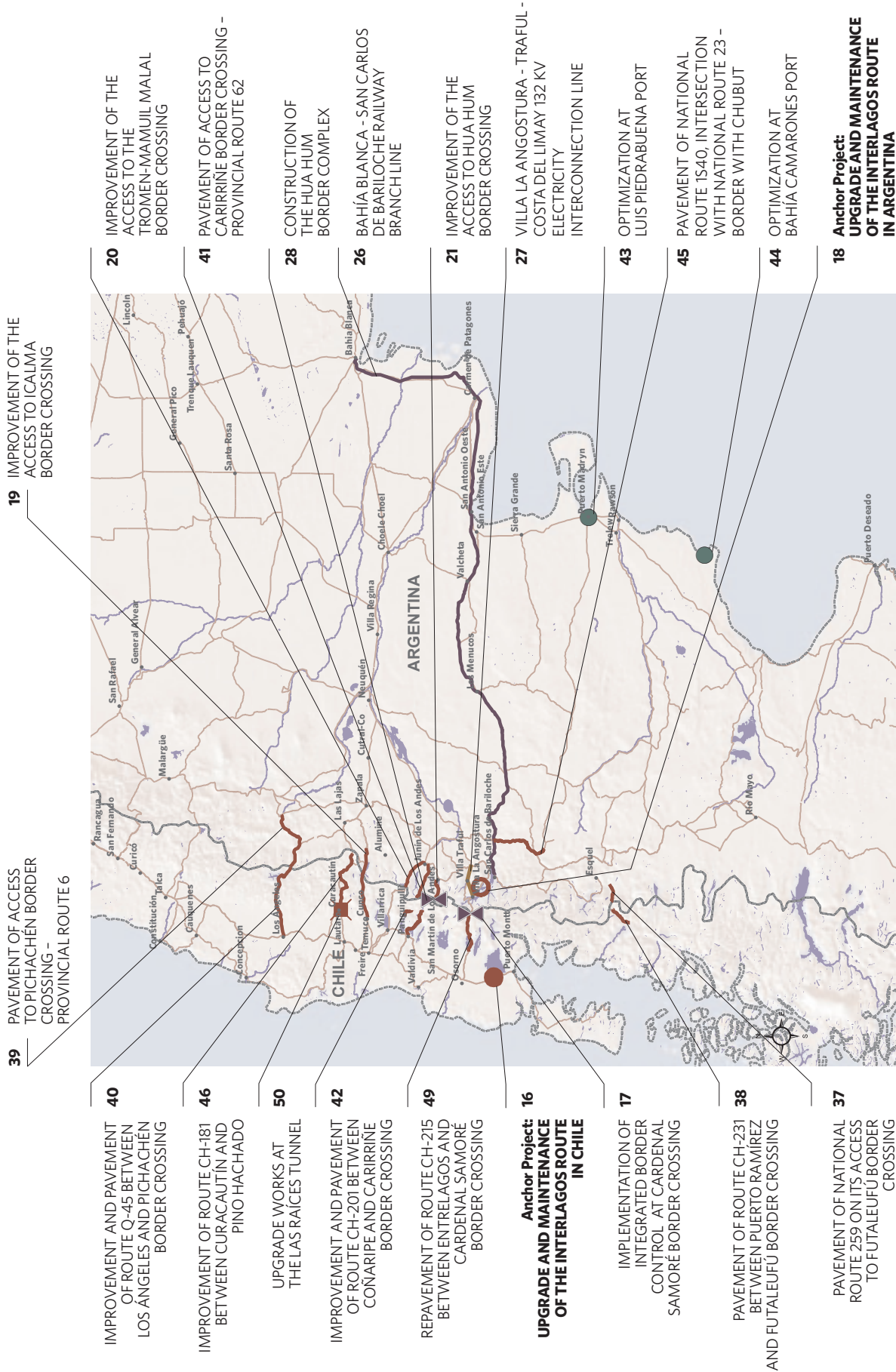


EXECUTION



COMPLETED

BINATIONAL TOURIST CIRCUIT OF THE LAKES AREA





DES GROUP 2

Strategic Function

- Reinforce the binational tourism system in the lakes area.
- Create sustainable economic and social development opportunities.
- Favor the preservation of the area's environmental resources.
- Facilitate the flow of people between the countries of the Group.



*US\$ million

Code	Name	Stage	Estimated Investment*	Countries
DES16	UPGRADE AND MAINTENANCE OF THE INTERLAGOS ROUTE IN CHILE		776.0	CH
DES17	IMPLEMENTATION OF INTEGRATED BORDER CONTROL AT CARDENAL SAMORÉ BORDER CROSSING		2.0	AR - CH
DES18	UPGRADE AND MAINTENANCE OF THE INTERLAGOS ROUTE IN ARGENTINA		200.0	AR
DES19	IMPROVEMENT OF THE ACCESS TO ICALMA BORDER CROSSING		44.8	AR - CH
DES20	IMPROVEMENT OF THE ACCESS TO THE TROMEN-MAMUIL MALAL BORDER CROSSING		30.0	AR - CH
DES21	IMPROVEMENT OF THE ACCESS TO HUA HUM BORDER CROSSING		43.0	AR - CH
DES26	BAHÍA BLANCA - SAN CARLOS DE BARILOCHE RAILWAY BRANCH LINE		400.0	AR
DES27	VILLA LA ANGOSTURA - TRAFUL - COSTA DEL LIMAY 132-KV ELECTRICITY INTERCONNECTION LINE		30.0	AR
DES28	CONSTRUCTION OF THE HUA HUM BORDER COMPLEX		7.6	CH
DES37	PAVEMENT OF NATIONAL ROUTE 259 ON ITS ACCESS TO FUTALEUFÚ BORDER CROSSING		18.0	AR
DES38	PAVEMENT OF ROUTE CH-231 BETWEEN PUERTO RAMÍREZ AND FUTALEUFÚ BORDER CROSSING		39.0	CH
DES39	PAVEMENT OF ACCESS TO PICHACHÉN BORDER CROSSING - PROVINCIAL ROUTE 6		162.0	AR
DES40	IMPROVEMENT AND PAVEMENT OF ROUTE Q-45 BETWEEN LOS ÁNGELES AND PICHACHÉN BORDER CROSSING		91.0	CH
DES41	PAVEMENT OF ACCESS TO CARIRRIÑE BORDER CROSSING - PROVINCIAL ROUTE 62		3.0	AR
DES42	IMPROVEMENT AND PAVEMENT OF ROUTE CH-201 BETWEEN COÑARIPE AND CARIRRIÑE BORDER CROSSING		36.1	CH
DES43	OPTIMIZATION AT LUIS PIEDRABUENA PORT		17.0	AR
DES44	OPTIMIZATION AT BAHÍA CAMARONES PORT		75.0	AR
DES45	PAVEMENT OF NATIONAL ROUTE 1540, INTERSECTION WITH NATIONAL ROUTE 23 - BORDER WITH CHUBUT		3.0	AR
DES46	IMPROVEMENT OF ROUTE CH-181 BETWEEN CURACAUTÍN AND PINO HACHADO		303.0	CH

BINATIONAL TOURIST CIRCUIT OF THE LAKES AREA

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*US\$ million

Code	Name	Stage	Estimated Investment*	Countries
DES49	REPAVEMENT OF ROUTE CH-215 BETWEEN ENTRELAGOS AND CARDENAL		77.6	CH
DES50	UPGRADE WORKS AT THE LAS RAÍCES TUNNEL		0.0	CH
21			2,358.1	

 PROFILING
  PRE-EXECUTION
  EXECUTION
  COMPLETED

GUY GUIANESE SHIELD

Integration and Development Hub



Population: 17,100,505
Population density: 10.7 people/km²
Area: 1,603,643 km²

GDP: US\$ 338,963 million

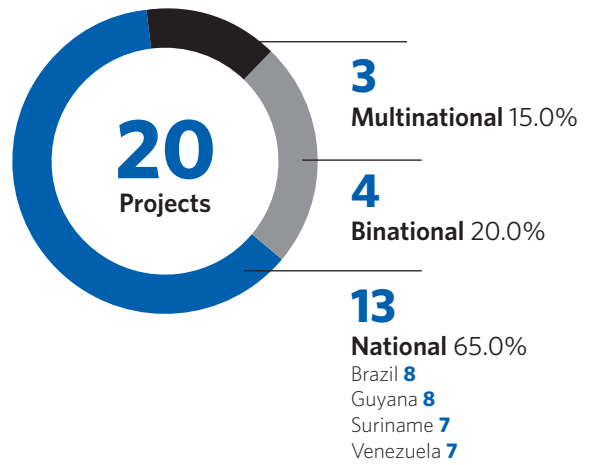
Services	76.7%
Industries	11.2%
Mining and quarrying	6.5%
Agriculture	5.6%



Estimated Investment

US\$ million

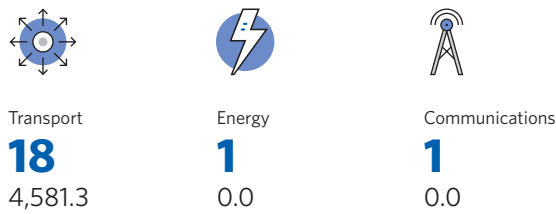
4,581.3



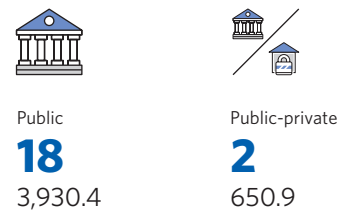
Projects by Stage



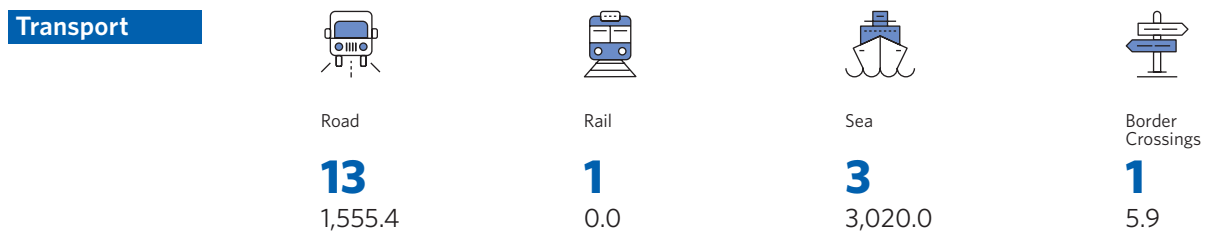
Projects by Sector



Projects by Type of Financing



Projects by Subsector



Energy



Energy Generation
1
0.0

Communications



Communications Interconnection
1
0.0

GUIANESE SHIELD

Presentation of the Hub

The Guianese Shield Hub⁽¹⁾ covers all of the territory of Guyana and Suriname; a significant area of Venezuela—including the states that form part of the Orinoco basin, the Caracas Capital District, and the states on the northern coast of the country—; and in Brazil, the entire territory of the states of Roraima and Amapá as well as a smallest portion of the Amazonas and Pará states, including the municipality of Manaus, among others.

The Hub accounts for 9% of the territory (1,603,643 km²) and 4% of the population (17,100,505 inhabitants) of South America. It is the second Hub with the lowest population density, fewer than 11 inhabitants per km². The GDP of the countries that make up the Hub accounts for 7% of the region's GDP (US\$338,963 million).⁽²⁾

AREA OF INFLUENCE OF THE GUIANESE SHIELD HUB



With regard to infrastructure, the **road network** of the countries involved in the Guianese Shield Hub covers a total length of 1,705,747 km, 25% of which are paved. The **rail network** is 30,608 km long. The **port system** of the Hub is made up of 28 major ports, three of which handle

¹ See "Caracterización Socioeconómica y Ambiental del Eje del Escudo Guayanes," COSIPLAN-IIRSA, 2015, at <http://www.iirsa.org/escudo-guayanes.asp>

² At 2014 current prices.

more than three million tons per year, and Porto Trombetas stands out as it handles more than 17 million tons in Brazil.

Most **river transportation** activities in the region are carried out in the Amazon basin and the rivers that flow into the Atlantic ocean. The **airport system** features 32 airports, 15 of which are located in the Venezuelan territory. Of these 32 airports, 17 are international. The volume of freight transport is very limited, and mainly involves the import of industrial manufactures from countries outside the Hub. Concerning **electricity generation**, as of 2012 the countries involved in the Hub had a joint installed power capacity of about 250,000 MW, 51% of which was contributed by Venezuela and 49% by Brazil.

The presence of **indigenous communities** is very significant. In general, rural communities are engaged in subsistence activities outside the region's formal economy, or as rural and mining salaried workers, and, in some cases, they engage in subsistence agriculture. Their way of life —sustainable in all cases— is constantly threatened by invasion of lands for forest extraction or by large-scale mining operations, which leads to the degradation of large expanses of woody areas and rainforest, which jeopardizes their economic, social and cultural survival. At present, there are about 125 territorial units in the Hub with some degree of **environmental protection**, covering approximately an area of 950,000 km², a significantly vast territory as it accounts for about **60% of the total area of the Hub**. A large part of this area is made up of vast natural reserves in southern Venezuela, equivalent to 470,000 km² of woody areas and wild rainforest, which host the greatest biodiversity in the planet, not only in terms of species richness but also in terms of their unique environments.

The territory of the Hub is exposed to **natural hazards**, mainly to geodynamic hazards due to seismic movements, and to meteorological and hydrological hazards produced by the heavy rainfall typical of the Hub. The Caribbean coastal strip is exposed to tsunamis caused by the eruption of submarine active volcanoes. Also, generally speaking, the Caribbean coast is usually affected by hazards such as large floods and landslides in urban areas.

The countries that make up the Guianese Shield Hub plan investments for US\$4,581 million in 20 physical integration projects.

Guyana and Suriname contribute 100% of their economies to the Hub, Venezuela 40%, and Brazil 4%. In absolute terms, Venezuela contributes 69% to the Hub's aggregate GDP, Brazil 29%, Suriname 2%, and Guyana 1%.

The Hub shares some regions of its area of influence with the Amazon (AMA) and Andean (AND) Hubs.

GUIANESE SHIELD

Project Portfolio

The projects of the Guianese Shield Hub are intended to strengthen the physical connection to promote the sustainable development and integration of economic sectors having high potential, such as heavy industry, durable goods, mining and jewelry, agribusiness and tourism (both ecotourism and Caribbean-style tourism). The connectivities involved are the following: i) Venezuela-Brazil (Caracas and Manaus, Guri and Boa Vista, Manaus and the south of Venezuela); ii) Brazil-Guyana (Amazonas and Roraima, and Guyana); iii) Venezuela-Guyana-Suriname; and iv) Guyana-Suriname-French Guiana-Brazil (particularly, the states of Amapá and Pará).

PROJECT GROUPS OF THE GUIANESE SHIELD HUB



TABLE 1. PROJECT GROUPS OF THE GUIANESE SHIELD HUB US\$ million



Group	Name	No. of Projects	Estimated Investment*
1	VENEZUELA - BRAZIL INTERCONNECTION	5	407.0
2	BRAZIL - GUYANA INTERCONNECTION	6	276.5
3	VENEZUELA (CIUDAD GUAYANA) - GUYANA (GEORGETOWN) - SURINAME (PARAMARIBO) INTERCONNECTION	3	301.8
4	GUYANA - SURINAME - FRENCH GUIANA - BRAZIL INTERCONNECTION	6	3,596.0
TOTAL		20	4,581.3





The active portfolio of the Hub includes 14 projects for an estimated investment of US\$4,495 million.

Of the 14 active projects, there is information available on the estimated completion date of three. Two of these will be completed in the next four years (2016-2019).

According to estimations, upon the completion of these two projects, 17% of the investment amount estimated for the Hub's portfolio will have been made. If the projects at an advanced (execution) stage are added, the percentage of investment made rises to 28%.

TABLE 2. PROJECTS TO BE COMPLETED IN THE NEXT FOUR YEARS *US\$ million

Code	Name	Group	Stage	Estimated Investment*	Countries	Estimated Completion Date
GUY01	REHABILITATION OF THE CARACAS - MANAUS ROAD	1		407.0	BR - VE	February 2017
GUY18	ROUTES INTERCONNECTING VENEZUELA (CIUDAD GUAYANA) - GUYANA (GEORGETOWN) - SURINAME (APURA - ZANDERIJ - PARAMARIBO)	3		300.8	GU - SU - VE	September 2018

 PROFILING  PRE-EXECUTION  EXECUTION  COMPLETED






The five projects with the greatest estimated investment account for 96% of the active portfolio of the Hub, made up of 14 projects, among which the one that ranks first—the Integrated Masterplan of Coastal Protection Albina-Nickerie—represents 67% on its own.

Excluding the Integrated Masterplan of Coastal Protection Albina-Nickerie, the other four projects involve considerably lower investment amounts: the project that ranks second in the Group—the Rehabilitation of the Caracas - Manaus Road—requires an investment that only accounts for 13% of the investment required for the Masterplan.

It should be stated that most projects are binational, except for the Masterplan, which concerns only Suriname, and the Lethem-Linden Road, which belongs to Guyana.

The first project deals with sea transportation, whereas the other four involve road works. For the five projects, public as well as public-private financing sources are considered.

TABLE 3. THE FIVE PROJECTS OF THE ACTIVE PORTFOLIO WITH THE GREATEST ESTIMATED INVESTMENT *US\$ million

Code	Name	Group	Stage	Estimated Investment*	Countries	Type of Financing
GUY40	INTEGRATED MASTERPLAN OF COASTAL PROTECTION ALBINA-NICKERIE	4		3,020.0	SU	Public
GUY01	REHABILITATION OF THE CARACAS - MANAUS ROAD	1		407.0	BR - VE	Public
GUY26	IMPROVEMENT OF THE GEORGETOWN - ALBINA ROAD, AND OF THE SECTION FERREIRA GOMES - OYAPOCK OF THE MACAPÁ - OYAPOCK ROAD	4		350.1	BR - GU - SU	Public-private
GUY18	ROUTES INTERCONNECTING VENEZUELA (CIUDAD GUAYANA) - GUYANA (GEORGETOWN) - SURINAME (APURA - ZANDERIJ - PARAMARIBO)	3		300.8	GU - SU - VE	Public-private
GUY09	LETHEM - LINDEN ROAD	2		250.0	GU	Public

 PROFILING
  PRE-EXECUTION
  EXECUTION
  COMPLETED

There are six completed projects in the Hub for a total investment of US\$87 million, accounting for almost 2% of the Portfolio's total investment.

All the completed projects were financed by the public sector and belong to or involve Brazil, except for a project that belongs to Guyana. In addition, five of the six projects fall in the transport sector, more precisely in the road subsector. Three projects involved bridges built over rivers, whereas two were road sections.

TABLE 4. COMPLETED PROJECTS IN THE HUB *US\$ million

Code	Name	Investment Amount*	Countries
GUY08	CARACAS - NORTHERN BRAZIL CONNECTION THROUGH OPTICAL FIBER LINES OR OTHER SUITABLE TECHNOLOGY	0.0	BR - VE
GUY10	BRIDGE OVER THE ARRAYA RIVER	1.5	BR
GUY11	BRIDGE OVER THE TAKUTU RIVER	10.0	BR - GU
GUY35	INTERNATIONAL BRIDGE OVER THE OYAPOCK RIVER	60.0	BR
GUY42	BOA VISTA - BONFIM ROAD	15.0	BR
GUY43	LINDEN - GEORGETOWN ROAD	0.0	GU
6		86.5	

VENEZUELA - BRAZIL INTERCONNECTION

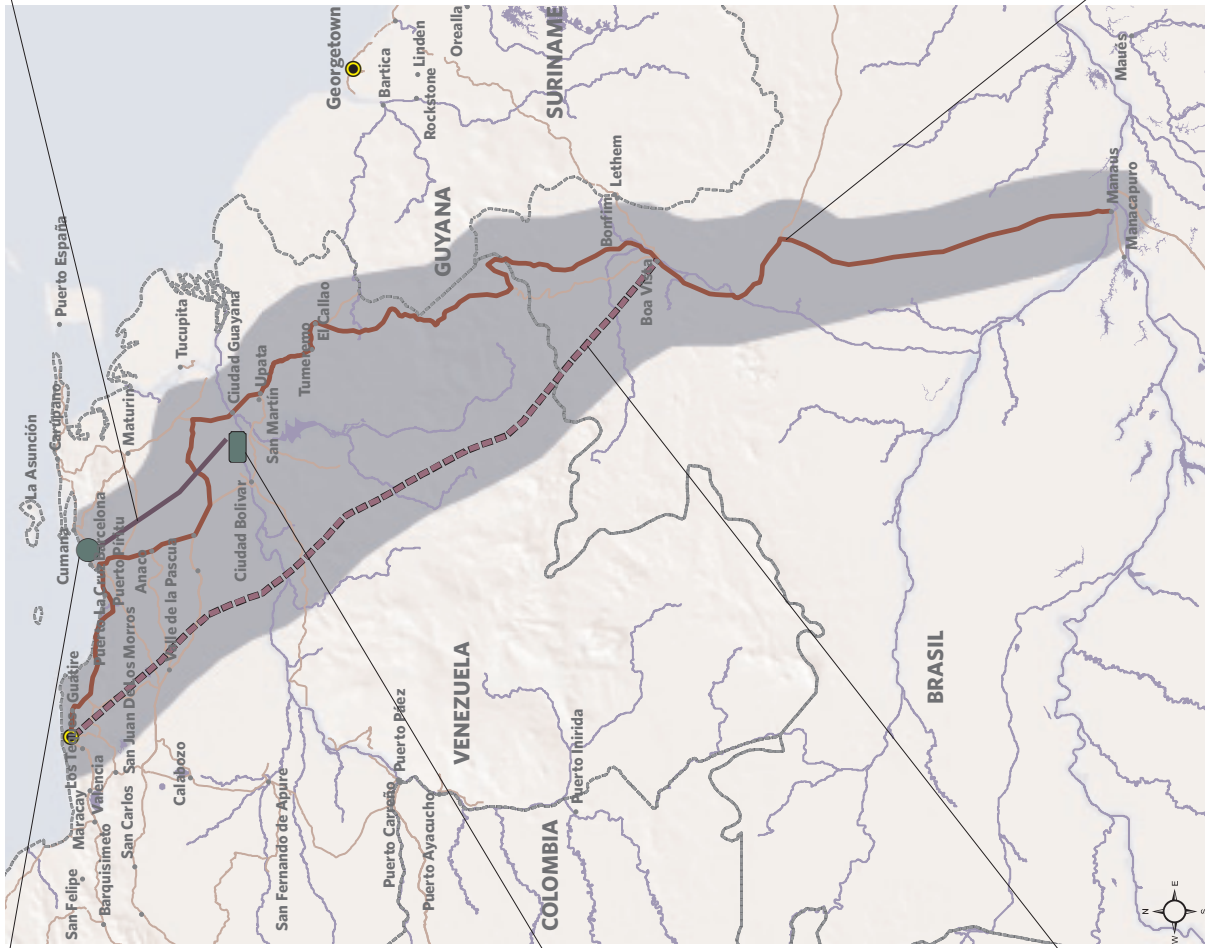
04 RAILWAY CONNECTING THE DEEP WATER PORT OR THE GUANTA PORT WITH CIUDAD GUAYANA

03 DEEP WATER PORT IN THE NORTH-EAST OF THE CARIBBEAN COAST IN VENEZUELA OR IMPROVEMENT OF THE GUANTA PORT

05 SECOND BIMODAL BRIDGE OVER THE ORINOCO RIVER

08 CARACAS - NORTHERN BRAZIL CONNECTION THROUGH OPTICAL FIBER LINES OR OTHER SUITABLE TECHNOLOGY

01 Anchor Project: REHABILITATION OF THE CARACAS - MANAUS ROAD





GUY GROUP 1

Strategic Function

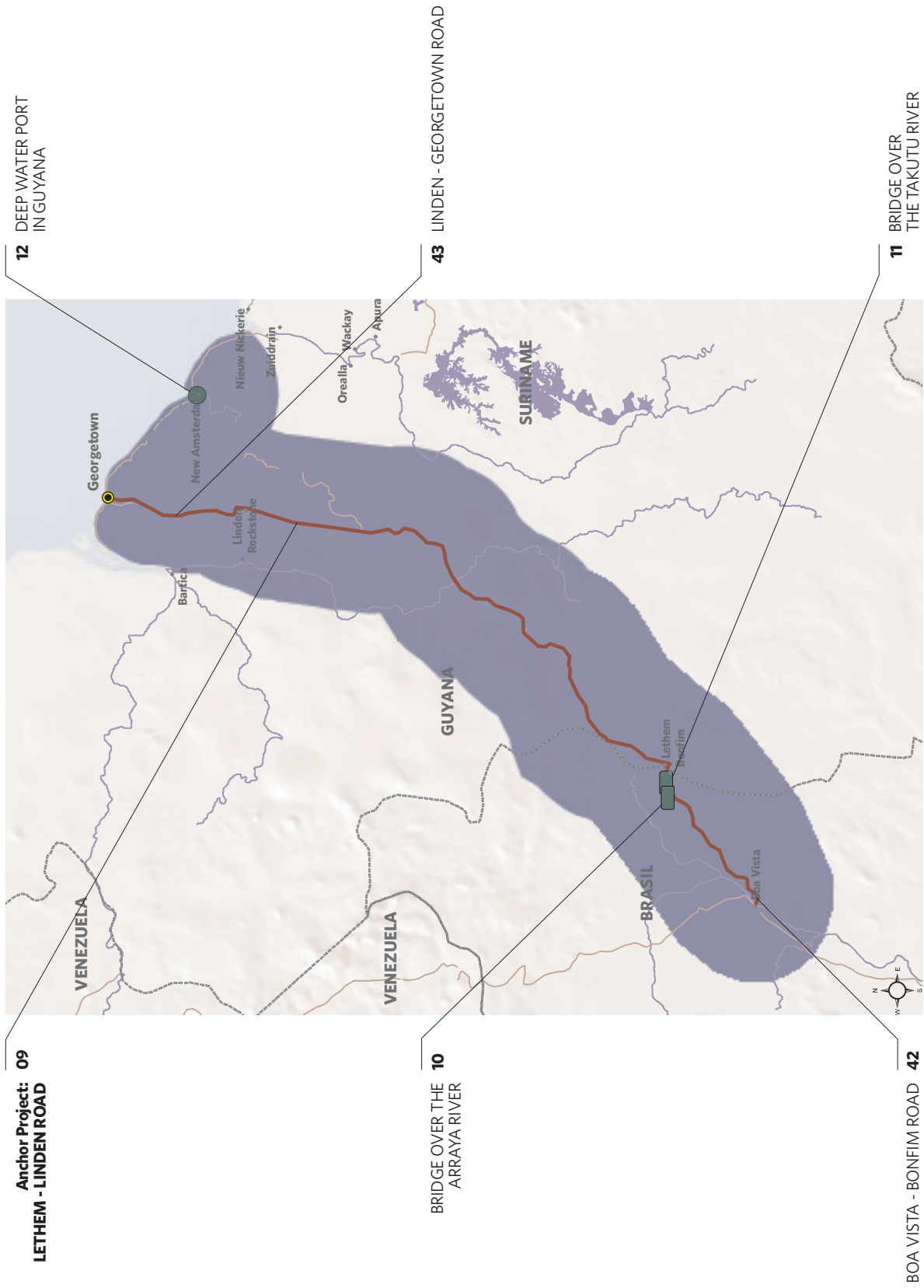
- Develop economic sectors having potential, such as heavy industry, durable goods, mining and jewelry, agribusiness and tourism (both eco-tourism and Caribbean-style tourism), using the paved route between Caracas and Manaus and the transmission line between Guri and Boa Vista as the starting points.
- Connect Manaus with the south of Venezuela.

*US\$ million

Code	Name	Stage	Estimated Investment*	Countries
GUY01	REHABILITATION OF THE CARACAS - MANAUS ROAD		407.0	BR - VE
GUY03	DEEP WATER PORT IN THE NORTH-EAST OF THE CARIBBEAN COAST IN VENEZUELA OR IMPROVEMENT OF THE GUANTA PORT		0.0	VE
GUY04	RAILWAY CONNECTING THE DEEP WATER PORT OR THE GUANTA PORT WITH CIUDAD GUAYANA		0.0	VE
GUY05	SECOND BIMODAL BRIDGE OVER THE ORINOCO RIVER		0.0	VE
GUY08	CARACAS - NORTHERN BRAZIL CONNECTION THROUGH OPTICAL FIBER LINES OR OTHER SUITABLE TECHNOLOGY		0.0	BR - VE
5			407.0	

PROFILING
 PRE-EXECUTION
 EXECUTION
 COMPLETED

BRAZIL - GUYANA INTERCONNECTION





GUY GROUP 2

Strategic Function

- Support the sustainable development and integration of the Brazilian states of Amazonas and Roraima with Guyana, through the consolidation of the infrastructure that connects both countries.

*US\$ million

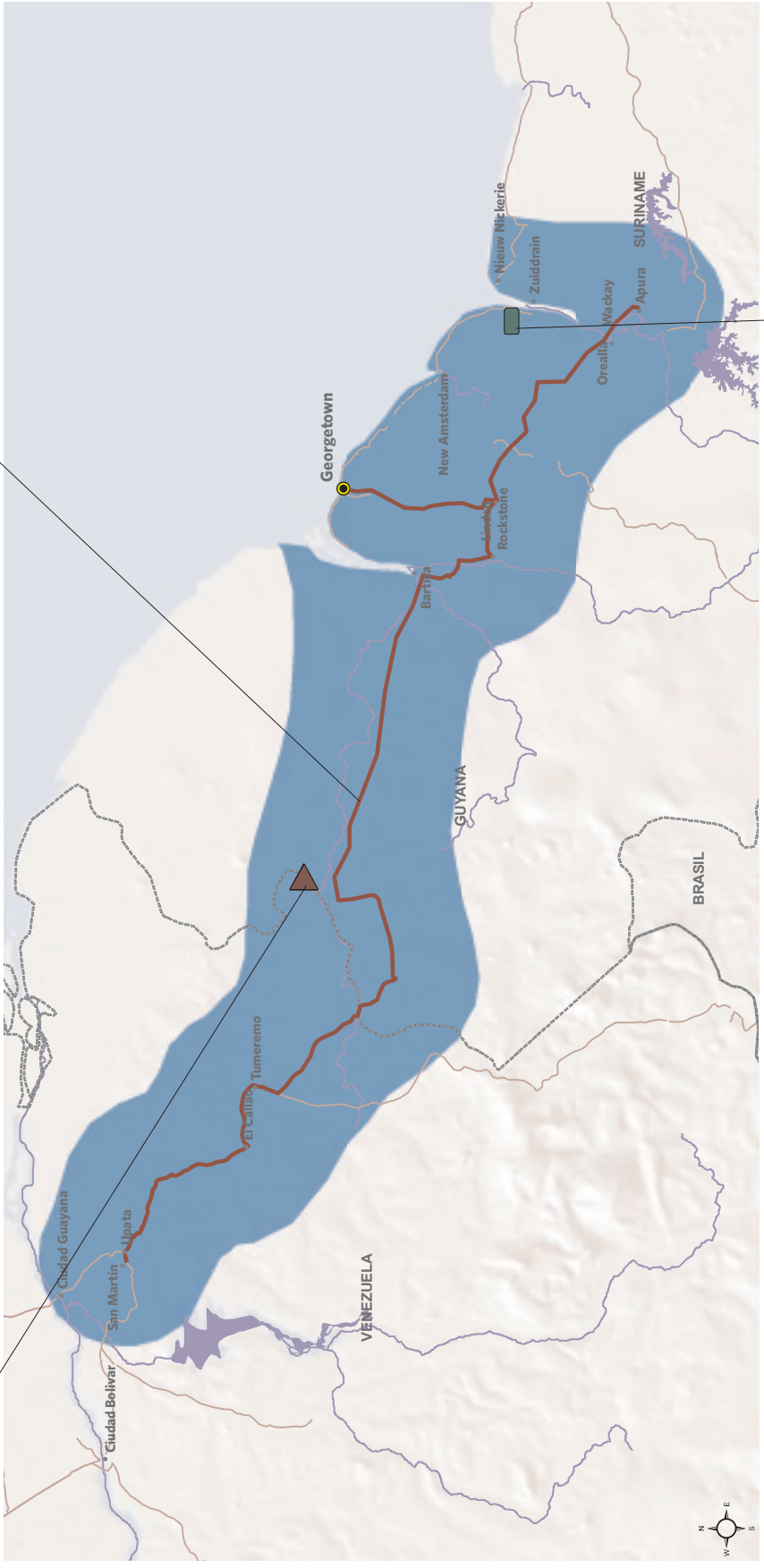
Code	Name	Stage	Estimated Investment*	Countries
GUY09	LETHEM - LINDEN ROAD		250.0	GU
GUY10	BRIDGE OVER THE ARRAYA RIVER		1.5	BR
GUY11	BRIDGE OVER THE TAKUTU RIVER		10.0	BR - GU
GUY12	DEEP WATER PORT IN GUYANA		0.0	GU
GUY42	BOA VISTA - BONFIM ROAD		15.0	BR
GUY43	LINDEN - GEORGETOWN ROAD		0.0	GU
6			276.5	

PROFILING
 PRE-EXECUTION
 EXECUTION
 COMPLETED

VENEZUELA (CIUDAD GUAYANA) - GUYANA (GEORGETOWN) - SURINAME (PARAMARIBO) INTERCONNECTION

18 Anchor Project:
**ROUTE INTERCONNECTING
VENEZUELA (CIUDAD GUAYANA) -
GUYANA (GEORGETOWN) -
SURINAME (APURA - ZANDERIJ -
PARAMARIBO)**

38 VENEZUELA - GUYANA -
SURINAME GAS PIPELINE



24 CONSTRUCTION OF THE
BRIDGE OVER THE
CORENTYNE RIVER










GUY GROUP 3

Strategic Function

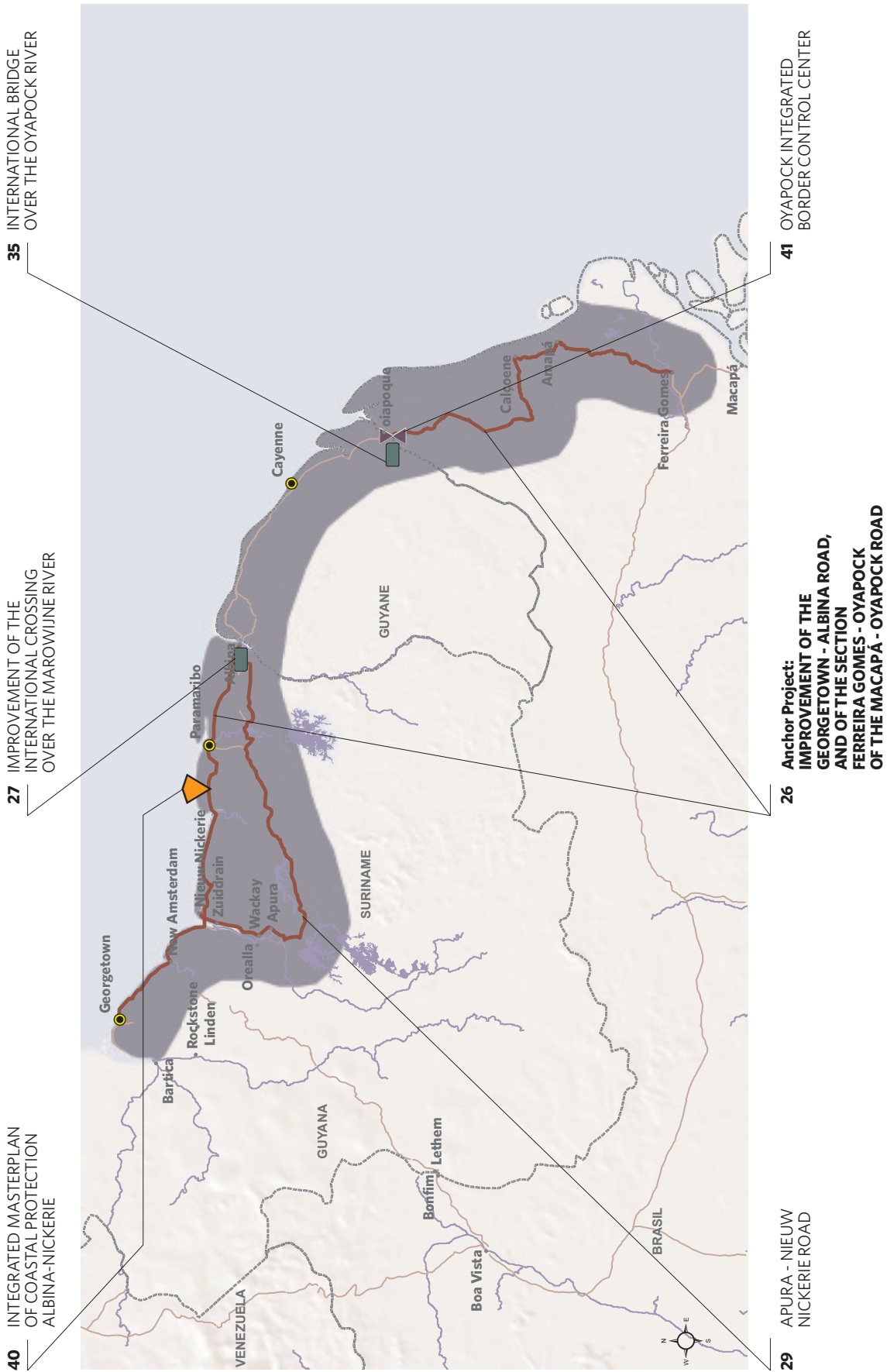
- Implement and develop an integration link in the north of South America that connects Venezuela, Guyana and Suriname.

*US\$ million

Code	Name	Stage	Estimated Investment*	Countries
GUY18	ROUTES INTERCONNECTING VENEZUELA (CIUDAD GUAYANA) - GUYANA (GEORGETOWN) - SURINAME (APURA - ZANDERIJ - PARAMARIBO)		300.8	GU - SU - VE
GUY24	CONSTRUCTION OF THE BRIDGE OVER THE CORENTYNE RIVER		1.0	GU - SU
GUY38	VENEZUELA - GUYANA - SURINAME GAS PIPELINE		0.0	GU - SU - VE
3			301.8	

 PROFILING
  PRE-EXECUTION
  EXECUTION
  COMPLETED

GUYANA - SURINAME - FRENCH GUIANA - BRAZIL INTERCONNECTION





GUY GROUP 4

Strategic Function

- Consolidate an international physical connection to promote the sustainable development and the integration of Guyana, Suriname and the Brazilian states of Amapá and Pará.

*US\$ million

Code	Name	Stage	Estimated Investment*	Countries
GUY26	IMPROVEMENT OF THE GEORGETOWN - ALBINA ROAD, AND OF THE SECTION FERREIRA GOMES - OYAPOCK OF THE MACAPÁ - OYAPOCK ROAD		350.1	BR - GU - SU
GUY27	IMPROVEMENT OF THE INTERNATIONAL CROSSING OVER THE MAROWIJNE RIVER		50.0	SU
GUY29	APURA - NIEUW NICKERIE ROAD		110.0	SU
GUY35	INTERNATIONAL BRIDGE OVER THE OYAPOCK RIVER		60.0	BR
GUY40	INTEGRATED MASTERPLAN OF COASTAL PROTECTION ALBINA-NICKERIE		3,020.0	SU
GUY41	OYAPOCK INTEGRATED BORDER CONTROL CENTER		5.9	BR
6			3,596.0	

PROFILING
 PRE-EXECUTION
 EXECUTION
 COMPLETED

HPP PARAGUAY-PARANÁ WATERWAY

Integration and Development Hub



Population: 119,035.634
Population density: 29.5 people/km²
Area: 4,036,541 km²

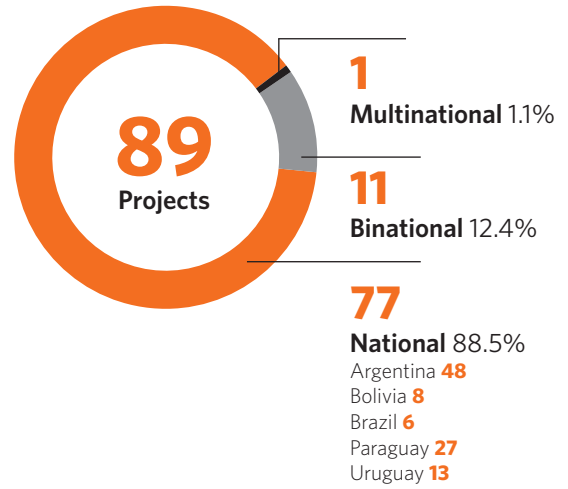
GDP: US\$ 1,491,033 million

Services	75.5%
Industries	14.1%
Agriculture	6.2%
Mining and quarrying	4.2%

Estimated Investment

US\$ million

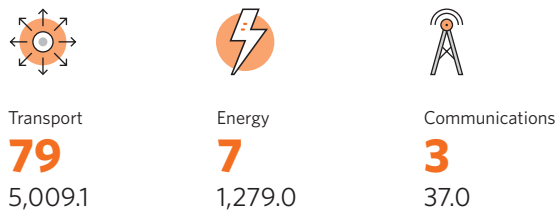
6,325.1



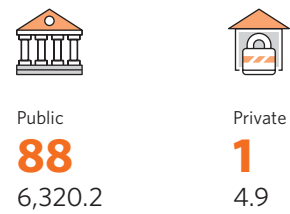
Projects by Stage



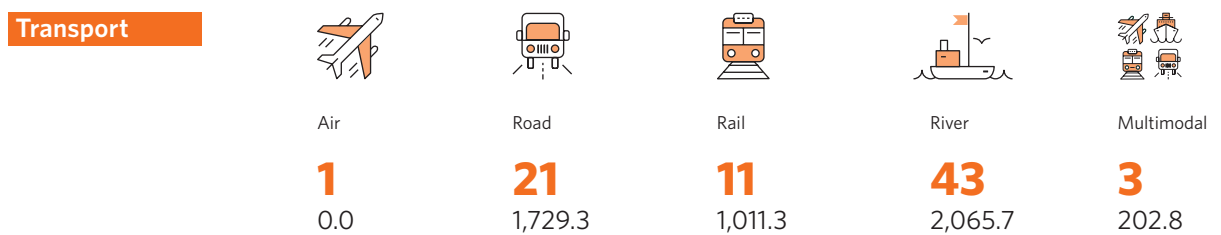
Projects by Sector



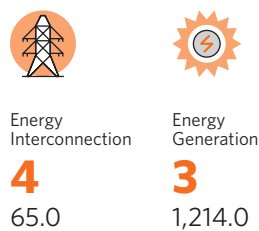
Projects by Type of Financing



Projects by Subsector



Energy



Communications



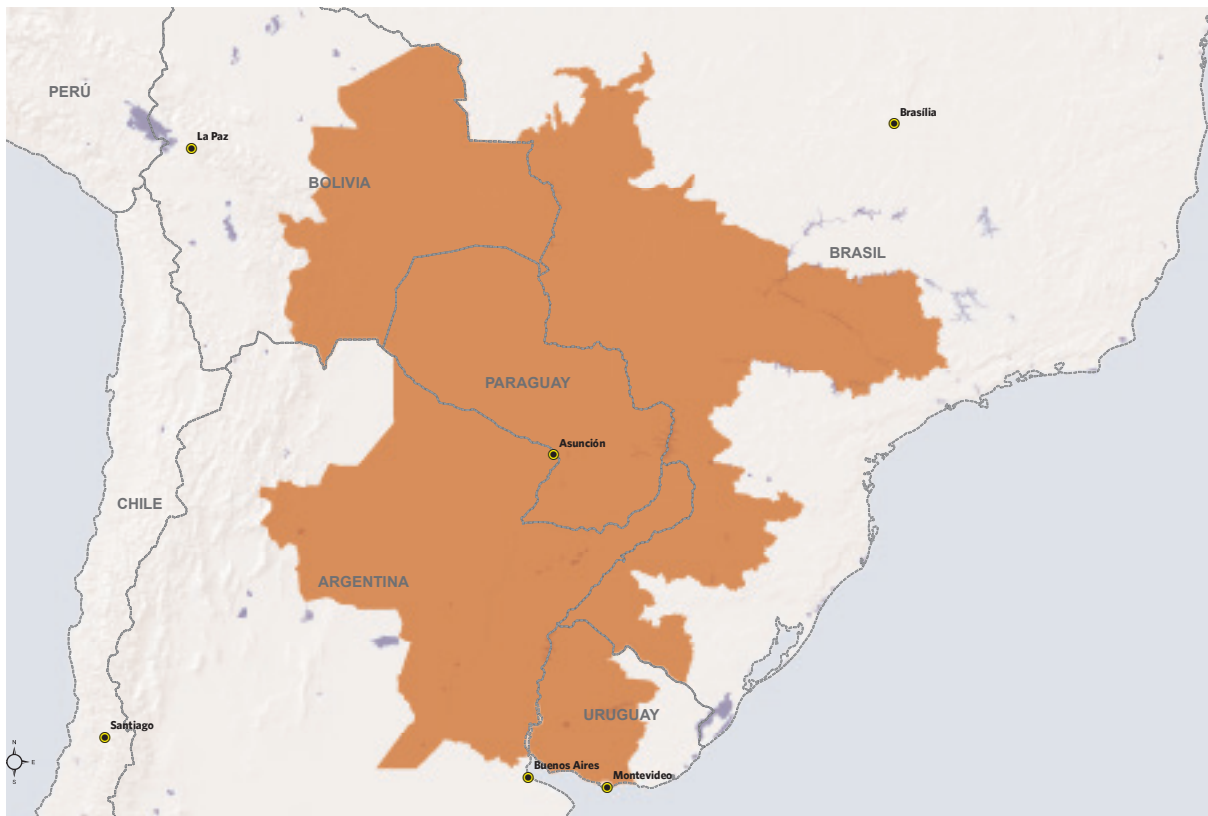
PARAGUAY-PARANÁ WATERWAY

Presentation of the Hub

The Paraguay-Paraná Waterway Hub⁽¹⁾ integrates areas of Brazil, Argentina, Bolivia, Paraguay and Uruguay around the basins of the Paraguay, Paraná, and Uruguay rivers, all of them tributaries of the vast Plata river basin, which flows into the Plata river estuary. The Hub has a low population density (29 inhabitants per km²), with the exception of the Paraguayan departments of Asunción and Central.

This is the second largest Hub, as it comprises 20% of the area of South America (4,036,541 km²), as well as the second Hub in terms of the region's GDP, accounting for 34% (US\$1,491,033 million).⁽²⁾ In addition, this Hub ranks third in population, accounting for 29% (i.e. 119,035,634 inhabitants) of the total population of the continent.

AREA OF INFLUENCE OF THE PARAGUAY-PARANÁ HUB



¹ See "Caracterización Socioeconómica y Ambiental del Eje de la Hidrovia Paraguay-Paraná," COSIPLAN-IIRSA, 2014, at <http://iirsa.org/hidrovia-paraguay-parana.asp>

² At current 2013 prices.

The existing and planned infrastructure of this Hub is determined by the courses of the Paraguay and Paraná rivers, which eventually flow into the Atlantic ocean. Consequently, the network of projects intended to improve navigation conditions or access to the waterway from railways and roads on its sides is located along or in the vicinities of the waterway.

The **road network** of the countries involved in the Hub totals 2,108,784 km, only about 14% of which are paved. The **rail network** covers 62,359 km, 87% of which, approximately, are in operating condition. **The river and sea port system** of the Hub comprises 40 major ports and many private terminals, mostly located on the Paraná and Paraguay rivers and on the final section of the Uruguay river, which connect with the ocean ports on the Atlantic coast. Seven of these ports handle more than 10 million tons per year, including the Brazilian port of Santos (with almost 100 million tons), followed by the Paranaguá port (with approximately 42 million tons). The major route of **river transportation**, around 3,300 km long, is the Paraguay-Paraná waterway, used for carrying cargo to the deep-water ports on the lowest section of the waterway and on the Plata river, where it is transshipped to seagoing vessels. Most of this transportation takes place in convoys of shallow draft barges pushed by towboats, which, jointly, can carry up to 52,000 tons per journey. There are also about 65 **major airports**, evenly distributed throughout the whole territory of the Hub. Passenger service is adequate, airport infrastructure is good, and there are numerous connections with inland areas of the countries. The Hub's installed **power capacity** is about 169,311 MW, 70% of which are supplied by Brazil.

The presence of **indigenous communities** is very significant, mainly in Bolivia, the Brazilian state of Mato Grosso, northern Argentina, and eastern Paraguay, while their number is lower in southern Brazil and in Uruguay. In general, they are engaged in activities outside the region's formal economy —subsistence agriculture and animal husbandry— and in complementary activities —craftwork in tourism regions. Furthermore, some of their members are rural waged workers.

Regarding **protected areas** in the Hub, there are about 460 administrative units with some degree of environmental protection, covering an area of approximately 410,000 km², which accounts for 8% of the total area of the Hub.

As for **natural hazards**, the Hub is exposed to floods and landslides, worsened by El Niño Southern Oscillation (ENSO), the former covering vast areas and the latter, more limited portions of the territory.

The countries that make up the Paraguay-Paraná Waterway Hub plan investments for US\$6,325 million in 89 physical integration projects. This Hub of the COSIPLAN Portfolio ranks second in number of projects, after the MERCOSUR-Chile Hub (MCC). However, in terms of estimated investment, it ranks seventh. The reason for this difference is that river projects demand lower investment amounts than road or other subsectors projects.

Paraguay participates with 100% of its economy, while the other countries contribute between 38% and 51% of their GDP. In absolute terms, Brazil accounts for 77% of the Hub's aggregate GDP, followed by Argentina (19%), and Bolivia, Paraguay and Uruguay, which together account for 4%.

Brazil and Argentina account for more than 77% of the trade between the countries involved in the Hub. Furthermore, Brazil is the main destination of the exports made by the other four countries, receiving more 61% of their foreign trade, particularly from Argentina, as more than 80% of its exports within the Hub go to Brazil. The main destination of Brazilian exports within the Hub is Argentina (75%), followed by Paraguay (11%).

The Hub shares some regions of its area of influence with the Central Interoceanic (IOC), the Capricorn (CAP), and the MERCOSUR-Chile (MCC) Hubs, to which it is linked by road and rail corridors.

PARAGUAY-PARANÁ WATERWAY

Project Portfolio

The projects of the Paraguay-Paraná Waterway Hub are intended to: (i) strengthen competitiveness in inland countries and regions by efficiently connecting them to the Atlantic ocean; (ii) strengthen and boost the integration of the production and consumption chains along the Hub; (iii) facilitate the flow of people among the countries of the Group.

PROJECT GROUPS OF THE PARAGUAY-PARANÁ WATERWAY HUB

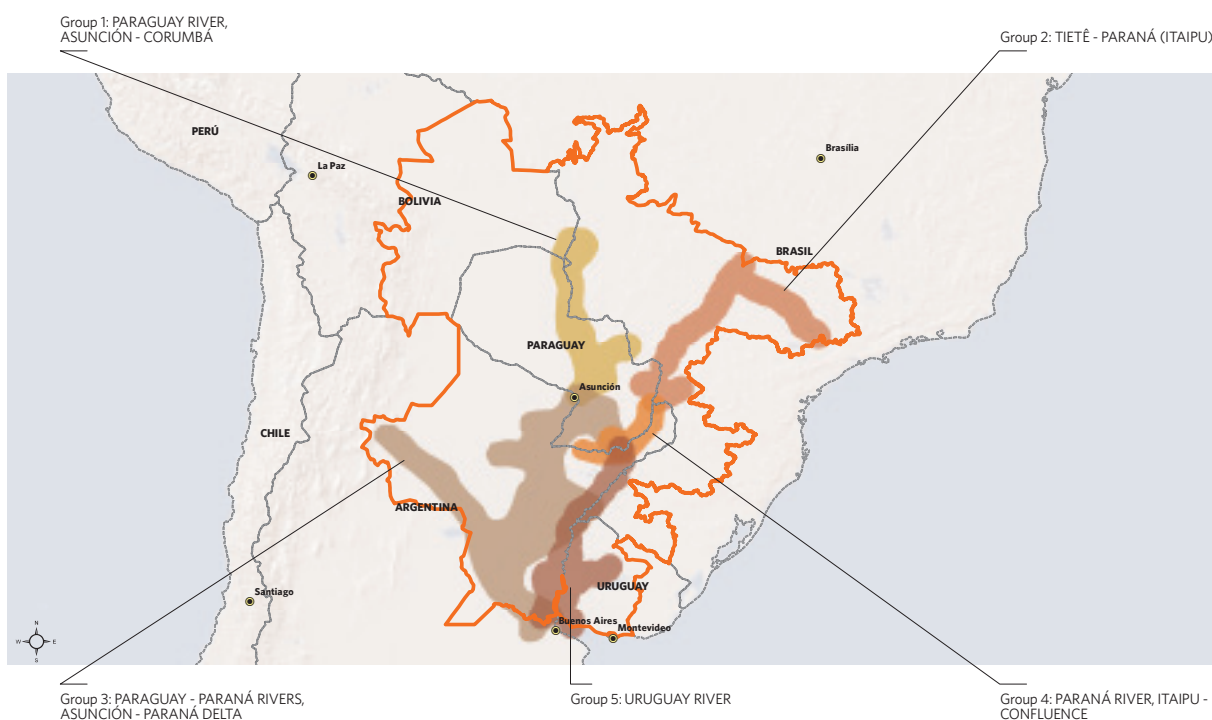


TABLE 1. PROJECT GROUPS OF THE PARAGUAY-PARANÁ WATERWAY HUB *US\$ million





Group	Name	No. of Projects	Estimated Investment*
1	PARAGUAY RIVER, ASUNCIÓN - CORUMBÁ	12	734.1
2	TIETÊ - PARANÁ (ITAIPU)	8	847.5
3	PARAGUAY - PARANÁ RIVERS, ASUNCIÓN - PARANÁ DELTA	39	2,983.8
4	PARANÁ RIVER, ITAIPU - CONFLUENCE	14	592.7
5	URUGUAY RIVER	16	1,167.0
TOTAL		89	6,325.1

The active portfolio of the Hub includes 74 projects with an estimated investment of US\$4,679 million.

Of the 74 active projects, there is information available on the estimated completion date of 16. Thirteen of these will be completed in the next four years (2016-2019), and with the exception of two binational Argentine and Paraguayan projects, all of them are national in scope. By the time these 13 projects are finished and if we take into account the projects already completed, a little over 50% of the investment estimated for the Hub's portfolio will have been made.

TABLE 2. PROJECTS TO BE COMPLETED IN THE NEXT FOUR YEARS *US\$ million






Code	Name	Group	Stage	Estimated Investment*	Countries	Estimated Completion Date
HPP108	IMPROVEMENT OF NAVIGATION CONDITIONS ON THE ALTO PARANÁ RIVER (UPSTREAM OF SALTOS DEL GUAIRÁ)	2		15.0	BR	September 2016
HPP12	PAVING OF THE CONCEPCIÓN -VALLEMÍ ROAD (ROUTES A06 AND PY14)	1		113.0	PY	October 2016
HPP64	PAVING OF THE VILLETA - ALBERDI ROAD SECTION	3		51.0	PY	December 2016
HPP96	REHABILITATION OF THE SALTO PORT, ACCESSES AND STORAGE AREA	5		4.0	UY	December 2016
HPP103	CONSTRUCTION AND REHABILITATION OF THE ASUNCIÓN - ARTIGAS RAILWAY	3		0.0	PY	December 2016
HPP19	IMPROVEMENT OF NAVIGATION CONDITIONS ON THE TIETÉ RIVER	2		800.0	BR	February 2017
HPP42	BINATIONAL PROJECT FOR THE IMPROVEMENT OF NAVIGATION CONDITIONS ON THE PARAGUAY RIVER, FROM CONFLUENCIA TO ASUNCIÓN	3		45.5	AR - PY	February 2017
HPP125	PAVING OF ROAD SECTION SANTA ROSA - CAPITÁN BADO (NATIONAL ROAD No.11 - BORDER WITH BRAZIL)	1		122.5	PY	February 2017
HPP44	DEEPENING OF THE FAIRWAY IN THE PARANÁ RIVER FROM CONFLUENCIA TO THE PLATA RIVER	3		110.3	AR	December 2017
HPP97	NUEVA PALMIRA BELTWAY AND PORT ACCESS ROADS NETWORK	5		15.0	UY	March 2018
HPP122	REHABILITATION AND MAINTENANCE OF THE TAMENGO CANAL	1		10.5	BO	June 2018
HPP76	CONSTRUCTION AND REHABILITATION OF THE ARTIGAS - POSADAS RAILWAY	4		150.0	AR - PY	May 2019
HPP65	REHABILITATION AND IMPROVEMENT OF THE PIEDRA SOLA - SALTO GRANDE RAILWAY CORRIDOR	5		127.3	UY	December 2019
TOTAL		13		1,518.6		

 PROFILING  PRE-EXECUTION  EXECUTION  COMPLETED

The five projects with the highest estimated investment fall in the transport sector and account for 42% of the estimated investment of the active portfolio of the Hub. The first project with the greatest investment accounts for 17% of the total amount estimated.

It should be stated that these five projects are national in scope, except for an Argentina-Uruguay binational project. All of these projects are financed with public funds. Three of them fall in the river subsector, one in the road subsector, and the other one involves a road-rail connection.

TABLE 3. THE FIVE PROJECTS OF THE ACTIVE PORTFOLIO WITH THE GREATEST ESTIMATED INVESTMENT *US\$ million

Code	Name	Group	Stage	Estimated Investment*	Countries	Type of Financing
HPP19	IMPROVEMENT OF NAVIGATION CONDITIONS ON THE TIETÉ RIVER	2		800.0	BR	Public
HPP115	IMPROVEMENT OF THE NAVIGATION CONDITIONS ON THE NEGRO RIVER	5		350.0	UY	Public
HPP124	UPGRADE OF NATIONAL ROUTE No. 11 TO A FOUR-LANE ROAD: RESISTENCIA - FORMOSA - CLORINDA	3		330.0	AR	Public
HPP87	COMPLETION OF THE CONSTRUCTION OF LOCKS AT SALTO GRANDE DAM	5		300.0	AR - UY	Public
HPP01	MOTACUCITO - MUTÚN - PUERTO BUSCH ROAD - RAIL CONNECTION	1		202.9	BO	Public

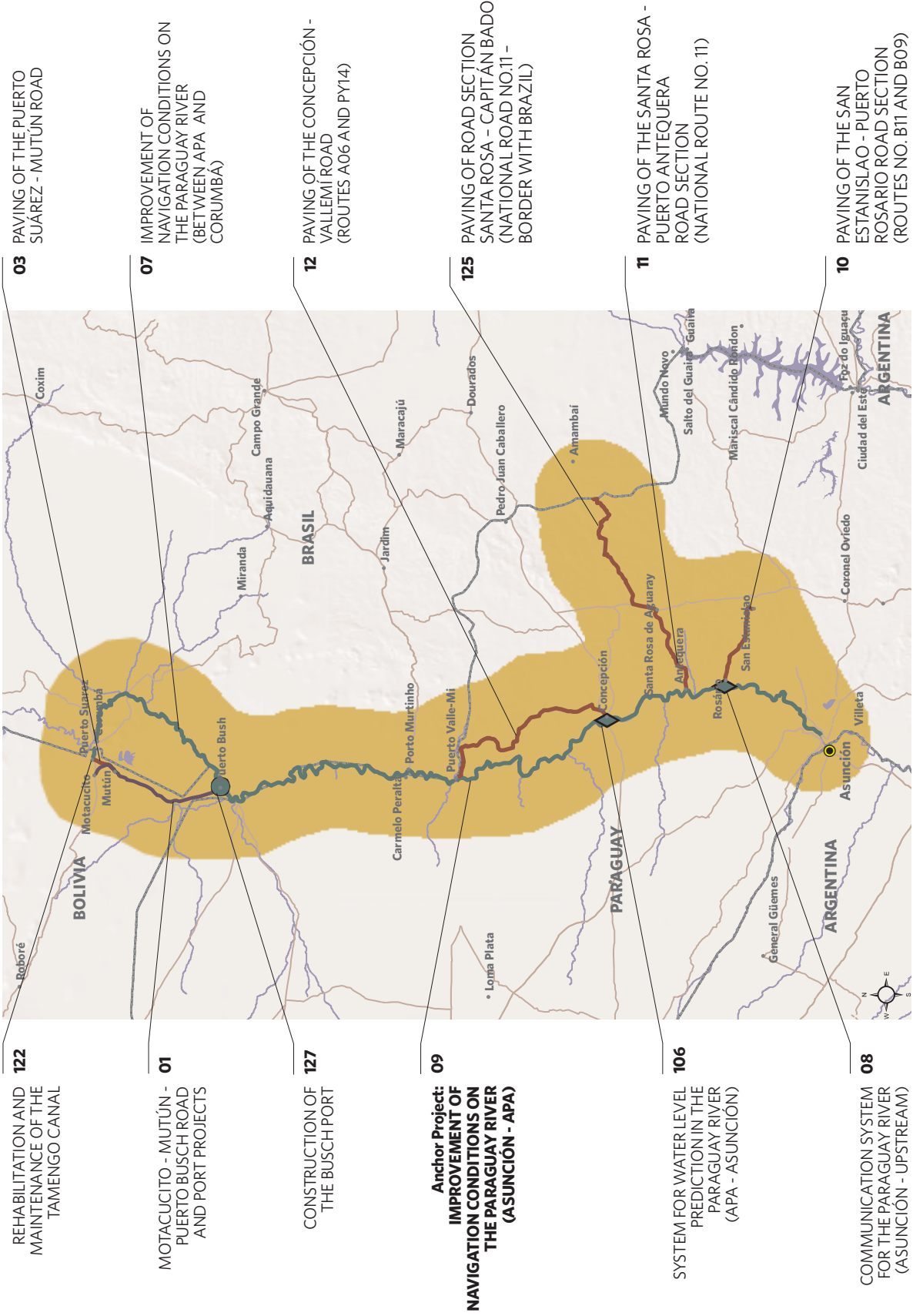
 PROFILING
  PRE-EXECUTION
  EXECUTION
  COMPLETED

There are 15 completed projects in the Hub, having required a total investment amount of US\$1,646 million.

TABLE 4. COMPLETED PROJECTS IN THE HUB *US\$ million

Code	Name	Investment Amount*	Countries
HPP10	PAVING OF THE SAN ESTANISLAO - PUERTO ROSARIO ROAD SECTION (ROUTES No. B11 AND B09)	66.5	PY
HPP11	PAVING OF THE SANTA ROSA - PUERTO ANTEQUERA ROAD SECTION (NATIONAL ROUTE No. 11)	47.0	PY
HPP29	BINATIONAL PROJECT FOR THE IMPROVEMENT OF NAVIGATION CONDITIONS ON THE ITAIPU LAKE	0.0	BR - PY
HPP34	BELGRANO THERMOELECTRIC POWER STATION IN CAMPANA	650.0	AR
HPP35	SAN MARTÍN THERMOELECTRIC POWER STATION IN TIMBÚES	500.0	AR
HPP36	TRANSFORMER STATION IN MERCEDES	25.0	AR
HPP56	SANTA FE CITY BELTWAY	200.0	AR
HPP73	ACCESS ROADS TO ENCARNACIÓN	26.0	PY
HPP77	DIVERSION OF THE AGUAPEY STREAM	64.0	PY
HPP94	IMPROVEMENT OF NUEVA PALMIRA PORT ACCESSES AND INFRASTRUCTURE	10.0	UY
HPP95	REHABILITATION OF THE PAYSANDÚ PORT, ACCESSES AND STORAGE AREA	6.0	UY
HPP107	ENCARNACIÓN PORT	11.8	PY
HPP116	HIGH-VOLTAGE TRANSMISSION LINE BETWEEN MERCEDES AND GOYA	25.0	AR
HPP117	HIGH-VOLTAGE TRANSMISSION LINE BETWEEN MERCEDES AND PASO DE LOS LIBRES	15.0	AR
HPP127	CONSTRUCTION OF THE BUSCH PORT	0.0	BO
15		1,646.3	

PARAGUAY RIVER, ASUNCIÓN - CORUMBÁ





HPP GROUP 1

Strategic Function

- Sustainably improve economic and social integration of the regions of Paraguay, Bolivia, and Brazil that share the basin.
- Facilitate the flow of people between the countries of the Group.
- Strengthen and boost the integration of the production chains along the Hub.
- Strengthen competitiveness in inland countries and regions by efficiently connecting them to the Atlantic ocean.

*US\$ million

Code	Name	Stage	Estimated Investment*	Countries
HPP01	MOTACUCITO - MUTÚN - PUERTO BUSCH ROAD - RAIL CONNECTION		202.8	BO
HPP03	PAVING OF THE PUERTO SUÁREZ - MUTÚN ROAD		18.8	BO
HPP07	IMPROVEMENT OF NAVIGATION CONDITIONS ON THE PARAGUAY RIVER (BETWEEN APA AND CORUMBÁ)		39.0	BO - BR - PY
HPP08	COMMUNICATIONS SYSTEM FOR THE PARAGUAY RIVER (ASUNCIÓN - UPSTREAM)		4.0	BO - PY
HPP09	IMPROVEMENT OF NAVIGATION CONDITIONS ON THE PARAGUAY RIVER (ASUNCIÓN - APA)		110.0	PY
HPP10	PAVING OF THE SAN ESTANISLAO - PUERTO ROSARIO ROAD SECTION (ROUTES No. B11 AND B09)		66.5	PY
HPP11	PAVING OF THE SANTA ROSA - PUERTO ANTEQUERA ROAD SECTION (NATIONAL ROUTE No. 11)		47.0	PY
HPP12	PAVING OF THE CONCEPCIÓN - VALLEMÍ ROAD (ROUTES A06 AND PY14)		113.0	PY
HPP106	SYSTEM FOR WATER LEVEL PREDICTION IN THE PARAGUAY RIVER (APA - ASUNCIÓN)		0.0	BO - PY
HPP122	REHABILITATION AND MAINTENANCE OF THE TAMENGO CANAL		10.5	BO
HPP125	PAVING OF ROAD SECTION SANTA ROSA - CAPITÁN BADO (NATIONAL ROAD No.11 - BORDER WITH BRAZIL)		122.5	PY
HPP127	CONSTRUCTION OF THE BUSCH PORT		0.0	BO
12			734.1	

PROFILING
 PRE-EXECUTION
 EXECUTION
 COMPLETED

TIETÊ - PARANÁ (ITAIPÚ)

19 IMPROVEMENT OF NAVIGATION CONDITIONS ON THE TIETÊ RIVER

108 IMPROVEMENT OF NAVIGATION CONDITIONS ON THE ALTO PARANÁ RIVER (UPSTREAM OF SALTO DEL GUAIRÁ)

31 REHABILITATION OF SALTO DEL GUAIRÁ PORT

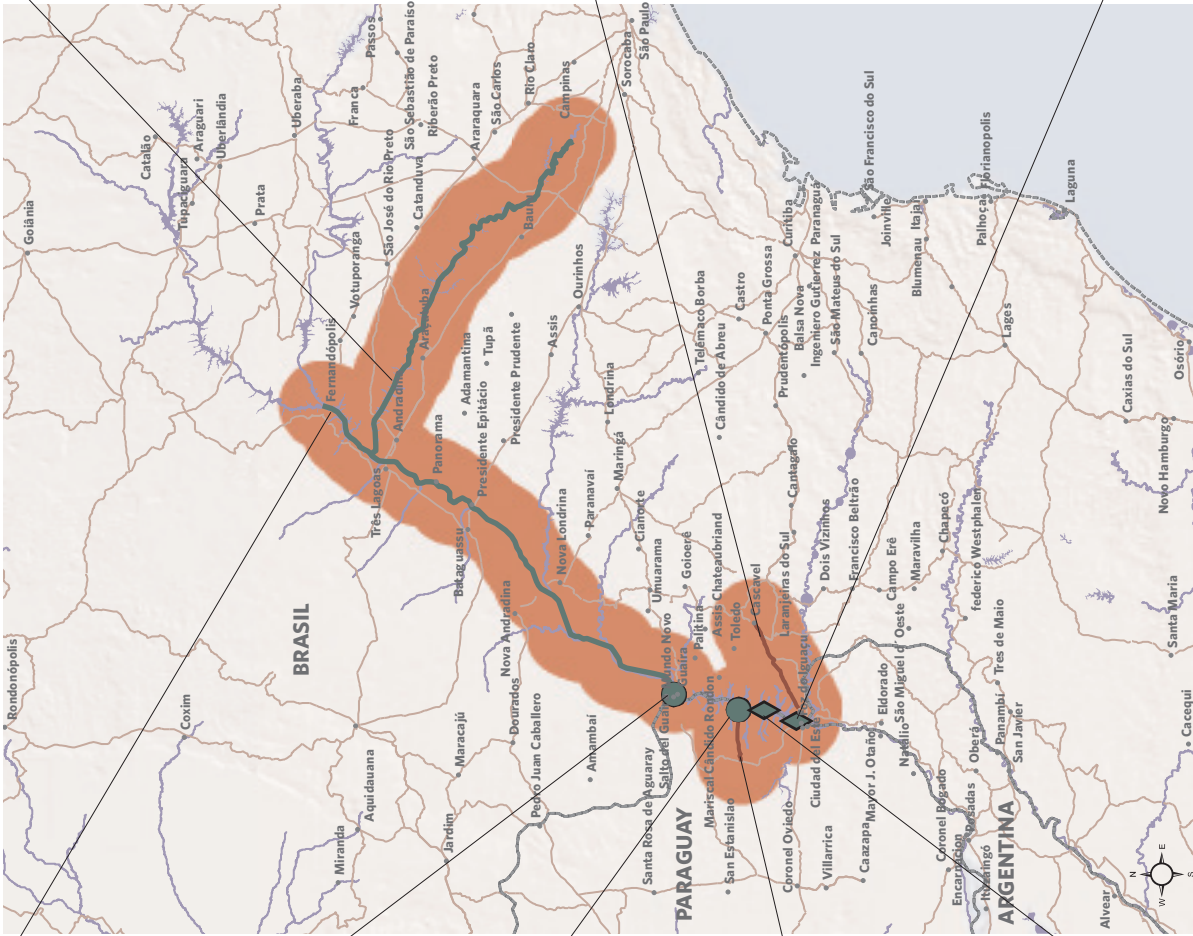
30 ENLARGEMENT OF PUERTO INDIO

32 PAVING OF TRUNK ROAD II

29 BINATIONAL PROJECT FOR THE IMPROVEMENT OF NAVIGATION CONDITIONS ON THE ITAIPU LAKE

25 SANTA TEREZINHA DE ITAIPU - CASCATEL SECTION, ROUTE BR-277

28 Anchor Project: ITAIPU DIVERSION BINATIONAL PROJECT





HPP GROUP 2

Strategic Function

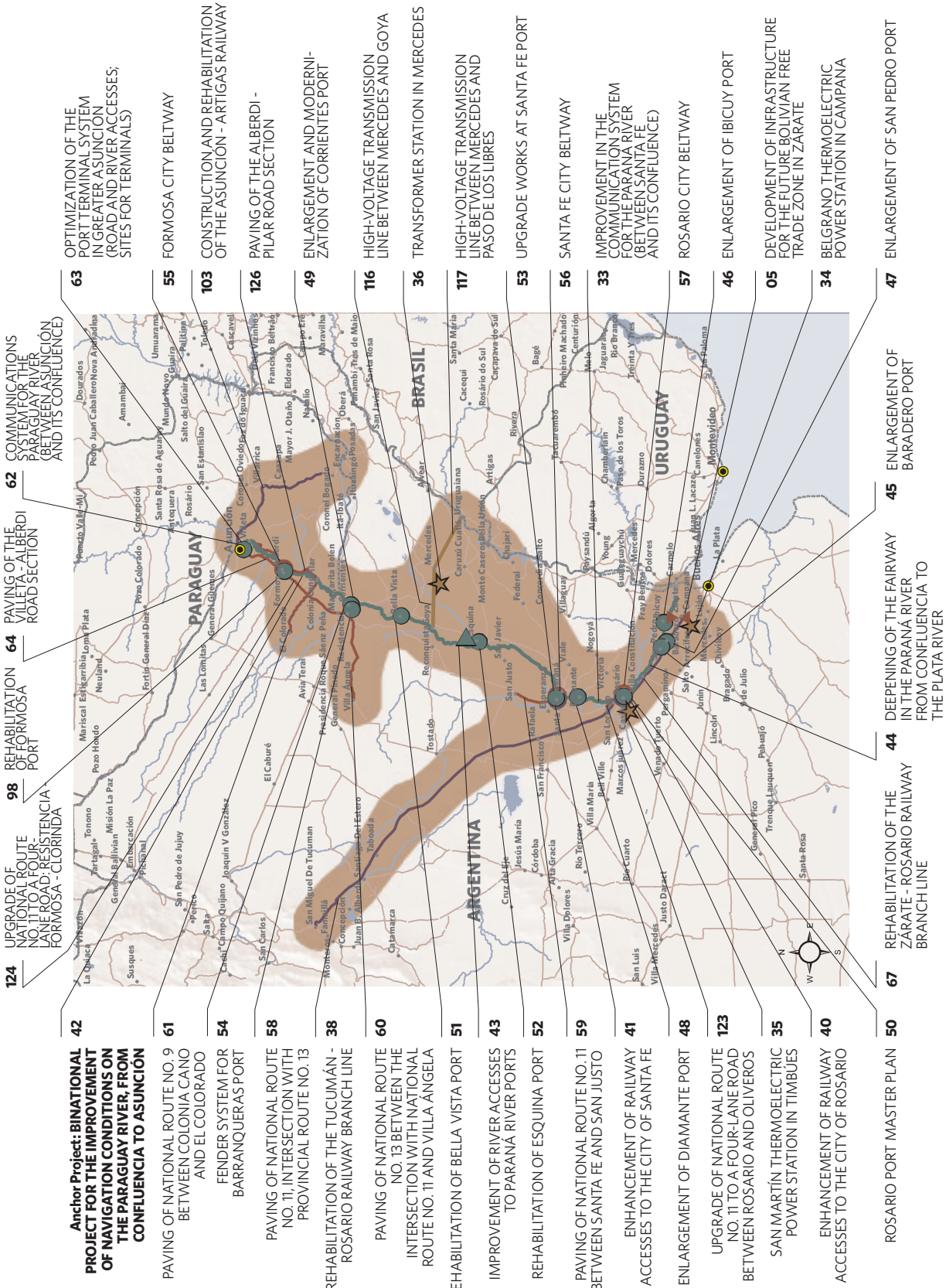
- Strengthen the socioeconomic dynamics in the area of influence of the Group.
- Improve the integration of production and consumption areas in the Tietê and Paraná basins.
- Strengthen competitiveness in inland countries and regions by efficiently connecting them to the Atlantic ocean.

*US\$ million

Code	Name	Stage	Estimated Investment*	Countries
HPP19	IMPROVEMENT OF NAVIGATION CONDITIONS ON THE TIETÊ RIVER		800.0	BR
HPP25	SANTA TEREZINHA DE ITAIPU - CASCAVEL SECTION, ROUTE BR-277		4.9	BR
HPP28	ITAIPU DIVERSION BINATIONAL PROJECT		0.0	BR - PY
HPP29	BINATIONAL PROJECT FOR THE IMPROVEMENT OF NAVIGATION CONDITIONS ON THE ITAIPU LAKE		0.0	BR - PY
HPP30	ENLARGEMENT OF PUERTO INDIO		1.2	PY
HPP31	REHABILITATION OF SALTO DEL GUAIRÁ PORT		0.8	PY
HPP32	PAVING OF TRUNK ROAD II		25.6	PY
HPP108	IMPROVEMENT OF NAVIGATION CONDITIONS ON THE ALTO PARANÁ RIVER (UPSTREAM OF SALTOS DEL GUAIRÁ)		15.0	BR
8			847.5	

PROFILING
 PRE-EXECUTION
 EXECUTION
 COMPLETED

PARAGUAY - PARANÁ RIVERS, ASUNCIÓN - PARANÁ DELTA





HPP GROUP 3

Strategic Function

- Strengthen and boost the integration of the production chains along the Hub.
- Reinforce integration of inland countries and regions with global markets by efficiently connecting them to the Atlantic ocean.
- Improve the efficiency of the production system of the region and the quality of life of the populations living in the area of influence of the Group.

*US\$ million

Code	Name	Stage	Estimated Investment*	Countries
HPP05	DEVELOPMENT OF INFRASTRUCTURE FOR THE FUTURE BOLIVIAN FREE TRADE ZONE IN ZÁRATE		0.0	BO
HPP33	IMPROVEMENT IN THE COMMUNICATIONS SYSTEM FOR THE PARANÁ RIVER (BETWEEN SANTA FE AND ITS CONFLUENCE)		30.0	AR
HPP34	BELGRANO THERMOELECTRIC POWER STATION IN CAMPANA		650.0	AR
HPP35	SAN MARTÍN THERMOELECTRIC POWER STATION IN TIMBÚES		500.0	AR
HPP36	TRANSFORMER STATION IN MERCEDES		25.0	AR
HPP38	REHABILITATION OF THE TUCUMÁN - ROSARIO RAILWAY BRANCH LINE		200.0	AR
HPP40	ENHANCEMENT OF RAILWAY ACCESSES TO THE CITY OF ROSARIO		92.0	AR
HPP41	ENHANCEMENT OF RAILWAY ACCESSES TO THE CITY OF SANTA FE		0.0	AR
HPP42	BINATIONAL PROJECT FOR THE IMPROVEMENT OF NAVIGATION CONDITIONS ON THE PARAGUAY RIVER, FROM CONFLUENCE TO ASUNCIÓN		45.5	AR - PY
HPP43	IMPROVEMENT OF RIVER ACCESSES TO PARANÁ RIVER PORTS		15.0	AR
HPP44	DEEPENING OF THE FAIRWAY IN THE PARANÁ RIVER FROM CONFLUENCE TO THE PLATA RIVER		110.3	AR
HPP45	ENLARGEMENT OF BARADERO PORT		0.0	AR
HPP46	ENLARGEMENT OF IBICUY PORT		3.0	AR
HPP47	ENLARGEMENT OF SAN PEDRO PORT		36.0	AR
HPP48	ENLARGEMENT OF DIAMANTE PORT		20.0	AR
HPP49	ENLARGEMENT AND MODERNIZATION OF CORRIENTES PORT		12.0	AR
HPP50	ROSARIO PORT MASTER PLAN		8.0	AR
HPP51	REHABILITATION OF BELLA VISTA PORT		10.0	AR
HPP52	REHABILITATION OF ESQUINA PORT		7.0	AR



PARAGUAY - PARANÁ RIVERS, ASUNCIÓN - PARANÁ DELTA

>> *US\$ million

Code	Name	Stage	Estimated Investment*	Countries
HPP53	UPGRADE WORKS AT SANTA FE PORT		0.0	AR
HPP54	FENDER SYSTEM FOR BARRANQUERAS PORT		15.0	AR
HPP55	FORMOSA CITY BELTWAY		8.0	AR
HPP56	SANTA FE CITY BELTWAY		200.0	AR
HPP57	ROSARIO CITY BELTWAY		80.0	AR
HPP58	PAVING OF NATIONAL ROUTE No. 11, INTERSECTION WITH PROVINCIAL ROUTE No. 13		100.0	AR
HPP59	PAVING OF NATIONAL ROUTE No. 11 BETWEEN SANTA FE AND SAN JUSTO		40.0	AR
HPP60	PAVING OF NATIONAL ROUTE No. 13 BETWEEN THE INTERSECTION WITH NATIONAL ROUTE No. 11 AND VILLA ÁNGELA		100.0	AR
HPP61	PAVING OF PROVINCIAL ROUTE No. 9 BETWEEN COLONIA CANO AND EL COLORADO		60.0	AR
HPP62	COMMUNICATIONS SYSTEM FOR THE PARAGUAY RIVER (BETWEEN ASUNCIÓN AND ITS CONFLUENCE)		3.0	AR - PY
HPP63	OPTIMIZATION OF THE PORT TERMINAL SYSTEM IN GREATER ASUNCIÓN (ROAD AND RIVER ACCESSES; SITES FOR TERMINALS)		0.0	PY
HPP64	PAVING OF THE VILLETA - ALBERDI ROAD SECTION		51.0	PY
HPP67	REHABILITATION OF THE ZÁRATE - ROSARIO RAILWAY BRANCH LINE		42.0	AR
HPP98	REHABILITATION OF FORMOSA PORT		6.0	AR
HPP103	CONSTRUCTION AND REHABILITATION OF THE ASUNCIÓN - ARTIGAS RAILWAY		0.0	PY
HPP116	HIGH-VOLTAGE TRANSMISSION LINE BETWEEN MERCEDES AND GOYA		25.0	AR
HPP117	HIGH-VOLTAGE TRANSMISSION LINE BETWEEN MERCEDES AND PASO DE LOS LIBRES		15.0	AR
HPP123	UPGRADE OF NATIONAL ROUTE No. 11 TO A FOUR-LANE ROAD BETWEEN ROSARIO AND OLIVEROS		45.0	AR
HPP124	UPGRADE OF NATIONAL ROUTE No. 11 TO A FOUR-LANE ROAD: RESISTENCIA - FORMOSA - CLORINDA		330.0	AR
HPP126	PAVING OF THE ALBERDI - PILAR ROAD SECTION		100.0	PY
39			2,983.8	



PROFILING



PRE-EXECUTION

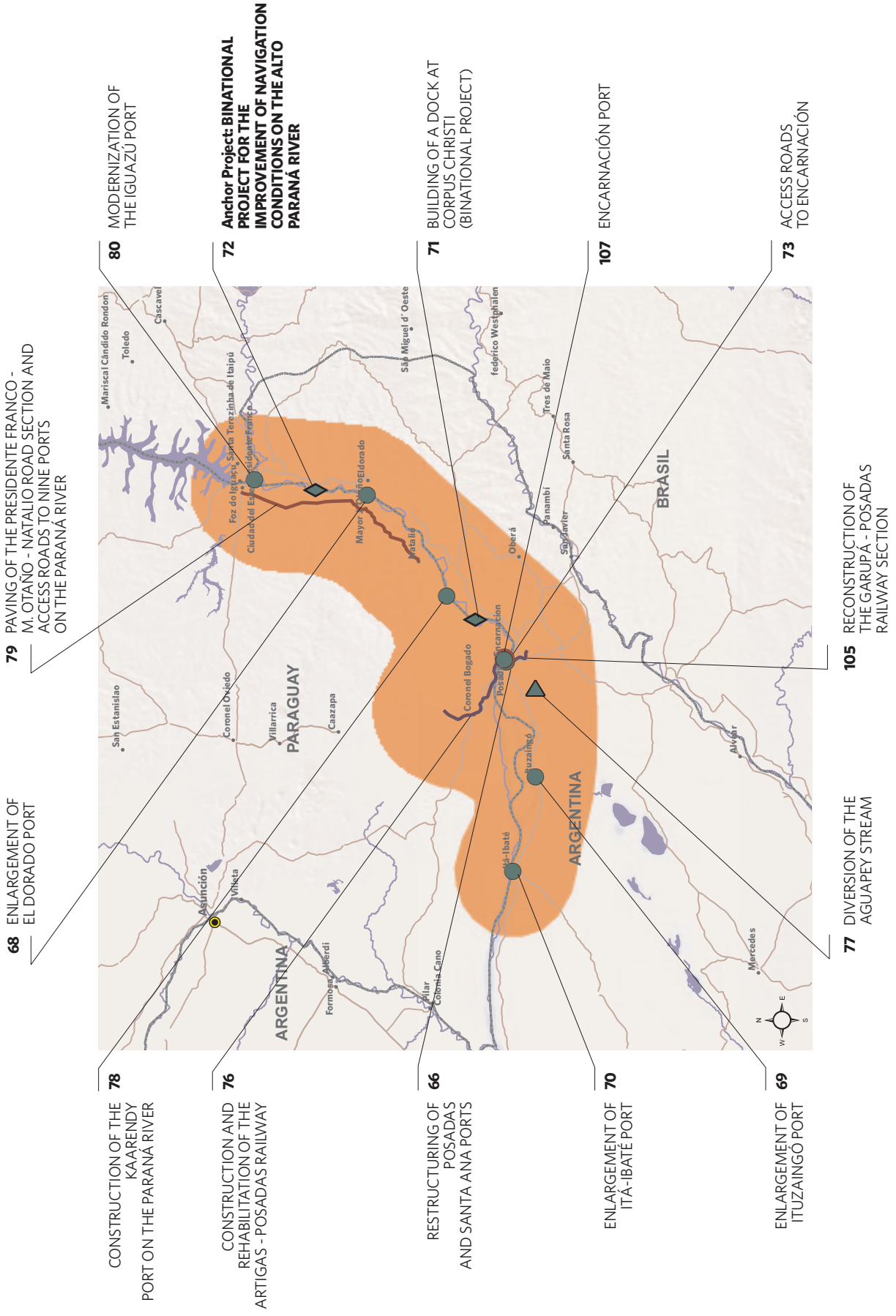


EXECUTION



COMPLETED

PARANÁ RIVER, ITAIPU - CONFLUENCE





HPP GROUP 4

Strategic Function

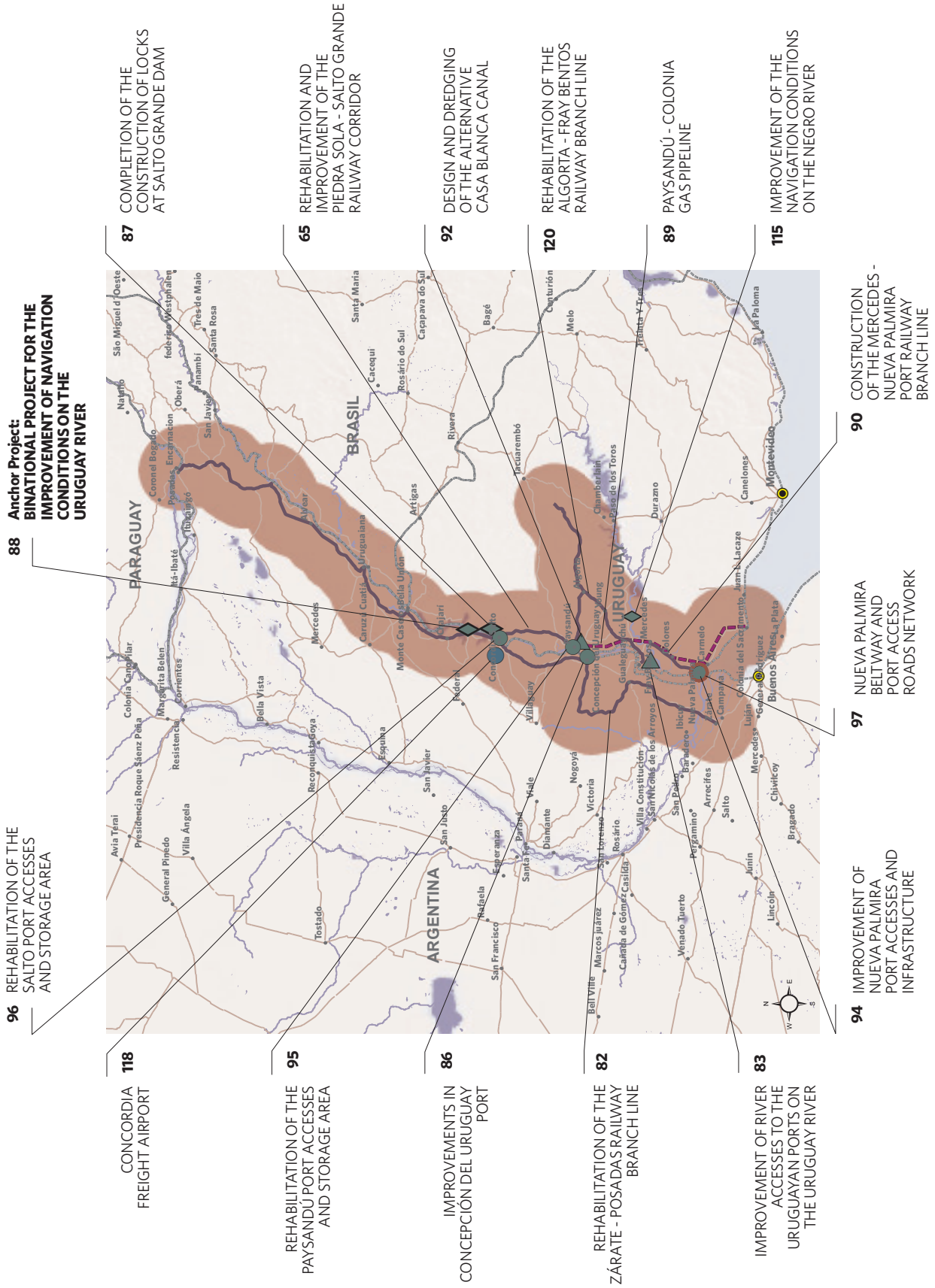
- Strengthen the socioeconomic dynamics in the area of influence of the Group.
- Improve the integration of the production and consumption areas in the Tietê and Paraná basins.
- Strengthen competitiveness of inland countries and regions by efficiently connecting them to the Atlantic ocean.

*US\$ million

Code	Name	Stage	Estimated Investment*	Countries
HPP66	RESTRUCTURING OF POSADAS AND SANTA ANA PORTS		10.0	AR
HPP68	ENLARGEMENT OF EL DORADO PORT		0.0	AR
HPP69	ENLARGEMENT OF ITUZAINGÓ PORT		27.0	AR
HPP70	ENLARGEMENT OF ITÁ-IBATÉ PORT		18.0	AR
HPP71	BUILDING OF A DOCK AT CORPUS CHRISTI (BINATIONAL PROJECT)		0.0	AR - PY
HPP72	BINATIONAL PROJECT FOR THE IMPROVEMENT OF NAVIGATION CONDITIONS ON THE ALTO PARANÁ RIVER		0.0	AR - PY
HPP73	ACCESS ROADS TO ENCARNACIÓN		26.0	PY
HPP76	CONSTRUCTION AND REHABILITATION OF THE ARTIGAS - POSADAS RAILWAY		150.0	AR - PY
HPP77	DIVERSION OF THE AGUAPEY STREAM		64.0	PY
HPP78	CONSTRUCTION OF THE KAARENDY PORT ON THE PARANÁ RIVER		9.9	PY
HPP79	PAVING OF THE PRESIDENTE FRANCO - M. OTAÑO - NATALIO ROAD SECTION AND ACCESS ROADS TO NINE PORTS ON THE PARANÁ RIVER		176.0	PY
HPP80	MODERNIZATION OF THE IGUAZÚ PORT		0.0	AR
HPP105	RECONSTRUCTION OF THE GARUPÁ - POSADAS RAILWAY SECTION		100.0	AR
HPP107	ENCARNACIÓN PORT		11.8	PY
14			592.7	

PROFILING
 PRE-EXECUTION
 EXECUTION
 COMPLETED

URUGUAY RIVER





HPP GROUP 5

Strategic Function

- Strengthen the socioeconomic dynamics in the area of influence of the Group.
- Implement an efficient regional system of river and port activities with a view to improving access to the Atlantic.

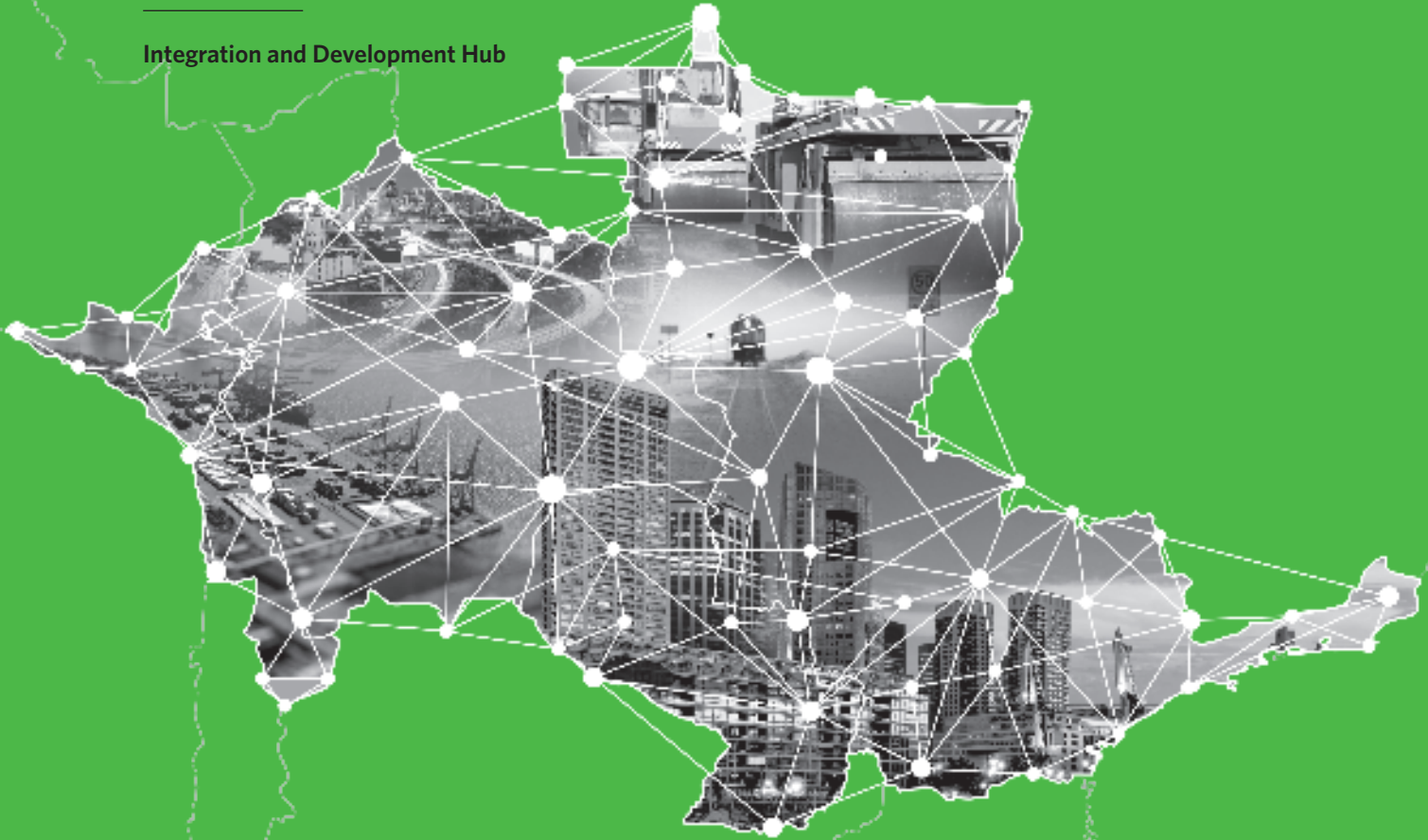
*US\$ million

Code	Name	Stage	Estimated Investment*	Countries
HPP65	REHABILITATION AND IMPROVEMENT OF THE PIEDRA SOLA - SALTO GRANDE RAILWAY CORRIDOR		127.3	UY
HPP82	REHABILITATION OF THE ZÁRATE - POSADAS RAILWAY BRANCH LINE		0.0	AR
HPP83	IMPROVEMENT OF RIVER ACCESSES TO THE URUGUAYAN PORTS ON THE URUGUAY RIVER		1.0	UY
HPP86	IMPROVEMENTS IN CONCEPCIÓN DEL URUGUAY PORT		10.7	AR
HPP87	COMPLETION OF THE CONSTRUCTION OF LOCKS AT SALTO GRANDE DAM		300.0	AR - UY
HPP88	BINATIONAL PROJECT FOR THE IMPROVEMENT OF NAVIGATION CONDITIONS ON THE URUGUAY RIVER		40.0	AR - UY
HPP89	PAYSANDÚ - COLONIA GAS PIPELINE		0.0	UY
HPP90	CONSTRUCTION OF THE MERCEDES - NUEVA PALMIRA PORT RAILWAY BRANCH LINE		200.0	UY
HPP92	DESIGN AND CONSTRUCTION OF THE ALTERNATIVE CASA BLANCA CANAL		3.0	UY
HPP94	IMPROVEMENT OF NUEVA PALMIRA PORT ACCESSES AND INFRASTRUCTURE		10.0	UY
HPP95	REHABILITATION OF THE PAYSANDÚ PORT, ACCESSES AND STORAGE AREA		6.0	UY
HPP96	REHABILITATION OF THE SALTO PORT, ACCESSES AND STORAGE AREA		4.0	UY
HPP97	NUEVA PALMIRA BELTWAY AND PORT ACCESS ROADS NETWORK		15.0	UY
HPP115	IMPROVEMENT OF THE NAVIGATION CONDITIONS ON THE NEGRO RIVER		350.0	UY
HPP118	EXPANSION AND REHABILITATION OF THE CONCORDIA AIRPORT		0.0	AR
HPP120	REHABILITATION OF THE ALGORTA - FRAY BENTOS RAILWAY BRANCH LINE		100.0	UY
16			1,167.0	

PROFILING
 PRE-EXECUTION
 EXECUTION
 COMPLETED

IOC CENTRAL INTEROCEANIC HUB

Integration and Development Hub



Population: 100,150,302
Population density: 37.9 people/km²
Area: 2,642,262 km²

GDP: US\$ 1,348,366 million

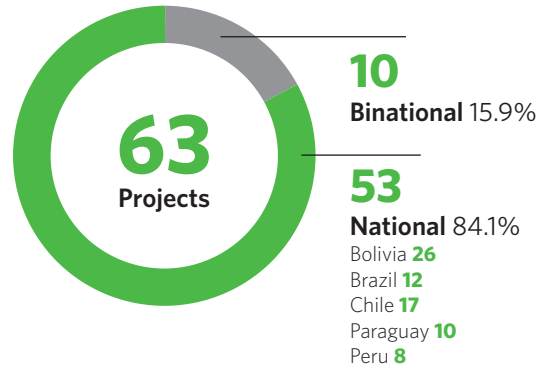
Services	77.3%
Industries	11.5%
Agriculture	5.7%
Mining and quarrying	5.5%



Estimated Investment

US\$ million

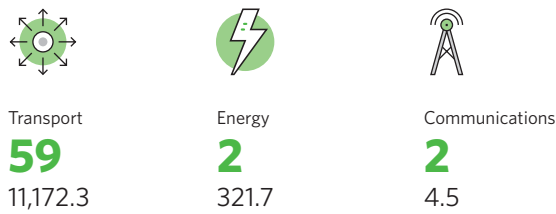
11,498.5



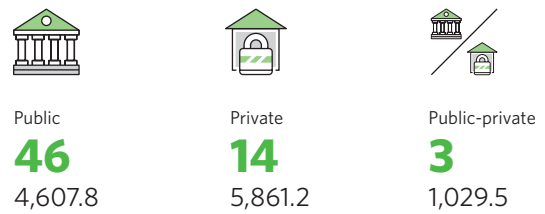
Projects by Stage



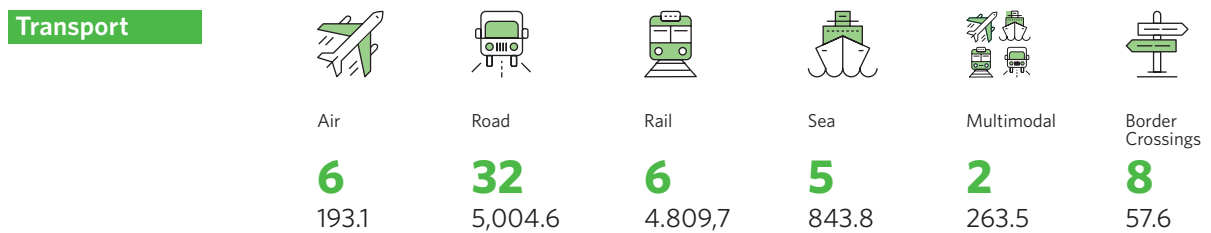
Projects by Sector



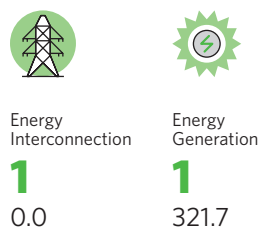
Projects by Type of Financing



Projects by Subsectors



Energy



Communications



CENTRAL INTEROCEANIC

Presentation of the Hub

The Central Interoceanic Hub⁽¹⁾ extends across South America from coast to coast, linking major ports on the Pacific and the Atlantic oceans as well as several transport hubs connecting Bolivia, Brazil, Chile, Paraguay and Peru.

The Hub accounts for 15% of the area (2,642,262 km²) and 25% of the population (100,150,302 inhabitants) of South America, and is one of the three most densely populated Hubs, with 38 inhabitants per km². It also ranks third in terms of GDP, accounting for almost 30% of the region's GDP (US\$1,348,336 million).⁽²⁾

AREA OF INFLUENCE OF THE CENTRAL INTEROCEANIC HUB



Regarding infrastructure, the **road network** of the countries that make up the Hub covers a total of 1,854,372 km, 14% of which are paved. Its **rail network** covers 40,146 km. The **sea port system** of the Hub features 29 major ports mostly located on the Atlantic and Pacific oceans and on the Paraguay river. Six of these ports handle more than 2 million tons. The ports of Santos and Paranaguá, on the Brazilian Atlantic coast, handle 100 and 40 million tons, respectively.

¹ See "Caracterización Socio-Económica y Ambiental del Eje Interoceánico Central," COSIPLAN-IIRSA, 2015. iirsa.org/interoceánico-central.asp

² At 2014 current prices.

Trade through **river transportation** in the region takes place mainly along the Paraguay river and, to a lesser extent, along the Paraná river. The **airport system** is made up of 32 airports —14 international. Concerning **electricity generation**, the installed power capacity in the countries of the Hub is 159,262 MW, 76% of which are contributed by Brazil.

The presence of **indigenous communities** is very significant. They live in the whole territory of Bolivia, in the south of Peru, in the eastern region of Paraguay and in part of the Brazilian state of Mato Grosso. In general, rural communities are engaged in subsistence activities or small-scale agriculture; some of their members are also rural or mining waged workers.

Regarding the **protected areas** in the Hub, there are about 450 territorial units with some degree of environmental protection, covering an area of approximately 402,837 km², which accounts for around 15% of the total area of the Hub. More than 50% of this area is contributed by Bolivia, with about 220,000 km² that include 17 national parks, three biosphere reserves, and one Ramsar site, among other important areas.

In general terms, all the western territory of the Hub in the Andes ranges is exposed to **natural hazards** resulting mostly from seismic and volcanic geodynamic processes, whereas the eastern area of the Hub is exposed to meteorological and hydrologic hazards as a result of the abundant rainfalls that affect a vast expanse of the central and central-southern areas of the Hub. The Pacific coastline, in turn, is exposed to tsunamis resulting from earthquakes.

The countries involved in the Central Interoceanic Hub plan investments for US\$11.5 billion in 63 physical integration projects.

Paraguay contributes 100% of its economy, Bolivia 99%, Brazil 52%, Chile 13%, and Peru 10%. In absolute terms, Brazil contributes 91% of the Hub's aggregate GDP, while the other countries contribute between 3% and 2%.

The Hub shares part of its area of influence with the MERCOSUR-Chile (MCC), Andean (AND), Peru-Brazil-Bolivia (PBB), Amazon (AMA), Paraná-Paraguay Waterway (HPP) and Capricorn (CAP) Hubs.

CENTRAL INTEROCEANIC HUB

Project Portfolio

The projects included in the Central Interoceanic Hub are intended to expand the rail infrastructure in order to reduce regional transportation costs in the following connectivities: from isolated territories of the hinterland towards the Pacific ocean; from the countries to the Atlantic ocean, from the eastern region of Bolivia to Mato Grosso, and from these regions to the Atlantic and Pacific oceans.

PROJECT GROUPS OF THE CENTRAL INTEROCEANIC HUB

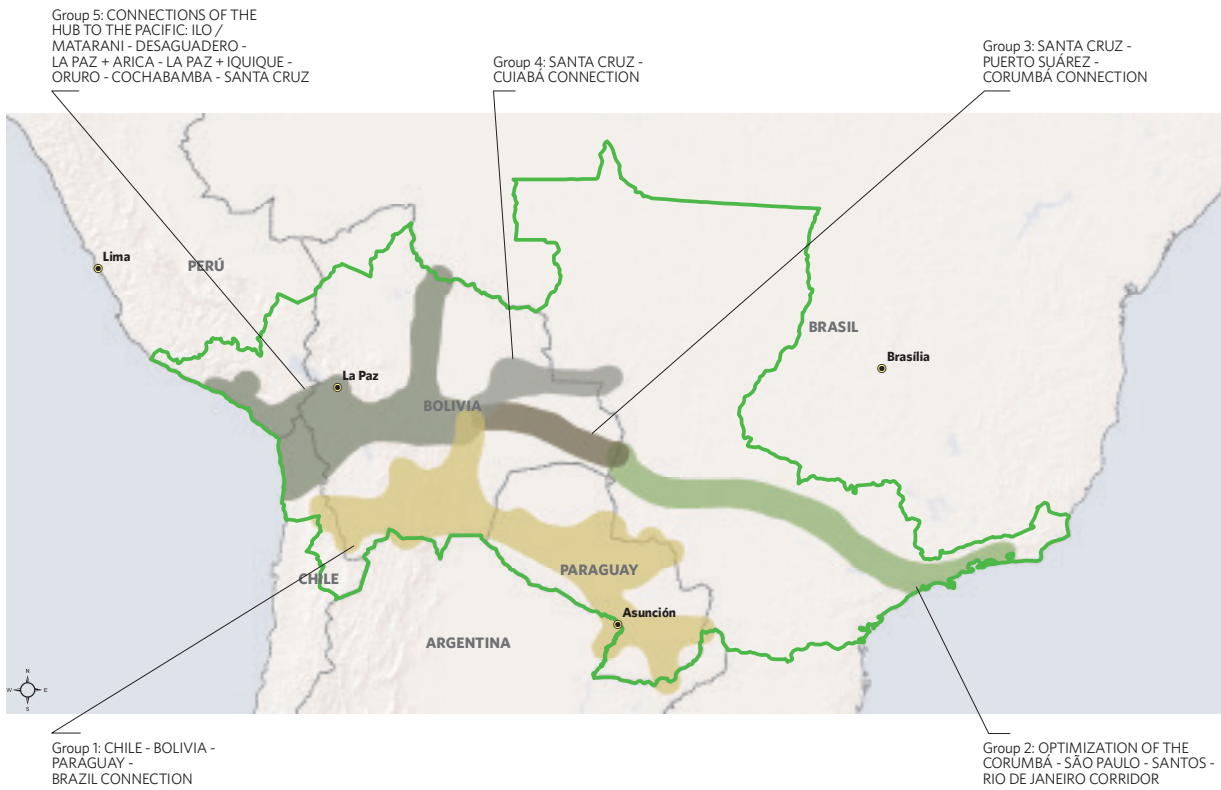


TABLE 1. PROJECT GROUPS OF THE CENTRAL INTEROCEANIC HUB *US\$ million











Group	Name	No. of Projects	Estimated Investment*
1	CHILE - BOLIVIA - PARAGUAY - BRAZIL CONNECTION	17	1,845.6
2	OPTIMIZATION OF THE CORUMBÁ - SÃO PAULO - SANTOS - RIO DE JANEIRO CORRIDOR	8	6,307.4
3	SANTA CRUZ - PUERTO SUÁREZ - CORUMBÁ CONNECTION	4	433.5
4	SANTA CRUZ - CUIABÁ CONNECTION	5	141.2
5	CONNECTIONS OF THE HUB TO THE PACIFIC: ILO / MATARANI - DESAGUADERO - LA PAZ + ARICA - LA PAZ + IQUIQUE - ORURO - COCHABAMBA - SANTA CRUZ	29	2,770.8
TOTAL		63	11,498.5


The active portfolio of the Hub includes 46 projects with an estimated investment of US\$10,835 million.

Of the 46 active projects, there is information available on the estimated completion date of 11. Ten of them are to be completed in the next four years (2016-2019).

According to estimations, by the time these ten projects are completed, 23% of the estimated investment amount for the Hub's Portfolio would have been made.

TABLE 2. PROJECTS TO BE COMPLETED IN THE NEXT FOUR YEARS *US\$ million

Code	Name	Group	Stage	Estimated Investment*	Countries	Estimated Completion Date
IOC09	INFANTE RIVAROLA - CAÑADA ORURO BORDER CROSSING	1		1.9	BO - PY	August 2016
IOC80	UPGRADE OF LA PAZ - SANTA CRUZ ROUTE TO A FOUR-LANE ROAD	5		269.0	BO	August 2016
IOC14	CAMPO GRANDE BYPASS	2		12.0	BR	December 2016
IOC32	TOLEDO - PISIGA ROAD	5		130.5	BO	February 2017
IOC42	REHABILITATION AND IMPROVEMENT OF THE CAMANÁ - MATARANI - ILO ROAD	5		438.1	PE	April 2017
IOC75	CONSTRUCTION OF ROUTE No. 5 SECTION BETWEEN BELLA VISTA AND THE CONNECTION WITH APA RIVER BRIDGE	1		48.5	PY	July 2017
IOC78	PASSENGER AND CARGO HUB AIRPORT FOR SOUTH AMERICA (VIRU VIRU, SANTA CRUZ, INTERNATIONAL HUB AIRPORT)	3		20.0	BO	December 2017
IOC79	TACNA - LA PAZ ROAD INTEGRATION, TACNA - COLLPA SECTION	5		160.3	BO - PE	January 2018
IOC01	PAVING OF THE CARMELO PERALTA - LOMA PLATA ROAD SECTION	1		255.5	PY	February 2018
IOC72	IMPROVEMENT OF ROUTE No. 9 TRANCHACO (INFANTE RIVAROLA - ASUNCIÓN ROAD SECTION)	1		598.5	PY	July 2018






 PROFILING  PRE-EXECUTION  EXECUTION  COMPLETED

The five projects with the greatest estimated investment account for 64% of all the investment in the active portfolio of the Hub.

It is to be noted that the first three projects are national in scope, involving only Brazil, and have a high investment level, while the other two are also national, involving Paraguay and Peru.

Public and private financing sources are being considered for all the projects (two projects will be publicly financed, two privately financed, and one will be public-privately financed). The first project, Improvement of the Corumbá - Santos (SP) Railway Section, is privately financed. All the projects considered belong to the transportation sector; three concern roads and two rail works.

TABLE 3. THE FIVE PROJECTS OF THE ACTIVE PORTFOLIO WITH THE GREATEST ESTIMATED INVESTMENT *US\$ million

Code	Name	Group	Stage	Estimated Investment*	Countries	Type of Financing
IOC17	IMPROVEMENT OF THE CORUMBÁ - SANTOS (SP) RAILWAY SECTION	2		3,700.0	BR	Private
IOC16	RIO DE JANEIRO BYPASS AND ACCESS ROAD TO ITAGUAÍ PORT	2		1,200.0	BR	Public
IOC11	SÃO PAULO RING RAILWAY	2		1,000.0	BR	Private
IOC72	IMPROVEMENT OF ROUTE No. 9 TRANCHACO (INFANTE RIVAROLA - ASUNCIÓN ROAD SECTION)	1		598.5	PY	Public-private
IOC42	REHABILITATION AND IMPROVEMENT OF THE CAMANÁ - MATARANI - ILO ROAD	5		438.1	PE	Public

 PROFILING  PRE-EXECUTION  EXECUTION  COMPLETED

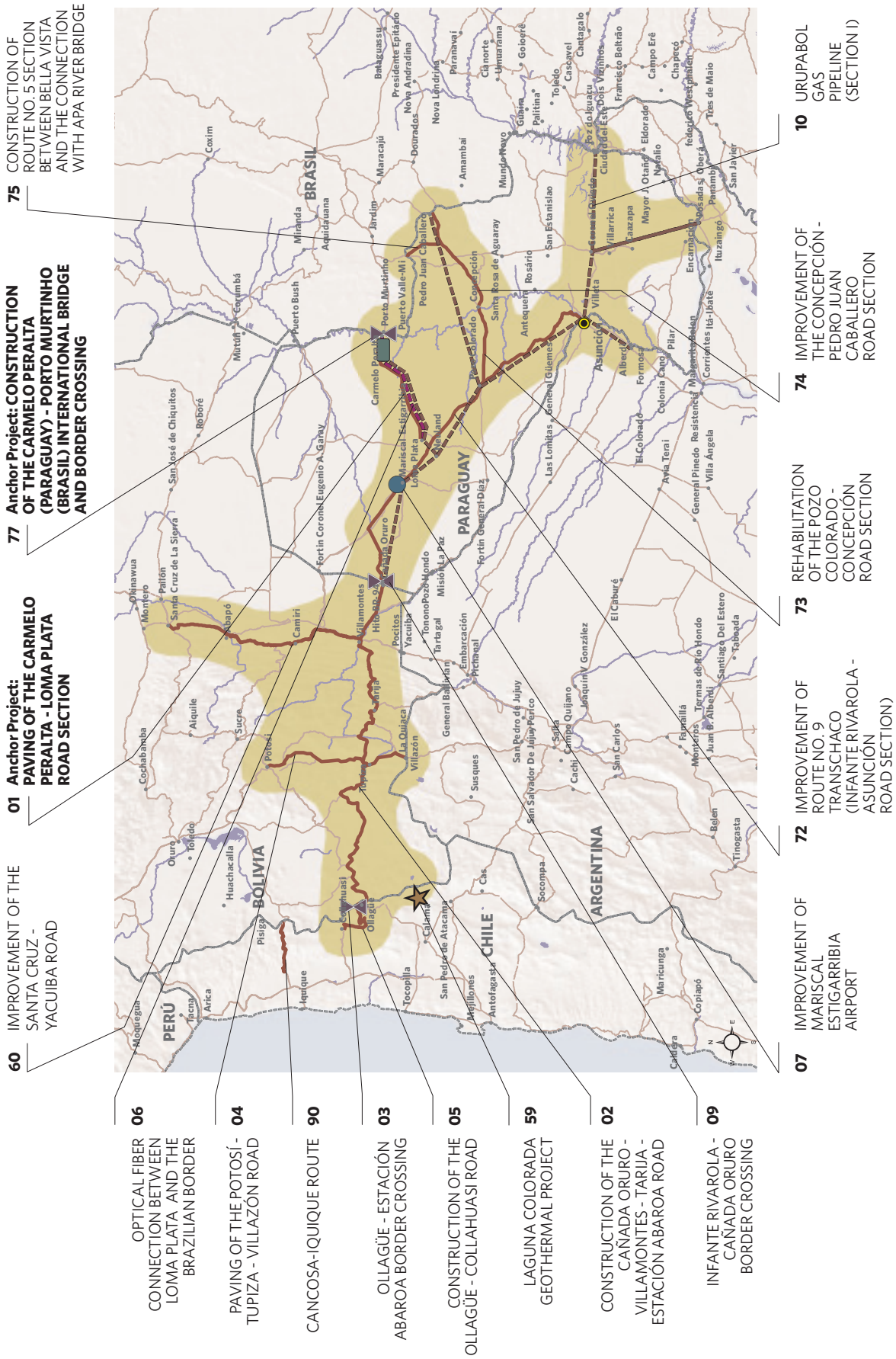
There are 17 completed projects in the Hub, having demanded a total investment amount of US\$663 million.

All the completed projects belong to the transportation sector. The projects financed by the private sector were less than half the projects financed by the public sector, although private financing has more than doubled the amount financed by the public sector. These projects are divided into the six subsectors, but the road, rail, and border crossing projects stand out. Most are national in scope, with a balanced participation of Chile (5) and Brazil (4). Paraguay has completed one project, and Bolivia participates in three binational projects already completed, two shared with Brazil and one with Chile.

TABLE 4. COMPLETED PROJECTS OF THE HUB *US\$ million

Code	Name	Investment Amount*	Countries
IOCB89	MINERAL CONCENTRATE RECEPTION, STORAGE AND SHIPPING SYSTEM AT THE MATARANI PORT	230.0	PE
IOCB71	CONCESSION OF THE DIEGO ARACENA AIRPORT - IQUIQUE ROAD FOR ITS UPGRADE TO A FOUR-LANE ROAD	173.0	CH
IOCB66	ARICA - LA PAZ RAILWAY REHABILITATION AND CONCESSION (CHILEAN SECTION)	50.0	CH
IOCB36	PAVING AND IMPROVEMENT OF THE IQUIQUE - COLCHANE ROAD	42.0	CH
IOCB62	IMPROVEMENT OF MATARANI PORT	37.0	PE
IOCB13	CAMPO GRANDE RING RAILWAY	31.0	BR
IOCB20	IMPROVEMENT OF CORUMBÁ - CAMPO GRANDE RAILWAY SECTION (TREM DO PANTANAL)	22.0	BR
IOCB69	ENLARGEMENT OF THE IQUIQUE AIRPORT	16.6	CH
IOCB30	PAVING OF THE PORTO LIMÃO - BOLIVIAN BORDER (SAN MATÍAS) ROAD SECTION	13.0	BR
IOCB74	IMPROVEMENT OF THE CONCEPCIÓN - PEDRO JUAN CABALLERO ROAD SECTION	12.5	PY
IOCB33	PISIGA - COLCHANE BORDER CROSSING	10.0	BO - CH
IOCB34	IMPROVEMENT OF ARICA AIRPORT	10.0	CH
IOCB15	CORUMBÁ BYPASS	8.0	BR
IOCB39	REHABILITATION OF THE "PUENTE DE LA AMISTAD" BRIDGE (OR EISENHOWER BRIDGE)	3.0	BO
IOCB25	PUERTO SUÁREZ - CORUMBÁ INTEGRATED CONTROL AREA	2.0	BO - BR
IOCB29	SAN MATÍAS - CÁCERES (PORTO LIMÃO) BORDER CROSSING	2.0	BO - BR
IOCB86	IMPROVEMENT OF THE CHACALLUTA BORDER COMPLEX	1.0	CH
17		663.1	

CHILE - BOLIVIA - PARAGUAY - BRAZIL CONNECTION





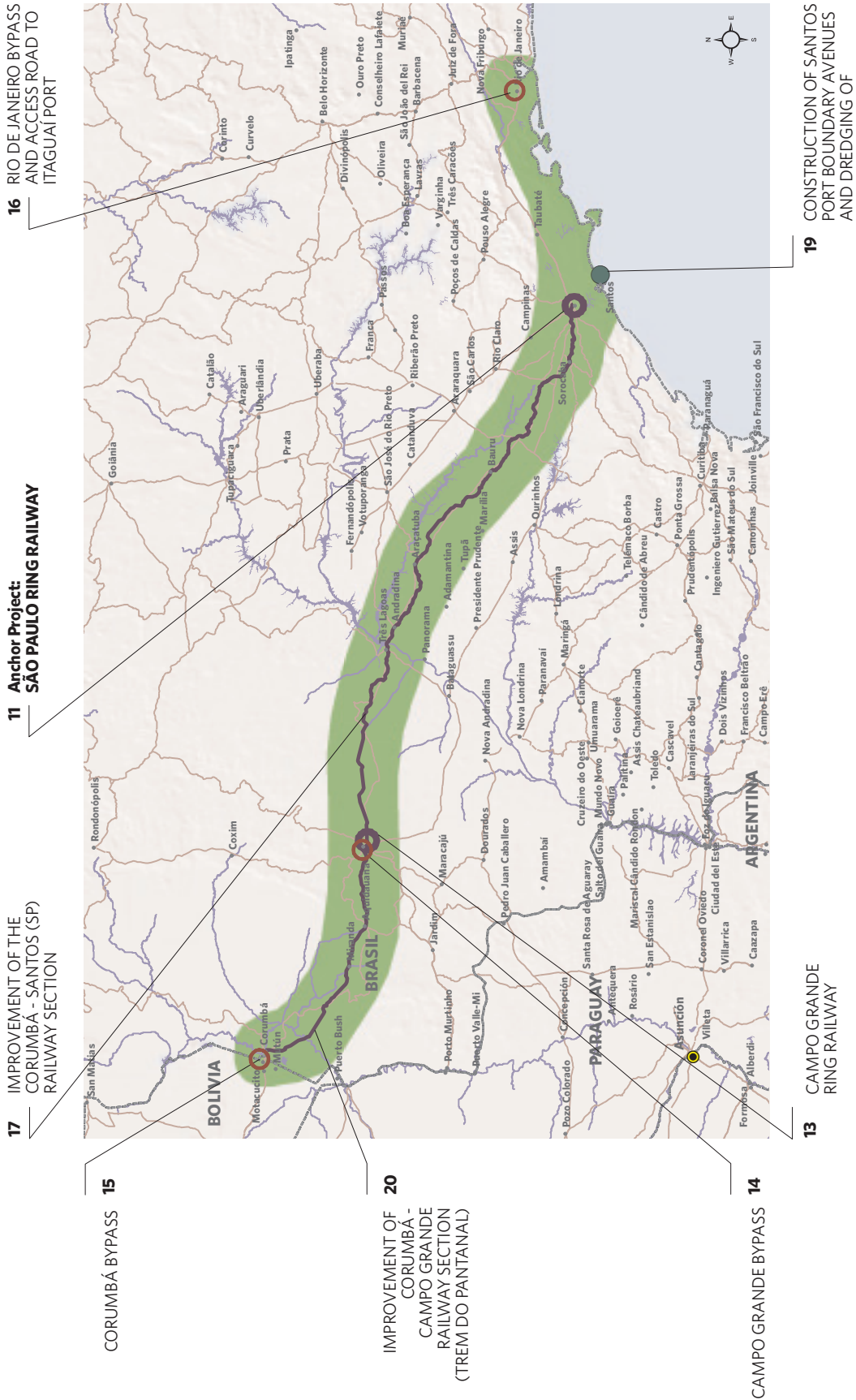
IOC GROUP 1

Strategic Function

- Interconnect regional production areas (transportation, energy, and communications).
- Provide new access of the hinterlands to the Pacific ocean, articulating isolated territories.
- Increase the economic complementariness among the countries.

					*US\$ million
Code	Name	Stage	Estimated investment*	Countries	
IOC01	PAVING OF THE CARMELO PERALTA - LOMA PLATA ROAD SECTION		255.5	PY	
IOC02	CONSTRUCTION OF THE CAÑADA ORURO - VILLAMONTES - TARIJA - ESTACIÓN ABAROA ROAD		210.0	BO	
IOC03	OLLAGÜE - ESTACIÓN ABAROA BORDER CROSSING		2.2	BO - CH	
IOC04	PAVING OF THE POTOSÍ - TUPIZA - VILLAZÓN ROAD		180.4	BO	
IOC05	CONSTRUCTION OF THE OLLAGÜE - COLLAHUASI ROAD		12.8	CH	
IOC06	OPTICAL FIBER CONNECTION BETWEEN LOMA PLATA AND THE BRAZILIAN BORDER		2.0	PY	
IOC07	IMPROVEMENT OF MARISCAL ESTIGARRIBIA AIRPORT		30.0	PY	
IOC09	INFANTE RIVAROLA - CAÑADA ORURO BORDER CROSSING		1.9	BO - PY	
IOC10	URUPABOL GAS PIPELINE (SECTION I)		0.0	BO - PY	
IOC59	LAGUNA COLORADA GEOTHERMAL PROJECT		321.7	BO	
IOC60	IMPROVEMENT OF THE SANTA CRUZ - YACUIBA ROAD		104.0	BO	
IOC72	IMPROVEMENT OF ROUTE No. 9 TRANSHACO (INFANTE RIVAROLA - ASUNCIÓN ROAD SECTION)		598.5	PY	
IOC73	REHABILITATION OF THE POZO COLORADO - CONCEPCIÓN ROAD SECTION		47.0	PY	
IOC74	IMPROVEMENT OF THE CONCEPCIÓN - PEDRO JUAN CABALLERO ROAD SECTION		12.5	PY	
IOC75	CONSTRUCTION OF ROUTE No. 5 SECTION BETWEEN BELLA VISTA AND THE CONNECTION WITH APA RIVER BRIDGE		48.5	PY	
IOC77	CONSTRUCTION OF THE CARMELO PERALTA (PARAGUAY) - PORTO MURTINHO (BRAZIL) INTERNATIONAL BRIDGE AND BORDER CROSSING		0.0	BR - PY	
IOC90	CANCOSA - IQUIQUE ROUTE		18.6	CH	
17			1,845.6		

OPTIMIZATION OF THE CORUMBÁ - SÃO PAULO - SANTOS - RIO DE JANEIRO CORRIDOR





IOC GROUP 2

Strategic Function

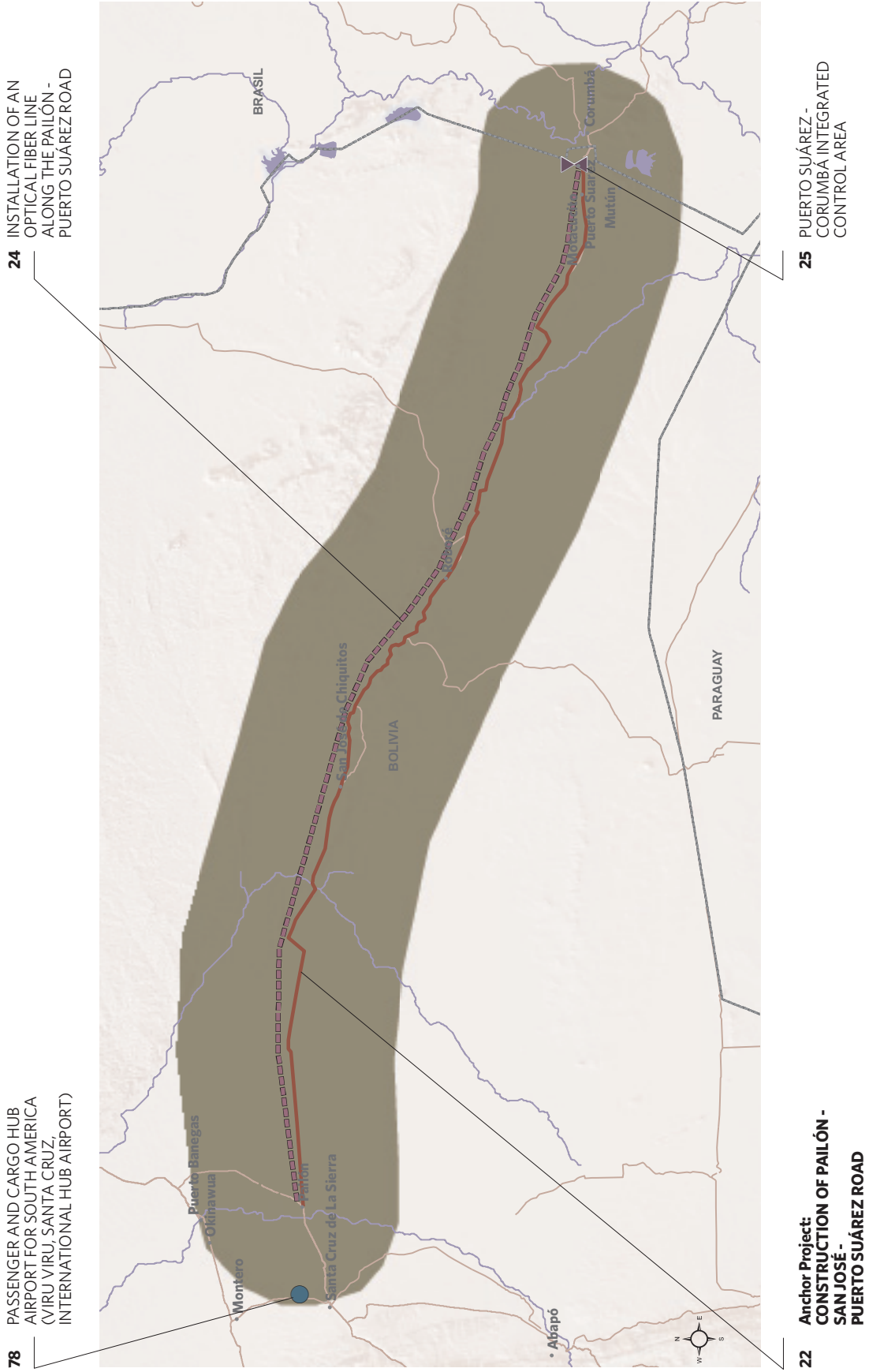
- Significantly reduce transportation costs for cargo from Brazil, Bolivia, and Paraguay to the Atlantic ocean and traded among these countries as well.
- Increase the countries' economic complementation.
- Increase the railway component in the regional transportation matrix.
- Support tourism in the region of Pantanal.

*US\$ million

Code	Name	Stage	Estimated investment*	Countries
IOC11	SÃO PAULO RING RAILWAY		1,000.0	BR
IOC13	CAMPO GRANDE RING RAILWAY		31.0	BR
IOC14	CAMPO GRANDE BYPASS		12.0	BR
IOC15	CORUMBÁ BYPASS		8.0	BR
IOC16	RIO DE JANEIRO BYPASS AND ACCESS ROAD TO ITAGUAÍ PORT		1,200.0	BR
IOC17	IMPROVEMENT OF THE CORUMBÁ - SANTOS (SP) RAILWAY SECTION		3,700.0	BR
IOC19	CONSTRUCTION OF SANTOS PORT BOUNDARY AVENUES AND DREDGING OF SANTOS PORT		334.4	BR
IOC20	IMPROVEMENT OF CORUMBÁ - CAMPO GRANDE RAILWAY SECTION (TREM DO PANTANAL)		22.0	BR
8			6,307.4	

PROFILING
 PRE-EXECUTION
 EXECUTION
 COMPLETED

SANTA CRUZ - PUERTO SUÁREZ - CORUMBÁ CONNECTION





IOC GROUP 3

Strategic Function

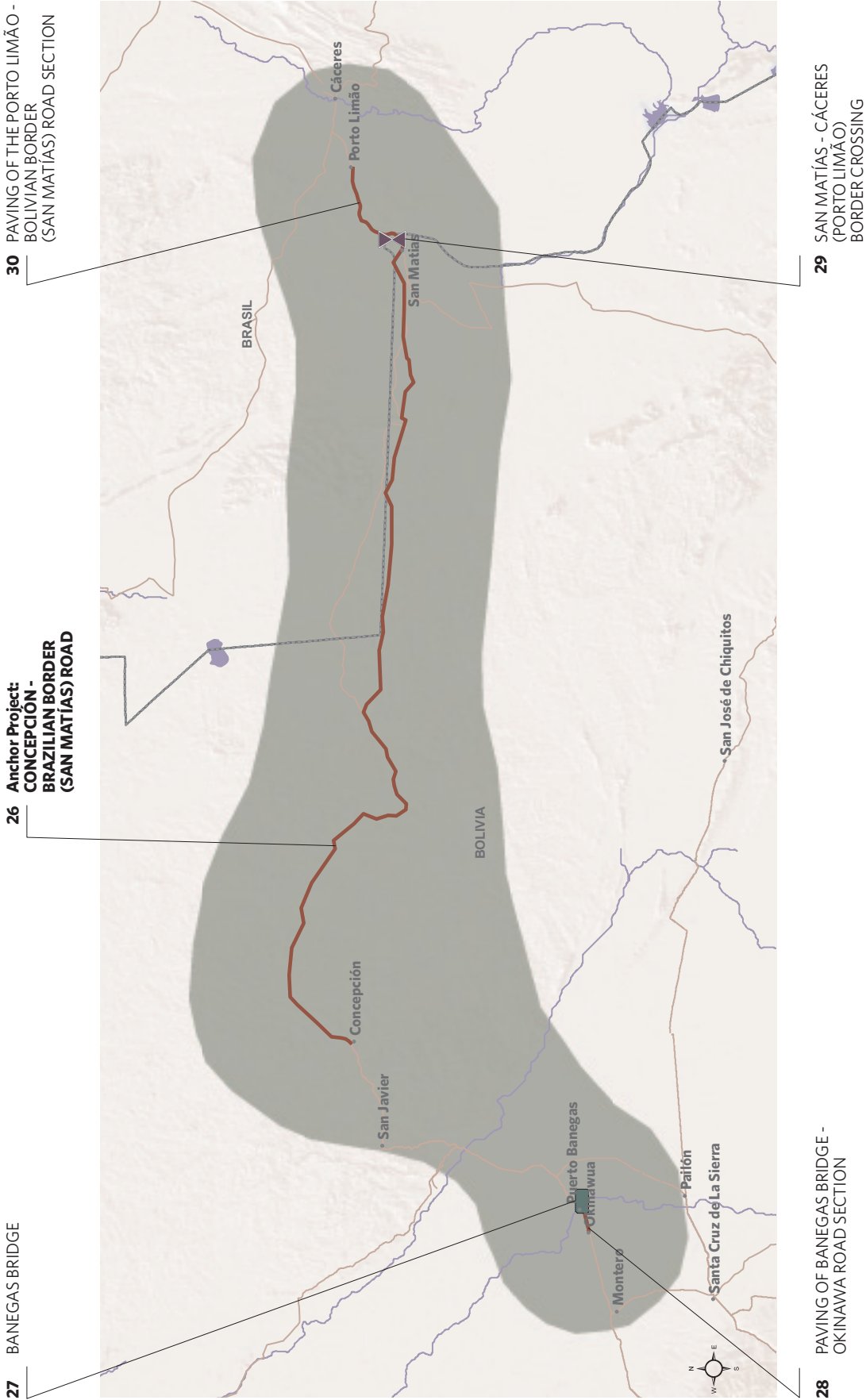
- Complete the railway and road connection in the Hub.
- Significantly reduce transportation costs for cargo from Brazil, Bolivia, Chile, Paraguay and Peru to the Atlantic ocean, the Pacific ocean, or for cargo traded among these countries.
- Increase the countries' economic complementation.
- Support tourism in the region of Pantanal.

*US\$ million

Code	Name	Stage	Estimated investment*	Countries
IOC22	CONSTRUCTION OF PAILÓN - SAN JOSÉ - PUERTO SUÁREZ ROAD		409.0	BO
IOC24	INSTALLATION OF AN OPTICAL FIBER LINE ALONG THE PAILÓN - PUERTO SUÁREZ ROAD		2.5	BO
IOC25	PUERTO SUÁREZ - CORUMBÁ INTEGRATED CONTROL AREA		2.0	BO - BR
IOC78	PASSENGER AND CARGO HUB AIRPORT FOR SOUTH AMERICA (VIRU VIRU, SANTA CRUZ, INTERNATIONAL HUB AIRPORT)		20.0	BO
4			433,5	

PROFILING
 PRE-EXECUTION
 EXECUTION
 COMPLETED

SANTA CRUZ - CUIABÁ CONNECTION





IOC GROUP 4

Strategic Function

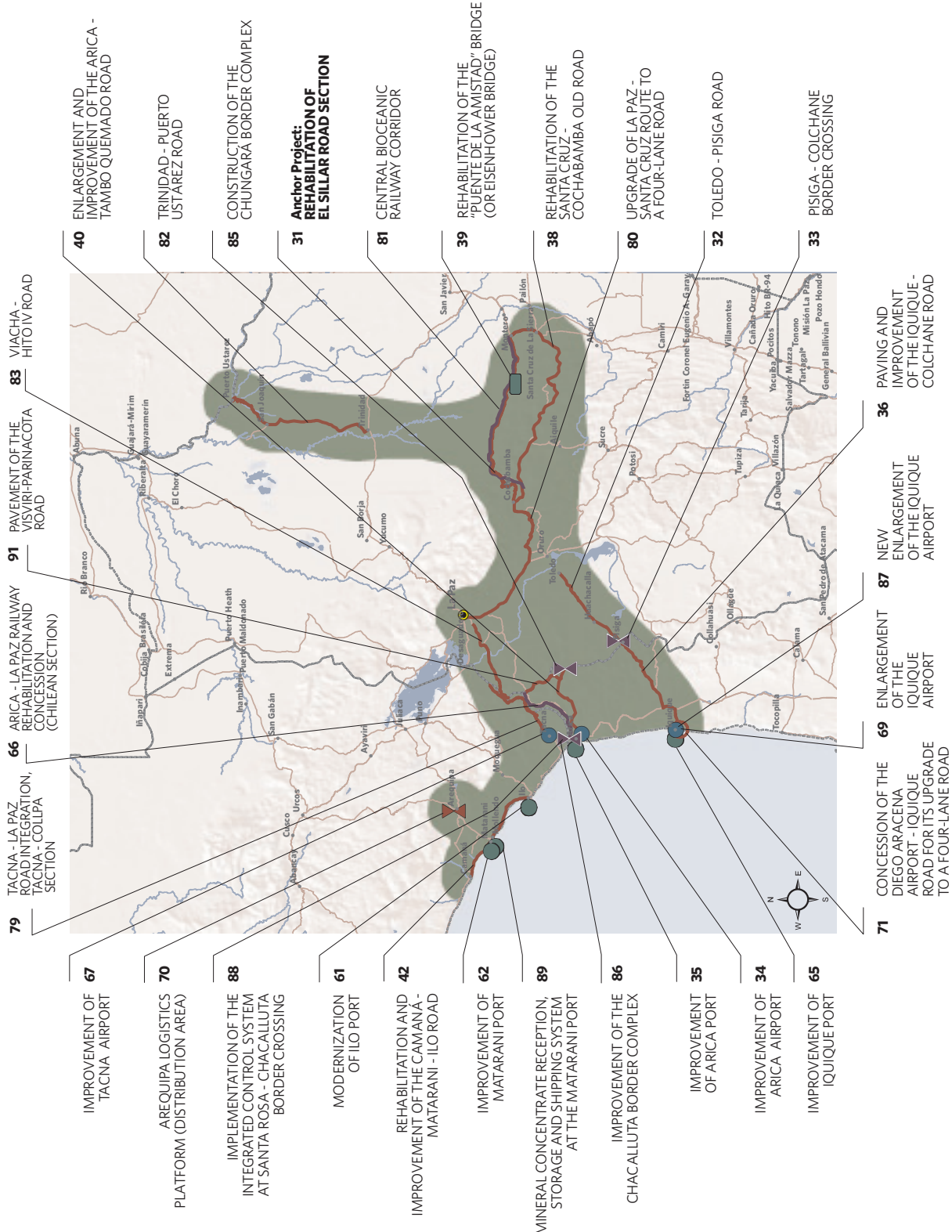
- Connect the eastern region in Bolivia with the Mato Grosso, facilitating the access of both regions to the ports on the Atlantic and Pacific oceans.
- Support the development of the agricultural potential in the central-eastern region of Bolivia.

*US\$ million

Code	Name	Stage	Estimated investment*	Countries
IOC26	CONCEPCIÓN - BRAZILIAN BORDER (SAN MATÍAS) ROAD		79.5	BO
IOC27	BANEGAS BRIDGE		46.7	BO
IOC28	PAVING OF BANEGAS BRIDGE - OKINAWA ROAD SECTION		0.0	BO
IOC29	SAN MATÍAS - CÁCERES (PORTO LIMÃO) BORDER CROSSING		2.0	BO - BR
IOC30	PAVING OF THE PORTO LIMÃO - BOLIVIAN BORDER (SAN MATÍAS) ROAD SECTION		13.0	BR
5			141.2	

PROFILING
 PRE-EXECUTION
 EXECUTION
 COMPLETED

CONNECTIONS OF THE HUB TO THE PACIFIC: ILO / MATARANI - DESAGUADERO - LA PAZ + ARICA - LA PAZ + IQUIQUE - ORURO - COCHABAMBA - SANTA CRUZ





IOC GROUP 5

Strategic Function

- Increase trade and tourism among the countries.
- Promote production integration among the cities located within the area of influence of the Hub.
- Enhance competitiveness by reducing foreign trade costs and technologically modernizing border crossings.

*US\$ million










Code	Name	Stage	Estimated investment*	Countries
IOC31	REHABILITATION OF EL SILLAR ROAD SECTION		122.5	BO
IOC32	TOLEDO - PISIGA ROAD		130.5	BO
IOC33	PISIGA - COLCHANE BORDER CROSSING		10.0	BO - CH
IOC34	IMPROVEMENT OF ARICA AIRPORT		10.0	CH
IOC35	IMPROVEMENT OF ARICA PORT		62.4	CH
IOC36	PAVING AND IMPROVEMENT OF THE IQUIQUE - COLCHANE ROAD		42.0	CH
IOC38	REHABILITATION OF THE SANTA CRUZ - COCHABAMBA OLD ROAD		35.0	BO
IOC39	REHABILITATION OF THE "PUENTE DE LA AMISTAD" BRIDGE (OR EISENHOWER BRIDGE)		3.0	BO
IOC40	ENLARGEMENT AND IMPROVEMENT OF THE ARICA - TAMBO QUEMADO ROAD		117.0	CH
IOC42	REHABILITATION AND IMPROVEMENT OF THE CAMANÁ - MATARANI - ILO ROAD		438.1	PE
IOC61	MODERNIZATION OF ILO PORT		230.0	BO - PE
IOC62	IMPROVEMENT OF MATARANI PORT		37.0	PE
IOC65	IMPROVEMENT OF IQUIQUE PORT		180.0	CH
IOC66	ARICA - LA PAZ RAILWAY REHABILITATION AND CONCESSION (CHILEAN SECTION)		50.0	CH
IOC67	IMPROVEMENT OF TACNA AIRPORT		51.5	PE
IOC69	ENLARGEMENT OF THE IQUIQUE AIRPORT		16.6	CH
IOC70	AREQUIPA LOGISTICS PLATFORM (DISTRIBUTION AREA)		33.5	PE
IOC71	CONCESSION OF THE DIEGO ARACENA AIRPORT - IQUIQUE ROAD FOR ITS UPGRADE TO A FOUR-LANE ROAD		173.0	CH
IOC79	TACNA - LA PAZ ROAD INTEGRATION, TACNA - COLLPA SECTION		160.3	BO - PE
IOC80	UPGRADE OF LA PAZ - SANTA CRUZ ROUTE TO A FOUR-LANE ROAD		269.0	BO



CONNECTIONS OF THE HUB TO THE PACIFIC: ILO / MATARANI - DESAGUADERO - LA PAZ + ARICA - LA PAZ + IQUIQUE - ORURO - COCHABAMBA - SANTA CRUZ

>>

*US\$ million

Code	Name	Stage	Estimated investment*	Countries
IOC81	CENTRAL BIOCEANIC RAILWAY CORRIDOR		6.7	BO
IOC82	TRINIDAD - PUERTO USTÁREZ ROAD		226.0	BO
IOC83	TACNA - LA PAZ, VIACHA - MILESTONE IV SECTION ROAD		16.0	BO
IOC85	CONSTRUCTION OF THE CHUNGARÁ BORDER COMPLEX		37.0	CH
IOC86	IMPROVEMENT OF THE CHACALLUTA BORDER COMPLEX		1.0	CH
IOC87	NEW ENLARGEMENT OF THE IQUIQUE AIRPORT, FOURTH STAGE		65.0	CH
IOC88	IMPLEMENTATION OF THE INTEGRATED CONTROL SYSTEM AT SANTA ROSA - CHACALLUTA BORDER CROSSING		1.5	CH - PE
IOC89	MINERAL CONCENTRATE RECEPTION, STORAGE AND SHIPPING SYSTEM AT THE MATARANI PORT		230.0	PE
IOC91	PAVEMENT OF THE VISVIRI - PARINACOTA ROAD		16.2	CH
29			2,770.8	



PROFILING



PRE-EXECUTION



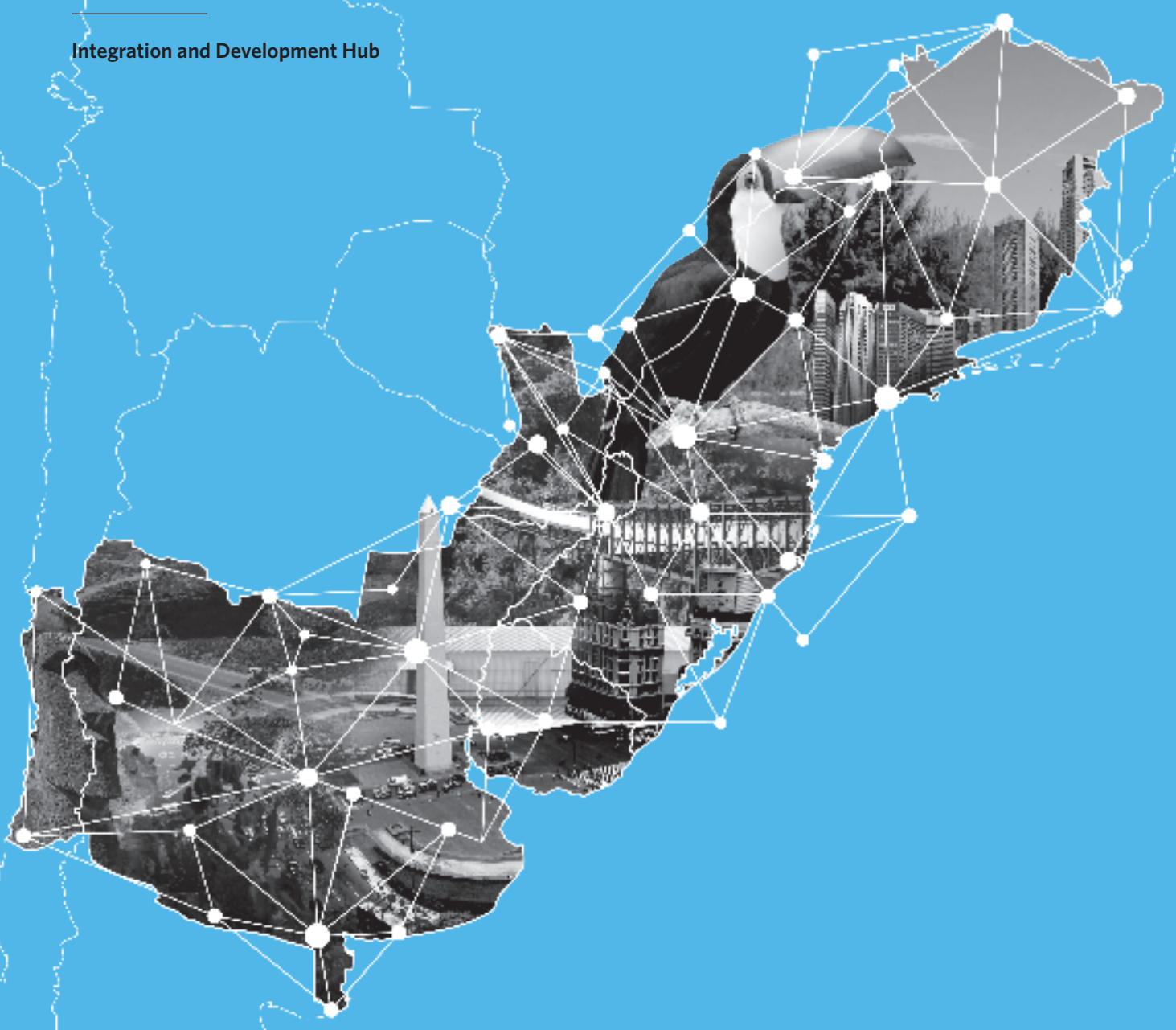
EXECUTION



COMPLETED

MCC MERCOSUR-CHILE

Integration and Development Hub



Population: 141,453,273
Population density: 44 people/km²
Area: 3,216,623 km²

GDP: US\$ 1,973,411 million

Services	75.0%
Industries	14.0%
Agriculture	6.0%
Mining and quarrying	5.0%

Estimated Investment

US\$ million

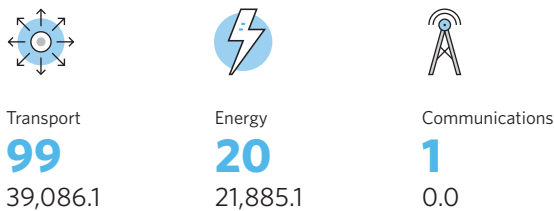
60,971.2



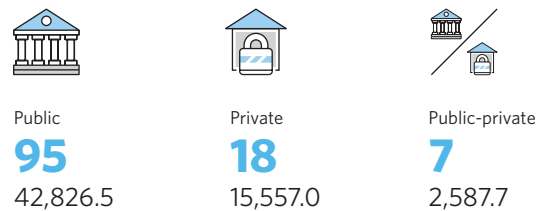
Projects by Stage



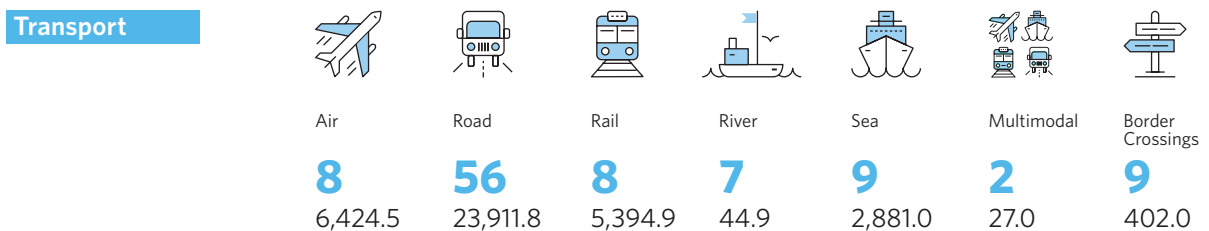
Projects by Sector



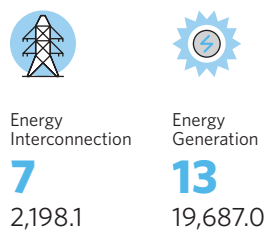
Proyectos por tipo de financiamiento



Projects by Subsector



Energy



Communications



MERCOSUR-CHILE

Presentation of the Hub

The MERCOSUR-Chile Hub⁽¹⁾ covers an important part of Argentina, Brazil and Paraguay, the whole territory of Uruguay, and the central region of Chile. Its area of influence accounts for 18% of the total area of the South American continent (3,216,623 km²).

It is the most densely populated Hub, with 35% of the population (141,453,273 inhabitants) of South America and the highest GDP in the continent, amounting to a total of US\$1,973,411 million.⁽²⁾

AREA OF INFLUENCE OF THE MERCOSUR-CHILE HUB



The MERCOSUR-Chile Hub features a **complex, dense network of infrastructure**, located on the Plata Basin and in the Brazilian states included in the Hub. Without considering the works to be built, the **road network** of the countries that make it up covers a total length of 1,973,802 km, only 6% of which are paved. The **rail network** covers 61,424 km, about 87% of which are operational. Its **sea and river port system** is made up of 46 major ports, most of which are located on the coasts of the Atlantic ocean and the Plata, Paraná, Paraguay and Uruguay rivers, to which the Chilean ports on the Pacific littoral should be added. **River transportation** in the region takes place mainly along the

¹ See "Caracterización Socioeconómica y Ambiental del Eje MERCOSUR-Chile," COSIPLAN-IIRSA, 2014, at <http://www.iirsa.org/mercosur-chile.asp>

² At current 2012 prices.

Paraná and Paraguay rivers, and to a lesser degree along the Uruguay river. There are also consolidated **domestic sea routes** between Brazil and Argentina, mainly used for trade of vehicles and parts. With regard to the **electric energy generation**, the countries within the Hub have a joint installed capacity of 190,131 MW, according to 2012 estimates.

The presence of **indigenous communities** is low, accounting for only 1.0% of the total population of the countries involved. With regard to the **protected areas**, there are about 600 territorial units with some degree of environmental protection, covering approximately 193,000 km², i.e. 6% of the Hub's territory.

The countries involved in the MERCOSUR-Chile Hub plan investments for US\$61 billion in 120 physical integration projects. This is the Hub with the greatest number of projects and the highest estimated investment of the entire COSIPLAN Portfolio.

The MERCOSUR-Chile Hub involves 100% of Uruguay's economy, 97% of Paraguay's economy, more than 86% of Argentina's economy, and approximately 60% of Chile's and Brazil's economies. In absolute terms, the aggregate gross product of the Hub is made up of 67% of Brazil's GDP, 21% of Argentina's GDP, 9% of Chile's GDP, and 3% Uruguay's and Paraguay's GDP as a whole.

The Hub shares some regions of its area of influence with the Paraguay-Paraná Waterway (HPP), Southern (DES), and Capricorn (CAP) Hubs.

MERCOSUR-CHILE

Project Portfolio

The projects included in the MERCOSUR-Chile Hub are intended to: (i) develop infrastructure and logistics to increase trade between the local, regional and global markets; (ii) increase the competitiveness of existing production chains and develop new chains at the regional level; (iii) optimize the flow of goods and services, promote the development of tourism, and facilitate the flow of people; and (iv) increase the capacity and reliability of electric and gas systems, and diversify the energy matrix.

The territory of this Hub has large-scale market conditions to attract new public, private or public-private investments.

PROJECT GROUPS OF THE MERCOSUR-CHILE HUB

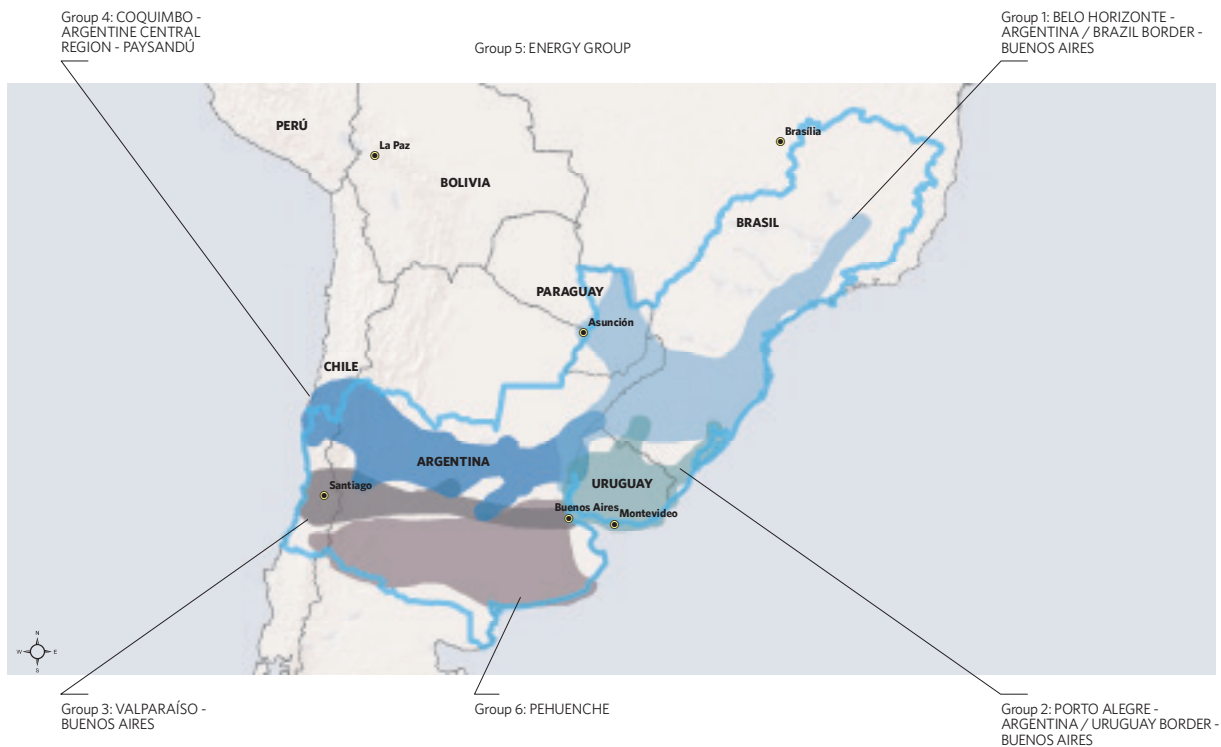


TABLE 1. PROJECT GROUPS OF THE MERCOSUR-CHILE HUB *US\$ million

Group	Name	No. of Projects	Estimated Investment*
1	BELO HORIZONTE - ARGENTINA / BRAZIL BORDER - BUENOS AIRES	20	16,652.1
2	PORTO ALEGRE - ARGENTINA / URUGUAY BORDER - BUENOS AIRES	26	3,054.5
3	VALPARAÍSO - BUENOS AIRES	23	11,005.0
4	COQUIMBO - ARGENTINE CENTRAL REGION - PAYSANDÚ	19	5,233.8
5	ENERGY GROUP	18	21,715.1
6	PEHUENCHE	14	3,310.7
TOTAL		120	60,971.2

The active portfolio of the Hub includes 96 projects for an estimated investment of US\$52,181 million.

Of the 96 active projects, there is information available on the estimated completion date of 13, 12 of which are scheduled to be completed in the next four years (2016-2019).

TABLE 2. PROJECTS TO BE COMPLETED IN THE NEXT FOUR YEARS *US\$ million












Code	Name	Group	Stage	Estimated Investment*	Countries	Estimated Completion Date
MCC159	LA CHARQUEADA PORT TERMINAL AND DREDGING OF THE CEBOLLATI RIVER	2		7.0	UY	February 2017
MCC157	DREDGING OF THE TACUARÍ RIVER	2		1.4	BR	February 2017
MCC158	DREDGING OF AND INSTALLATION OF SIGNS, MARKERS AND AIDS TO NAVIGATION ON THE MIRIM LAKE - DOS PATOS LAKE SYSTEM	2		2.1	BR	February 2017
MCC85	DREDGING OF MIRIM LAKE	2		2.9	BR	March 2017
MCC160	PORT TERMINAL AND DREDGING OF TACUARÍ	2		7.0	UY	September 2016
MCC153	NEW LOS LIBERTADORES BORDER COMPLEX (CRISTO REDENTOR SYSTEM OPTIMIZATION)	3		76.0	CH	June 2017
MCC22	CONSTRUCTION OF THE JAGUARÃO - RÍO BRANCO INTERNATIONAL BRIDGE	2		93.5	BR - UY	July 2017
MCC151	INTEGRATED FREIGHT CONTROL CENTER AT USPALLATA (CRISTO REDENTOR SYSTEM OPTIMIZATION)	3		90.0	AR	December 2017
MCC152	PASSENGER CONTROL CENTER AT LOS HORCONES (CRISTO REDENTOR SYSTEM OPTIMIZATION)	3		80.0	AR	December 2107
MCC30	REHABILITATION OF THE MONTEVIDEO - RIVERA RAILWAY	2		134.9	UY	March 2018
MCC154	REHABILITATION OF THE CRISTO REDENTOR TUNNEL AND CARACOLES (CRISTO REDENTOR SYSTEM OPTIMIZATION)	3		4.0	AR - CH	December 2018


TABLE 2. PROJECTS TO BE COMPLETED IN THE NEXT FOUR YEARS (CONT.) *US\$ million

Code	Name	Group	Stage	Estimated Investment*	Countries	Estimated Completion Date
MCC155	BINATIONAL MANAGEMENT CONTROL SYSTEM AT THE CRISTO REDENTOR BORDER CROSSING (CRISTO REDENTOR SYSTEM OPTIMIZATION)	3		28.0	AR - CH	December 2018

PROFILING
 PRE-EXECUTION
 EXECUTION
 COMPLETED

According to estimations, by the time these 11 projects are completed, almost 15% of the investment amount estimated for the Hub's portfolio will have been spent.

The five projects with the highest estimated investment account for 42% of the investment in the Hub's active portfolio.

Binational projects with high investment amounts stand out, and to carry out all the works, both public and private financing sources are being considered.

Two projects fall in the energy sector and seek to diversify the Hub's energy matrix. The other projects, which fall in the transportation sector, comprise different subsectors: a railway corridor, an airport, and a road ring.

TABLE 3. THE FIVE PROJECTS OF THE ACTIVE PORTFOLIO WITH THE HIGHEST ESTIMATED INVESTMENT *US\$ million

Code	Name	Group	Stage	Estimated Investment*	Countries	Type of Financing
MCC62	CONSTRUCTION OF THE CORPUS CHRISTI HYDROELECTRIC POWER STATION	5		8,000.0	AR - PY	Public
MCC33	RAILWAY PROJECT BETWEEN LOS ANDES, CHILE AND MENDOZA, ARGENTINA (CENTRAL TRANS-ANDEAN RAILWAY)	3		5,100.0	AR - CH	Private
MCC06	ENLARGEMENT OF CAMPINAS AIRPORT	1		3,550.0	BR	Private
MCC132	CONSTRUCTION OF THE SAN PABLO RING ROAD (NORTHERN SECTION)	1		2,810.0	BR	Public
MCC138	CONSTRUCTION OF THE PANAMBI HYDROELECTRIC POWER STATION	5		2,474.0	AR - BR	Public

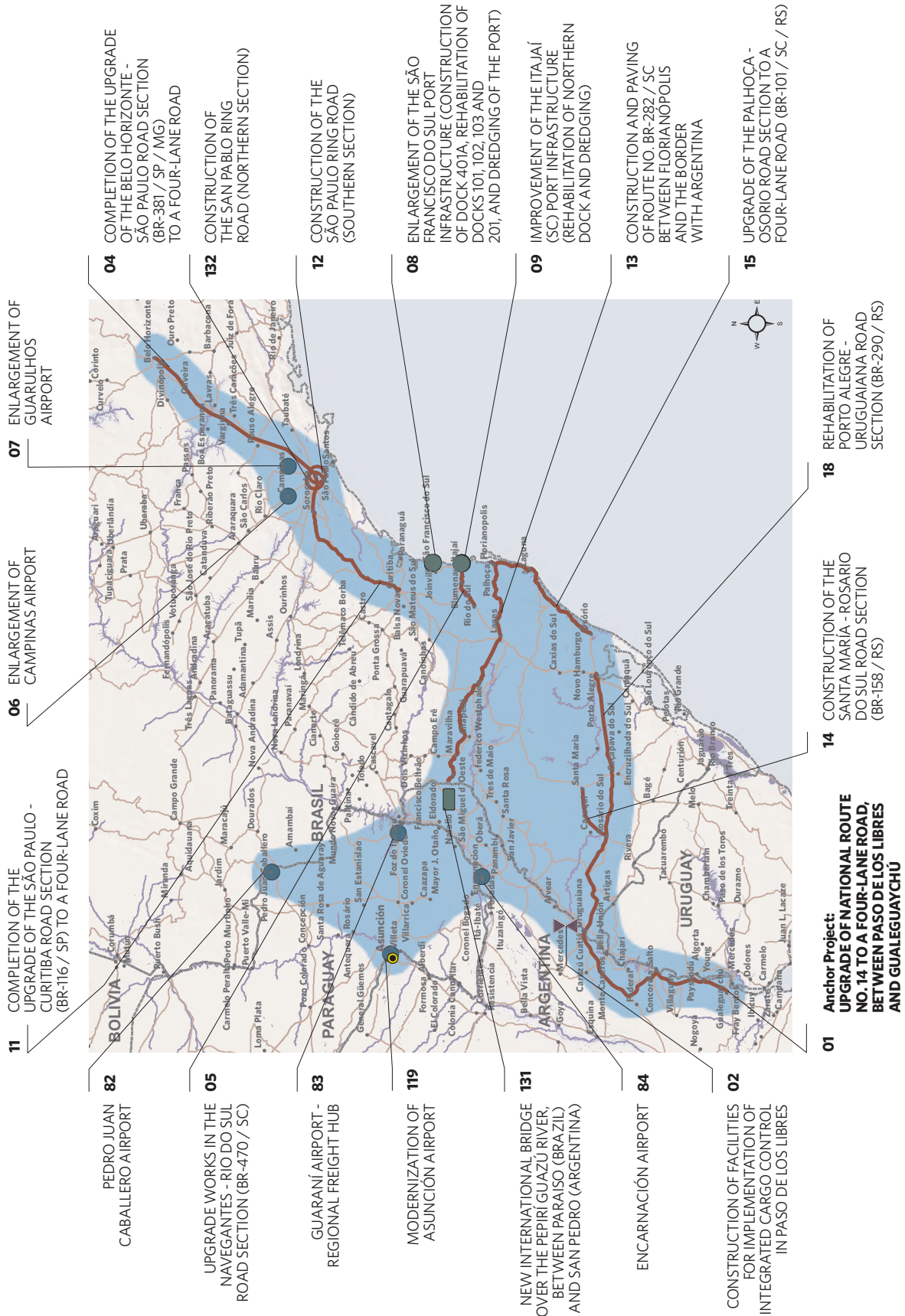
PROFILING
 PRE-EXECUTION
 EXECUTION
 COMPLETED

There are 24 completed projects in the Hub, demanding an investment of US\$8,790 million.

TABLE 4. COMPLETED PROJECTS IN THE HUB *US\$ million

Code	Name	Investment Amount*	Countries
MCC01	UPGRADE OF NATIONAL ROUTE No. 14 TO A FOUR-LANE ROAD, BETWEEN PASO DE LOS LIBRES AND GUALEGUAYCHÚ	780.0	AR
MCC02	CONSTRUCTION OF FACILITIES FOR IMPLEMENTATION OF INTEGRATED CARGO CONTROL IN PASO DE LOS LIBRES	10.0	AR
MCC03	YACYRETÁ - BUENOS AIRES TRANSMISSION LINE	600.0	AR
MCC04	COMPLETION OF THE UPGRADE OF THE BELO HORIZONTE - SÃO PAULO ROAD SECTION (BR-381 / SP / MG) TO A FOUR-LANE ROAD	1,300.0	BR
MCC12	CONSTRUCTION OF THE SÃO PAULO RING ROAD (SOUTHERN SECTION)	2,700.0	BR
MCC13	CONSTRUCTION AND PAVING OF ROUTE No. BR-282 / SC, BETWEEN FLORIANÓPOLIS AND THE BORDER WITH ARGENTINA	100.0	BR
MCC14	CONSTRUCTION OF THE SANTA MARÍA - ROSARIO DO SUL ROAD SECTION (BR-158 / RS)	30.0	BR
MCC19	UPGRADE WORKS OF THE RÍO BRANCO - MONTEVIDEO - COLONIA - NUEVA PALMIRA ROAD CORRIDOR (ROUTES No. 1, 11, 8, 17, 18 AND 26, ROUTES No. 23 AND 12)	276.2	UY
MCC26	PUNTAS DEL TIGRE COMBINED CYCLE THERMAL POWER PLANT	170.0	UY
MCC40	NATIONAL ROUTE No. 7, CONSTRUCTION OF LAGUNA LA PICASA ROAD BYPASS	20.0	AR
MCC41	NATIONAL ROUTE No. 7, CONSTRUCTION OF A LAGUNA LA PICASA RAILWAY BYPASS	30.0	AR
MCC46	IMPROVEMENT OF ROAD ACCESS TO VALPARAÍSO PORT	105.0	CH
MCC47	PAVING OF PUENTE ARMERILLO - PEHUENCHE BORDER CROSSING ROAD SECTION (ROUTE CH-115)	60.0	CH
MCC48	LOS SAUCES LAND PORT (LOS ANDES)	61.0	CH
MCC52	REHABILITATION AND UPGRADE OF NATIONAL ROUTE No. 168 TO A FOUR-LANE ROAD FROM PARANÁ (UNDERWATER ROAD TUNNEL) TO SANTA FE	40.0	AR
MCC61	ITAIPU SYSTEM (EXISTING)	16,000.0	BR - PY
MCC64	YACYRETÁ HYDROELECTRIC DAM: RAISE RESERVOIR STORAGE LEVEL TO 83	1,200.0	AR - PY
MCC66	ITAIPU - LONDRINA - ARARAQUARA ELECTRICITY TRANSMISSION LINE	149.1	BR
MCC84	ENCARNACIÓN AIRPORT	12.0	PY
MCC86	EXPANSION OF COLONIA PORT (DOCKS, DREDGING AND INCORPORATION OF AREAS)	14.0	UY
MCC101	ATUCHA II NUCLEAR POWER PLANT	740.0	AR
MCC115	REHABILITATION OF THE RIVERA - SANTANA DO LIVRAMENTO - CACEQUI RAILWAY SECTION	5.0	BR - UY
MCC139	OPTICAL FIBER CABLE BETWEEN BRAZIL AND URUGUAY	0.0	BR - UY
MCC163	UPGRADE OF ROUTE 5 LA SERENA-VALLENAR SECTION TO A FOUR-LANE ROAD	388.0	CH
24		8,790.3	

BELO HORIZONTE - ARGENTINA / BRAZIL BORDER - BUENOS AIRES





MCC GROUP 1

Strategic Function

- Achieve, consolidate and improve the necessary infrastructure and logistics standards for the good performance of the region in intra- and extra-regional markets.
- Make good use of the conditions of scale and demand in the area to attract public-private partnerships and disseminate the experience to other Hubs.
- Optimize trade and services flows between the Argentine and Brazilian economic centers.
- Facilitate the flow of people between the countries of the Group.
- Optimize the logistics base so that the industry located in this area can reinforce its competitiveness at the regional and global level.





*US\$ million

Code	Name	Stage	Estimated Investment*	Countries
MCC01	UPGRADE OF NATIONAL ROUTE No. 14 TO A FOUR-LANE ROAD, BETWEEN PASO DE LOS LIBRES AND GUALEGUAYCHÚ		780.0	AR
MCC02	CONSTRUCTION OF FACILITIES FOR IMPLEMENTATION OF INTEGRATED CARGO CONTROL IN PASO DE LOS LIBRES		10.0	AR
MCC04	COMPLETION OF THE UPGRADE OF THE BELO HORIZONTE - SÃO PAULO ROAD SECTION (BR-381 / SP / MG) TO A FOUR-LANE ROAD		1,300.0	BR
MCC05	UPGRADE WORKS IN THE NAVEGANTES - RIO DO SUL ROAD SECTION (BR-470 / SC)		400.0	BR
MCC06	ENLARGEMENT OF CAMPINAS AIRPORT		3,550.0	BR
MCC07	ENLARGEMENT OF GUARULHOS AIRPORT		1,900.0	BR
MCC08	ENLARGEMENT OF THE SÃO FRANCISCO DO SUL PORT INFRASTRUCTURE (CONSTRUCTION OF DOCK 401A, REHABILITATION OF DOCKS 101, 102, 103 AND 201, AND DREDGING OF THE PORT)		131.6	BR
MCC09	IMPROVEMENT OF THE ITAJAÍ (SC) PORT INFRASTRUCTURE (REHABILITATION OF NORTHERN DOCK AND DREDGING)		68.0	BR
MCC11	COMPLETION OF THE UPGRADE OF THE SÃO PAULO - CURITIBA ROAD SECTION (BR-116 / SP) TO A FOUR-LANE ROAD		350.0	BR
MCC12	CONSTRUCTION OF THE SÃO PAULO RING ROAD (SOUTHERN SECTION)		2,700.0	BR
MCC13	CONSTRUCTION AND PAVING OF ROUTE No. BR-282 / SC, BETWEEN FLORIANÓPOLIS AND THE BORDER WITH ARGENTINA		100.0	BR
MCC14	CONSTRUCTION OF THE SANTA MARÍA - ROSARIO DO SUL ROAD SECTION (BR-158 / RS)		30.0	BR
MCC15	UPGRADE OF THE PALHOÇA - OSORIO ROAD SECTION TO A FOUR-LANE ROAD (BR-101 / SC / RS)		2,000.0	BR
MCC18	REHABILITATION OF PORTO ALEGRE - URUGUAIANA ROAD SECTION (BR-290 / RS)		250.0	BR
MCC82	PEDRO JUAN CABALLERO AIRPORT		2.5	PY
MCC83	GUARANÍ AIRPORT - REGIONAL FREIGHT HUB		50.0	PY

BELO HORIZONTE - ARGENTINA / BRAZIL BORDER - BUENOS AIRES

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*US\$ million

Code	Name	Stage	Estimated Investment*	Countries
MCC84	ENCARNACIÓN AIRPORT		12.0	PY
MCC119	MODERNIZATION OF ASUNCIÓN AIRPORT		200.0	PY
MCC131	NEW INTERNATIONAL BRIDGE OVER THE PEPIRÍ GUAZÚ RIVER, BETWEEN PARAIISO (BRAZIL) AND SAN PEDRO (ARGENTINA)		8.0	AR - BR
MCC132	CONSTRUCTION OF THE SAN PABLO RING ROAD (NORTHERN SECTION)		2,810.0	BR
20			16,652.1	

 PROFILING
  PRE-EXECUTION
  EXECUTION
  COMPLETED



MCC GROUP 2

Strategic Function

- Achieve, consolidate and improve the necessary infrastructure and logistics standards for the good performance of the region in global markets.
- Make good use of the conditions of scale and demand in the area to attract public-private partnerships and disseminate the experience to other Hubs.
- Optimize goods and services flows between the Argentine, Brazilian and Uruguayan economic centers.
- Facilitate the flow of people among the countries of the Group.
- Optimize the logistics base so that the industry located in this area can reinforce its competitiveness at the global level.

*US\$ million










Code	Name	Stage	Estimated Investment*	Countries
MCC19	UPGRADE WORKS OF THE RÍO BRANCO - MONTEVIDEO - COLONIA - NUEVA PALMIRA ROAD CORRIDOR (ROUTES No. 1, 11, 8, 17, 18 AND 26, ROUTES No. 23 AND 12)		276.2	UY
MCC20	UPGRADE WORKS OF RIO GRANDE - PELOTAS ROAD SECTION (BR-392 / RS)		500.0	BR
MCC21	ENLARGEMENT OF RIO GRANDE PORT DOCKS		435.7	BR
MCC22	CONSTRUCTION OF THE JAGUARÃO - RÍO BRANCO INTERNATIONAL BRIDGE		93.5	BR - UY
MCC23	BORDER CROSSING IN THE MONTEVIDEO - CHUY ROAD CORRIDOR		15.0	UY
MCC26	PUNTAS DEL TIGRE COMBINED CYCLE THERMAL POWER PLANT		170.0	UY
MCC27	REHABILITATION OF THE MONTEVIDEO - RIVERA ROAD SECTION		85.6	UY
MCC28	REHABILITATION OF ROUTE No. 26, RÍO BRANCO - PAYSANDÚ ROAD SECTION		39.8	UY
MCC29	REHABILITATION OF MONTEVIDEO - FRAY BENTOS ROUTE (ROUTES No. 1, 3, 11, 23, 12 AND 2)		37.9	UY
MCC30	REHABILITATION OF THE MONTEVIDEO - RIVERA RAILWAY		134.9	UY
MCC70	MODERNIZATION OF THE MONTEVIDEO PORT AND COMPLEMENTARY WORKS		189.0	UY
MCC71	BELLA UNIÓN - MONTECASEROS BRIDGE		0.0	AR - UY
MCC85	DREDGING OF MIRIM LAKE		2.9	BR
MCC86	EXPANSION OF COLONIA PORT (DOCKS, DREDGING AND INCORPORATION OF AREAS)		14.0	UY
MCC87	ENLARGEMENT OF SAUCE PORT, INCLUDING NEW BERTHS AND LARGER PORT FACILITIES FOR LOGISTICS ACTIVITIES		10.0	UY
MCC90	CONSTRUCTION OF A DRY PORT NEAR MONTEVIDEO PORT		25.0	UY
MCC93	REHABILITATION OF THE MONTEVIDEO - RÍO BRANCO RAILWAY BRANCH LINE		0.0	UY

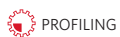


PORTO ALEGRE - ARGENTINA / URUGUAY BORDER - BUENOS AIRES

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*US\$ million

Code	Name	Stage	Estimated Investment*	Countries
MCC113	RIVERA DRY PORT		2.0	UY
MCC115	REHABILITATION OF THE RIVERA - SANTANA DO LIVRAMENTO - CACEQUI RAILWAY SECTION		5.0	BR - UY
MCC117	LA CHARQUEADA RAILWAY CONNECTION TO RÍO BRANCO RAILWAY BRANCH LINE		0.0	UY
MCC139	OPTICAL FIBER CABLE BETWEEN BRAZIL AND URUGUAY		0.0	BR - UY
MCC150	DEEP WATER PORT IN ROCHA		1,000.0	UY
MCC157	DREDGING OF THE TACUARÍ RIVER		1.4	BR
MCC158	DREDGING OF AND INSTALLATION OF SIGNS, MARKERS AND AIDS TO NAVIGATION ON THE MIRIM LAKE - DOS PATOS LAKE SYSTEM		2.6	BR
MCC159	LA CHARQUEADA PORT TERMINAL AND DREDGING OF THE CEBOLLATI RIVER		7.0	UY
MCC160	PORT TERMINAL AND DREDGING OF TACUARÍ		7.0	UY
26			3,054.5	



PROFILING



PRE-EXECUTION

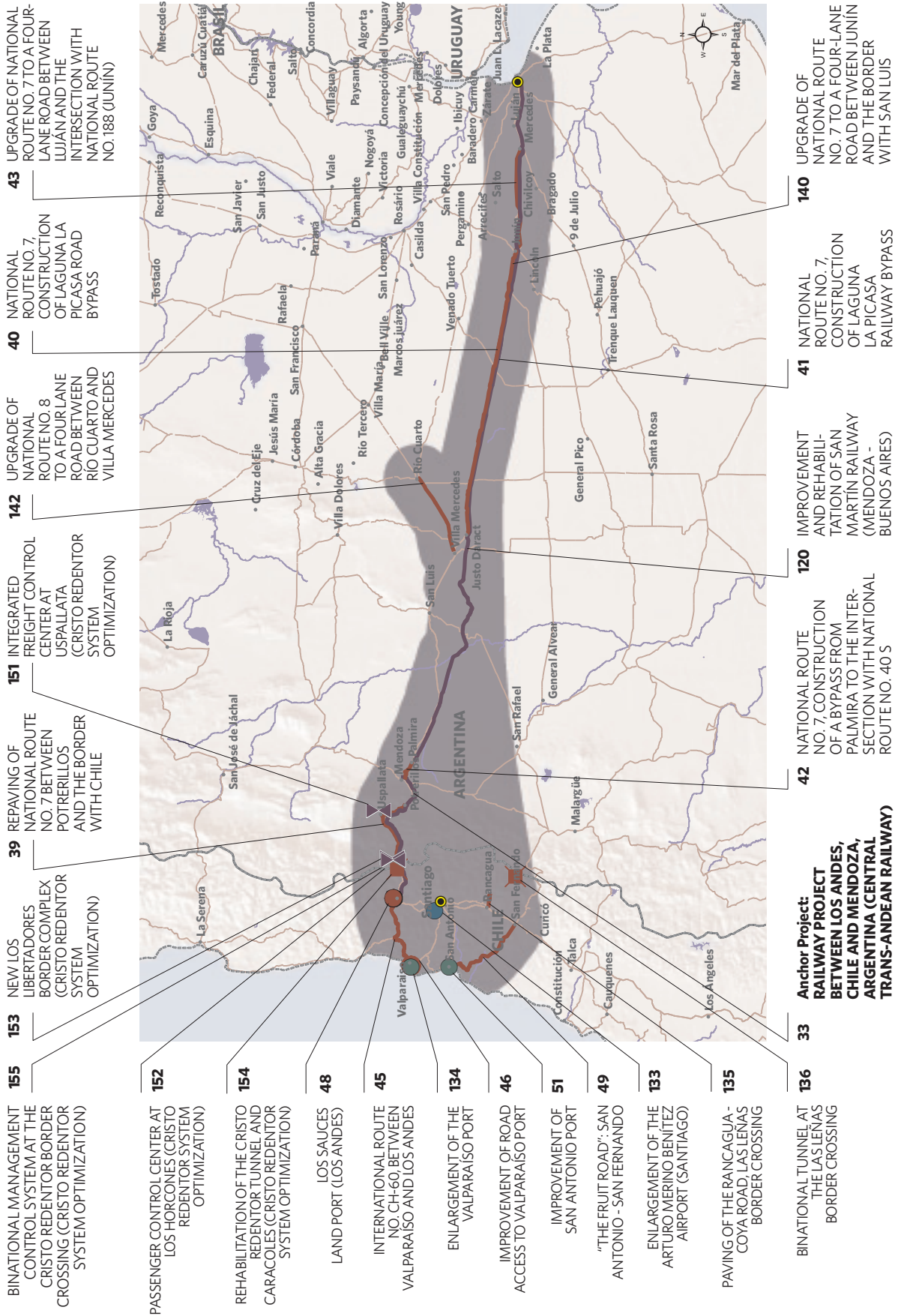


EXECUTION



COMPLETED

VALPARAÍSO - BUENOS AIRES





MCC GROUP 3

Strategic Function

- Achieve, consolidate and improve the necessary infrastructure and logistics standards for the good performance of the region in global markets.
- Make good use of the conditions of scale and demand in the area to attract public-private partnerships and disseminate the experience to other Hubs.
- Optimize goods and services flows between the Argentine and Chilean economic centers.
- Facilitate the flow of people among the countries of the Group.
- Optimize the logistics base so that the industry located in this area can reinforce its competitiveness at the global level.
- Promote Chile to serve as a logistics platform for the remaining countries of the Hub to develop markets for their products and services in Asia.

*US\$ million








Code	Name	Stage	Estimated Investment*	Countries
MCC33	RAILWAY PROJECT BETWEEN LOS ANDES, CHILE AND MENDOZA, ARGENTINA (CENTRAL TRANS-ANDEAN RAILWAY)		5,100.0	AR - CH
MCC39	REPAVING OF NATIONAL ROUTE No. 7 BETWEEN POTRERILLOS AND THE BORDER WITH CHILE		52.0	AR
MCC40	NATIONAL ROUTE No. 7, CONSTRUCTION OF LAGUNA LA PICASA ROAD BYPASS		20.0	AR
MCC41	NATIONAL ROUTE No. 7, CONSTRUCTION OF LAGUNA LA PICASA RAILWAY BYPASS		30.0	AR
MCC42	NATIONAL ROUTE No. 7, CONSTRUCTION OF A BYPASS FROM PALMIRA TO THE INTERSECTION WITH NATIONAL ROUTE No. 40 S		25.0	AR
MCC43	UPGRADE OF NATIONAL ROUTE No. 7 TO A FOUR-LANE ROAD BETWEEN LUJÁN AND THE INTERSECTION WITH NATIONAL ROUTE No. 188 (JUNÍN)		237.0	AR
MCC45	INTERNATIONAL ROUTE No. CH-60, BETWEEN VALPARAÍSO AND LOS ANDES		447.0	CH
MCC46	IMPROVEMENT OF ROAD ACCESS TO VALPARAÍSO PORT		105.0	CH
MCC48	LOS SAUCES LAND PORT (LOS ANDES)		61.0	CH
MCC49	"THE FRUIT ROAD": SAN ANTONIO - SAN FERNANDO		600.0	CH
MCC51	IMPROVEMENT OF SAN ANTONIO PORT		370.0	CH
MCC120	IMPROVEMENT AND REHABILITATION OF SAN MARTÍN RAILWAY (MENDOZA - BUENOS AIRES)		90.0	AR
MCC133	ENLARGEMENT OF THE ARTURO MERINO BENÍTEZ AIRPORT (SANTIAGO)		590.0	CH
MCC134	ENLARGEMENT OF THE VALPARAISO PORT		560.0	CH
MCC135	PAVING OF THE RANCAGUA - COYA ROAD, LAS LEÑAS BORDER CROSSING		200.0	CH
MCC136	BINATIONAL TUNNEL AT THE LAS LEÑAS BORDER CROSSING		1,200.0	AR - CH



VALPARAÍSO - BUENOS AIRES

>>

*US\$ million

Code	Name	Stage	Estimated Investment*	Countries
MCC140	UPGRADE OF NATIONAL ROUTE No. 7 TO A FOUR-LANE ROAD BETWEEN JUNÍN AND THE BORDER WITH SAN LUIS		800.0	AR
MCC142	UPGRADE OF NATIONAL ROUTE No. 8 TO A FOUR-LANE ROAD BETWEEN RÍO CUARTO AND VILLA MERCEDES		240.0	AR
MCC151	INTEGRATED FREIGHT CONTROL CENTER AT USPALLATA (CRISTO REDENTOR SYSTEM OPTIMIZATION)		90.0	AR
MCC152	PASSENGER CONTROL CENTER AT LOS HORCONES (CRISTO REDENTOR SYSTEM OPTIMIZATION)		80.0	AR
MCC153	NEW LOS LIBERTADORES BORDER COMPLEX (CRISTO REDENTOR SYSTEM OPTIMIZATION)		76.0	CH
MCC154	REHABILITATION OF THE CRISTO REDENTOR TUNNEL AND CARACOLES (CRISTO REDENTOR SYSTEM OPTIMIZATION)		4.0	AR - CH
MCC155	BINATIONAL MANAGEMENT CONTROL SYSTEM AT THE CRISTO REDENTOR BORDER CROSSING (CRISTO REDENTOR SYSTEM OPTIMIZATION)		28.0	AR - CH
23			11,005.0	



PROFILING



PRE-EXECUTION

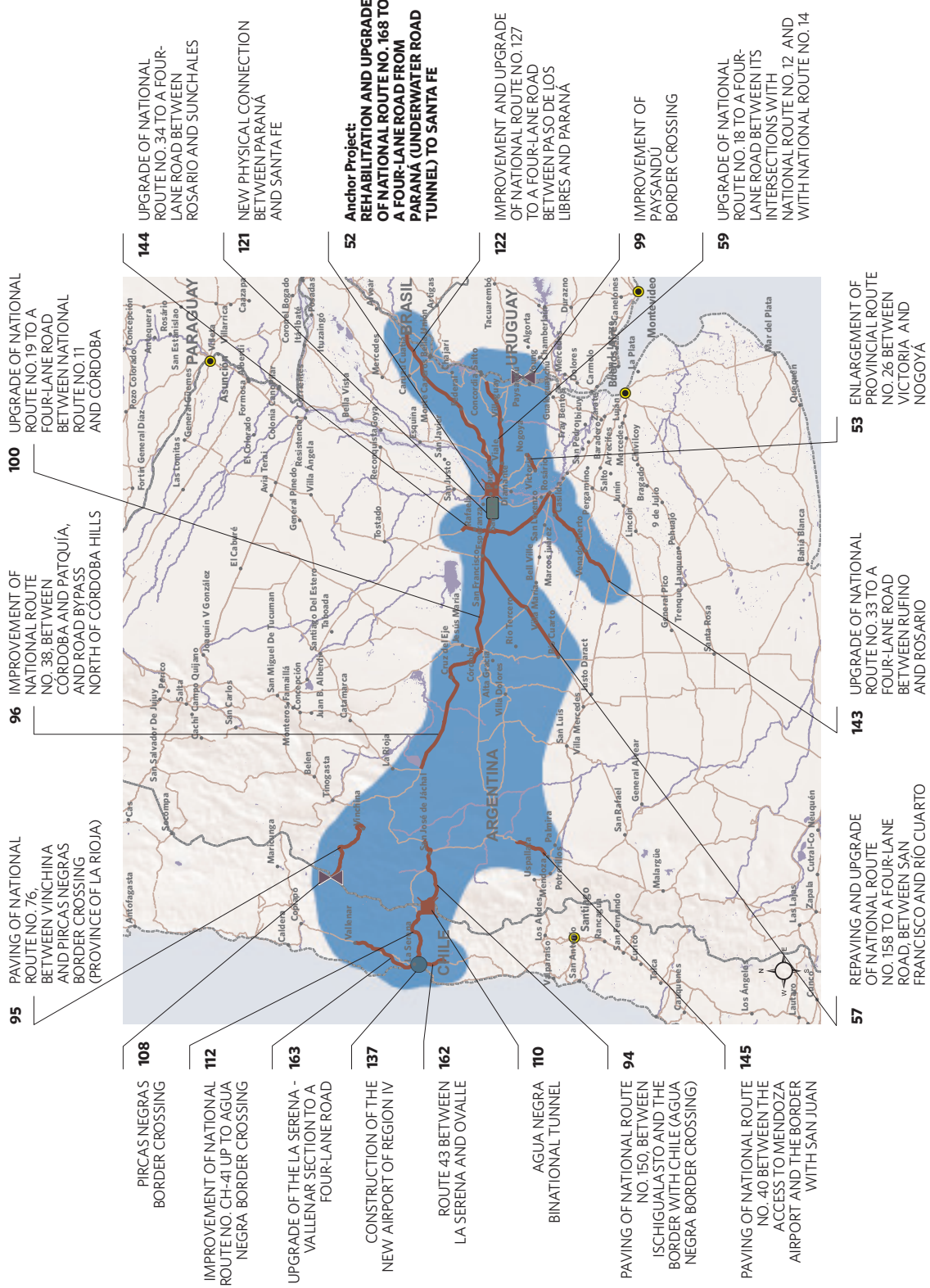


EXECUTION



COMPLETED

COQUIMBO - ARGENTINE CENTRAL REGION - PAYSANDÚ





MCC GROUP 4

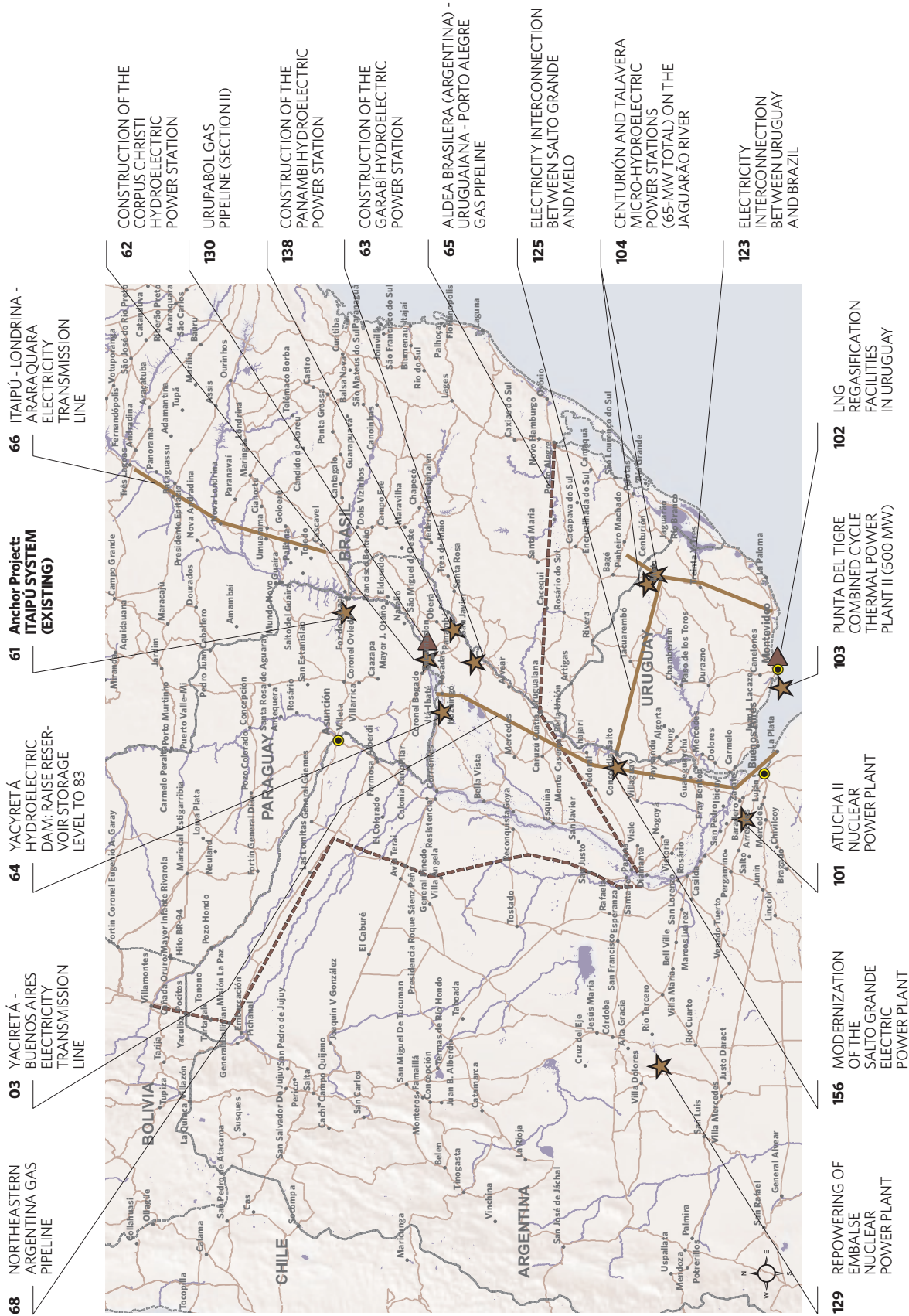
Strategic Function

- Optimize trade and services flows among the economic centers in Argentina, Brazil, Chile, Paraguay and Uruguay.
- Articulate goods and services flows with the Paraguay-Paraná Waterway Hub.
- Facilitate the flow of people among the countries of the Group.
- Boost the development of ecotourism in the region.
- Develop and improve the regional productive chains.

*US\$ million

Code	Name	Stage	Estimated Investment*	Countries
MCC52	REHABILITATION AND UPGRADE OF NATIONAL ROUTE No. 168 TO A FOUR-LANE ROAD FROM PARANÁ (UNDERWATER ROAD TUNNEL) TO SANTA FE		40.0	AR
MCC53	ENLARGEMENT OF PROVINCIAL ROUTE No. 26 BETWEEN VICTORIA AND NOGOYÁ		6.0	AR
MCC57	REPAVING AND UPGRADE OF NATIONAL ROUTE No. 158 TO A FOUR-LANE ROAD, BETWEEN SAN FRANCISCO AND RÍO CUARTO		400.0	AR
MCC59	UPGRADE OF NATIONAL ROUTE No. 18 TO A FOUR-LANE ROAD BETWEEN ITS INTERSECTIONS WITH NATIONAL ROUTE No. 12 AND WITH NATIONAL ROUTE No. 14		250.0	AR
MCC94	PAVING OF NATIONAL ROUTE No. 150, BETWEEN ISCHIGUALASTO AND THE BORDER WITH CHILE (AGUA NEGRA BORDER CROSSING)		73.0	AR
MCC95	PAVING OF NATIONAL ROUTE No. 76, BETWEEN VINCHINA AND PIRCAS NEGRAS BORDER CROSSING (PROVINCE OF LA RIOJA)		120.0	AR
MCC96	IMPROVEMENT OF NATIONAL ROUTE No. 38, BETWEEN CÓRDOBA AND PATQUÍA, AND ROAD BYPASS NORTH OF CÓRDOBA HILLS		100.0	AR
MCC99	IMPROVEMENT OF PAYSANDÚ BORDER CROSSING		12.0	UY
MCC100	UPGRADE OF NATIONAL ROUTE No. 19 TO A FOUR-LANE ROAD BETWEEN NATIONAL ROUTE No. 11 AND CÓRDOBA		529.0	AR
MCC110	AGUA NEGRA BINATIONAL TUNNEL		1,600.0	AR - CH
MCC112	IMPROVEMENT OF NATIONAL ROUTE No. CH-41 UP TO AGUA NEGRA BORDER CROSSING		123.0	CH
MCC121	NEW PHYSICAL CONNECTION BETWEEN PARANÁ AND SANTA FE		1.8	AR
MCC122	IMPROVEMENT AND UPGRADE OF NATIONAL ROUTE No. 127 TO A FOUR-LANE ROAD BETWEEN PASO DE LOS LIBRES AND PARANÁ		40.0	AR
MCC137	CONSTRUCTION OF THE NEW AIRPORT OF REGION IV (LA FLORIDA-LA SERENA)		120.0	CH
MCC143	UPGRADE OF NATIONAL ROUTE No. 33 TO A FOUR-LANE ROAD BETWEEN RUFINO AND ROSARIO		500.0	AR
MCC144	UPGRADE OF NATIONAL ROUTE No. 34 TO A FOUR-LANE ROAD BETWEEN ROSARIO AND SUNCHALES		500.0	AR
MCC145	PAVING OF NATIONAL ROUTE No. 40 BETWEEN THE ACCESS TO MENDOZA AIRPORT AND THE BORDER WITH SAN JUAN		210.0	AR
MCC162	ROUTE 43 BETWEEN LA SERENA AND OVALLE		221.0	CH
MCC163	UPGRADE OF ROUTE 5 LA SERENA - VALLENAR SECTION TO A FOUR-LANE ROAD		388.0	CH
19			5,233.8	

ENERGY GROUP





MCC GROUP 5

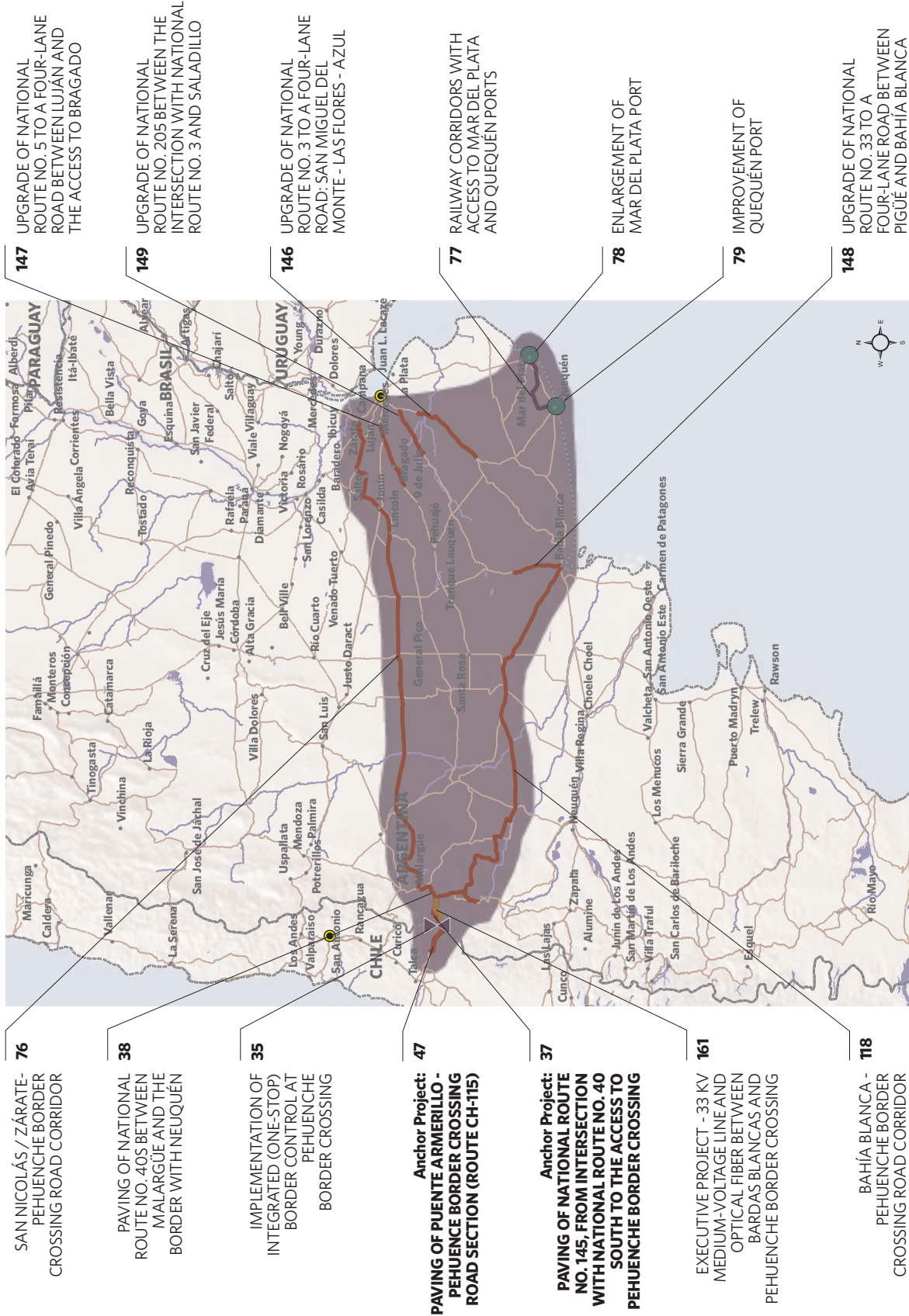
Strategic Function

- Enhance the dependability of the electric and gas systems in the area.
- Strengthen and increase energy generation, transmission, and distribution capacity in a densely populated, highly industrialized area.
- Diversify the energy matrix of the MERCOSUR countries.

*US\$ million

Code	Name	Stage	Estimated Investment*	Countries
MCC03	YACIRETÁ - BUENOS AIRES ELECTRICITY TRANSMISSION LINE		600.0	AR
MCC61	ITAIPU SYSTEM (EXISTING)		16,000.0	BR - PY
MCC62	CONSTRUCTION OF THE CORPUS CHRISTI HYDROELECTRIC POWER STATION		8,000.0	AR - PY
MCC63	CONSTRUCTION OF THE GARABÍ HYDROELECTRIC POWER STATION		2,728.0	AR - BR
MCC64	YACYRETÁ HYDROELECTRIC DAM: RAISE RESERVOIR STORAGE LEVEL TO 83		1,200.0	AR - PY
MCC65	ALDEA BRASILEIRA (ARGENTINA) - URUGUAIANA - PORTO ALEGRE GAS PIPELINE		510.0	BR
MCC66	ITAIPU - LONDRINA - ARARAQUARA ELECTRICITY TRANSMISSION LINE		149.1	BR
MCC68	NORTHEASTERN ARGENTINA GAS PIPELINE		1,000.0	AR
MCC101	ATUCHA II NUCLEAR POWER PLANT		740.0	AR
MCC102	LNG REGASIFICATION FACILITIES IN URUGUAY		1,125.0	UY
MCC103	PUNTA DEL TIGRE COMBINED CYCLE THERMAL POWER PLANT II (500 MW)		531.0	UY
MCC104	CENTURIÓN AND TALAVERA MICRO-HYDROELECTRIC POWER STATIONS (65-MW TOTAL) ON THE JAGUARÃO RIVER		60.0	UY
MCC123	ELECTRICITY INTERCONNECTION BETWEEN URUGUAY AND BRAZIL		349.0	BR - UY
MCC125	ELECTRICITY INTERCONNECTION BETWEEN SALTO GRANDE AND MELO		100.0	UY
MCC129	REPOWERING OF EMBALSE NUCLEAR POWER PLANT		2,149.0	AR
MCC130	URUPABOL GAS PIPELINE (SECTION II) (*)		0.0	PY - UY
MCC138	CONSTRUCTION OF THE PANAMBI HYDROELECTRIC POWER STATION		2,474.0	AR - BR
MCC156	MODERNIZATION OF THE SALTO GRANDE ELECTRIC POWER PLANT		0.0	AR - UY
18			21,715.1	

PEHUENCHE





MCC GROUP 6

Strategic Function

- Offer connectivity alternatives and services to the flows of goods and services in the countries that make up the MERCOSUR and Chile.
- Make intra-regional development more dynamic.
- Facilitate the flows of people among the countries of the Group.
- Promote the development of integrated tourism in the region.

*US\$ million

Code	Name	Stage	Estimated Investment*	Countries
MCC35	IMPLEMENTATION OF INTEGRATED (ONE-STOP) BORDER CONTROL AT PEHUENCHE BORDER CROSSING		30.0	AR - CH
MCC37	PAVING OF NATIONAL ROUTE No. 145, FROM INTERSECTION WITH NATIONAL ROUTE No. 40 SOUTH TO THE ACCESS TO PEHUENCHE BORDER CROSSING		63.0	AR
MCC38	PAVING OF NATIONAL ROUTE No. 40S BETWEEN MALARGÜE AND THE BORDER WITH NEUQUÉN		90.0	AR
MCC47	PAVING OF PUENTE ARMERILLO - PEHUENCHE BORDER CROSSING ROAD SECTION (ROUTE CH-115)		60.0	CH
MCC76	SAN NICOLÁS / ZÁRATE - PEHUENCHE BORDER CROSSING ROAD CORRIDOR		1,000.0	AR
MCC77	RAILWAY CORRIDORS WITH ACCESS TO MAR DEL PLATA AND QUEQUÉN PORTS		35.0	AR
MCC78	ENLARGEMENT OF MAR DEL PLATA PORT		70.0	AR
MCC79	IMPROVEMENT OF QUEQUÉN PORT		56.7	AR
MCC118	BAHÍA BLANCA - PEHUENCHE BORDER CROSSING ROAD CORRIDOR		1,000.0	AR
MCC146	UPGRADE OF NATIONAL ROUTE No. 3 TO A FOUR-LANE ROAD: SAN MIGUEL DEL MONTE - LAS FLORES - AZUL		166.0	AR
MCC147	UPGRADE OF NATIONAL ROUTE No. 5 TO A FOUR-LANE ROAD BETWEEN LUJÁN AND THE ACCESS TO BRAGADO		240.0	AR
MCC148	UPGRADE OF NATIONAL ROUTE No. 33 TO A FOUR-LANE ROAD BETWEEN FIGÜÉ AND BAHÍA BLANCA		260.0	AR
MCC149	UPGRADE OF NATIONAL ROUTE No. 205 BETWEEN THE INTERSECTION WITH NATIONAL ROUTE No. 3 AND SALADILLO		240.0	AR
MCC161	EXECUTIVE PROJECT - 33 KV MEDIUM-VOLTAGE LINE AND OPTICAL FIBER BETWEEN BARDAS BLANCAS AND PEHUENCHE BORDER CROSSING		0.0	AR
14			3,310.7	

PROFILING
 PRE-EXECUTION
 EXECUTION
 COMPLETED

PBB PERU-BRAZIL-BOLIVIA

Integration and Development Hub



Population: 12,730,732
Population density: 11 people/km²
Area: 1,159,504 km²

GDP: US\$ 71,116 million

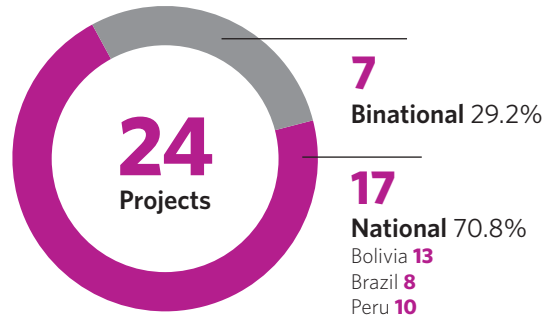
Services	77.9%
Industries	11.4%
Agriculture	5.8%
Mining and quarrying	5.2%



Estimated Investment

US\$ million

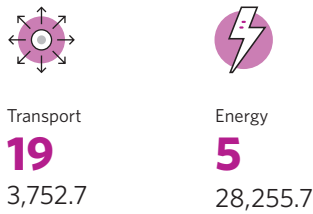
32,008.4



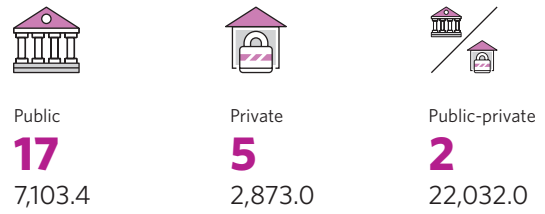
Projects by Stage



Projects by Sector

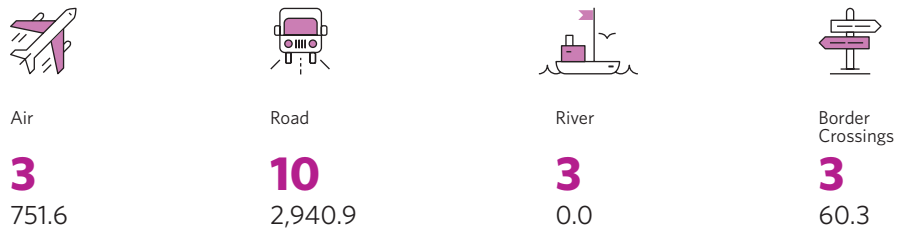


Projects by Type of Financing

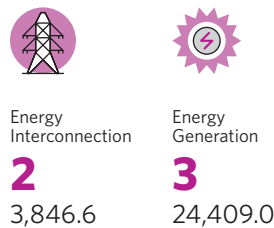


Projects by Subsector

Transport



Energy



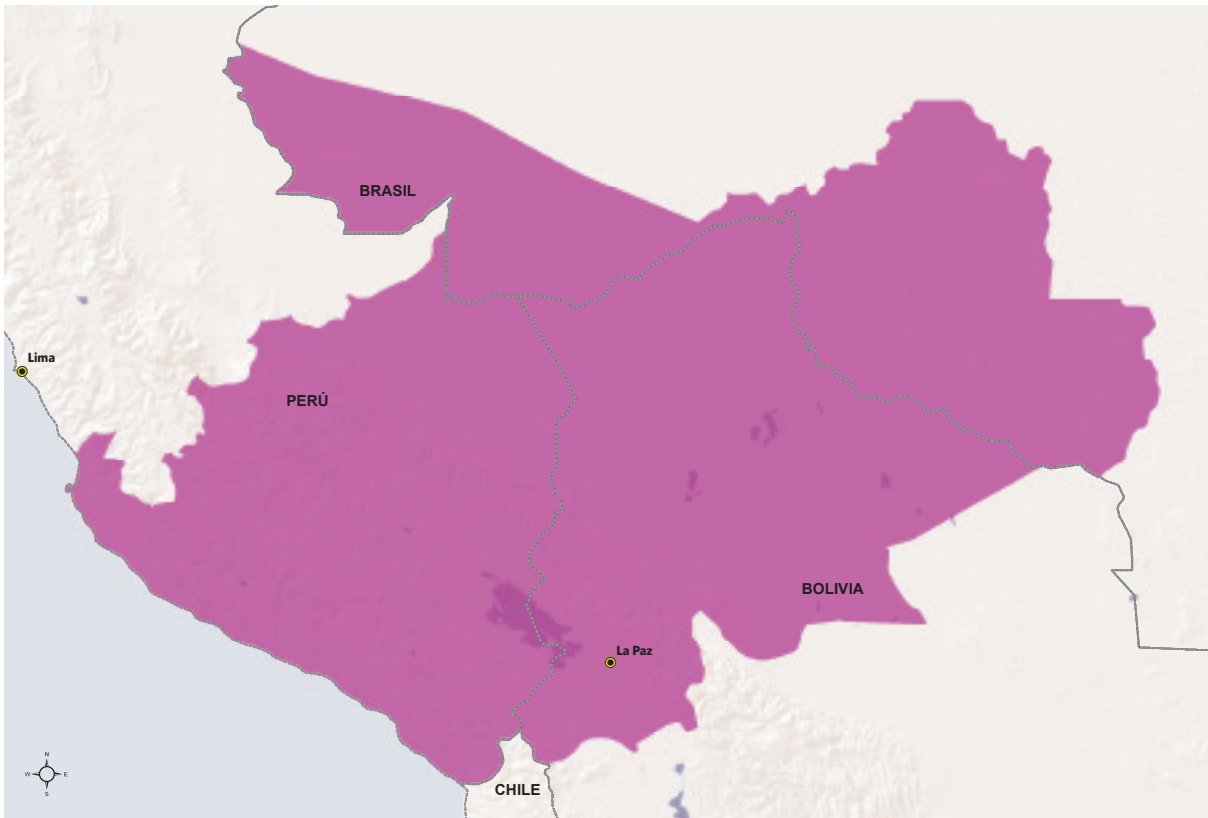
PERU-BRAZIL-BOLIVIA

Presentation of the Hub

The Peru-Brazil-Bolivia Hub⁽¹⁾ runs along the Peruvian departments of Tacna, Moquegua, Arequipa, Apurímac, Cusco, Madre de Dios, and Puno; the Bolivian departments of Pando, Beni, and La Paz; and the Brazilian states of Acre and Rondônia.

The Hub covers 7% of the area of South America (1,159,504 km²), and is home to 3% of the South American population (12,730,732 inhabitants); thus, with 11 people/km², it is the less densely populated of the Hubs. Also, it accounts for 2% of the GDP of South America (US\$71,116 million).⁽²⁾

AREA OF INFLUENCE OF THE PERU-BRAZIL-BOLIVIA HUB



¹ See "Caracterización Socioeconómica y Ambiental del Eje Perú-Brasil-Bolivia," COSIPLAN-IIRSA, 2015, at <http://www.iirsa.org/peru-brasil-bolivia.asp>

² At 2013 current prices.

As regards infrastructure, the **road network** of the countries involved in the Hub is 1,742,580 km long, 11% of which are paved. The **rail network** has a length of 35,070 km. The **port system** includes seven major ports, two of which handle more than 1.5 million tons per year. The airport system has 19 airports, 11 of which are domestic. As for **electricity generation**, the countries involved in the Hub have an installed power capacity of 132,000 MW, almost entirely contributed by Brazil (91%).

The presence of **indigenous communities** is very relevant. They live in all the Andean territory of Bolivia and in the south of Peru, as well as in the Amazon territories of the eastern area of the Hub. In general, these communities are devoted to subsistence activities (small-scale agriculture) and their members may also be rural or mining wage-earners.

With regard to the **protected areas**, there are about 132 territorial units with some degree of environmental protection that cover, approximately, 253,000 km², accounting for about 22% of the total area of the Hub. Of this area, 40% is contributed by Brazil (103,000 km²), 36% by Peru (91,000 km²), and 24% by Bolivia (59,000 km²). These regions feature important landscape, flora and fauna conservation areas, including two biosphere reserves, three Ramsar sites, and 16 national parks.

Overall, all the Andean territory of the Hub is exposed to **natural hazards** resulting mostly of seismic and volcanic geodynamic processes, whereas the eastern area of the Hub covering the Amazonian plains is exposed to meteorological and hydrological hazards due to heavy rains that cause floods and waterlogging, mainly in the basin of Madeira river and its tributaries. The Pacific coastline is exposed to tsunamis generated by earthquakes. In addition, landslides are common in all the territory of the Hub, which hosts steep slopes and high precipitation rates.

The countries that make up the Hub plan investments for US\$32 billion in 24 physical integration projects, five of which belong to the energy sector and account for 88% of the investments. This makes the Peru-Brazil-Bolivia Hub the second Hub with the highest investment amount estimated for projects in the COSIPLAN Portfolio.

The Hub involves 28% of Bolivia's economy, 20% of Peru's economy, and 1% of Brazil's economy. In absolute terms, Peru contributes 57% to the Hub's aggregate GDP, followed by Brazil (30%), and Bolivia (14%).

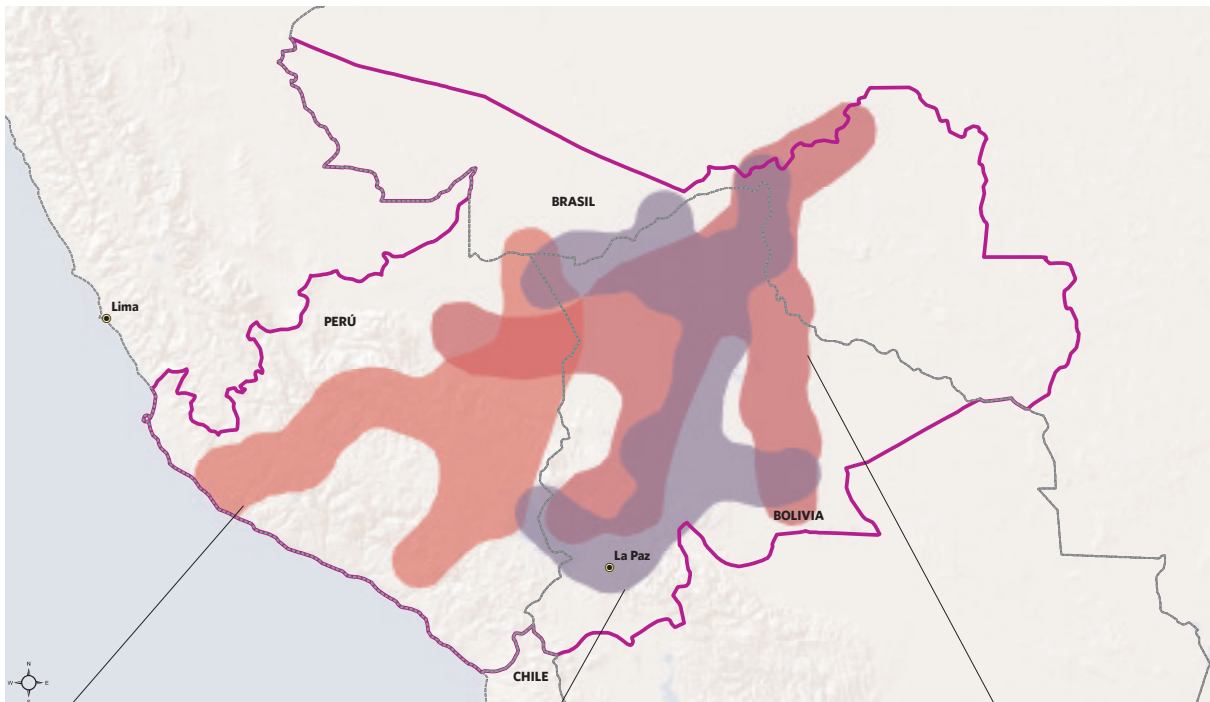
The Hub shares some regions of its area of influence with the Amazon (AMA), Andean (AND), and Central Interoceanic (IOC) Hubs.

PERU-BRAZIL-BOLIVIA HUB

Project Portfolio

The projects included in the Peru-Brazil-Bolivia Hub aim at diversifying the energy matrix of the region and consolidating an international river waterway to open up new possibilities for socioeconomic development.

PROJECT GROUPS OF THE PERU-BRAZIL-BOLIVIA HUB



Group 1: CORRIDOR PORTO VELHO - RIO BRANCO - ASSIS - PUERTO MALDONADO - CUSCO / JULIACA - PORTS IN THE PACIFIC

Group 2: RIO BRANCO - COBIJA - RIBERALTA - YUCUMO - LA PAZ CORRIDOR

Group 3: MADEIRA - MADRE DE DIOS - BENI RIVER CORRIDOR

TABLE 1. PROJECT GROUPS OF THE PERU-BRAZIL-BOLIVIA HUB *US\$ million

Group	Name	No. of Projects	Estimated Investment*
1	CORRIDOR PORTO VELHO - RIO BRANCO - ASSIS - PUERTO MALDONADO - CUSCO / JULIACA - PORTS IN THE PACIFIC	8	2,933.8
2	RIO BRANCO - COBIJA - RIBERALTA - YUCUMO - LA PAZ CORRIDOR	9	842.6
3	MADEIRA - MADRE DE DIOS - BENI RIVER CORRIDOR	7	28,232.0
TOTAL		24	32,008.4

The active portfolio of the Hub includes 19 projects for an estimated investment of US\$26,028 million.

Of the 19 active projects, only one has information available on its estimated completion date —Bridge over the Madeira River in Abunã (BR-364/RO), the only API project included in the Hub. This project is at the execution stage and is scheduled to be completed in 2017.






According to estimations, by the time the seven projects at the execution stage are completed, about 78% of the investment estimated for the Hub's portfolio will have been spent.

The five projects with the highest estimated investment account for 94% of the Hub's active portfolio. The Madeira River Hydroelectric Power Complex (Santo Antônio and Jirau Hydroelectric Power Stations) is the project with the highest estimated investment —with an amount of US\$18,209 million— of the entire COSIPLAN Portfolio, made up of 581 projects.

This new complex in Brazil involves the construction of two hydroelectric power plants fed by the water resources of the Madeira river, seeking to diversify the energy matrix of the territory. It is being financed by the BNDES (the Brazilian Development Bank) and by a private bank consortium. Being at an advanced stage of implementation, it is scheduled to be completed in March 2017. The existence of this sole project explains why the Hub, even if it features only 4% of all the Portfolio projects, accounts for 10% of the total estimated investment.

Regarding the other four projects with the highest estimated investment amounts, it should be stated that their joint investment accounts for 40% of the investment estimated for the first project mentioned, and that all of them are financed by the public sector. As in the case of the first project, the second and third ones involve the construction of hydroelectric power plants, although in these cases the pre-feasibility studies have not been conducted yet. Therefore, their estimated investment amounts will be updated as soon as such results are available. Finally, the fourth and fifth projects fall in the road subsector and are both at the execution stage.

TABLE 2. THE FIVE PROJECTS OF THE ACTIVE PORTFOLIO WITH THE HIGHEST ESTIMATED INVESTMENT *US\$ million

Code	Name	Group	Stage	Estimated Investment*	Countries	Type of Financing
PBB16	MADEIRA RIVER HYDROELECTRIC POWER COMPLEX (SANTO ANTÔNIO AND JIRAU HYDROELECTRIC POWER STATIONS)	3		18,209.0	BR	Public-private
PBB17	BINATIONAL HYDROELECTRIC POWER STATION (BOLIVIA - BRAZIL)	3		5,000.0	BO - BR	Public
PBB67	CONSTRUCTION OF THE INTERNATIONAL AIRPORT OF CHINCHERO, CUSCO	1		658.0	PE	Private
PBB05	GUAYARAMERÍN - RIBERALTA / YUCUMO - LA PAZ ROAD SECTIONS	2		594.0	BO	Public
PBB12	CACHUELA ESPERANZA HYDROELECTRIC POWER STATION (MADRE DE DIOS RIVER, BOLIVIA)	3		1,200.0	BO	Public

 PROFILING
  PRE-EXECUTION
  EXECUTION
  COMPLETED

There are five projects already completed in the Hub, having demanded a total investment amount of US\$5,980 million.

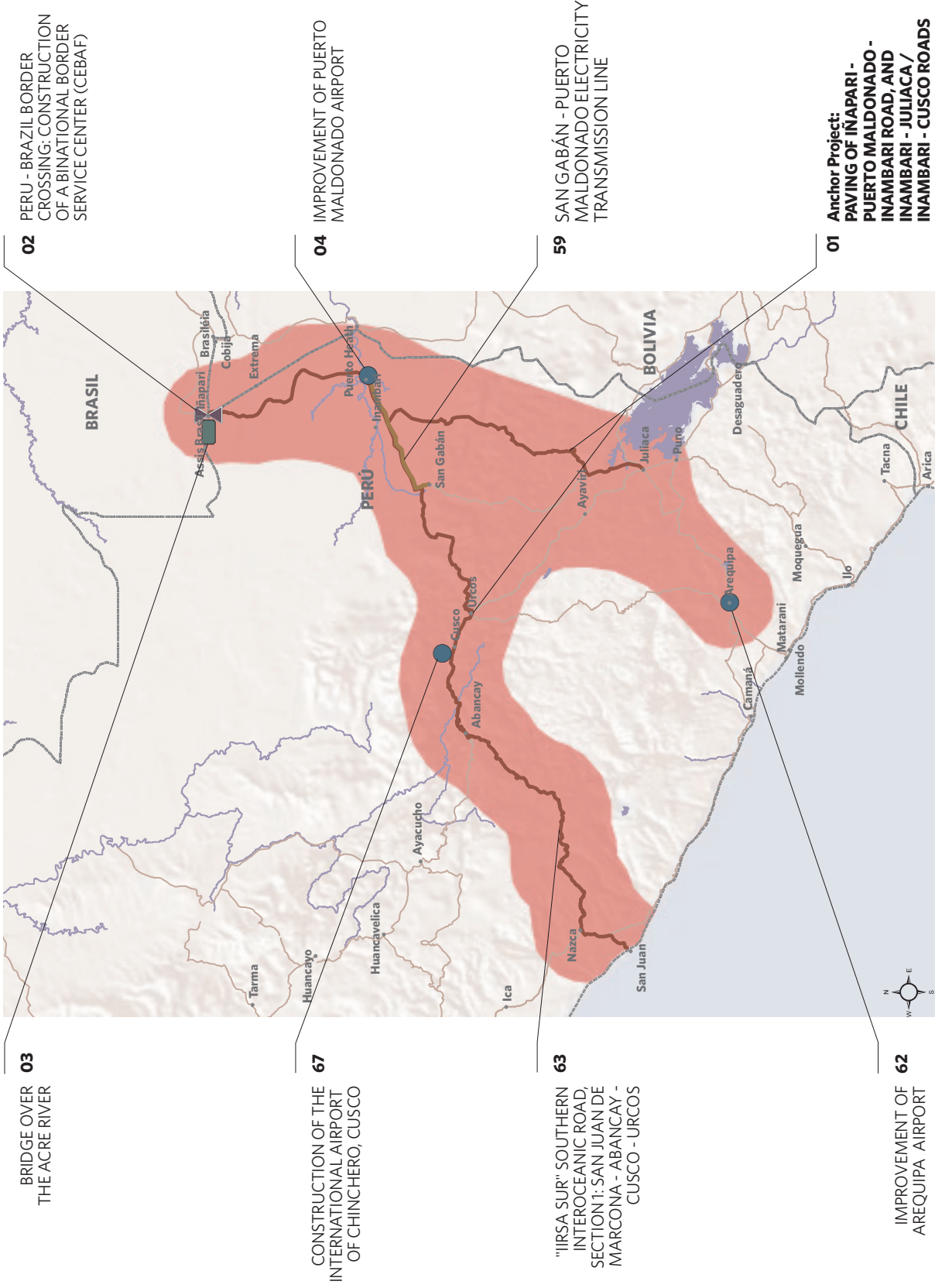
The transmission line between the two hydroelectric power plants on the Madeira River and the central system has been completed recently, requiring a total investment of US\$3,823 million, thus consolidating the distribution of renewable energy in the region.

Furthermore, anchor project Paving of Iñapari - Puerto Maldonado - Inambari Road, and Inambari - Juliaca / Inambari - Cusco Roads was completed. These paving works, demanding nearly US\$2 billion, were complemented by others, among which the following can be mentioned: the completion of the bridge over the Acre River, in the Brazilian territory, and of section 1 of "IIRSA Sur" Southern Interoceanic Road. All these works made it possible to create a corridor connecting the Peruvian coast with Brazil and the Bolivian border, resulting in an increase in the flow of goods and people. Project Bridge over the Madeira River in Abunã, which is at the execution stage, forms part of the same corridor and has been planned to join the sections of the corridor that are now interrupted by the Madeira river and have to be crossed on a raft boat.

TABLE 3. COMPLETED PROJECTS IN THE HUB *US\$ million

Code	Name	Investment Amount*	Countries
PBB18	ELECTRICITY TRANSMISSION LINE BETWEEN THE TWO HYDROELECTRIC POWER STATIONS ON THE MADEIRA RIVER AND THE CENTRAL SYSTEM	3,823.0	BR
PBB03	PAVING OF IÑAPARI - PUERTO MALDONADO - INAMBARI ROAD, AND INAMBARI - JULIACA / INAMBARI - CUSCO ROADS	1,976.0	PE
PBB63	"IIRSA SUR" SOUTHERN INTEROCEANIC ROAD, SECTION 1: SAN JUAN DE MARCONA - ABANCAY - CUSCO - URCOS	145.4	PE
PBB01	SAN GABÁN - PUERTO MALDONADO ELECTRICITY TRANSMISSION LINE	23.6	PE
PBB59	BRIDGE OVER THE ACRE RIVER	12.0	BR - PE
5		5,980.0	

CORRIDOR PORTO VELHO - RIO BRANCO - ASSIS - PUERTO MALDONADO - CUSCO / JULIACA - PORTS IN THE PACIFIC





PBB GROUP 1

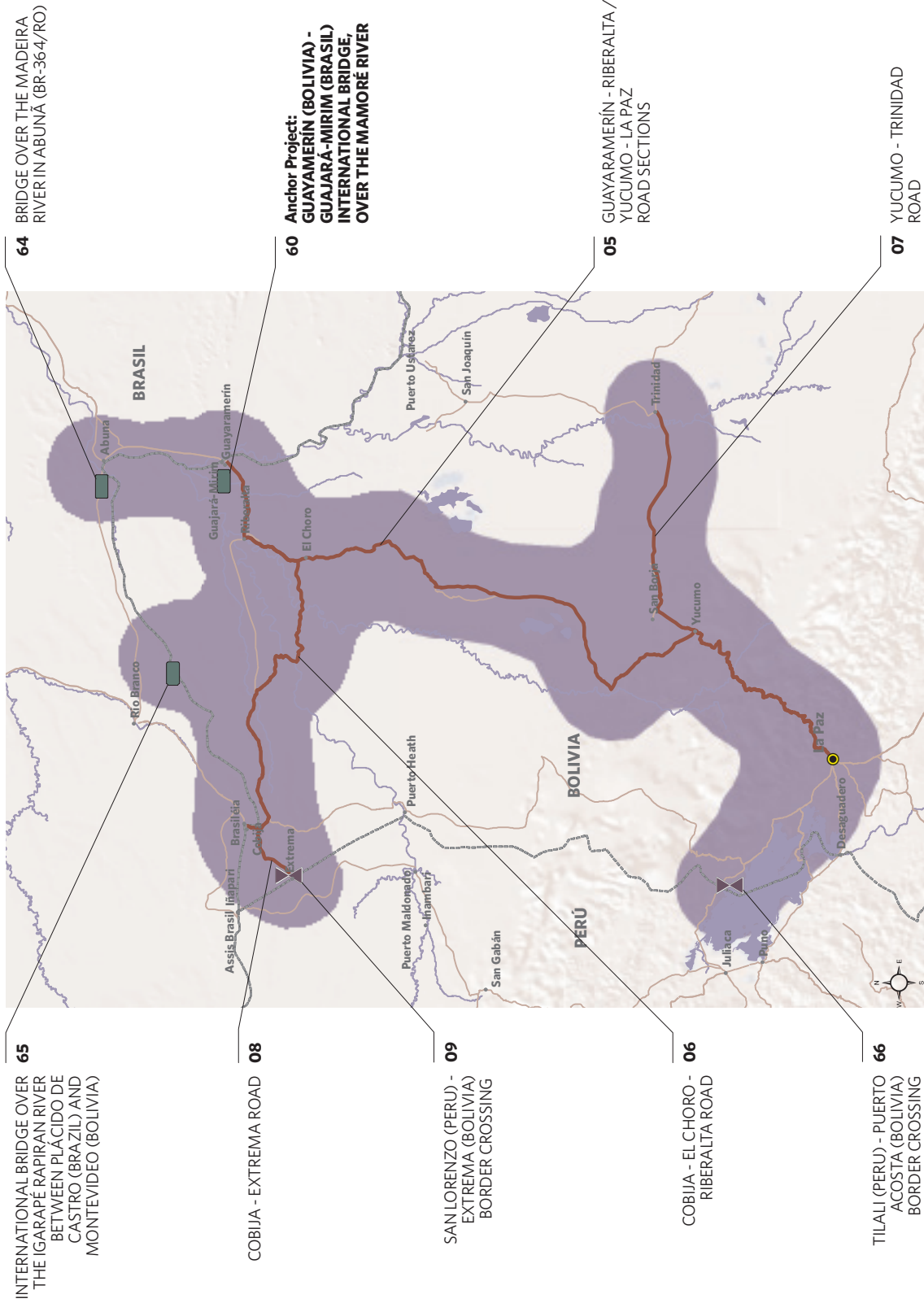
Strategic Function

- Consolidate the socioeconomic development of the macro-region in the south of Peru and the states of Acre and Rondônia, in Brazil, to facilitate trade and tourism, and provide logistics services that guarantee access of these territories to international markets, promoting the integration process.

					*US\$ million
Code	Name	Stage	Estimated Investment*	Countries	
PBB01	PAVING OF IÑAPARI - PUERTO MALDONADO - INAMBARI ROAD, AND INAMBARI - JULIACA / INAMBARI - CUSCO ROADS		1,976.0	PE	
PBB02	PERU - BRAZIL BORDER CROSSING: CONSTRUCTION OF A BINATIONAL BORDER SERVICE CENTER (CEBAF)		25.2	BR - PE	
PBB03	BRIDGE OVER THE ACRE RIVER		12.0	BR - PE	
PBB04	IMPROVEMENT OF PUERTO MALDONADO AIRPORT		42.4	PE	
PBB59	SAN GABÁN - PUERTO MALDONADO ELECTRICITY TRANSMISSION LINE		23.6	PE	
PBB62	IMPROVEMENT OF AREQUIPA AIRPORT		51.2	PE	
PBB63	"HIRSA SUR" SOUTHERN INTEROCEANIC ROAD, SECTION 1: SAN JUAN DE MARCONA - ABANCAY - CUSCO - URCOS		145.4	PE	
PBB67	CONSTRUCTION OF THE INTERNATIONAL AIRPORT OF CHINCHERO, CUSCO		658.0	PE	
8			2,933.8		

PROFILING
 PRE-EXECUTION
 EXECUTION
 COMPLETED

RIO BRANCO - COBIJA - RIBERALTA - YUCUMO - LA PAZ CORRIDOR





PBB GROUP 2

Strategic Function

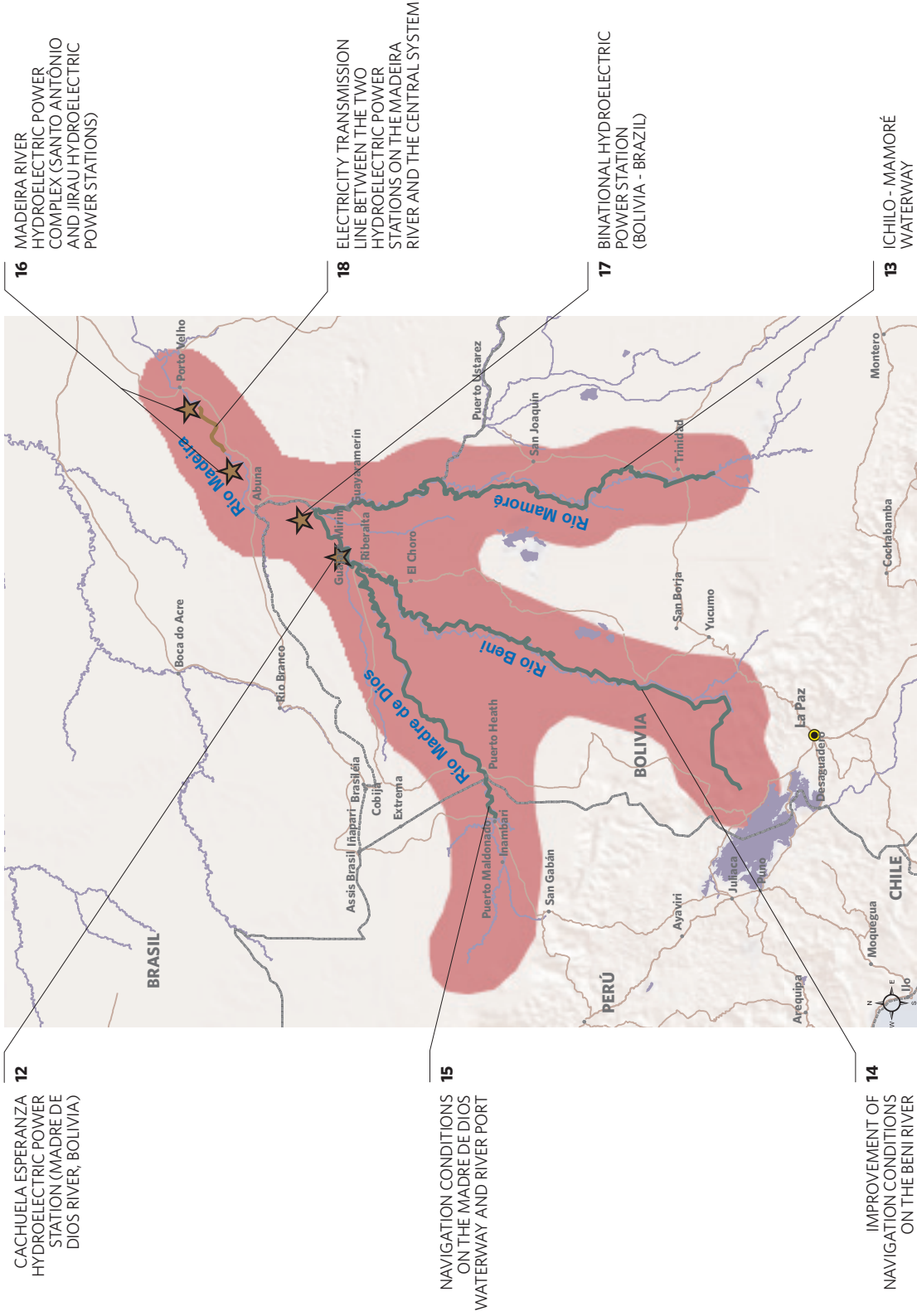
- Provide new possibilities for socioeconomic development in the Madre de Dios - Acre - Pando (MAP) region through its connection to the central Bolivian hub.

*US\$ million

Code	Name	Stage	Estimated Investment*	Countries
PBB05	GUAYARAMERÍN - RIBERALTA / YUCUMO - LA PAZ ROAD SECTIONS		594.0	BO
PBB06	COBIJA - EL CHORO - RIBERALTA ROAD		56.0	BO
PBB07	YUCUMO - TRINIDAD ROAD		5.5	BO
PBB08	COBIJA - EXTREMA ROAD		29.0	BO
PBB09	SAN LORENZO (PERU) - EXTREMA (BOLIVIA) BORDER CROSSING		15.0	BO - PE
PBB60	GUAYAMERÍN (BOLIVIA) - GUAJARÁ-MIRIM (BRAZIL) INTERNATIONAL BRIDGE, OVER THE MAMORÉ RIVER		75.0	BO - BR
PBB64	BRIDGE OVER THE MADEIRA RIVER IN ABUNÃ (BR-364/RO)		48.0	BR
PBB65	INTERNATIONAL BRIDGE OVER THE IGARAPÉ RAPIRAN RIVER BETWEEN PLÁCIDO DE CASTRO (BRAZIL) AND MONTEVIDEO (BOLIVIA)		0.0	BO - BR
PBB66	TILALI (PERU) - PUERTO ACOSTA (BOLIVIA) BORDER CROSSING		20.0	BO - PE
9			842.5	

PROFILING
 PRE-EXECUTION
 EXECUTION
 COMPLETED

MADEIRA - MADRE DE DIOS - BENI RIVER CORRIDOR





PBB GROUP 3

Strategic Function

- Consolidate an international river integration corridor that mainly impacts on the transportation logistics and the socioeconomic development of the regions of Madre de Dios, in Peru; Rondônia, in Brazil; and Pando and Beni, in Bolivia.
- Facilitate changes in the energy matrix by increasing the supply of renewable energy in the region.

*US\$ million

Code	Name	Stage	Estimated Investment*	Countries
PBB12	CACHUELA ESPERANZA HYDROELECTRIC POWER STATION (MADRE DE DIOS RIVER, BOLIVIA)		1,200.0	BO
PBB13	ICHILO - MAMORÉ WATERWAY		0.0	BO
PBB14	IMPROVEMENT OF NAVIGATION CONDITIONS ON THE BENI RIVER		0.0	BO
PBB15	NAVIGATION CONDITIONS ON THE MADRE DE DIOS WATERWAY AND RIVER PORT		0.0	BO
PBB16	MADEIRA RIVER HYDROELECTRIC POWER COMPLEX (SANTO ANTÔNIO AND JIRAU HYDROELECTRIC POWER STATIONS)		18,209.0	BR
PBB17	BINATIONAL HYDROELECTRIC POWER STATION (BOLIVIA - BRAZIL)		5,000.0	BO - BR
PBB18	ELECTRICITY TRANSMISSION LINE BETWEEN THE TWO HYDROELECTRIC POWER STATIONS ON THE MADEIRA RIVER AND THE CENTRAL SYSTEM		3,823.0	BR
7			28,232.0	

PROFILING
 PRE-EXECUTION
 EXECUTION
 COMPLETED

Chapter 4

The Territory and Integration Infrastructure Planning

For more than a decade, the South American governments have been making a major effort of cooperation and dialogue with the purpose of securing a greater and more sustainable physical integration in the region. The work undertaken by IIRSA in the first ten years and by COSIPLAN since 2011 focuses on infrastructure project planning as a key component for attaining the physical integration and the development of the South American territory.

The distinctive feature of this process has been infrastructure planning in the transportation, energy and communications sectors with a regional perspective. With a focus on the territory, the objectives are to enhance the competitiveness and complementariness of the economies of the region, contribute to reducing regional disparities and social inequality, and improve life expectancy and quality of life in every country and in the region as a whole.

4.1. The Integration and Development Hubs

In order to frame infrastructure planning, theoretical and practical tools linking the territory and infrastructure were used, which helped set up the **Integration Infrastructure Project Portfolio**. This was possible thanks to the development and application of the **Indicative Territorial Planning Methodology**. This methodology is based on the identification of **Integration and Development Hubs**,⁽¹⁾ which organize the South American territory and structure the Portfolio.

The Hubs and their areas of influence have been defined considering the following characteristics:

- **Geographical coverage of countries and regions.** The Hubs group territories that allow the presence and participation of all twelve South American countries in the physical integration process. Their area of influence covers regions with different population densities, including the main population concentrations.
- **Identification of both existing and potential trade flows.** The Hubs are areas that contain the main intraregional trade flows —following historical trade patterns—, enabled by the infrastructure in place, and that also consider the production potential of the regional spaces.
- **Investments in the areas of influence of the Hubs.** Account has been taken of the volume of the investments recently made, of those being disbursed, and also of the funds planned to be invested in the short run within the area of influence of each Hub.
- **Interest and participation of the local population and the production sectors** in territorial development, logistics projects, and infrastructure.
- **Social and environmental sustainability.** In light of the diversity of ecosystems in each region, forest reserves, highly fragile ecological areas, as well as the rights and opportunities of local population have been identified.

Ten Integration and Development Hubs,⁽²⁾ with areas of influence that may be superimposed on one another, have been defined.

Once the geographic area of the Hubs was established following the above-mentioned criteria, a key aspect was the link between them and infrastructure. On the basis of the economic, social and environmental characterization of the area of influence of the Hubs, a direct coordination of the projects and the territory is sought through the Indicative Territorial Planning Methodology.

The development of this Methodology was inspired by the conviction that investments and projects have a substantial impact on the economy and the environment of the region and contribute to social development, while creating new economic opportunities for the local population.

An Integration and Development Hub is a multinational territorial space involving specific natural resources, human settlements, production areas and logistics services. Linked by transportation, energy and communications infrastructure, it facilitates the flow of goods and services, people, and information within its own territory as well as from/to the rest of the world.

¹ See <http://www.iirsa.org/eid.asp>

² The Indicative Territorial Planning Methodology has not been applied to the Southern Andean Hub yet.



4.2 The Indicative Territorial Planning Methodology

The process of application of the Indicative Territorial Planning Methodology⁽¹⁾ began with the launch of IIRSA. This work was carried out at the meetings of the Executive Technical Groups (GTEs) in a participative working environment that involved the twelve South American countries, and it took place in two phases.

The COSIPLAN Project Portfolio is a set of high-impact works for the integration and socioeconomic development of the region. It is made up of transport, energy and communications projects that promote regional connectivity and create sustainable economic and social development in South America.

This planning process was performed in two phases. In the first phase, based on the concept of synergies, **Project Groups**, their **Anchor Projects**, **Hinge Projects** and **strategic functions** were defined for each Hub.

Project Groups. A Project Group is a set of interdependent projects in a given geoeconomic space having synergetic effects upon sustainable development. A Project Group enables the capitalization of the benefits of a set of investments, which are greater than the aggregate effects of its individual component projects. The process is territory-based and takes into account the location of projects, their relationships with the prevailing or potential economic activities, and related environmental and social aspects.

Strategic Function. The effects of a Project Group constitute its strategic function, i.e. its common objective or main benefits for both the integration and the regional development of the geoeconomic spaces involved. The strategic function has to do with the direct linkage of the Project Group to the specific territorial aspects of its area of influence and to the strategic vision of the pertinent Hub.

Anchor Projects. An anchor project gives meaning to the Project Groups and makes synergies viable. It is identified as the bottleneck or missing link in the infrastructure network hindering the optimum use of the combined effects of the Group for the sake of economic and social development. It is not necessarily the largest-sized project or the one with the highest estimated investment amount.

Hinge Projects. A hinge project articulates two or more Hubs, plays a role in more than one Hub, or articulates two or more Project Groups within one Hub.

The second phase consisted in defining a structure of factors of analysis to grasp the attributes of each Project Group in terms of their impact on regional integration and development and the feasibility conditions for implementation. On the basis of these two dimensions, an assessment was conducted in order to establish investment priorities.

- Coordinate and incorporate economic, social and environmental development initiatives and policies into the Integration and Development Hubs that are complementary to the integration infrastructure projects identified;

The first stage of the application of the Indicative Territorial Planning Methodology took place during 2003 and 2004, and resulted in the set up and structuring of the Project Portfolio with a regional vision integrating the national visions.

The second stage of the application of the Indicative Territorial Planning Methodology (2005-2010) was launched in 2006 with the approval of an action plan designed to take a qualitative leap forward in the Project Portfolio and the territorial planning process.

¹ See <http://www.iirsa.org/mpti.asp>

With the creation of COSIPLAN, this work is given continuity and the use and dissemination of these tools and methodologies are broadened. One of the objectives of the Strategic Action Plan (PAE) 2012-2022 is to improve, disseminate and implement Territorial Planning methodologies and tools.

- Enhance the technical support of the Portfolio Project Groups by gaining greater knowledge about the economic, social and environmental situation of the territory and the likely impact of the infrastructure projects on sustainable development (potential for production integration, socio-environmental impacts, etc.);
- Improve the capacity for formulating, preparing and assessing integration projects in order to strengthen their inherent quality.

In this regard, training workshops on physical integration topics targeted for the national teams were held,⁽¹⁾ and non-reimbursable funds for pre-investment studies were created.⁽²⁾ Likewise, new territorial planning methodologies⁽³⁾ and analytical tools⁽⁴⁾ were developed, particularly the following: the Production Integration and Logistics (IPrLg) Methodology,⁽⁵⁾ the Strategic Environmental and Social Evaluation (EASE) Methodology,⁽⁶⁾ and the Project Portfolio Database (at present, the COSIPLAN Project Information System – SIP).

Currently, the activities underway make further progress and new instruments are introduced to strengthen and enrich the South American infrastructure sustainable planning process, such as the Integration Territorial Programs,⁽⁷⁾ the Methodology for the Incorporation of Disaster Risk Management in Regional Integration Infrastructure Projects,⁽⁸⁾ the COSIPLAN Project Information System (PIS),⁽⁹⁾ and the COSIPLAN Geo-referenced Information System (GIS).⁽¹⁰⁾

The methodologies and tools mentioned are incorporated into the PAE. The COSIPLAN annual work plans include activities to work on their enhancement and application:

Integration Territorial Programs (PTIs). The objective of the PTIs is to identify and implement a set of actions complementing the API projects in order to leverage their impact on the development of the territories involved, taking into account economic, social and environmental aspects.

Strategic Environmental and Social Evaluation (EASE) Methodology.

The purpose of this methodology is to identify any complementary action that might enhance —from a social, environmental and cultural point of view— the positive effects of projects and minimize their negative impact. The unit of analysis of this methodology is the area of influence of the Portfolio Project Groups or the API projects.

¹ Training Workshops on Physical Integration: (i) Course on Integration and Development of Regional Infrastructure in South America, October 2008 (<http://www.iirsa.org/Event/Detail?Id=122>); and (ii) Training Workshop on Integration and Development of South American Regional Infrastructure, September 2009 (<http://www.iirsa.org/Event/Detail?Id=136>).

² The IDB, CAF and FONPLATA earmarked specific line items for pre-investment studies for physical integration projects, with special emphasis on the Portfolio projects.

³ These methodologies aim at incorporating environmental, social, production integration, logistics, disaster risk management, legal and regulatory aspects, among others, to the project planning process.

⁴ These tools are intended to support and facilitate the analysis of the territory through the standardization of project information.

⁵ See <http://www.iirsa.org/iprlg.asp>

⁶ See <http://www.iirsa.org/ease.asp>

⁷ See <http://www.iirsa.org/pti.asp>

⁸ See <http://www.iirsa.org/grd.asp>

⁹ See <http://www.iirsa.org/sip.asp>

¹⁰ See <http://www.iirsa.org/sig.asp>

Production Integration and Logistics (IPrLg) Methodology. The objective of this methodology is to assess the potential for production integration and for the development of logistics in the area of influence of a Project Group or of an API project. Its final outcome helps articulate a set of actions within the framework of a logic of interdependent relations in order to leverage the impact of infrastructure on the development of these activities.

Methodology for the Incorporation of Disaster Risk Management (DRM). The objective of this methodology is to prevent or reduce the effects of natural disasters (earthquakes, tsunamis, floods, and volcanic eruptions) affecting South American infrastructure, and to devise plans for connectivity and public infrastructure recovery.

With the aim of consolidating the Project Portfolio, the PAE provides for the continuous update of the projects included in the Portfolio. One of the key tools for this update and to ensure project information quality as well as its dissemination is the COSIPLAN Project Information System.

4.3 The COSIPLAN Project Information System

The **Project Information System (SIP)** 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.

The information in each project file is kept updated by one responsible person per country or countries, depending on the geographical scope of each project.⁽¹¹⁾ Annual progress reports are prepared on the basis of the information in the system.

The first version of this database was built in **2004**. Later, 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 database: (i) a module to consolidate the information on the API projects, and (ii) a Continuous Monitoring System (CMS) for these projects.

To incorporate these new instruments, technical and programming adjustments had to be made to the platform in place. In this context, in **2013**,⁽¹²⁾ the SIP⁽¹³⁾ was developed, made up of three components connected online to both access and upload the information.

COSIPLAN Project Portfolio Database. It contains the files of each Portfolio project (known as “individual projects” for the purposes of the system) with general information organized into modules. This database enables the user to make queries 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 of the project.

¹¹ National, binational or multinational projects.

¹² GTE Meeting on API and the CMS, August 27 and 28, 2013, Rio de Janeiro, Brazil. See <http://iirsa.org/Event/Detail?Id=22>.

¹³ See <http://www.iirsa.org/proyectos/>

API Project Database. This contains the files of the 31 API structured projects. The information in these files is organized similarly to the data in the individual project files. Both the structured and individual project files are linked to one another. Furthermore, this database includes a series of reports on the Agenda.





Continuous Monitoring System (CMS). The CMS is a module in the project files, created on the basis of the **Methodology for Scheduling the Life Cycle of Projects**, a tool that follows up on the progress of the projects throughout their life cycle. This module controls the progress of each COSIPLAN Portfolio project as well as of the API structured projects by monitoring the individual projects that make them up.

As mentioned in the paragraph above, 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⁽¹⁾ —which is the methodology on which the CMS is based— was developed between 2012 and 2013.

The **Life Cycle Scheduling Methodology** is based on the four project life cycle stages agreed upon by the governments in 2008: profiling, pre-execution, execution and completed.

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. This is why both stages were further broken down, in order to see the progress of a project more accurately.

PROJECT LIFE CYCLE SCHEDULING

INDIVIDUAL PROJECTS STAGES AND SUB-STAGES										
 PROFILING	 PRE-EXECUTION					 EXECUTION			 COMPLETED	
0%	30%					65%			5%	
0% Initial status	6% Resources for studies	12% Studies underway	18% Studies approved	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.

¹ For more information on the development of the API Project Life Cycle Scheduling Methodology, see the "CMS Progress Report 2012" at <http://www.iirsa.org/Document/Detail?Id=3416>, and "API Progress Report 2013" at <http://www.iirsa.org/Document/Detail?Id=3718>

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.
- *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 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.

In **2014**, the countries carried out specific actions intended to enhance the quality and standardization of the project data, and to better communicate their progress and outcomes. This resulted in the following actions leading to modifications and new tasks in the SIP: (i) organization of the information fields in the project files; (ii) specific descriptors by sector, subsector and type of works; (iii) results indicators for the projects already completed; (iv) application of the Continuous Monitoring System (CMS) to all the Portfolio projects; and (v) API progress indicators.

In **2015**, small adjustments were made to the SIP to improve the performance of the new elements developed the previous year. An advanced search option with new search filters was created, including a new criteria selection methodology. Some information fields in the project files were improved, and new fields were added, such as "Risks and Hazards" and "Estimated Completion Date." Several reports were enhanced and created. The charts were modified, and the API Structured Projects CMS was opened to public access.

In **2016**, a diagnosis was made of quality of the project information contained in the SIP, placing special emphasis on reviewing projects with inconsistent information and on completing any data fields that were empty or included partial information. A review was also made of the projects at the pre-execution stage to detail their progress and current status as accurately as possible so as to facilitate their implementation. Furthermore, the SIP home page was updated to include visualizations and infographics of the projects. An explanatory video of the system was also developed.

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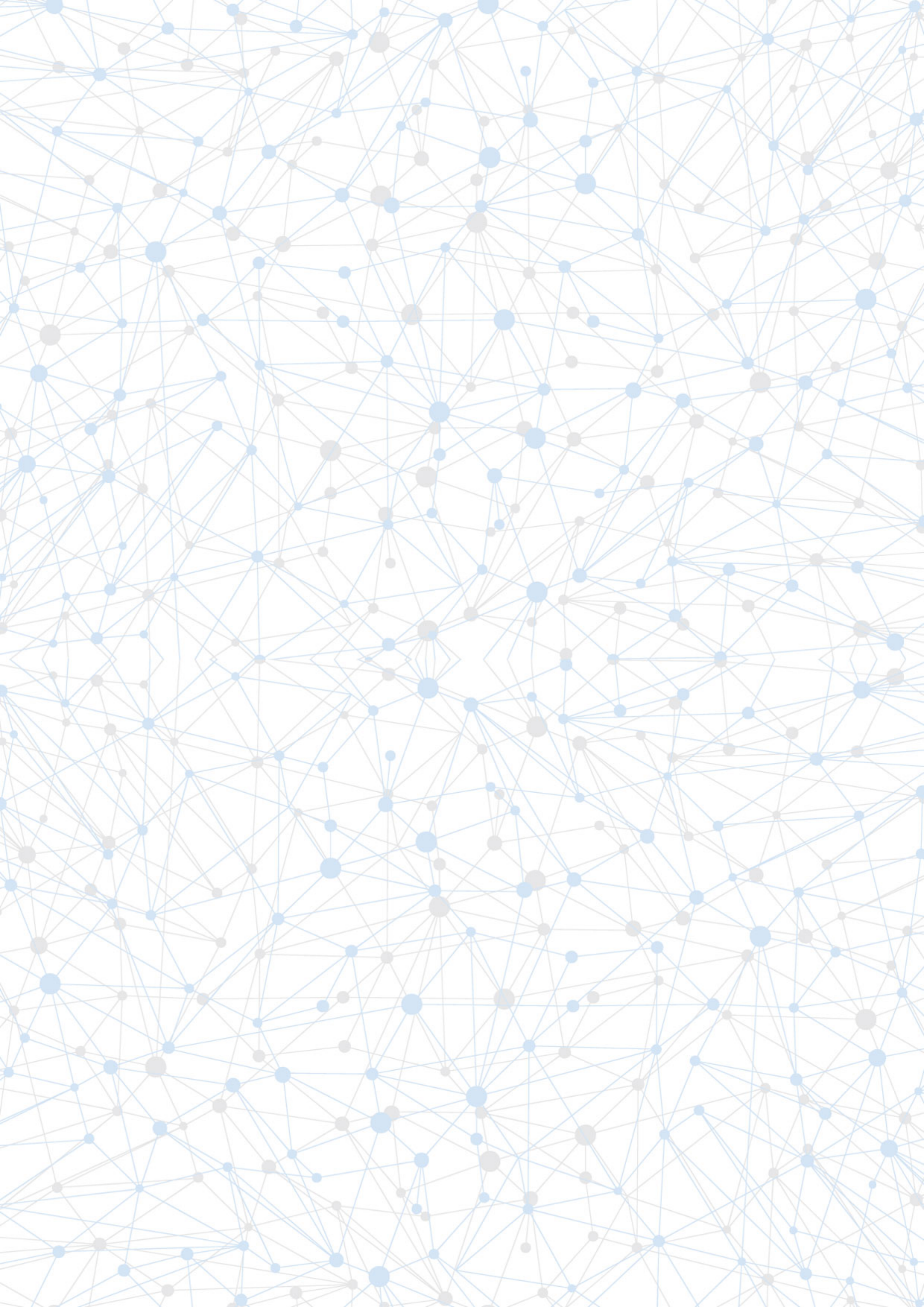
Initiative for the Integration of Regional Infrastructure in South America - IIRSA. <<http://www.iirsa.org/>>

Acronyms and Abbreviations

AMA	Amazon Hub
AND	Andean Hub
API	Integration Priority Project Agenda
AR	Argentina
BO	Bolivia
BR	Brazil
CAF	Development Bank of Latin America
CAP	Capricorn Hub
CCT	Technical Coordination Committee
CEBAF	Binational Border Service Center
CENAF	National Border Service Center
CH	Chile
CMS	Continuous Monitoring System
CO	Colombia
COSIPLAN	South American Infrastructure and Planning Council
DRM	Disaster Risk Management
EASE	Strategic Environmental and Social Evaluation Methodology
EC	Ecuador
FONPLATA	Financial Fund for the Development of the Plata Basin
GDP	Gross Domestic Product
GTE	Executive Technical Group
GU	Guyana
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
IOC	Central Interoceanic Hub
IPRLG	Production Integration and Logistics Methodology
MCC	MERCOSUR-Chile Hub
MERCOSUR	Southern Common Market
PAE	Strategic Action Plan 2012-2022
PBB	Peru-Brazil-Bolivia Hub
PTI	Integration Territorial Program
PY	Paraguay
SIP	COSIPLAN Project Information System
UNASUR	Union of South American Nations
UY	Uruguay
VE	Venezuela

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