Portfolio

Project Portfolio 2017

South American
Infrastructure and
Planning Council

UNASUR
Unión de Naciones Suramericanas
União de Nações Sul - Americanas
Union of South American Nations
Unie van Zuid - Amerikaanse Naties

COSIPLAN

Presidency Pro Tempore
Argentina 2017-2018

IIRSA Technical Forum
Technical Coordination Committee

VII Ordinary Meeting of COSIPLAN Ministers
December 7, 2017, Buenos Aires, Argentina

UNASUR

Unión de Naciones Suramericanas
União de Nações Sul - Americanas
Union of South American Nations
Unie van Zuid - Amerikaanse Naties

COSIPLAN

2017 Project Portfolio

Technical Coordination Committee

IDB

CAF DEVELOPMENT BANK OF LATIN AMERICA

FONPLATA

INTAL

Note

The information about the projects presented here is built on the data contained in the COSIPLAN Project Information System (SIP) (www.cosiplan.org/proyectos) as of August 16, 2017. 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

Projects

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

Geographical Legend

- Country Capital
- City
- Country Border
- Existing Waterway
- Existing Railroad
- Existing Road

REFERENCES

Integration and Development Hubs

ADS — SOUTHERN ANDEAN
AMA — AMAZON
AND — ANDEAN
CAP — CAPRICORN
DES — SOUTHERN
GUY — GUIANESE SHIELD
HPP — PARAGUAY-PARANÁ WATERWAY
IOC — CENTRAL INTEROCEANIC
MCC — MERCOSUR-CHILE
PBB — PERU-BRAZIL-BOLIVIA

Project Life Cycle Stages


Profiling

Pre-execution


Execution


Completed

Sectors


Transport


Energy


Communications

Subsectors

Transport


Air


Road


Rail


River


Sea


Multimodal


Border Crossings

Energy


Energy Generation


Energy Interconnection

Communications


Communications Interconnection

Types of Financing


Public


Private


Public/Private

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cosiplan.org/cartera2017

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OVERVIEW

Since 2000, the South American countries have been working together with the purpose of being better connected and more integrated through infrastructure. The milestone that marked the beginning of this work was the creation of the **Initiative for the Integration of Regional Infrastructure in South America (IIRSA)** by the South American presidents. Its purpose was planning and implementing infrastructure for regional integration.

This was really an innovative initiative since, for the first time, the twelve South American countries coordinated their agendas to address infrastructure issues in a joint manner, taking into account the transport, energy and communications sectors.

In 2008, the South American presidents created the Union of South American Nations (UNASUR) as a forum for high-level political dialogue 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]

This Council became the forum for political and strategic discussion aimed at planning and implementing the integration of regional infrastructure in the UNASUR Member States. IIRSA was incorporated as its technical forum, and thus its ten years of experience and knowledge were the foundations of the COSIPLAN work.

Over the last seventeen years, the officials concerned with planning, public works and many other areas of government have been planning their countries' infrastructure looking beyond their borders, by considering South America as a single territory and taking into account economic, social and environmental aspects.

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,[2] 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.

1. *cosiplan.org*
2. *cosiplan.org/ejes*

The technological platform enabling users to gain insight into the Portfolio projects is the **COSIPLAN Project Information System (SIP).**[3] 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 both to reflect and 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.

This **Seventh Report on the COSIPLAN Project Portfolio**, provided for in the COSIPLAN-IIRSA Work Plan 2017, 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 562 projects; the active Portfolio, i.e. the projects that are currently at the profiling, pre-execution or execution stages; and the completed projects. In addition, it describes the evolution of the projects in the Portfolio since its creation in 2004 and throughout more than a decade, up to 2017, with emphasis on the changes that took place between 2016 and 2017 as a result of the update process undertaken by the countries this year.

Chapter 2 describes the projects of each of the nine Integration and Development Hubs, including a brief socioeconomic and environmental characterization of the latter.

Chapter 3 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 the process that led to the creation of the Project Portfolio, and finally presents the COSIPLAN Project Information System (SIP). ■

3. *cosiplan.org/proyectos*

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 integration infrastructure.

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 creation of the Integration Infrastructure Project Portfolio (hereinafter, the COSIPLAN Project Portfolio) was possible thanks to the **Indicative Territorial Planning Methodology**, which is based on the identification of Integration and Development Hubs[1] that 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.

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.

The Projects

The COSIPLAN Portfolio in 2017

As of 2017, the COSIPLAN Portfolio includes a total of 562 projects for an investment estimated at US$198.901 billion, which are distributed as follows: an active portfolio made up of 409 projects for an investment estimated at US$150.405 billion, and 153 completed projects for an investment of US$48.496 billion[2].

Regarding their territorial scope, 83% of the Portfolio projects are national, 16% are binational and 1% is multinational. Similar percentages hold for their estimated investments.

There are **50 anchor projects**, amounting to an investment estimated at US$15.475 billion, which means 8% of the financial investment in the whole Portfolio.

As for the **sector-based breakdown**, most of the Portfolio projects fall in the transport sector, representing almost 90%. However, these works account for only 72% of the estimated investment, and energy projects account for 28% due to their scope and nature.

1. *See cosiplan.org/ejes*
2. *All the information in this report was taken from the COSIPLAN Project Information System (cosiplan.org/proyectos) as of August 16, 2017*

The Portfolio is mostly financed by the public sector (almost 60% of the estimated investment), a fourth of it is funded by public-private initiatives, while only 15% of the investment comes from the private sector.

In terms of 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 projects in execution also accounts for a third of the total Portfolio.

The Active Portfolio

The projects in the active portfolio, i.e. the projects underway (at the profiling, pre-execution and execution stages), are 409 and account for an investment estimated at US$150.405 billion.

The **10 projects with the greatest estimated investment** represent 40% of the total estimated investment in the COSIPLAN active portfolio.

There is information on the **estimated date of completion** of almost a fourth of the 409 active Portfolio projects. Of the 96 projects that include such information, almost 90% will be completed in the next three years (before the end of 2020), which involves the implementation of US$16.347 billion, based on the investment estimated for these projects.

The Completed Projects

There are 153 completed projects in the Portfolio for a total investment of US$48.496 billion. This means that over a quarter of the integration projects prioritized by the countries have already been completed, 25 of them in the last year, between 2016 and 2017.

Almost half of the completed projects (45%) fall in the road subsector, and as for the investment amount, they account for a fourth of the whole set of projects. The completed works falling in the energy generation subsector account for almost 5% of all completed projects, having required, however, almost 45% of the total investments made due to the completion of the project with the greatest investment in the whole Portfolio.

Of the total completed works, 80% were financed with public **funds**. In terms of investment amount, the public sector contributed 40%.

Regarding the **territorial scope**, most completed projects are national in scope (85%), while the other ones are binational. This ratio rises in relation to the investment amount, with the national share accounting for almost 97%. However, several national projects must be seen in terms of their contribution to cross-national connectivity.

Evolution of the Project Portfolio

Between 2004 and 2017, the portfolio grew, on average, by 17 projects and US$12.420 billion per year, which reflects the countries' long-term deep commitment to the physical integration of the region. In 2017, the estimated investment grew by 4% vis-à-vis last year.

In 2017, online meetings of the Executive Technical Groups to Update the Projects in the COSIPLAN Portfolio and the Integration Priority Project Agenda (API) were held. A meeting was held for each Integration and Development Hub,[3] using an online video-conferencing tool.

In preparation for the above-mentioned meetings and as a result of the discussions held at them, the South American countries worked on the update of the Portfolio projects in the **COSIPLAN Project Information System**, and over the last year they updated 63% of the projects included in the active COSIPLAN Portfolio. This has been possible thanks to the participation of multidisciplinary technical teams from different governmental areas of the countries. When considering the last two years, such percentage exceeds 83%.

As for the **annual assessment**, the total number of projects in the Portfolio dropped from 581 to 562, as 23 projects were excluded and four were included. The total estimated amount grew from US$191.420 billion to US$198.901 billion.

3. 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 COSIPLAN Project Information System (SIP)

The Hubs

The **Amazon Hub** comprises 70 projects organized into eight project groups for an investment estimated at US$27.498 billion. There are 46 projects in its active portfolio, amounting to an investment estimated at US$20.423 billion. It is expected that 26% of the investment amount estimated for the Hub will have been made by the end of 2020. The 24 completed projects in the Hub demanded a total investment of US$7.073 billion, equal to more than 25% of the total investment for the Hub's portfolio.

The **Andean Hub** comprises 65 projects organized into nine project groups for an investment estimated at US$28.141 billion. There are 45 projects in its active portfolio, amounting to an investment estimated at US$27.148 billion. Seventeen of these projects will be completed in the next four years (2017-2020), involving 21% 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 77 projects organized into five project groups for an investment estimated at US$15.851 billion. There are 57 projects in its active portfolio, amounting to an investment estimated at US$12.897 billion. It is expected that 46% of the investment amount estimated for the Hub's portfolio will have been made by the end of 2020. The completed projects are 20 and required a total investment of US$2.954 billion, equal to 19% of the total projected investment.

The **Guianese Shield Hub** comprises 20 projects organized into four project groups for an investment estimated at US$4.581 billion. There are 14 projects in the active portfolio of the Hub, amounting to an investment estimated at US$4.495 billion. Two of these projects will be completed in the next four years (2017-2020), 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 84 projects organized into five project groups for an investment estimated at US$7.534 billion. There are 64 projects in its active portfolio, amounting to an investment estimated at US$5.421 billion. Fifteen of these projects will be completed in the next four years (2017-2020), involving more than 55% of the investment amount estimated for the Hub's portfolio. The completed projects are 20 and required a total investment of US$2.133 billion.

The **Central Interoceanic Hub** comprises 63 projects organized into five project groups for an investment estimated at almost US$19.901 billion. There are 40 projects in its active portfolio, amounting to an investment estimated at US$18.815 billion. Twelve of these projects will be completed in the next four years (2017-2020), involving 45% of the investment amount estimated

for the Hub. The completed projects are 23 and required a total investment of US$1.084 billion.

The **MERCOSUR-Chile Hub** comprises 115 projects organized into six project groups for an investment of US$58.516 billion. There are 86 projects in its active portfolio, amounting to an investment estimated at US$48.807 billion. Twenty-nine of these projects will be completed in the next four years (2017-2020), involving about 24% of the investment amount estimated for the Hub's portfolio. The completed projects are 29 and required US$9.708 billion.

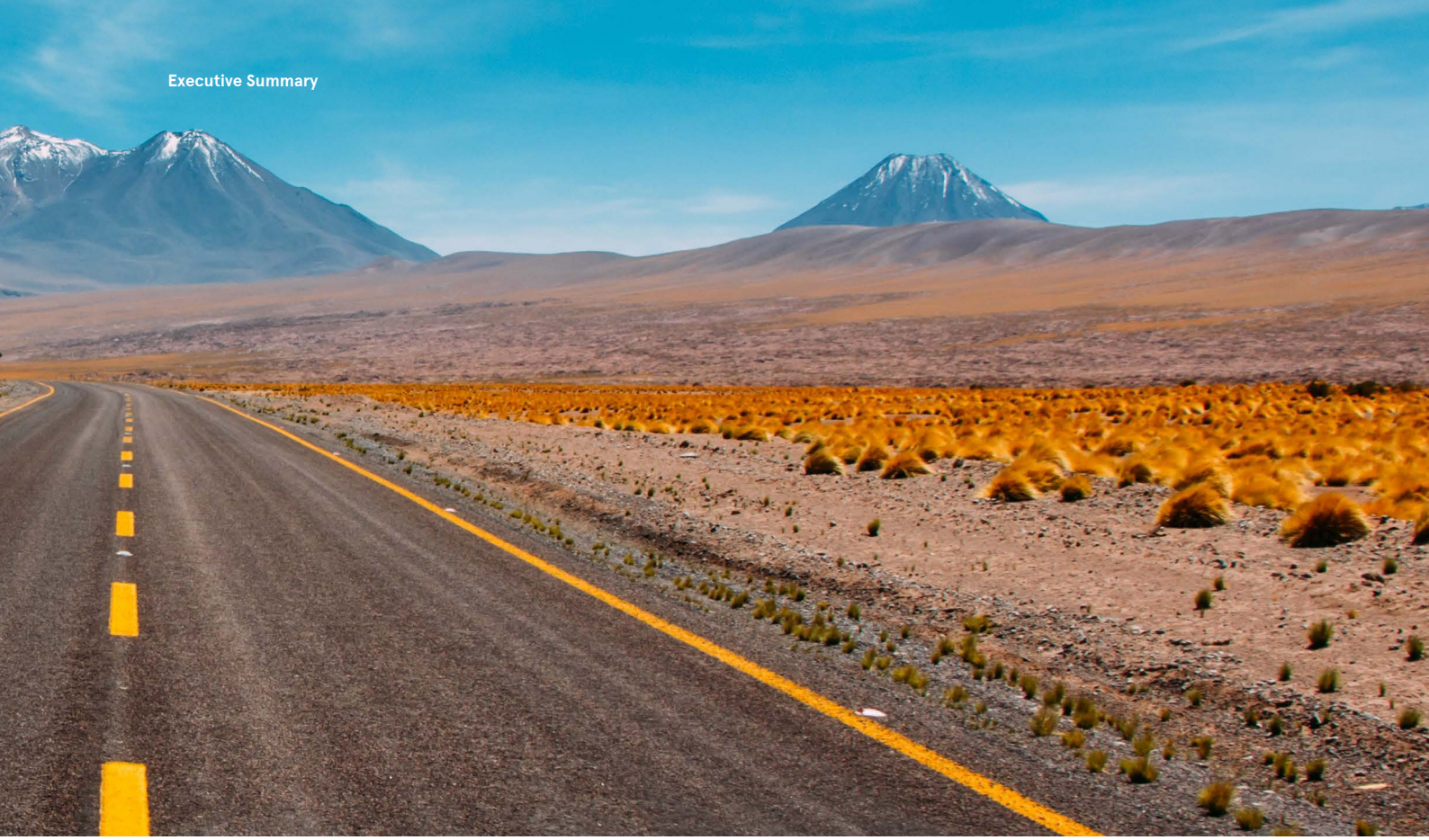
The **Peru-Brazil-Bolivia Hub** comprises 24 projects organized into three project groups for an investment estimated at US$32.648 billion. There are 18 projects in its active portfolio, amounting to an investment estimated at US$8.459 billion. Taking into account the five projects currently at the execution stage, it is expected that, once they are completed, almost 17% of the investment amount estimated for the Hub will have been made. The completed projects are six and required a total investment of US$24.189 billion.

The **Southern Hub** comprises 45 projects organized into two project groups for an investment estimated at US$4.411 billion. There are 39 projects in its active portfolio, amounting to an investment estimated at US$3.938 billion. Taking into account the 13 projects that are currently at the execution stage, it is expected that, once they are completed, half of the estimated investment amount for the Hub will have been made. The completed projects are six and required a total of US$473 million; two of them involved electric interconnection works that account for 95% of the amount invested.

The Planning of the Territory

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, the objectives are 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 COSIPLAN Portfolio 2017.

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

The development of the Indicative Territorial Planning 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.

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.

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 (SIP).

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 SIP is made up of three components that have been connected online since 2013 to both access and upload the information.

In 2016 and 2017, attention was given to the need that users became familiar with the system and the planning concepts. Thus, the SIP home page was redesigned to make it more modern, including dynamic visualizations and infographics of the Portfolio and API projects. Furthermore, geo-referenced files were created in Google Earth for each Portfolio and API project, which were in turn included in the project files to help users locate the projects easily. Also, a video was shot presenting the objective of the SIP as well as its main features and functionalities. ■

Argentina

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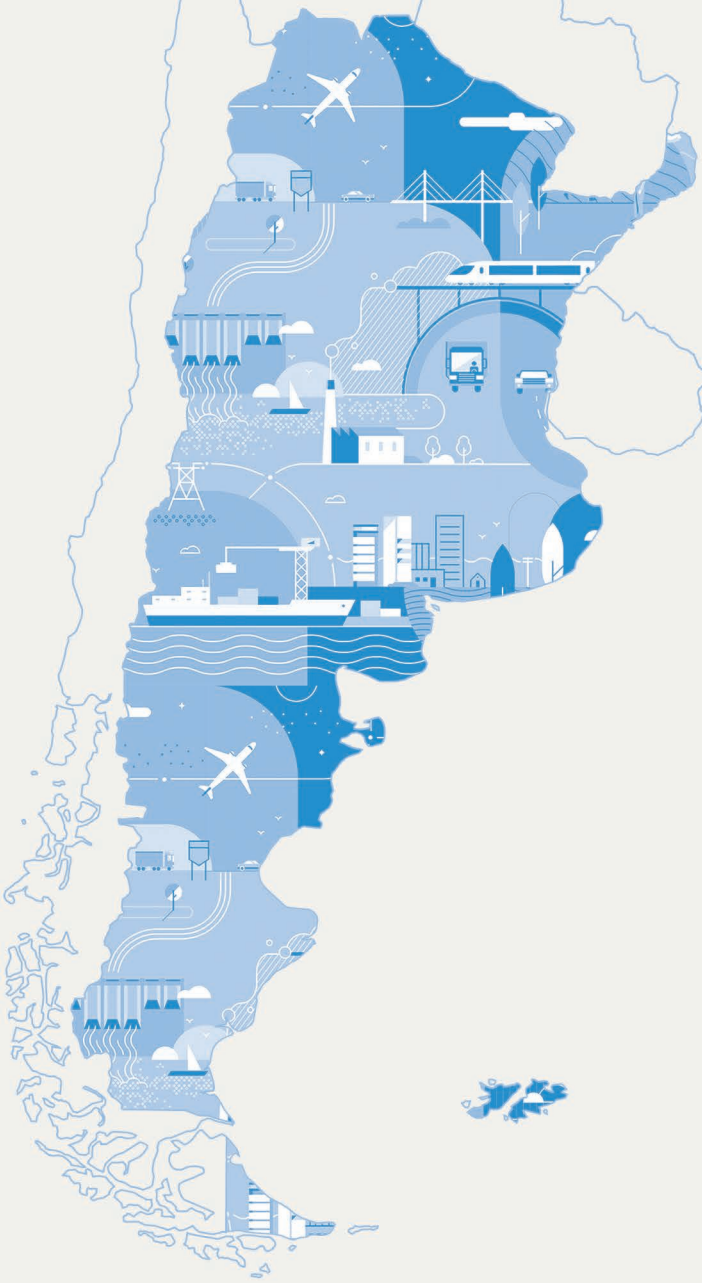


Population
40,117,096

Area
3,761,274 km²

Population density
11 Hab./km²

GDP
US$ 543.490 billion

Estimated Investment

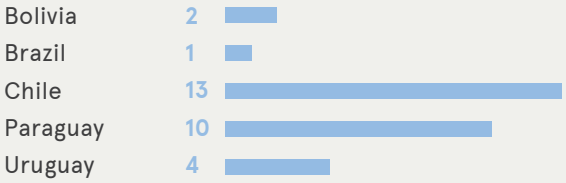
US$ million

48,545.9

132
Nationals
81.5%

30
Binationals
18.5%

Binationals projects



No. of projects U$S million

Projects by stage

Profiling
19
5,611.1

Pre-execution
58
23,340.7

Execution
53
12,479.5

Completed
32
7,114.6

Projects by sector

Transport
144
28,609.9

Energy
17
19,933

Communications
1
3

Projects by type of financing

Public
152
42,858

Public/private
10
5,687.9

Projects by subsector

Transport

Air
1

Road
80
19,874.5

Rail
21
7,044.1

River
20
700.4

Sea
7
569.7

Multimodal
1
20

Border Crossings
9
5.9

Energy

Energy Generation
8
16,223

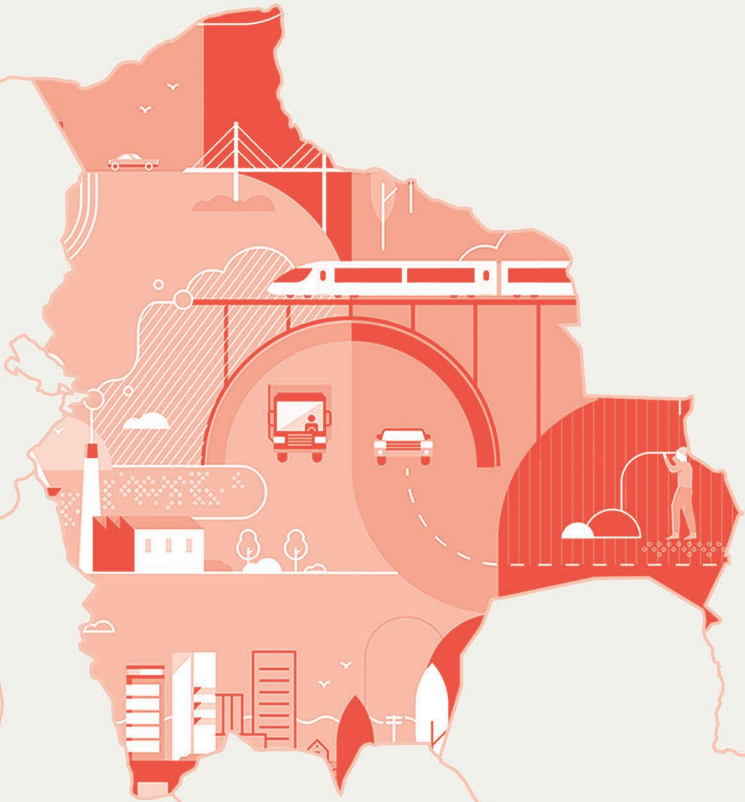
Energy Interconnection
9
3,710

Communications

Communications Interconnection
1
3

Bolivia

AND CAP HPP IOC PBB



Population
10,027,254

Area
1,098,581km²

Population density
9 Hab./km²

GDP
US$ 34.139 billion

Estimated Investment

US$ million

19,611.5

32
Nationals
61.5%

19
Binationals
36.5%

1
Multinational
1.9%

Binationals projects

Argentina	2	
Brazil	6	
Chile	2	
Paraguay	5	
Peru	6	

No. of projects U$S million

Projects by stage

Profiling
11
5,659

Pre-execution
18
9,498.7

Execution
14
4,112

Completed
9
341.8

Projects by sector

Transport
46
13,073.8

Energy
4
6,521.7

Communications
2
16

Projects by type of financing

Public
49
12,155.8

Private
1
46.7

Public/private
2
7.409

Projects by subsector

Transport

Air
1
20

Road
23
5,038.4

Rail
2
7,390

River
7
49.5

Sea
1
230

Multimodal
2
202.9

Border Crossings
10
143

Energy

Energy Generation
3
6,512.7

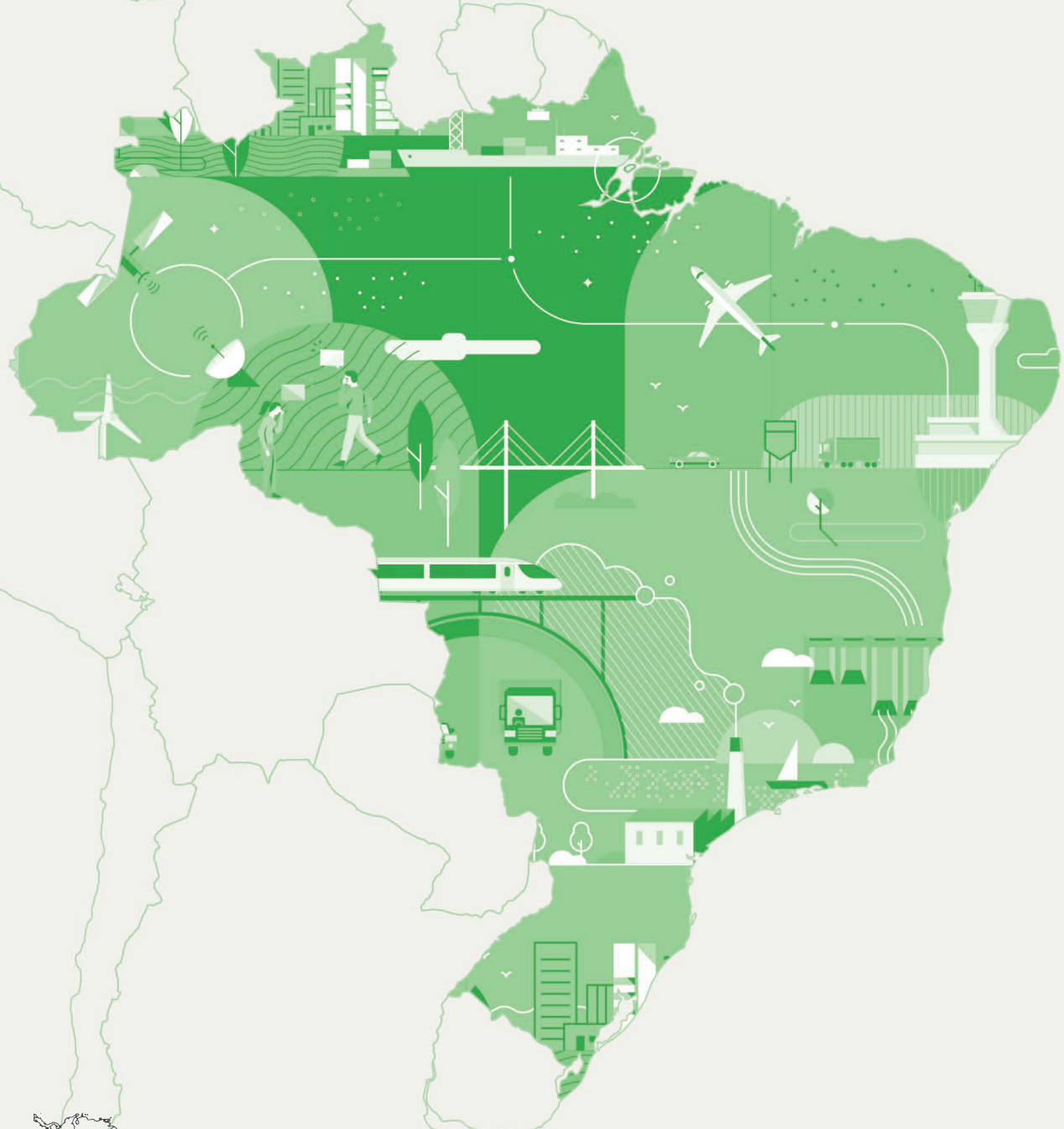
Energy Interconnection
1

Communications

Communications Interconnection
2
16

Brazil

AMA CAP GUY HPP IOC MCC PBB



Population
190,732,694

Area
8,514,876 km²

Population density
22 Hab./km²

GDP
US$ 2.345.894 billion

Estimated Investment

US$ million

78,107.8

65
Nationals
73%

21
Binationals
23.6%

3
Multinationals
3.4%

Binationals projects

Argentina	1	Paraguay	6
Bolivia	6	Peru	4
Colombia	1	Suriname	1
Ecuador	1	Uruguay	4
Guyana	2	Venezuela	2

No. of projects U$S million

Proyectos por etapas

Profiling
7
8,700

Pre-execution
18
8,241.4

Execution
32
29,230.8

Completed
32
31,935.6

Projects by sector

Transport
78
46,019.7

Energy
9
32,088.1

Communications
2

Projects by type of financing

Public
70
30,323.8

Private
11
16,909.9

Public/private
8
30,874.1

Projects by subsector

Transport

Air
2
5,450

Road
37
21,528

Rail
17
15,408

River
12
1,128.8

Sea
6
2,469.7

Border Crossings
4
35.2

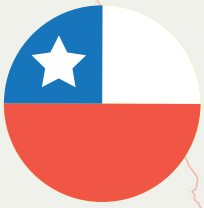
Energy

Energy Generation
1
26,447

Energy Interconnection
4
5,641.1

Communications

Communications Interconnection
2



Chile

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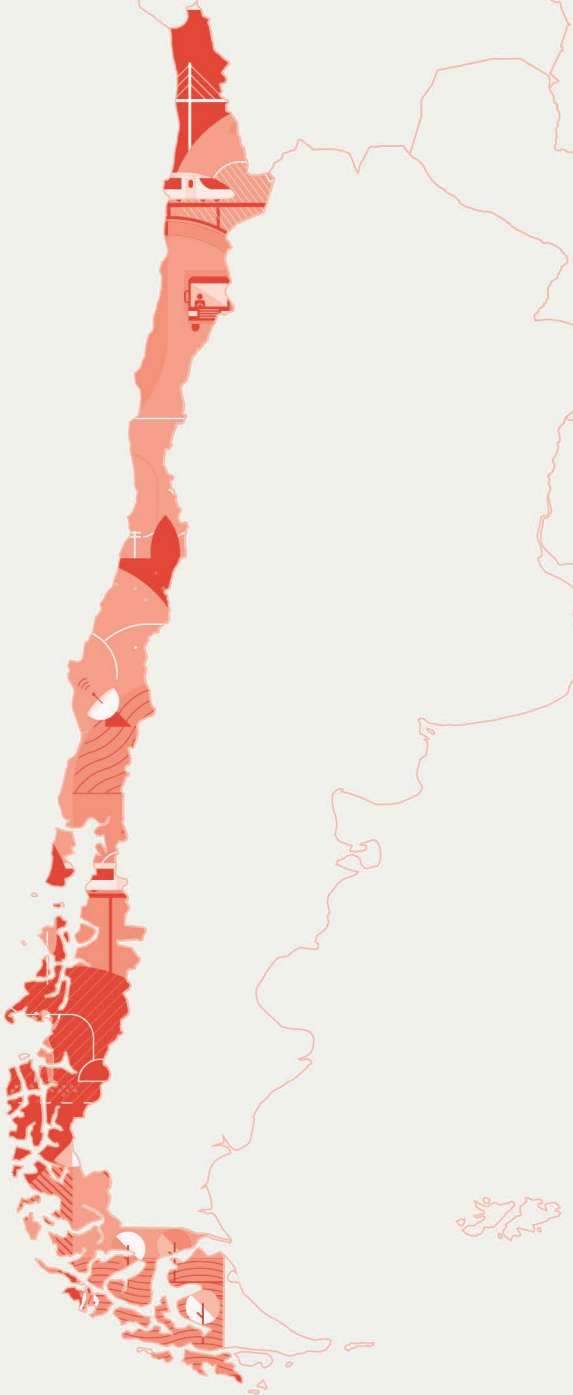


Population
17,444,799

Area
2,006,096 km²

Population density
9 Hab./km²

GDP
US$ 258.062 billion

Estimated Investment

US$ million

12,561

59
Nationals
78.7%

16
Binationals
21.3%

Binationals projects

Argentina	13
Bolivia	2
Peru	1

No. of projects U$S million

Projects by stage

Profiling
2
1,600

Pre-execution
29
5,027.5

Execution
17
3,418.1

Completed
27
2,515.4

Projects by sector

Transport
75
12,561

Projects by type of financing

Public
53
7,792

Private
21
4,649

Public/private
1
120

Projects by subsector

Transport

Air
6
829.6

Road
43
9,476.5

Rail
2
561

Sea
8
1,443.4

Border Crossings
16
250.5

Colombia

AMA AND

Population
46,097,854

Area
1,141,748 km²

Population density
40 Hab./km²

GDP
US$ 377.740 billion

Estimated Investment

US$ million

4,641.7

Binationals projects

Brazil	1	
Ecuador	9	
Peru	1	
Venezuela	5	

18
Nationals
56.3%

13
Binationals
40.6%

1
Multinational
3.1%

No. of projects U$S million

Projects by stage

Profiling
3
77.9

Pre-execution
5
1,015.5

Execution
10
2,821.8

Completed
14
726.5

Projects by sector

Transport
25
4,121.4

Energy
7
520.3

Projects by type of financing

Public
27
4,329

Public/private
5
312.7

Projects by subsector

Transport

Road
15
3,886.3

River
4
92.4

Sea
1
5

Border Crossings
5
137.7

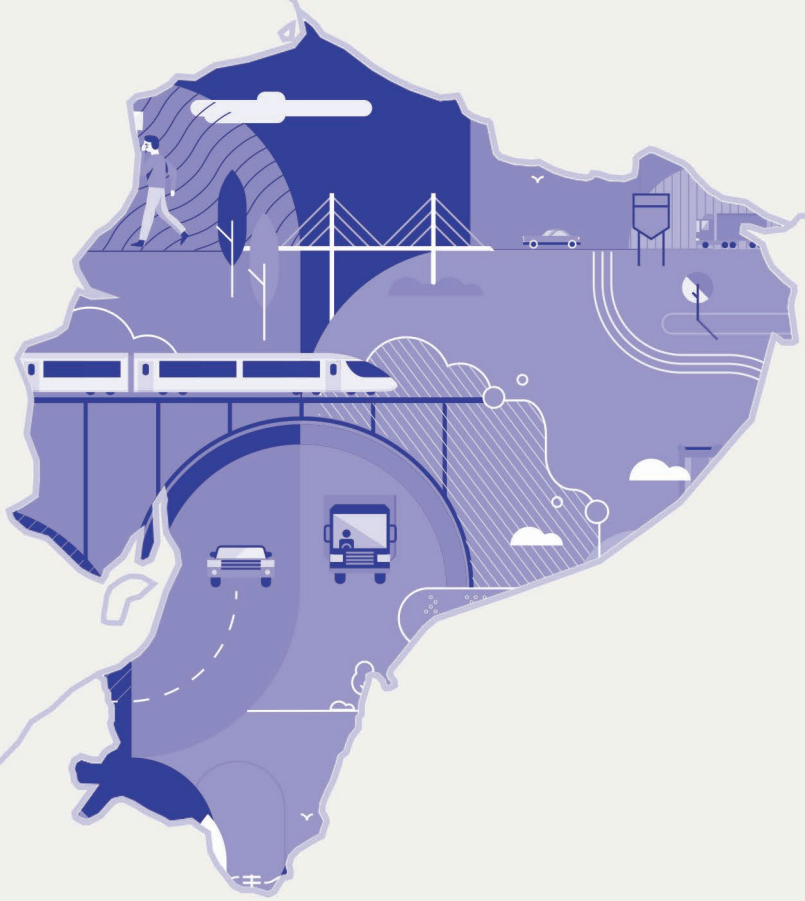
Energy

Energy Generation
1
6.9

Energy Interconnection
6
513.4

Ecuador

AMA AND



Population
15,845,407

Area
257,217 km²

Population density
62 Hab./km²

GDP
US$ 100.543 billion

Estimated Investment

US$ million

19,603.1

18
Nationals
47.4%

19
Binationals
53.6%

Binationals projects

Brazil	1	
Colombia	9	
Peru	12	

No. of projects U$S million

Projects by stage

Profiling
8
17,847.6

Pre-execution
6
145.6

Execution
8
796.4

Completed
16
813.5

Projects by sector

Transport
31
18,954.9

Energy
7
648.2

Projects by type of financing

Public
38
19,603.1

Projects by subsector

Transport

Air
3
116.6

Road
11
790.8

Rail
1
17,800

River
5
54

Sea
1

Multimodal
1
5

Border Crossings
9
188.5

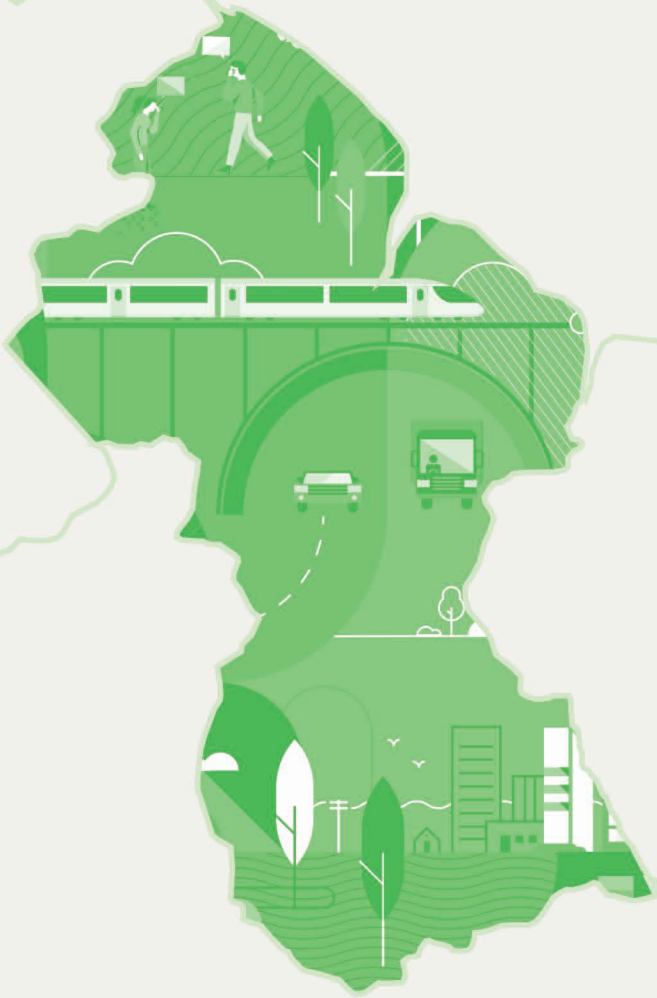
Energy

Energy Generation
3
602.8

Energy Interconnection
4
45.4

Guyana

GUY



Population
751,223

Area
214,970 km²

Population density
3 Hab./km²

GDP
US$ 3.086 billion

Estimated Investment

US$ million

911.9

Binationals projects

Brazil	2	
Suriname	4	
Venezuela	2	

3
Nationals
37.5%

2
Binationals
25%

3
Multinationals
37.5%

No. of projects U$S million

Projects by stage

Profiling
3
1

Pre-execution
2
550.8

Execution
1
350.1

Completed
2
10

Projects by sector

Transport
7
911.9

Energy
1

Projects by type of financing

Public
6
261

Public/private
2
650.9

Projects by subsector

Transport

Road
6
911.9

Sea
1

Energy

Energy Generation
1

Paraguay

CAP HPP IOC MCC

Population
5,163,198

Area
406,752 km²

Population density
13 Hab./km²

GDP
US$ 30.985 billion

Estimated Investment

US$ million

18,380.2

43
Nationals
67.2%

20
Binationals
31.3%

1
Multinational
1.6%

Binationals projects

Argentina	1
Bolivia	9
Brazil	12
Uruguay	12

No. of projects U$S million

Projects by stage

Profiling
16
757.1

Pre-execution
25
13,266

Execution
11
2,360.4

Completed
12
1,996.7

Projects by sector

Transport
53
8,255.2

Energy
8
10,116

Communications
3
9

Projects by type of financing

Public
57
15,921.9

Private
5
1,809.8

Public/private
2
648.5

Projects by subsector

Transport

Air
5
294.5

Road
26
4,007.9

Rail
4
3,450

River
14
393.2

Multimodal
1

Border Crossings
3
109.6

Energy

Energy Generation
4
9,264

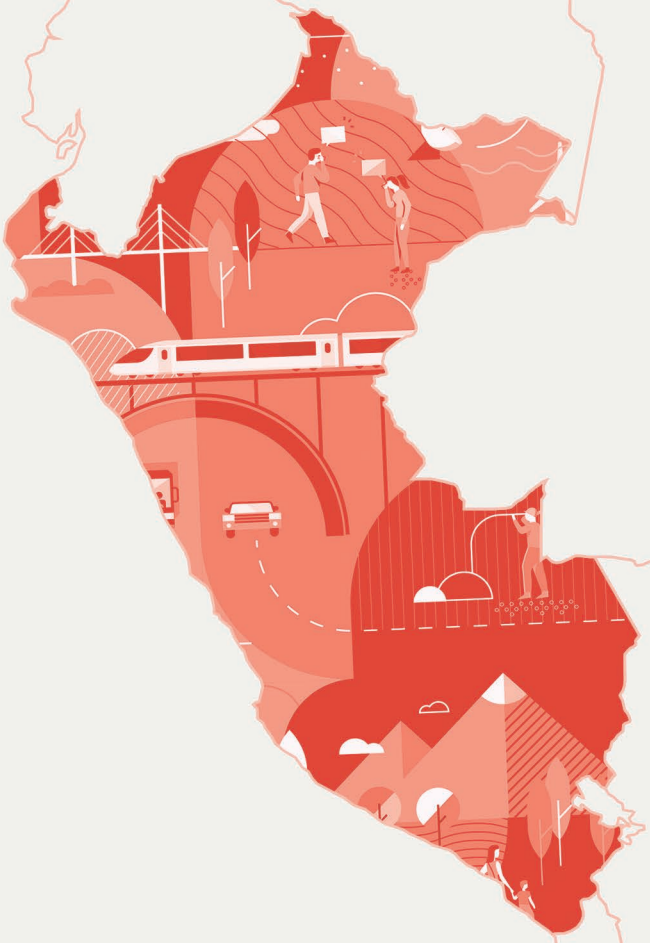
Energy Interconnection
4
852

Communications

Communications Interconnection
3
9

Peru

AMA AND IOC PBB



Population
30,814,175

Area
1,285,215 km²

Population density
24 Hab./km²

GDP
US$ 202.098 billion

Estimated Investment

US$ million

12,535

51
Nationals
69.9%

21
Binationals
28.8%

1
Multinational
1.3%

Binationals projects

Bolivia	6
Brazil	4
Chile	1
Colombia	1
Ecuador	12

No. of projects U$S million

Projects by stage

Profiling
17
1,350.7

Pre-execution
12
2,027.9

Execution
24
5,190.3

Completed
20
3,966.1

Projects by sector

Transport
70
12,511.4

Energy
3
23.6

Projects by type of financing

Public
33
3,062.4

Private
29
6,752.7

Public/private
11
2,719.9

Projects by subsector

Transport

Air
6
877.4

Road
28
8,688.7

Rail
1
390

River
10
237.3

Sea
7
1,721.9

Multimodal
7
424.5

Border Crossings
11
171.6

Energy

Energy Interconnection
3
23.6

Suriname

GUY

Population
492,000

Area
163,820 km²

Population density
3 Hab./km²

GDP
US$ 5.681 billion

Estimated Investment

US$ million

3,831.9

Binationals projects

Brazil	1	
Guyana	4	
Venezuela	2	

3
Nationals
42.9%

1
Binationals
14.3%

3
Multinationals
42.9%

No. of projects U$S million

Projects by stage

Profiling
3
51

Pre-execution
2
3,320.8

Execution
2
460.1

Projects by sector

Transport
6
3,831.9

Energy
1

Projects by type of financing

Public
5
3,181

Public/private
2
650.9

Projects by subsector

Transport

Road
5
811.9

Sea
1
3,020

Energy

Energy Generation
1

Uruguay

HPP MCC

Population
3,286,314

Area
176,215 km²

Population density
19 Hab./km²

GDP
US$ 57.471 billion

Estimated Investment

US$ million

4,321.5

33
Nationals
78.6%

9
Binationals
21.4%

Binationals projects

Argentina	4	
Brazil	4	
Paraguay	1	

No. of projects U$S million

Projects by stage

Profiling
7
690

Pre-execution
11
1,429.5

Execution
14
1,687.4

Completed
10
514.6

Projects by sector

Transport
32
3,131.5

Energy
9
1,190

Communications
1

Projects by type of financing

Public
34
3,274.8

Private
4
19

Public/private
4
1,027.7

Projects by subsector

Transport

Road
7
564.9

Rail
7
567.2

River
12
756.5

Sea
2
1,189

Multimodal
2
27

Border Crossings
2
27

Energy

Energy Generation
5
761

Energy Interconnection
4
429

Communications

Communications Interconnection
1

Venezuela

AND GUY

Population
30,206,307

Area
916,445 km²

Population density
33 Hab./km²

GDP
US$ 567.997 billion

Estimated Investment

US$ million

2,122.6

11
Nationals
55%

7
Binationals
35%

2
Multinationals
10%

Binationals Projects

Brazil	2	
Colombia	5	
Guyana	2	
Suriname	2	

No. of projects U$S million

Projects by stage

Profiling
7
1,222.8

Pre-execution
3
315.8

Execution
8
458.7

Completed
2
125.2

Projects by sector

Transport
13
779.5

Energy
6
1,343.1

Communications
1

Projects by type of financing

Public
17
1,181.7

Private
1
625

Public/private
2
315.8

Projects by subsector

Transport

Road
7
747.5

Rail
1

Sea
1

Border Crossings
4
32

Energy

Energy Generation
3
625

Energy Interconnection
3
718.1

Communications

Communications Interconnection
1

The COSIPLAN Project Portfolio at a Glance

Active Portfolio

409

Projects

US$ 150.405 billion

Completed Projects

153

Projects

US$ 48.496 billion

Estimated Investment
US$ million

198,901.4

468
National projects
83.3%

89
Binational projects
15.8%

5
Multinational projects
0.9%

ARGENTINA	162	GUYANA	8
BOLIVIA	52	PARAGUAY	64
BRAZIL	89	PERU	73
CHILE	75	SURINAME	7
COLOMBIA	32	URUGUAY	42
ECUADOR	38	VENEZUELA	20

No. of projects · U$S million

Projects by stage

Profiling
81
36,220.9

Pre-execution
152
52,842.6

Execution
176
61,341.3

Completed
153
48,496.5

Projects by sector

Transport
502
143,953.7

Energy
54
54,926.7

Communications
6
21

Projects by type of financing

Public
447
118,993.7

Private
71
30,807

Public/private
44
49,100.7

Projects by subsector

Transport

Air
24
7,588.1

Road
258
69,354.2

Rail
53
52,065.3

River
71
2,898.3

Sea
35
10,418.7

Multimodal
14
679.3

Border Crossings
47
949.7

Energy

Energy Generation
25
43,516.5

Energy Interconnection
29
11,410.2

Communications

Communications Interconnection
6
21

THE PROJECTS

1. The COSIPLAN Portfolio in 2017

The physical integration of South America is a key issue for the peoples of the region and a priority on government agendas. COSIPLAN is constantly working on the update and analysis of the integration infrastructure projects that the countries deem necessary for their joint development and that form part of the Project Portfolio, as well as on the improvement of its information quality and on the dissemination of the results and benefits.

As of 2017, the COSIPLAN Portfolio includes a total of 562 projects for an investment estimated at US$198.901 billion, which are distributed as follows: an active portfolio made up of 409 projects for an investment estimated at US$150.405 billion, and 153 completed projects for an investment of US$48.496 billion.[1]

1.1 The Projects in the Territory

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 (87%, 12.5% and less than 1%, respectively).

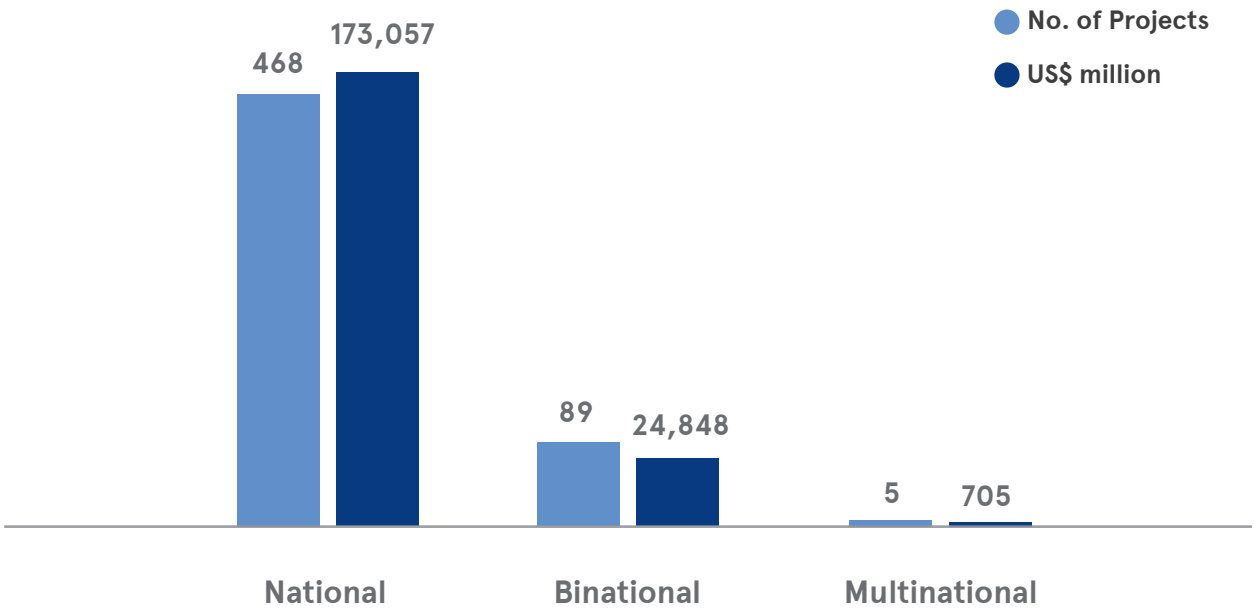
Many national projects are essential to solve cross-national connectivities and, in many cases, several national projects together provide a solution to the same connectivity. Furthermore, working on international connectivities by encouraging national projects within national borders sometimes contributes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

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

As for national projects, Argentina and Brazil include more projects than all the other countries. Chile ranks third, followed by Peru. In terms of binational projects, Argentina ranks first, followed by Brazil and Peru (both with the same number), and next but closely, by Bolivia, Ecuador and Paraguay.

1. *All the information in this report was taken from the COSIPLAN Project Information System (cosiplan.org/proyectos) as of August 16, 2017*

Territorial Scope of the Projects



Territorial Scope of the Projects by Country

Country	National	Binational	Multinational
Argentina	132	30	0
Bolivia	32	19	1
Brazil	65	21	3
Chile	59	16	0
Colombia	18	13	1
Ecuador	18	19	1
Guyana	3	2	3
Paraguay	43	20	1
Peru	51	21	1
Suriname	3	1	3
Uruguay	33	9	0
Venezuela	11	7	2

1.2 The 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.

Most of the 47 project groups that make up the Integration and Development Hubs include one or two anchor projects, depending on the need to more effectively coordinate the other projects of the set.

There are 50 anchor projects, amounting to an investment estimated at US$15.475 billion, which means 8% of the financial investment in the whole Portfolio.

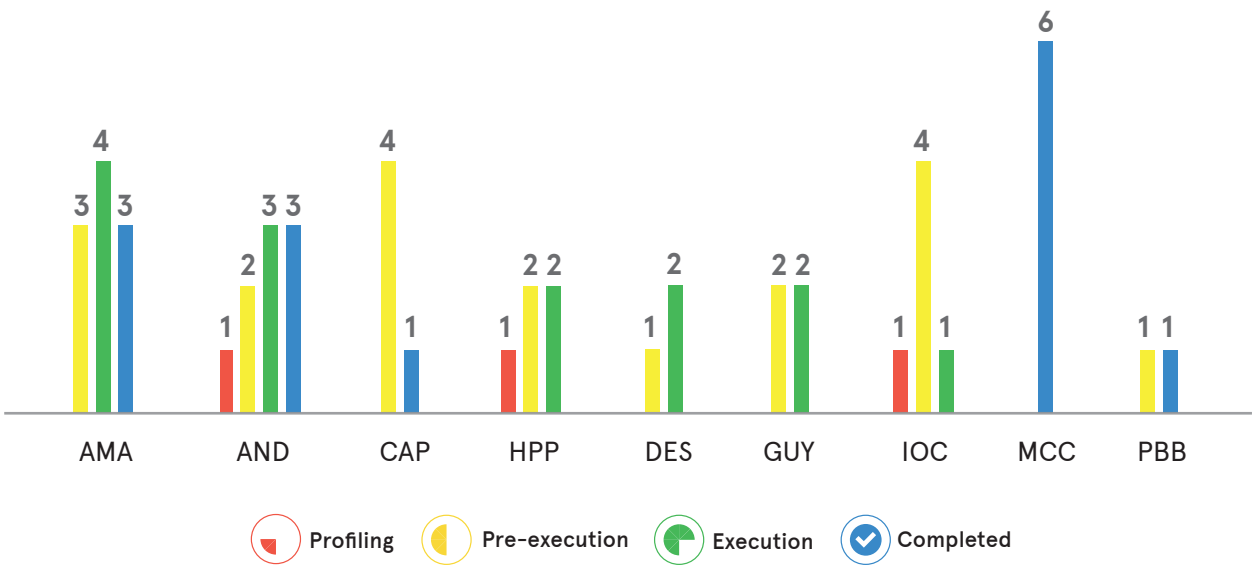
Anchor Project Stages

** US$ million*

	No. of Projects	% of Projects	Estimated Investment	% of Investment
Profiling	3	6.0	116.5	0.8
Pre-execution	19	38.0	3,636.1	23.5
Execution	14	28.0	8,192.5	52.9
Completed	14	28.0	3,529.7	22.8
TOTAL	**50**	**100.0**	**15,474.9**	**100.0**

Anchor project Paving of National Route No. 145, from Intersection with National Route No. 40 South to the Access to Pehuenche Border Crossing was completed this year. Most anchor projects (28) are at the execution stage, or have already been completed, accounting for 76% 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 of estimated investment in this kind of project, the Amazon Hub ranks first, followed by the MERCOSUR-Chile Hub.

Number of Anchor Projects by Stage and by Hub



Nearly all of them (49) 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 and border crossings subsectors (8 each), the rail subsector (5), and multimodal projects (2).

Anchor Projects – Subsectors

**US$ million*

Sector / Subsector	No. of Projects	% of Projects	Estimated Investment	% of Investment
Road	26	52	8,367.9	54
Rail	5	10	6,550.0	42
River	8	16	299.5	2
Multimodal	2	4	25.0	0
Border Crossings	8	16	232.5	2
Energy Generation	1	2	0.0	0
TOTAL	**50**	**100**	**15,474.9**	**100**

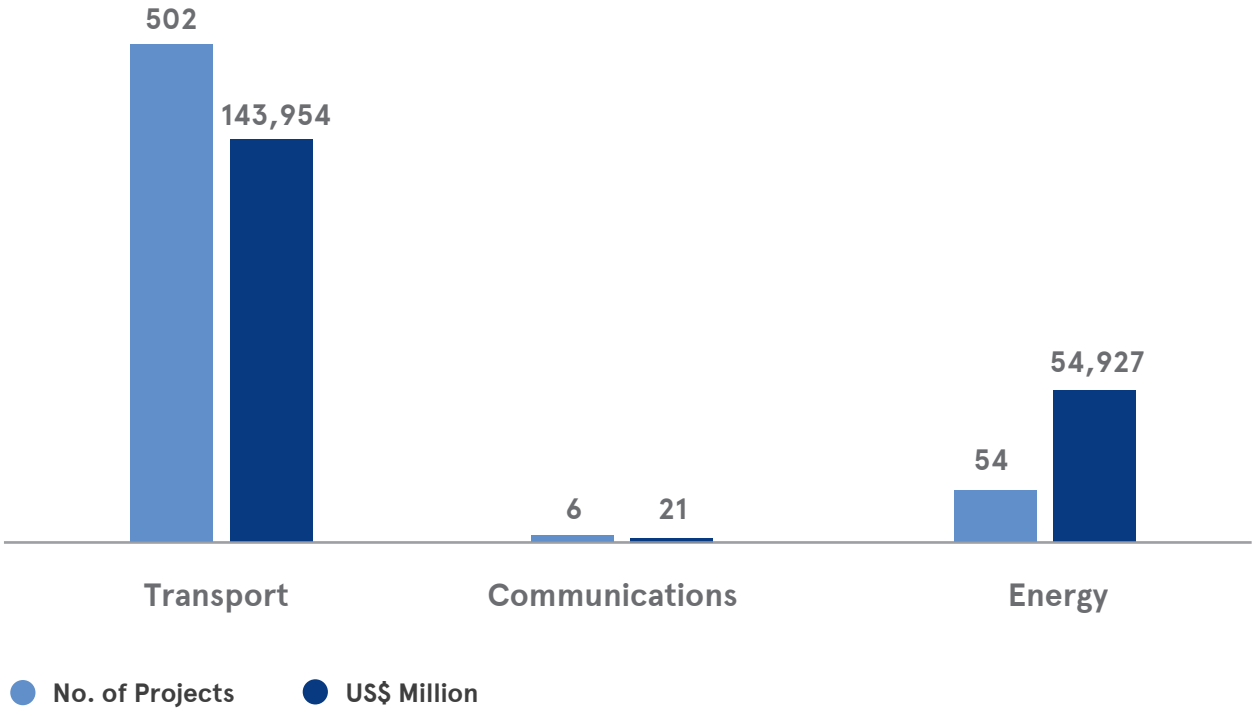
Although most anchor projects fall in in the road subsector, those in the rail subsector are the ones that require the greatest relative financial effort, as with only 10% of the anchor projects, this subsector involves more than42% of the total estimated investment.

1.3 Sectors and subsectors

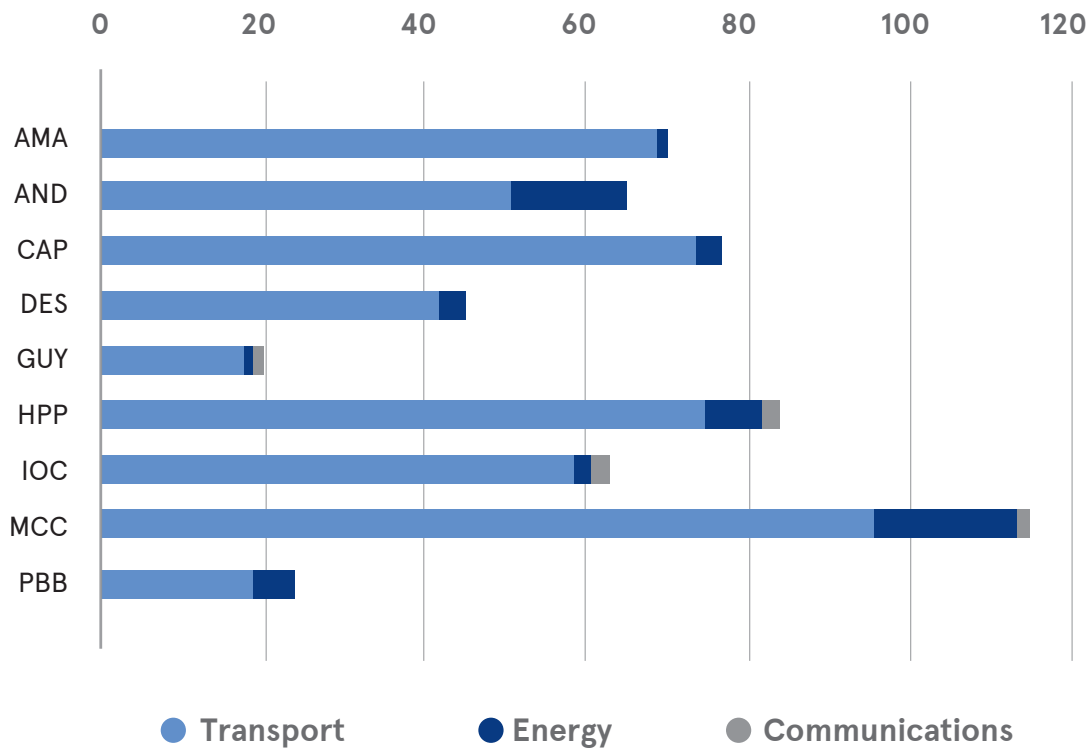
The COSIPLAN Project Portfolio is mostly made up of transport projects, accounting for almost 90% of the Portfolio. However, transport works alone account for 72% of the estimated investment, as energy projects account for 28% given their scope and nature.

Energy projects are mainly located in the MERCOSUR-Chile, Andean and Paraguay-Paraná Waterway Hubs, but there is at least 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

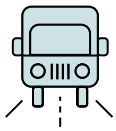


Project Sectors By Hub



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.

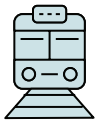
Air subsector: A third of the airport projects belong to the MERCOSUR-Chile Hub, and if the second hub in terms of these projects, i.e. the Central Interoceanic Hub, is considered, they both host more than half of the air projects in the entire Portfolio (33% and 25%, respectively). In terms of the estimated investment, the former hub accounts for 71% of the total amount of the subsector. Seven projects have already been completed and another eight 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 ranks seventh in terms of estimated investment in the whole Portfolio: US$3.550 billion.



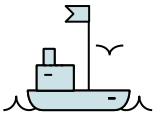
Road subsector: This is the subsector involving the largest number of Portfolio projects, almost half of the total, and accounting for 40% of the estimated investment amount. Almost 70% of all the road projects have been completed or are at the execution stage.

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 rehabilitation, expansion or maintenance of existing roads, whereas more than a third of the projects involve the construction of new roads, accounting for 20% of the total investment in the subsector. However, the greatest estimated investment is related to expansion works, amounting to half of the financial investment for the whole subsector. Furthermore, 25 major bridges, 16 beltways and three tunnels complete the picture. Forty percent of the projects are at the execution stage and 27% have already been completed. Only 5% 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 60% are at the profiling and pre-execution stages), because of the magnitude and scope of the connectivity works proposed for this mode of transport. Of the other projects, 14 are at the execution stage and 10 have already been completed. Almost half of the projects entail the rehabilitation of existing rail tracks, 40% are new railroad works, and the remaining 6% are ring railway works. However, due to the striking difference in the magnitude of the works involved, new rail construction projects represent more than 75% of the investment. The greatest amount of estimated investment is allocated to the Andean Hub (35%), which, however, accounts for only 4% of the subsector in terms of the number of projects involved. Instead, this subsector is much more important in the Capricorn Hub (26%) and in the Paraguay-Paraná Waterway Hub (21%).



River subsector: Most river projects fall within the Paraguay-Paraná Waterway Hub (55% of the projects involving 72% of the investment) and in the Amazon Hub (25% of the projects involving 18% of the investment), on account of the nature of their territories. As in the case of rail projects, almost 60% are at an early stage (profiling and pre-execution), while the remaining 40% 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 completed projects. Projects involve the construction of 11 river ports, upgrade works in 27 existing ports, and the improvement of navigation conditions on 33 river sections. This last type of works absorbs more than 70% of the estimated investment for the subsector.

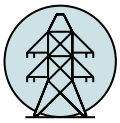
Sea subsector: Of the 35 projects included, only seven involve new works, whereas the others consist in the enlargement of existing infrastructure. Most projects are located in the Amazon and MERCOSUR-Chile Hubs, with 8 and 9 works, respectively, followed by the Southern Hub, including six projects. However, almost a third of the resources estimated for this subsector falls within the Guianese Shield Hub, which includes only three projects. Forty percent of the ports are at the execution stage and, so far, one fourth has 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 are two projects that were completed, one of them this year: Construction of a Dry Port Near Montevideo 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 (57% and 43%, 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-seven percent of the border crossings projects are at the pre-execution stage, 2o% are at the execution stage, and almost a third of the projects have already been completed.

Energy generation subsector: Almost half of the 25 projects in this subsector is at an early stage of development (profiling and pre-execution), while the other half is at an advanced stage or has been completed. However, almost half of the investment is allocated to completed

projects. Nearly half of the plants to be built are hydroelectric power plants, which helps improve the energy matrix of the region. Approximately 50% 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: Energy interconnection projects are located in the Andean Hub (31%), and almost all of them involve new connections, 60% of which have already been completed with 72% of the total investment amount.

Communications interconnection subsector: This subsector includes only six projects, four of which are binational. Most of the estimated investment in this subsector is allocated to one of the three completed projects, whose completion was achieved this year involving 60% of the total: Installation of an Optical Fiber Line along the Pailón - Puerto Suárez Road.

Project Subsectors

**US$ million*

Sector / Subsector	No. of Projects	% of Projects	Estimated Investment*	% of Investment
Air	24	4.3	7,588.1	3.8
Road	258	45.9	69,354.2	34.9
Rail	53	9.4	52,065.3	26.2
River	71	12.6	2,898.3	1.5
Sea	35	6.2	10,418.7	5.2
Multimodal	14	2.5	679.3	0.3
Border Crossings	47	8.4	949.7	0.5
Energy Generation	25	4.4	43,516.5	21.9
Energy Interconnection	29	5.2	11,410.2	5.7
Communications Interconnection	6	1.1	21.0	0.0
TOTAL	**562**	**100.0**	**198,901.4**	**100.0**

1.4 Project Financing

Most financing of the Portfolio comes from the public sector (almost 60% of the estimated investment), one fourth is financed by public-private initiatives, and only 15% of the investment comes from the private sector. When analyzed from the point of view of the number of projects, the participation of the public sector becomes even more evident: almost 80% of the projects are financed with public funds, 13% with private funds, and only 8% through public-private partnerships.

It is important to underscore the role of national governments in the execution of the Portfolio projects. Almost 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 13% of the Portfolio projects, whereas more than 20% of the projects have no specified source of financing yet.

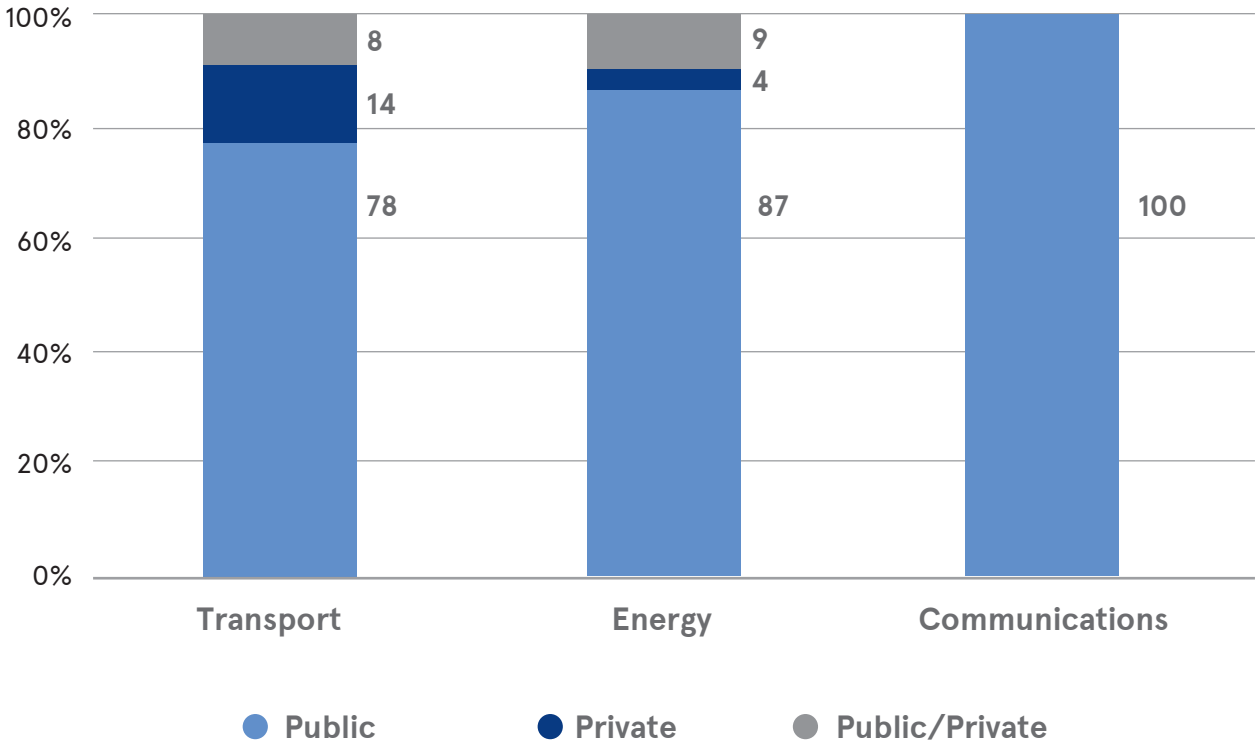
Sources of Financing of the Projects

** US$ million*

Source of Financing	No. of Projects	Estimated Investment*	Amount Invested
National Government	322	70,374.5	27,026.4
Private Sector	86	43,609.9	11,459.2
To be defined	72	40,431.0	170.0
IDB	36	5,716.6	1,211.0
CAF	32	4,265.1	1,154.8
Miscellaneous	20	13,159.4	2,748.0
Provincial Government	17	1,875.0	200.0
Binational	12	9,639.8	1,408.8
FOCEM	10	819.0	419.3
Miscellaneous – Public Sector	10	3,611.8	0.0
FONPLATA	6	298.9	0.0
To be defined – Public Sector	6	328.0	0.0
To be defined – Private Sector	6	1,149.7	388.0
Private Banks	4	108.0	0.0
European Union	4	179.5	75.3
World Bank	3	172.5	68.5
JBIC	3	185.9	0.0
BNDES	2	157.1	67.2
Local Government	2	2,100.0	2,100.0
Miscellaneous – Private Sector	2	719.9	0.0
TOTAL		**198,901.4**	**48,496.5**

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 with public funds.

Type of Financing Percentage 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 45% 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 billion were invested.

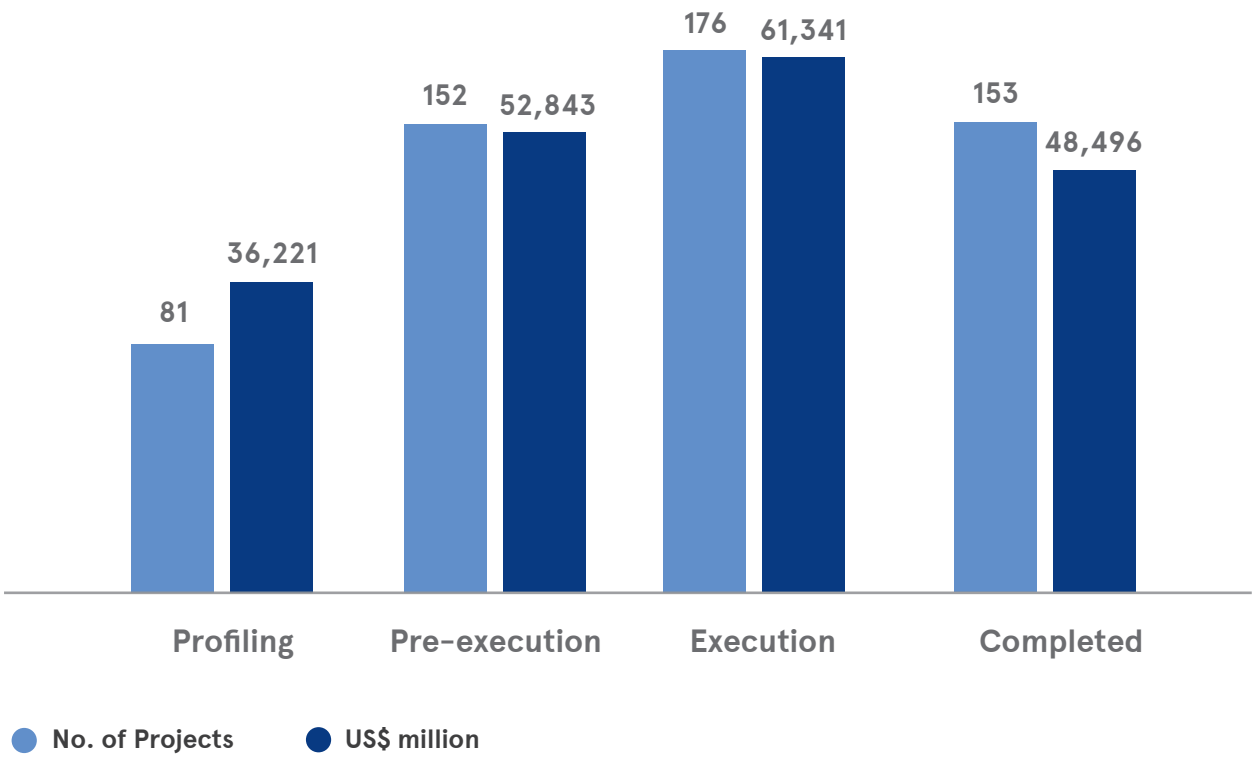
Type of Financing by Hub

	AMA	AND	CAP	DES	GUY	HPP	IOC	MCC	PBB
Private	30%	6%	10%	2%	0%	1%	22%	15%	21%
Public	56%	82%	86%	96%	90%	98%	71%	74%	71%
Public/private	14%	12%	4%	2%	10%	1%	6%	11%	8%
No. of Projects	70	65	77	45	20	84	63	115	24

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 also accounts for one third of the total Portfolio.

Project Stage



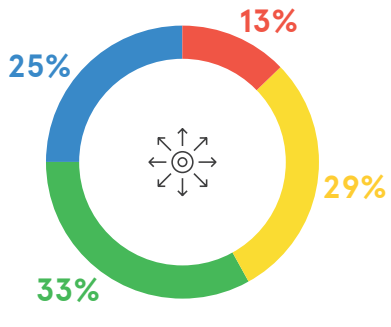
The completed projects represent almost 30% of the total, and the investment made one fourth of all the estimated investment in the Portfolio, while the projects at the profiling stage account for as little as 15%. Of all the completed projects, more than 80% fall in the transport sector, 16% in the energy sector, and only 2% in the communications sector.

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 (58%). The ratio improves when considering the energy projects, as the ones at the execution stage and the ones already completed account for 65% of the total.

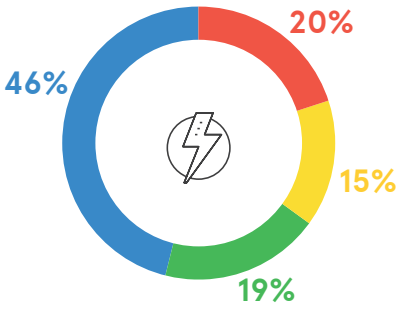
Project Stages by Sector

	Projects					Estimated Investment	
	Transport	Energy	Communications	Total	%	US$ million	%
Profiling	67	11	3	81	14.4	136,220.9	18.2
Pre-execution	144	8	0	152	27.1	52,842.6	26.6
Execution	166	10	0	176	31.3	61,341.3	30.8
Completed	125	25	3	153	27.2	48,496.5	24.4
TOTAL	**502**	**54**	**6**	**562**	**100.0**	**198,901.4**	**100.0**

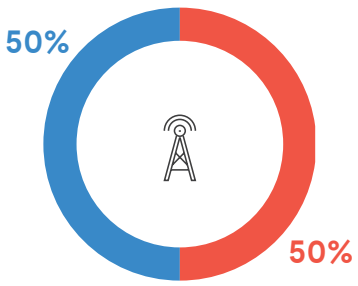
Transport



Energy



Communications



2. The Active Portfolio

The projects in the active portfolio, i.e. the projects underway (whether at an early stage, such as profiling and pre-execution, or at the execution stage), are 409 and account for an investment estimated at US$150.405 billion.

2.1. The 10 Projects with the Highest Estimated Investment

The 10 projects with the greatest estimated investment represent 40% of the total estimated investment for the active projects of the COSIPLAN Portfolio.

The First 10 Projects Ranked in Order of Estimated Investment

** US$ million*

Code	Name	Group	Stage	Estimated Investment*	Countries
AND95	ECUADOR'S ELECTRIC FREIGHT TRAIN	5		17,800.0	EC
MCC62	CONSTRUCTION OF THE CORPUS CHRISTI HYDROELECTRIC POWER STATION	5		8,000.0	AR - PY
IOC81	BIOCEANIC RAILWAY CORRIDOR FOR INTEGRATION (BOLIVIAN SECTION)	5		7,000.0	BO
AMA33	CUIABÁ - SANTARÉM ROAD (BR-163 / MT / PA)	5		6,500.0	BR
PBB17	BINATIONAL HYDROELECTRIC POWER STATION (BOLIVIA - BRAZIL)	3		5,000.0	BO - BR
IOC17	IMPROVEMENT OF THE CORUMBÁ - SANTOS (SP) RAILWAY SECTION	2		3,700.0	BR
MCC06	ENLARGEMENT OF CAMPINAS AIRPORT	1		3,550.0	BR
GUY40	INTEGRATED MASTERPLAN OF COASTAL PROTECTION ALBINA-NICKERIE	4		3,020.0	SU
AMA73	NEW CROSS-NORTHEASTERN RAILWAY PHASE I (SUAPE - SALGUEIRO / PECÉM - ELISEU MARTINS)	5		3,000.0	BR
MCC132	CONSTRUCTION OF THE SAN PABLO RING ROAD (NORTHERN SECTION)	1		2,810.0	BR
	TOTAL			**60,380.0**	

Profiling · Pre-execution · Execution · Completed

Of these 10 projects, six are hydroelectric or rail projects, which reveals that works in this subsectors require significant investments. The other four projects involve the construction of a road, the enlargement of an airport, a coastal protection integrated plan, and the construction of a ring road. The first three projects in terms of investment are detailed below.

Project **Ecuador's Electric Freight Train** involves an estimated investment of almost US$18.000 billion, even though it is at the profiling stage. It 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, and is financed by the public sector for an amount estimated at US$8 billion. It 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 countries.

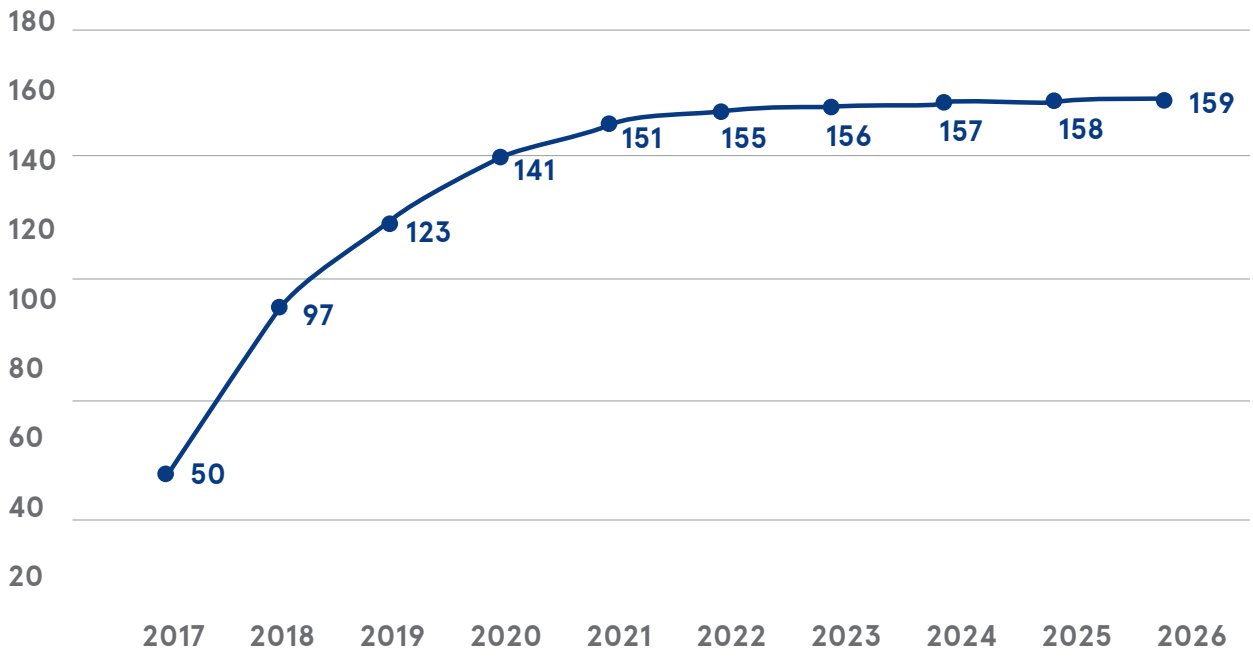
The **Bioceanic Railway Corridor for Integration (Bolivian Section)** is an API project that has made substantial progress in 2017. The length of the corridor would be 1,894 km, the estimated cost of the project is US$7 billion and the project schedule involves five years. Talks are being held with parties interested in financing it from Germany and Switzerland, as well as with representatives of Brazil, Peru, Paraguay and Uruguay who are interested in participating in this connectivity.

2.2. Estimated Completion Dates

The estimated date of completion is known in the case of almost 40% of the 409 active projects within the Portfolio. Of these 159 projects whose estimated completion date is available, almost 90% are scheduled to be completed in the next three years (before the end of 2020), which involves the expenditure of US$52.464 billion, 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 2017-2022 period, since approximately 155 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 2022 and 2026.

Project Completion by Year



3. Completed Projects

There are 153 completed projects in the Portfolio for a total investment of US$48.496 billion. This means that more than one fourth of the integration projects prioritized by the countries have already been completed, with 25 projects finished between 2016 and 2017. All the Hubs, as well as 42 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), both with 13 completed projects. However, the Hub with the greatest number of completed projects is MERCOSUR-Chile with 29 projects (almost 20% of the works handed over),

followed by the Amazon and Central Interoceanic Hubs (16% and 15%, respectively). In terms of the investment made, the Peru-Brazil-Bolivia Hub accounts for half of the total investment in the completed projects, even though it only includes six of such projects; this is due to the inclusion in this set of projects of the Madeira River Hydroelectric Power Complex (Santo Antônio and Jirau Hydroelectric Power Stations), which was completed this year and is the project of the Portfolio involving the greatest investment.

The opposite situation can be observed in the Central Interoceanic Hub: although completed projects amount to 15%, they only represent 2% of the investment.

Completed Projects by Hub[2]

** US$ million*

Hub	No. of Groups	No. of Projects	% Projects	Estimated Investment*	% of Investment
AND	7	20	13.0	993.7	2.0
AMA	7	24	15.6	7,073.6	14.6
CAP	4	20	13.0	2,773.3	5.7
DES	2	6	3.9	473.1	1.0
GUY	3	6	3.9	86.5	0.2
HPP	5	20	13.0	2,112.7	4.4
IOC	5	23	14.9	1,086.4	2.2
MCC	6	29	18.8	9,708.3	20.0
PBB	2	6	3.9	24,189.0	49.9
TOTAL	**41**	**153**	**100.0**	**48,496.5**	**100.0**

The countries that completed the greatest number of projects are Argentina and Brazil, with 32 each, but in terms of the investments made, the Brazilian projects account for 64%, while Argentine projects account for only 14%. Colombia is the country with the greatest number of completed works in terms of all its projects included in its portfolio, having completed 44% of them. Almost half of the completed projects (45%) fall in the road subsector, and as for the investment amount, they account for a fourth of all the investments made. The energy generation projects already completed represent almost 5% of the total completed projects, although they demanded almost 45% of the amount invested because of the conclusion of the already-mentioned project with the greatest investment of the whole Portfolio.

Of the total completed works, 80% were financed with public funds. In terms of their investment amount, the public sector contributed 40%. The private sector financed 14% of the projects, and contributed 10% of the investments made. Public-private partnerships financed 6% of the projects, but their contribution accounted for half of the total amount invested.

2. Investments in project MCC61 - Itaipu System (Existing), belonging to the MERCOSUR-Chile Hub, are not considered, as they were mostly made before IIRSA was launched

Completed Projects by Country

** US$ million*

	Total No. of Projects	No. of Completed Projects	% of Projects**	Investment Amount	% of Investment**
Argentina	162	32	19.8	7,114.6	14.2
Bolivia	53	10	18.9	341.8	0.7
Brazil	89	32	36.0	31,935.6	64.0
Chile	75	27	36.0	2,515.4	5.0
Colombia	32	14	43.8	726.5	1.5
Ecuador	38	16	42.1	813.5	1.6
Guyana	8	2	25.0	10.0	0.0
Paraguay	64	12	18.8	1,996.7	4.0
Peru	73	20	27.4	3,966.1	7.9
Suriname	7	0	0.0	0.0	0.0
Uruguay	42	10	23.8	514.6	1.0

*** Country Project Portfolio Share*

Completed Projects Subsectors

**US$ million*

Sector / Subsector	No. of Projects	% Projects	Investment*	% of Investment
Air	7	4.6	219.8	0.6
Road	69	45.1	12,459.6	39.9
Rail	10	6.5	3,891.0	13.3
River	14	9.2	145.1	0.5
Sea	9	5.9	1,375.1	3.6
Multimodal	2	1.3	255.0	0.8
Border Crossings	14	9.2	158.5	0.4
Energy Generation	8	5.2	21,789.0	11.8
Energy Interconnection	17	11.1	8,191.4	29.1
Communications Interconnection	3	2.0	12.0	0.0
TOTAL	**153**	**100.0**	**48,496.5**	**100.0**

Type of Financing of the Completed Projects

** US$ million*

	No. of Projects	% of Projects	Investment*	% of Investment
Private	21	13.7	4,759.9	9.8
Public	122	79.7	19,459.8	40.1
Public/Private	10	6.6	24,276.8	50.1
TOTAL	**153**	**100.0**	**48,496.5**	**100.0**

Most completed projects are national in scope (85%), while the other ones are binational. This ratio rises in relation to the investment amount, with the national share accounting for almost 97%.

This year, 25 projects were completed. Among them there is a hinge project of the Portfolio: Paving of the Potosí - Tupiza - Villazón Road. As already stated, such completed projects include the project with the greatest investment in the Portfolio, the Madeira River Hydroelectric Power Complex (Santo Antônio and Jirau Hydroelectric Power Stations). Argentina is the country with the highest number of completed projects this year (9), followed by Bolivia, Brazil and Chile, with four completed projects each.

Most projects were completed with public financing, as only two where financed by the private sector, and one was funded by a public-private partnership. However, the latter is, precisely, Madeira River Hydroelectric Power Complex. More than half of the projects completed this year are road projects (13), three are border crossings, and two rail and two river projects were also completed.

Territorial Scope of the Completed Projects

** US$ million*

	No. of Projects	% of Projects	Investment Amount*	% of Investment
National	130	83.6	46,933.0	94.6
Binational	23	16.4	1,563.5	5.4
TOTAL	**153**	**100.0**	**48,496.5**	**100.0**

Projects Completed During 2017

*US$ million

Code	Name	Group	Subsector	Type of Financing	Estimated Investment*	Countries
AMA84	REHABILITATION OF ROAD BR-222 AÇAILÂNDIA (MA) - PORTO DE ITAQUI (MA)	5	Road	Public	180.0	BR
AMA85	REHABILITATION OF ROAD BR-230 BALSAS (MA) - MARABÁ (PA)	5	Road	Public	0.0	BR
CAP44	PAVING OF NATIONAL ROUTE No. 95 BETWEEN THE INTERSECTION WITH NATIONAL ROUTE 81 AND VILLA ÁNGELA	1	Road	Public	90.0	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	5	Road	Public	24.3	AR
CAP78	PAVING OF NATIONAL ROUTE No. 51, CAMPO QUIJANO - SICO BORDER CROSSING SECTION	5	Road	Public	24.3	AR
CAP89	HITO CAJÓN BORDER COMPLEX	1	Border Crossings	Public	1.2	CH
CAP90	PAVING OF ROAD B-243, CH27 SAN PEDRO - TOCOPILLA - ANTOFAGASTA CONNECTION	1	Road	Public	1.5	CH
DES20	IMPROVEMENT OF THE ACCESS TO THE TROMEN-MAMUIL MALAL BORDER CROSSING	2	Road	Public	30.0	AR, CH
HPP61	PAVING OF NATIONAL ROUTE No. 9 BETWEEN COLONIA CANO AND EL COLORADO	3	Road	Public	60.0	AR
HPP67	REHABILITATION OF THE ZÁRATE - ROSARIO RAILWAY BRANCH LINE	3	Rail	Public	42.0	AR
HPP83	IMPROVEMENT OF RIVER ACCESSES TO THE URUGUAYAN PORTS ON THE URUGUAY RIVER	5	Fluvial	Public	1.0	UY
HPP92	DESIGN AND DREDGING OF THE ALTERNATIVE CASA BLANCA CANAL	5	Fluvial	Public	7.4	UY
HPP105	RECONSTRUCTION OF THE GARUPÁ - POSADAS RAILWAY SECTION	4	Rail	Public	100.0	AR
IOC04 - CAP92	PAVING OF THE POTOSÍ - TUPIZA - VILLAZÓN ROAD	1	Road	Public	180.4	BO
IOC09	INFANTE RIVAROLA - CAÑADA ORURO BORDER CROSSING	1	Border Crossings	Public	1.9	BO, PY
IOC24	INSTALLATION OF AN OPTICAL FIBER LINE ALONG THE PAILÓN - PUERTO SUÁREZ ROAD	3	Communications Interconnection	Public	11.9	BO
IOC32	TOLEDO - PISIGA ROAD	5	Road	Public	130.5	BO
IOC67	IMPROVEMENT OF TACNA AIRPORT	5	Air	Private	51.5	PE
IOC85	CONSTRUCTION OF THE CHUNGARÁ BORDER COMPLEX	5	Border Crossings	Public	37.0	CH
MCC18	REHABILITATION OF PORTO ALEGRE - URUGUAIANA ROAD SECTION (BR-290/RS)	1	Road	Public	250.0	BR
MCC37	PAVING OF NATIONAL ROUTE No. 145, FROM INTERSECTION WITH NATIONAL ROUTE No. 40 SOUTH TO THE ACCESS TO PEHUENCHE BORDER CROSSING	6	Road	Public	63.0	AR
MCC51	IMPROVEMENT OF SAN ANTONIO PORT	3	Sea	Private	370.0	CH

continue >>

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Projects Completed During 2017

*US$ million

Code	Name	Group	Subsector	Type of Financing	Estimated Investment*	Countries
MCC51	CONSTRUCTION OF A DRY PORT NEAR MONTEVIDEO PORT	2	Multimodal	Public	25.0	UY
MCC90	PAVING OF NATIONAL ROUTE No. 40 BETWEEN THE ACCESS TO MENDOZA AIRPORT AND THE BORDER WITH SAN JUAN	4	Road	Public	210.0	AR
PBB16	MADEIRA RIVER HYDROELECTRIC POWER COMPLEX (SANTO ANTÔNIO AND JIRAU HYDROELECTRIC POWER STATIONS)	3	Energy Generation	Public-private	18,209.0	BR
	TOTAL				**20.101,9**	

4. Evolution of the Project Portfolio

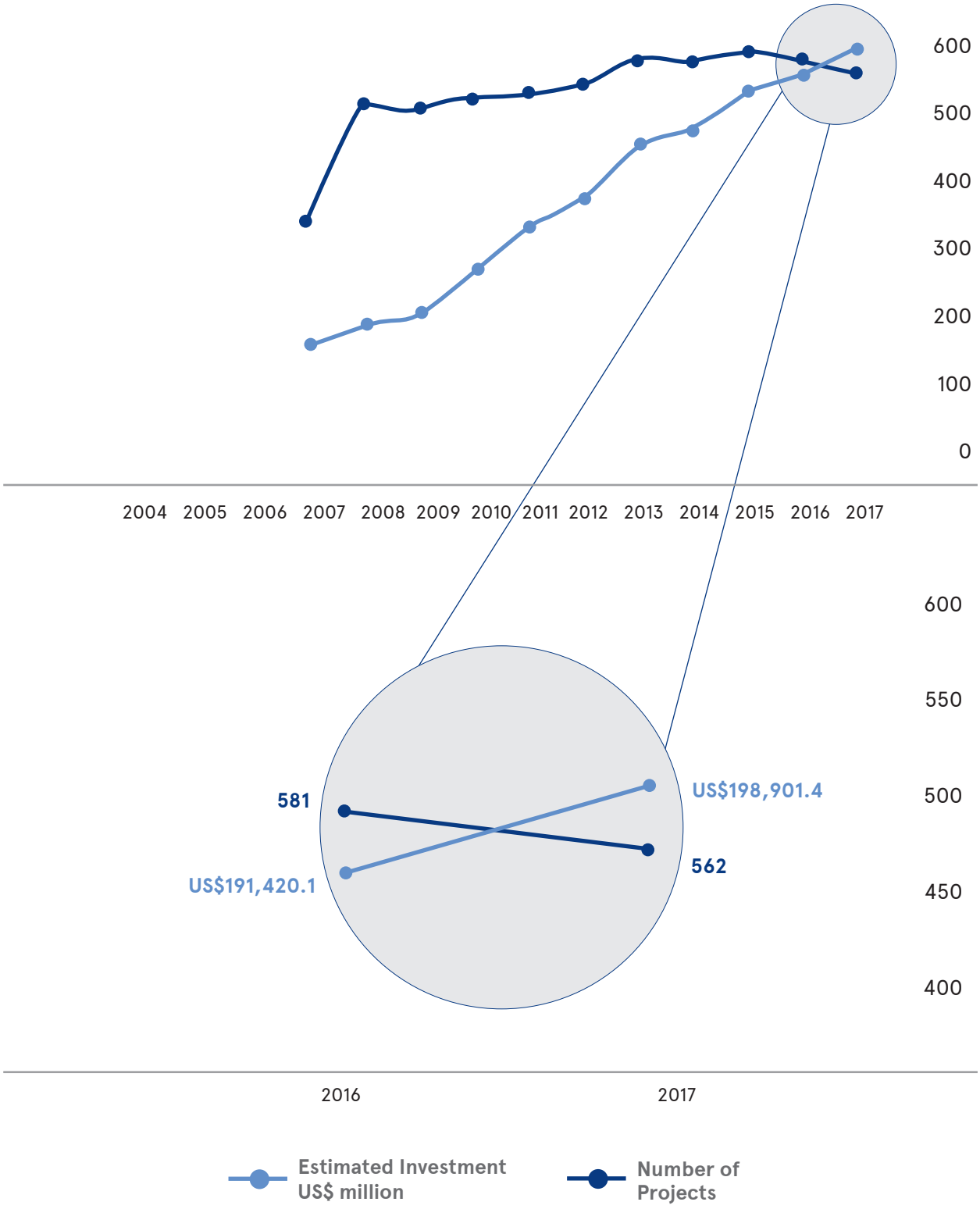
This section analyzes the progress made by the Portfolio projects. First, it describes the evolution of the Portfolio throughout more than a decade (2004-2017), and then presents the changes that took place between 2016 and 2017 as a result of the update process undertaken by the countries this year.

4.1. The Project Portfolio between 2004 and 2017

Throughout the last decade, the structure 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 the estimated investment in the Portfolio 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.

Between 2016 and 2017, the total number of projects in the Portfolio was reduced. 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. The estimated investment, however, continued growing over the years.

Evolution of the Project Portfolio 2004-2017



The Portfolio grew, on average, by 17 projects and US$12.420 billion per year between 2004 and 2017, which reflects the countries' long-term deep commitment to the physical integration of the region. In 2017, the estimated investment rose 4% vis-à-vis last year.

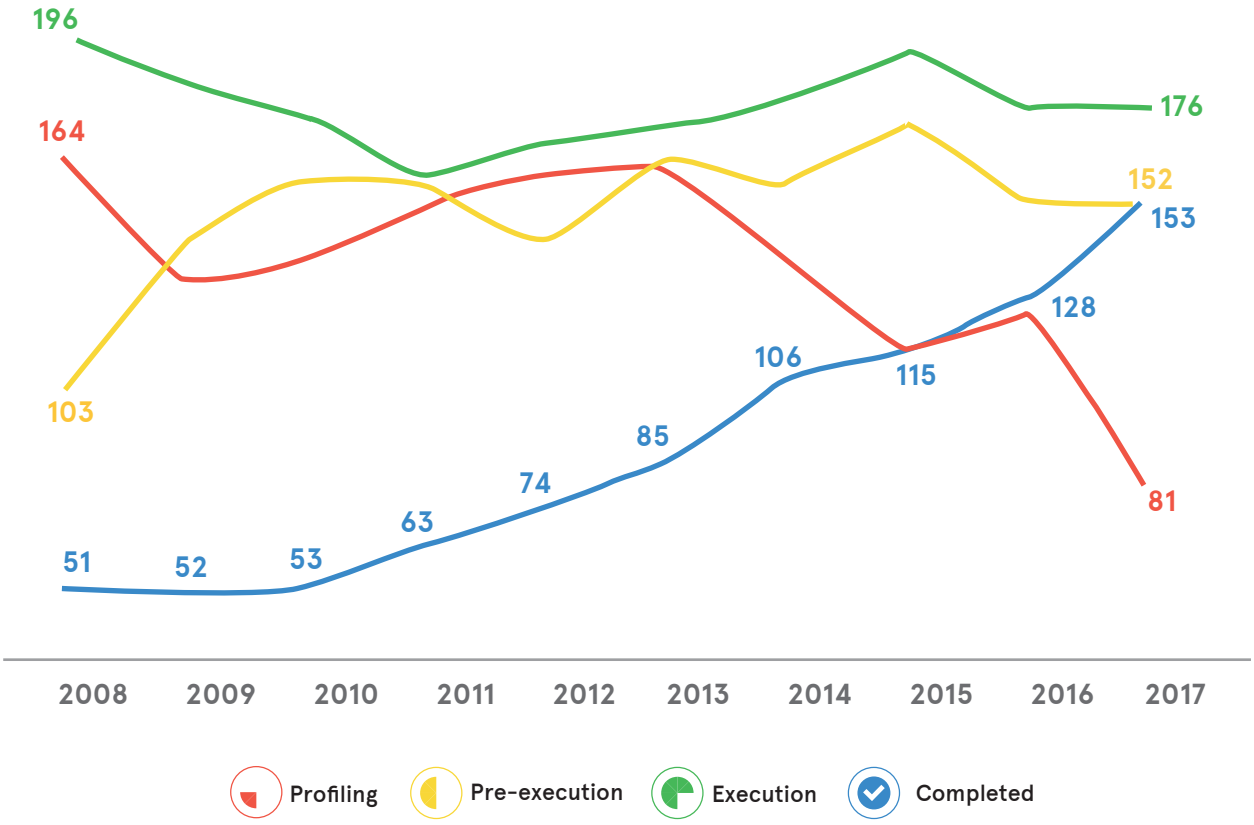
Annual Changes in the Projects by Hub (2004–2017)

	Integration and Development Hub									Total
	AMA	AND	CAP	DES	GUY	HPP	IOC	MCC	PBB	
2003-2004										
No.	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.	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.	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.	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.	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.	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.	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.	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.	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.	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.	72	66	81	47	20	89	63	120	24	581
US$ million	27,022.8	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
2017										
No.	70	65	77	45	20	84	63	114	24	562
US$ million	27,497.5	28,141.2	15,851.0	4,411.2	4,581.3	7,534.2	19,901.5	58,515.6	32,648.2	198,901.4

Concerning the number of projects, some Hubs have remained relatively unchanged, as has been the case of the Andean and the Peru-Brazil-Bolivia Hubs since 2007. 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 in the last two year that it slightly reduced its number of projects and 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[3], 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 (2008-2017)



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

3. *The stages in the life cycle of the Portfolio projects are profiling, pre-execution, execution, and completed. For more information, see the last chapter in this publication*

as competition for the resources available with other initiatives in the countries;

· The reformulation of their scope caused by situations alien to them, 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 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 tripled every year in the 2008-2017 period.

4.2. Changes in the Portfolio between 2016 and 2017

In 2017, online meetings of the Executive Technical Groups to Update the Projects in the COSIPLAN Portfolio and the Integration Priority Project Agenda (API) were held. A meeting took place for each Integration and Development Hub[4] using an online video-conferencing tool.

GTE Meetings to Update the COSIPLAN Project Portfolio and API in 2017

Date	Hubs	Countries
May 16	Central Interoceanic and Peru-Brazil-Bolivia Hubs	Bolivia, Brazil, Chile, Paraguay, Peru
May 23	MERCOSUR-Chile Hub	Argentina, Brazil, Chile, Paraguay, Uruguay
May 30	Paraguay-Paraná Waterway Hub	Argentina, Bolívia, Brazil, Paraguay, Uruguay
June 5	Capricorn and Southern Hubs	Argentina, Bolivia, Brazil, Chile, Paraguay
June 22	Amazon Hub	Brazil, Colombia, Ecuador, Peru
June 29	Andean Hub	Bolivia, Colombia, Ecuador, Peru, Venezuela

The objectives of the update work in 2017 were the following:

·Revise API projects according to the progress already defined at the Special Meeting on API Review, which was held on April 18 and 19 in Buenos Aires, on the occasion of the First API Five-Year Review, as established in the COSIPLAN Strategic Action Plan (PAE) 2012-2022.;

· Analyze the projects that involve a concession or maintenance contract and define their characteristics;

· Analyze projects proposed to be added or removed as well as projects requiring particular revisions.

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.

Sixty-three percent of the projects included in the COSIPLAN active portfolio were updated by them over the last year.

4. 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 COSIPLAN Project Information System (SIP)

This was possible thanks to the participation of multidisciplinary technical teams from different governmental areas of the South American countries. If the last two years are taken into account, such update percentage rises to over 83%.

Annual Changes in the Projects by Hub (2016–2017)

	No. of Projects			Estimated Investment *(US$ million)*		
Hub	**2016**	**2017**	**Change**	**2016**	**2017**	**Change**
Amazon Hub	72	70	-2	27,022.8	27,497.5	474.7
Andean Hub	66	65	-1	27,995.3	28,141.2	145.9
Capricorn Hub	81	77	-4	16,691.2	15,851.0	-840.2
Guianese Shield Hub	20	20	0	4,581.3	4,581.3	0.0
Paraguay-Paraná Waterway Hub	89	84	-5	6,325.1	7,534.2	1,209.1
Central Interoceanic Hub	63	63	0	11,498.5	19,901.5	8,403.0
MERCOSUR-Chile Hub	120	115	-5	60,971.2	58,515.6	-2,455.6
Peru-Brazil-Bolivia Hub	24	24	0	32,008.4	32,648.3	639.9
Southern Hub	47	45	-2	4,506.7	4,411.2	-95.5
TOTAL (*)(**)	**581**	**562**	**-19**	**191,420.1**	**198,901.4**	**7,481.3**

Notes:
(*)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.
(**) There is a so-called hinge project belonging to two Hubs; therefore, the totals in the No. of Projects and Estimated Investment columns do not match the arithmetic sum of the totals by Hub. Such project is Paving of the Potosí - Tupiza - Villazón Road, belonging to the Capricorn and Central Interoceanic Hubs. (A hinge project is a project that plays a role in more than one Integration and Development Hub or articulates two or more Project Groups in the same Hub)

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

• **28 projects** that were at the profiling stage moved on as follows: 18 to the pre-execution stage, five to the execution stage, and five were completed.

• **24 projects** that were at the pre-execution stage changed as follows: 19 moved on to the execution stage, three we completed, whereas two projects underwent a change in their scope and are currently at the profiling stage.

• **28 projects** that were at the execution stage changed as follows: 18 were completed and 10 underwent a change in their scope, of which nine are now at the pre-execution stage and one at the profiling stage.

In addition to these changes, it is important to consider the projects that have been included and excluded and the results in the total changes between stages, as shown in the following table.

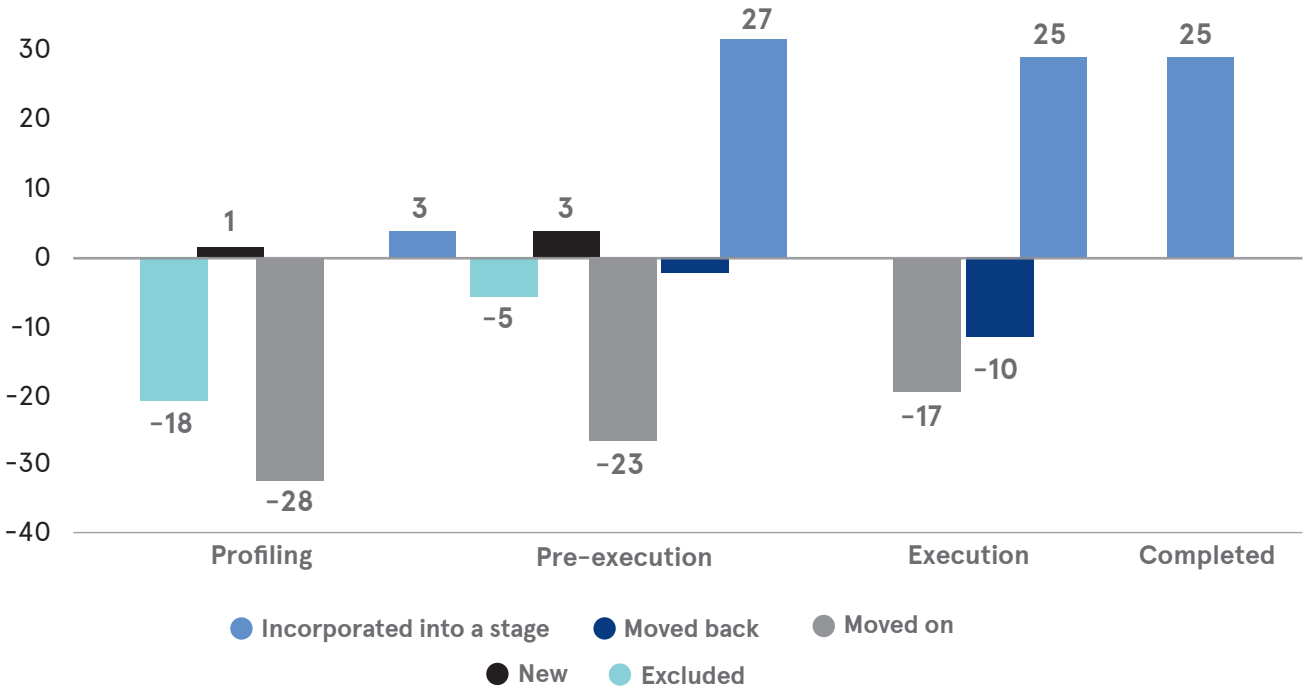
Changes between Stages in the Project Portfolio (2016-2017)

	No. of Projects according to Report 2016	No. of Projects Included at the GTE Meetings	No. of Projects Excluded at the GTE Meetings	Total Changes between Stages	Changes 2015-2016	No. of Projects as of August 2017
Profiling	123	1	-18	-25	-42	81
Pre-execution	152	3	-5	2	-	152
Execution	178	-	-	-2	-2	176
Completed	128	-	-	25	25	153
TOTAL	581	4	23	0	-19	562

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 fewer projects than last year were added, and that several projects at the profiling stage were excluded, due to an in-depth analysis of their progress possibilities, especially in the case of Argentina's and Brazil's projects.

Furthermore, a considerable number of projects that last year were at the profiling stage moved on. The group of projects that increased the most was that of completed projects, as since 2016 25 have been completed that were at the following stages: 17 at the execution stage, three at the pre-execution stage, and five at the profiling stage. Overall, the following figure shows the significant progress in the evolution of the Portfolio projects. ■

Changes in the Project Portfolio (2016-2017)



THE HUBS

AMA

AMAZON

70

27,497.5

AND

ANDEAN

65

28,141.2

CAP

CAPRICORN

77

15,851.0

DES

SOUTHERN

45

4,411.2

GUY

GUIANESE SHIELD

20

4,581.3

HPP

PARAGUAY-PARANÁ WATERWAY

84

7,534.2

IOC

CENTRAL INTEROCEANIC

63

19,901.5

MCC

MERCOSUR-CHILE

115

58,515.6

PBB

PERU-BRAZIL-BOLIVIA

24

32,648.3

Number of Projects US$ million

AMA

Amazon

Brazil / Colombia / Ecuador / Peru

Population
132,687,257

Population density
16.5 Hab./km²

Area
8,059,085 km²

GDP
US$ 844.689 billion

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

Estimated Investment
US$ million

27,497.5

BRAZIL	24	
COLOMBIA	5	
ECUADOR	15	
PERU	33	

65 Nationals 92.9%

4 Binationals 5.7%

1 Multinational 1.4%

No. of projects · U$S million

Projects by Stage

Profiling
13
191

Pre-execution
16
4,757.4

Execution
17
15,475.6

Completed
24
7,073.6

Projects by Sector

Transport
69
26,177.5

Energy
1
1,320

Projects by Type of Financing

Public
39
9,625.7

Private
21
9,039.6

Public/private
10
8,832.2

Projects by Subsector

Transport

Air
4
143.8

Road
21
11,815.4

Rail
10
10,650

River
18
530.4

Sea
8
2,859.9

Multimodal
6
166

Border Crossings
2
12

Energy

Energy Interconnection
1
1,320

AMA

AMAZON

Presentation of the hub

Brazil - Colombia - Ecuador - Peru

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 billion).[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.

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 238,968 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 of bulk cargo 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.

1. See cosiplan.org/ejes#ama
2. At 2013 current prices

Map of the Area of Influence of the Amazon Hub

The presence and diversity of **indigenous communities** is significant in the Hub, as there are more than 200 peoples distributed among 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 km^2 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$27.497 billion in 70 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.

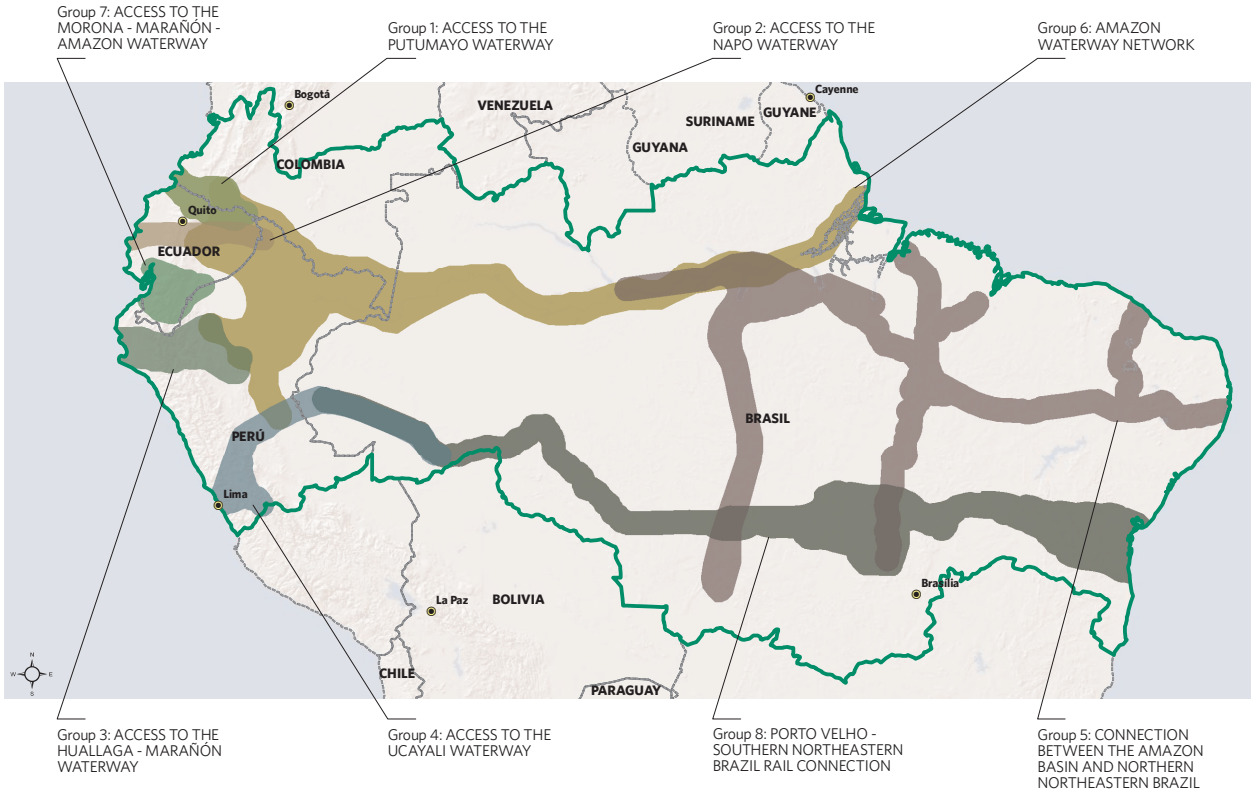
The Hub shares some regions of its area o f influence with other five Hubs: the Guianese Shield, the Paraguay-Paraná Waterway, the Peru-Brazil-Bolivia, the Andean, and the Central Interoceanic Hubs.

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 transcontinental 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.

Map of the Project Groups of the Amazon Hub



Project Groups of the Amazon Hub

**US$ million*

Group	Name	No. of Projects	Estimated Investment *
1	ACCESS TO THE PUTUMAYO WATERWAY	5	378.4
2	ACCESS TO THE NAPO WATERWAY	5	104.5
3	ACCESS TO THE HUALLAGA - MARAÑÓN WATERWAY	10	1,298.5
4	ACCESS TO THE UCAYALI WATERWAY	14	3,633.8
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	**70**	**27,497.5**

There are 46 projects in the active portfolio of the Hub, amounting to an investment estimated at US$20.423 billion.

Of the eight groups, six are designed to s trengthen the Amazon basin waterway system, while the other two are intended to create a Transcontinental 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 46 active projects, there is information available on the estimated completion date of 27. All of these are scheduled to be completed in the next four years (2017-2020), and it is worth mentioning that almost all of them are national in scope, mostly Peruvian (18) and Brazilian (5). According to estimations, by the end of 2020, 82% of the investment amount estimated for the Hub's portfolio will have been made.

Projects to Be Completed in the Next Four Years

** US$ million*

Code	Name	Group	Stage	Estimated Investment*	Countries	Estimated Completion Date
AMA26	IMPROVEMENT OF TINGO MARÍA - PUCALLPA ROAD	4	Execution	438.4	PE	September 2017
AMA63	IIRSA CENTER, SECTION 2: RICARDO PALMA - LA OROYA - TURN OFF TO CERRO DE PASCO / LA OROYA - HUANCAYO	4	Execution	127.2	PE	September 2017
AMA33	CUIABÁ - SANTARÉM ROAD (BR-163 / MT / PA)	5	Execution	6,500.0	BR	October 2017
AMA32	LIMA - RICARDO PALMA EXPRESSWAY	4	Execution	200.0	PE	December 2017
AMA61	IMPLEMENTATION OF THE NEW COCA AIRPORT	4	Execution	308.1	PE	December 2017
AMA72	REHABILITATION AND IMPROVEMENT OF THE LIMA - CANTA - UNISH ROAD	2	Execution	14.9	EC	December 2017
AMA86	PAVING OF ROAD BR-230 MARABÁ (PA) - ITAITUBA (PA)	5	Execution	1,000.0	BR	December 2017
AMA31	MODERNIZATION OF EL CALLAO PORT (NEW CONTAINER DOCK)	4	Execution	704.8	PE	March 2018
AMA89	WEST - EAST INTEGRATION RAILWAY - PHASE I (ILHÉUS - BARREIRAS)	8	Execution	2,000.0	BR	July 2018
AMA65	EL CALLAO LOGISTICS ACTIVITIES ZONE (ZAL CALLAO)	4	Profiling	68.3	PE	July 2018
AMA17	REHABILITATION OF PIURA AIRPORT	3	Execution	58.5	PE	September 2018
AMA20	PAITA LOGISTICS CENTER	3	Profiling	47.7	PE	November 2018
AMA73	NEW CROSS-NORTHEASTERN RAILWAY PHASE I (SUAPE - SALGUEIRO / PECÉM - ELISEU MARTINS)	5	Execution	3,000.0	BR	December 2018
AMA15	MANTA PORT	2	Pre-execution	0.0	EC	December 2018
AMA21	YURIMAGUAS LOGISTICS CENTER	3	Profiling	15.0	PE	December 2018
AMA30	PUCALLPA INTERMODAL LOGISTICS CENTER	4	Profiling	15.0	PE	December 2018
AMA44	IQUITOS LOGISTICS CENTER	6	Profiling	15.0	PE	December 2018
AMA64	IIRSA CENTER, SECTION 3: TURN OFF TO CERRO DE PASCO - TINGO MARÍA	4	Pre-execution	624.8	PE	December 2018
AMA42	IMPROVEMENT OF NAVIGATION CONDITIONS ON THE NAPO RIVER (ECUADORIAN SECTION)	6	Profiling	5.8	EC	September 2019
AMA106	IMPROVEMENT OF NAVIGATION CONDITIONS ON THE NAPO RIVER (PERUVIAN SECTION)	6	Profiling	5.8	PE	September 2019
AMA57	NETWORK OF RIVER TERMINALS IN THE AMAZON RAINFOREST	6	Execution	160.0	BR	December 2019
AMA38	IMPROVEMENT OF NAVIGATION CONDITIONS ON THE PUTUMAYO - IÇÁ RIVER	6	Pre-execution	15.0	BR - CO EC - PE	December 2019
AMA104	CONSTRUCTION OF NEW PUCALLPA PORT	4	Pre-execution	55.0	PE	December 2019
AMA56	MODERNIZATION OF IQUITOS PORT	6	Pre-execution	39.6	PE	April 2020
AMA40	IMPROVEMENT OF NAVIGATION CONDITIONS ON THE HUALLAGA RIVER WATERWAY, BETWEEN YURIMAGUAS AND THE CONFLUENCE WITH MARAÑÓN RIVER	6	Pre-execution	33.0	PE	May 2020
AMA41	IMPROVEMENT OF NAVIGATION CONDITIONS ON THE MARAÑÓN RIVER WATERWAY, BETWEEN SARAMERIZA AND THE CONFLUENCE WITH UCAYALI RIVER	6	Pre-execution	11.0	PE	May 2020
AMA43	IMPROVEMENT OF NAVIGATION CONDITIONS ON THE UCAYALI RIVER WATERWAY, BETWEEN PUCALLPA AND THE CONFLUENCE WITH MARAÑÓN RIVER	6	Pre-execution	19.0	PE	May 2020

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 54% of the estimated investment in the active portfolio of the Hub.

Three of these five projects are at the execution stage; most of them 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.

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 24 completed projects, which required a total investment of US$7.073 billion, equivalent to almost 25% of the total Portfolio investment.

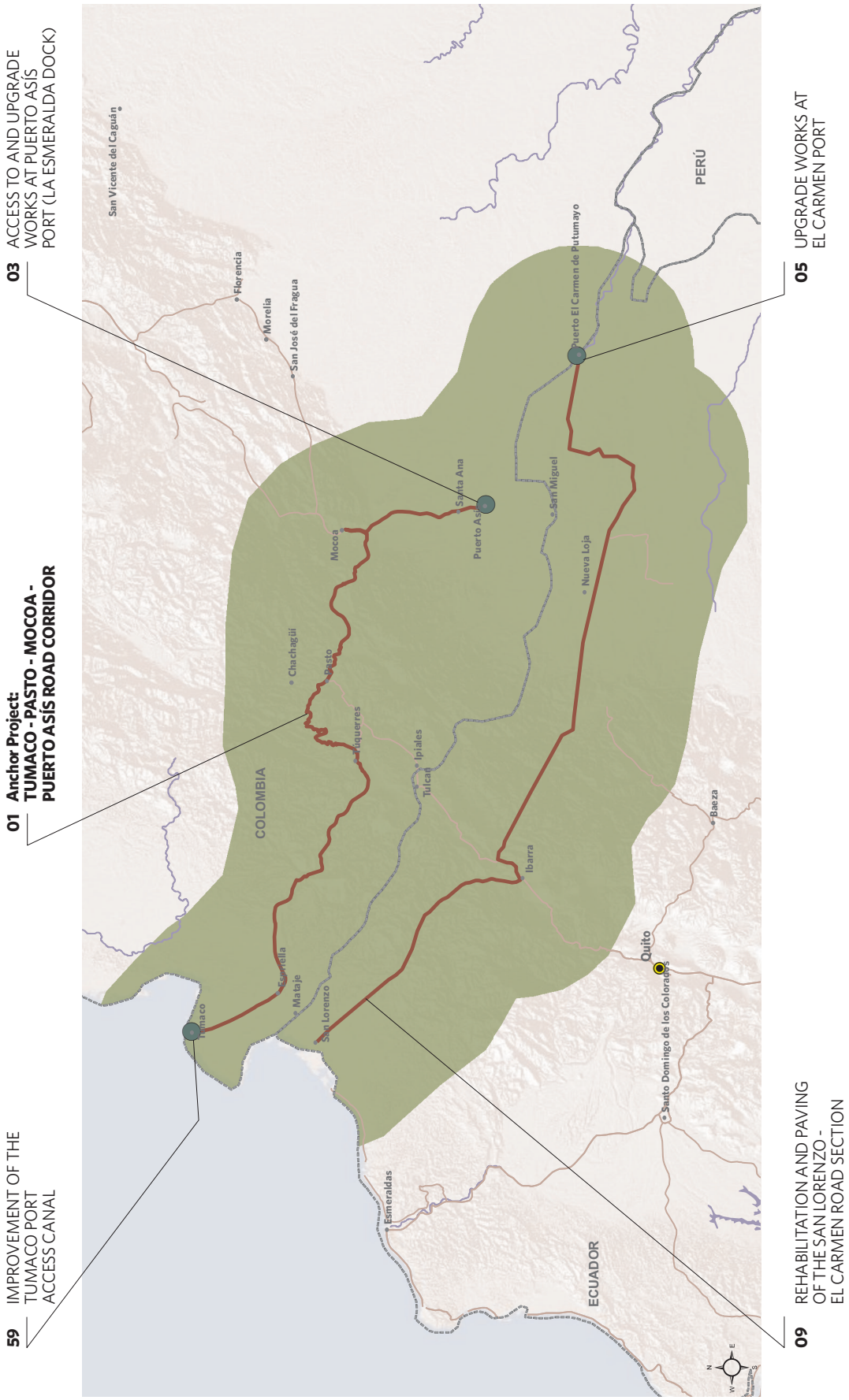
Among the projects already completed, there are three anchor projects: Improvement of Navigation Conditions in the Solimões - Amazon Rivers System, which is vitally important as this section of the Amazon river flows to Manaus and receives the traffic from the waterway network; project Tarapoto - Yurimaguas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

Completed Projects in the Amazon Hub

** US$ million*

Code	Name	Executed 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	PUERTO DE BAYÓVAR	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) (BR-163 / MT / PA)	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
AMA55	RIO BRANCO - CRUZEIRO DO SUL ROAD CONNECTION (BR-364 / AC)	573.0	BR
AMA66	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 - FIRST STAGE	25.0	EC
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
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
	TOTAL	**7,073.6**	

Access to the Putumayo Waterway



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.

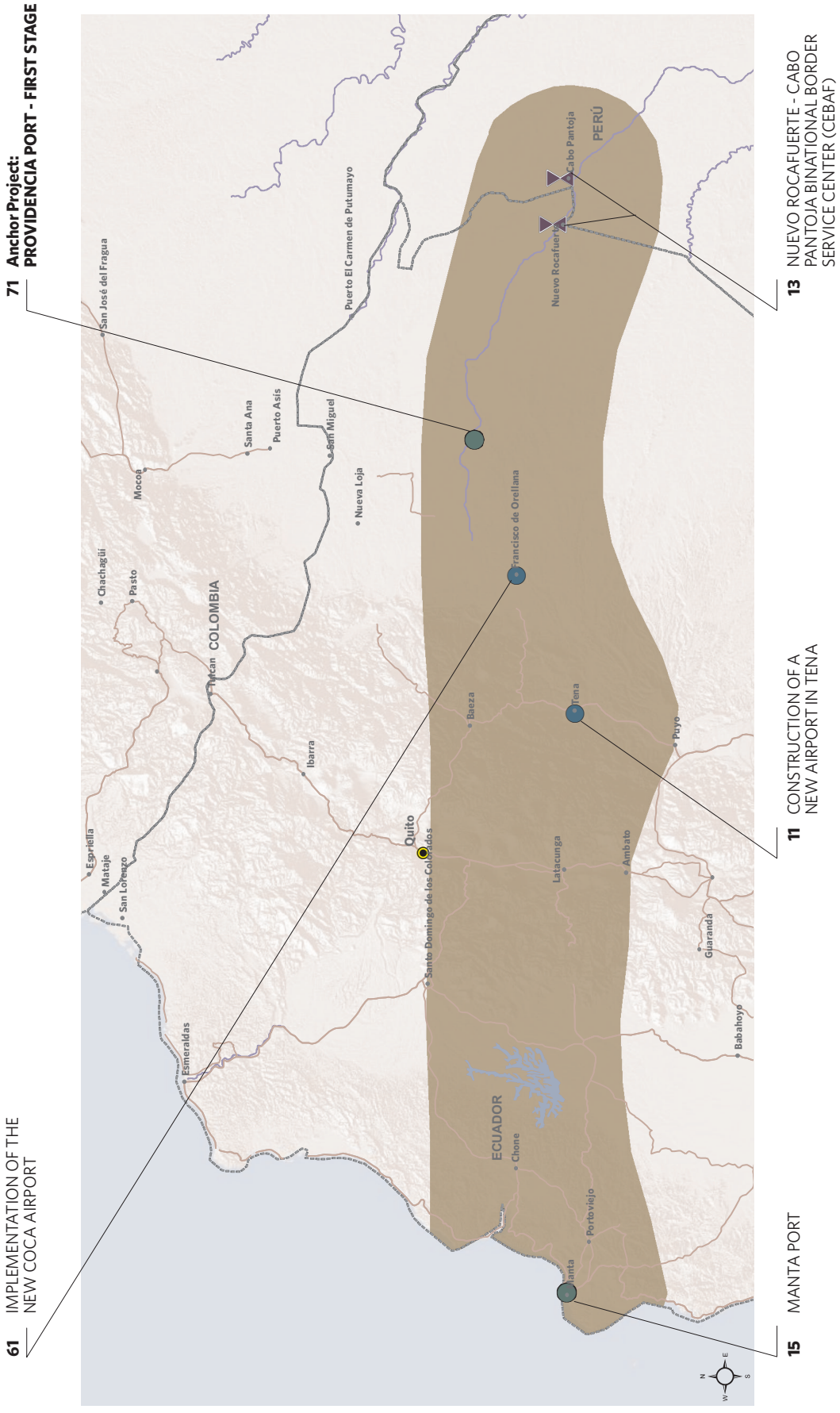
· Reinforce the interconnection of the continent's hinterlands with the Pacific Basin.

** US$ million*

Code	Name	Stage	Estimated Investment*	Countries
AMA01	**TUMACO - PASTO - MOCOA - PUERTO ASÍS ROAD CORRIDOR**		**291.4**	**CO**
AMA03	ACCESS TO AND UPGRADE WORKS AT PUERTO ASÍS PORT (LA ESMERALDA DOCK)		**3.0**	**CO**
AMA05	UPGRADE WORKS AT EL CARMEN PORT		**3.0**	**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**
	TOTAL		**378.4**	

Profiling · Pre-execution · Execution · Completed

Access to the Napo Waterway



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, and consolidate the opportunity of having an Ecuadorian river for Amazon international integration towards Manaus.

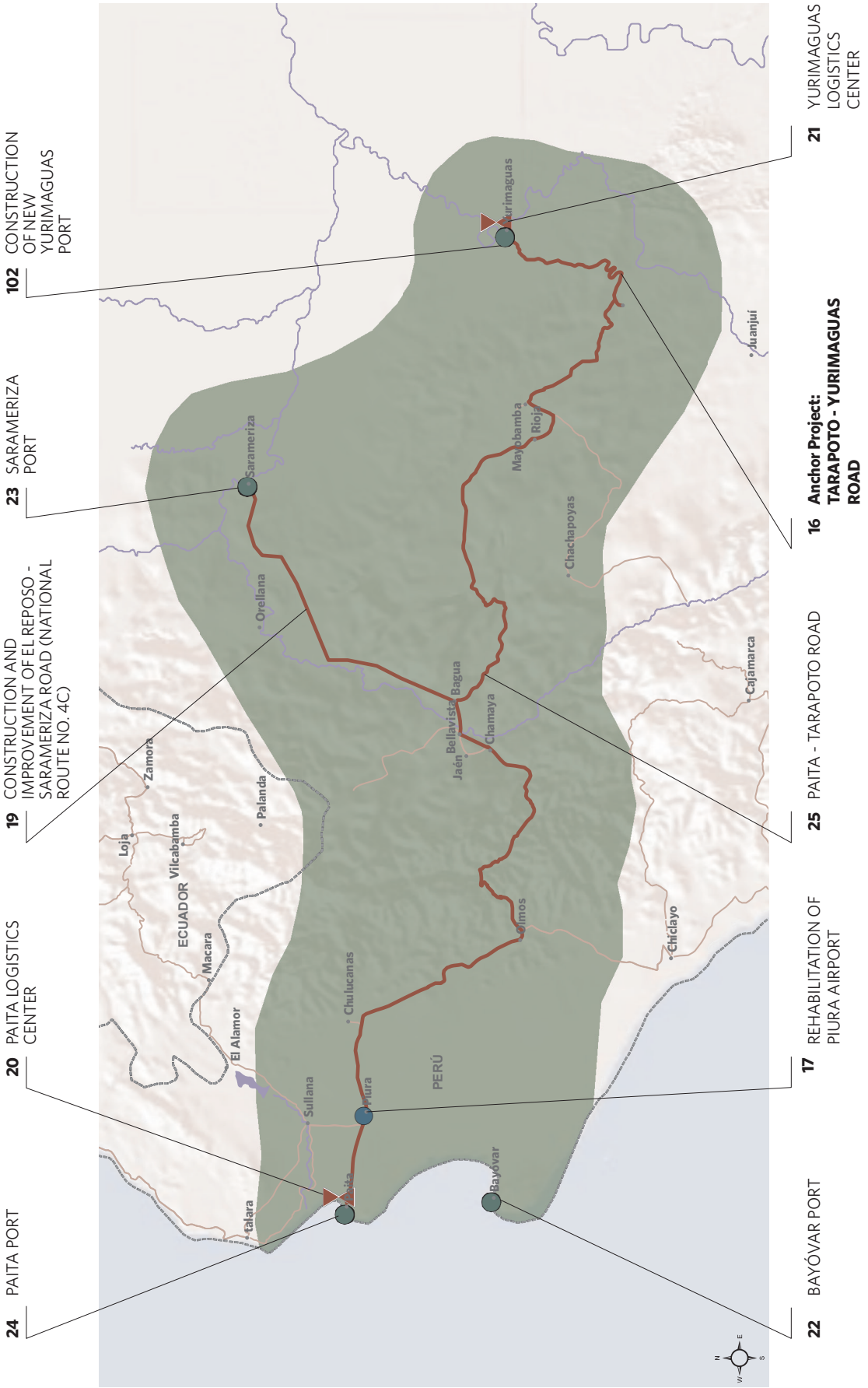
·Reinforce the interconnection of the continent's hinterlands with the Pacific Basin.

** US$ million*

Code	Name	Stage	Estimated investment*	Countries
AMA11	CONSTRUCTION OF A NEW AIRPORT IN TENA	Completed	54.6	EC
AMA13	NUEVO ROCAFUERTE - CABO PANTOJA BINATIONAL BORDER SERVICE CENTER (CEBAF)	Profiling	10.0	EC - PE
AMA15	MANTA PORT	Pre-execution	0.0	EC
AMA61	IMPLEMENTATION OF THE NEW COCA AIRPORT	Execution	14.9	EC
AMA71	**PROVIDENCIA PORT – FIRST STAGE**	Completed	25.0	EC
	TOTAL		**104.5**	

Profiling · Pre-execution · Execution · Completed

Access to the Huallaga – Marañón Waterway



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 complementariness with the states of Amazonas and Pará, Brazil.

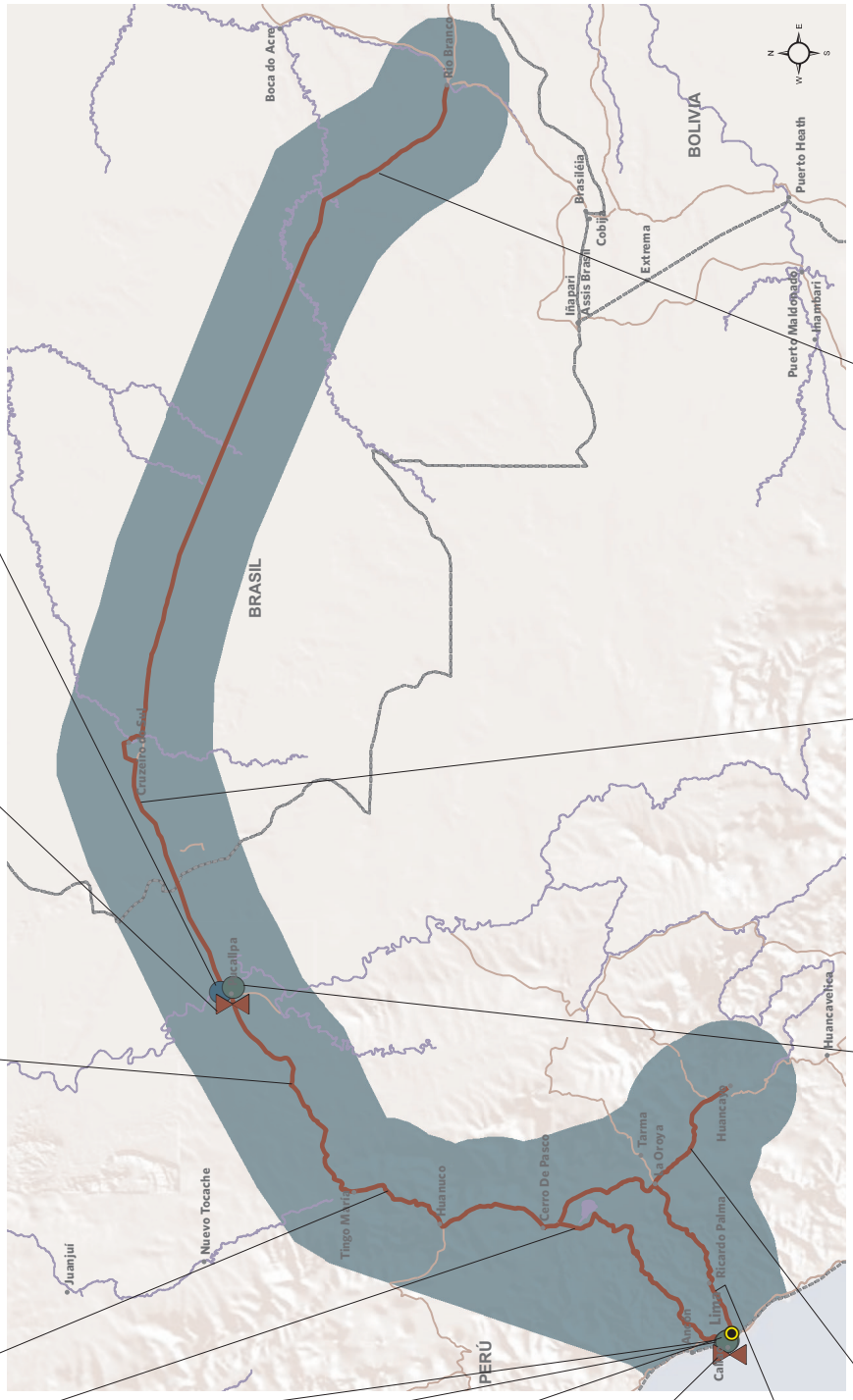
· Articulate the south and southeastern regions of Ecuador with the Peruvian Amazon to become the interconnection road with the Atlantic Basin.

** US$ million*

Code	Name	Stage	Estimated investment*	Countries
AMA16	**TARAPOTO – YURIMAGUAS ROAD**	Completed	231.7	PE
AMA17	REHABILITATION OF PIURA AIRPORT	Execution	58.5	PE
AMA19	CONSTRUCTION AND IMPROVEMENT OF EL REPOSO – SARAMERIZA ROAD (NATIONAL ROUTE No. 4C)	Execution	371.5	PE
AMA20	PAITA LOGISTICS CENTER	Profiling	47.7	PE
AMA21	YURIMAGUAS LOGISTICS CENTER	Profiling	15.0	PE
AMA22	BAYÓVAR PORT	Completed	70.0	PE
AMA23	SARAMERIZA PORT	Profiling	3.5	PE
AMA24	PAITA PORT	Completed	176.7	PE
AMA25	PAITA – TARAPOTO ROAD	Completed	273.7	PE
AMA102	CONSTRUCTION OF NEW YURIMAGUAS PORT	Completed	50.3	PE
	TOTAL		1,298.5	

Profiling · Pre-execution · Execution · Completed

Access to the Ucayali Waterway



64 IIRSA CENTER, SECTION 3: TURN OFF TO CERRO DE PASCO - TINGO MARÍA

26 **Anchor Project: IMPROVEMENT OF TINGO MARÍA - PUCALLPA ROAD**

30 PUCALLPA INTERMODAL LOGISTICS CENTER

29 PUCALLPA AIRPORT

28 PUCALLPA - CRUZEIRO DO SUL LAND INTERCONNECTION

104 CONSTRUCTION OF NEW PUCALLPA PORT

63 IIRSA CENTER, SECTION 2: RICARDO PALMA - LA OROYA - TURN OFF TO CERRO DE PASCO / LA OROYA - HUANCAYO

55 RIO BRANCO - CRUZEIRO DO SUL ROAD CONNECTION (BR-364 / AC)

72 REHABILITATION AND IMPROVEMENT OF THE LIMA - CANTA - UNISH ROAD

66 EL CALLAO MULTI-PURPOSE NORTHERN TERMINAL

31 MODERNIZATION OF EL CALLAO PORT (NEW CONTAINER DOCK)

67 EL CALLAO MINERAL SHIPPING TERMINAL

65 EL CALLAO LOGISTICS ACTIVITIES ZONE (ZAL CALLAO)

32 LIMA - RICARDO PALMA EXPRESSWAY

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.

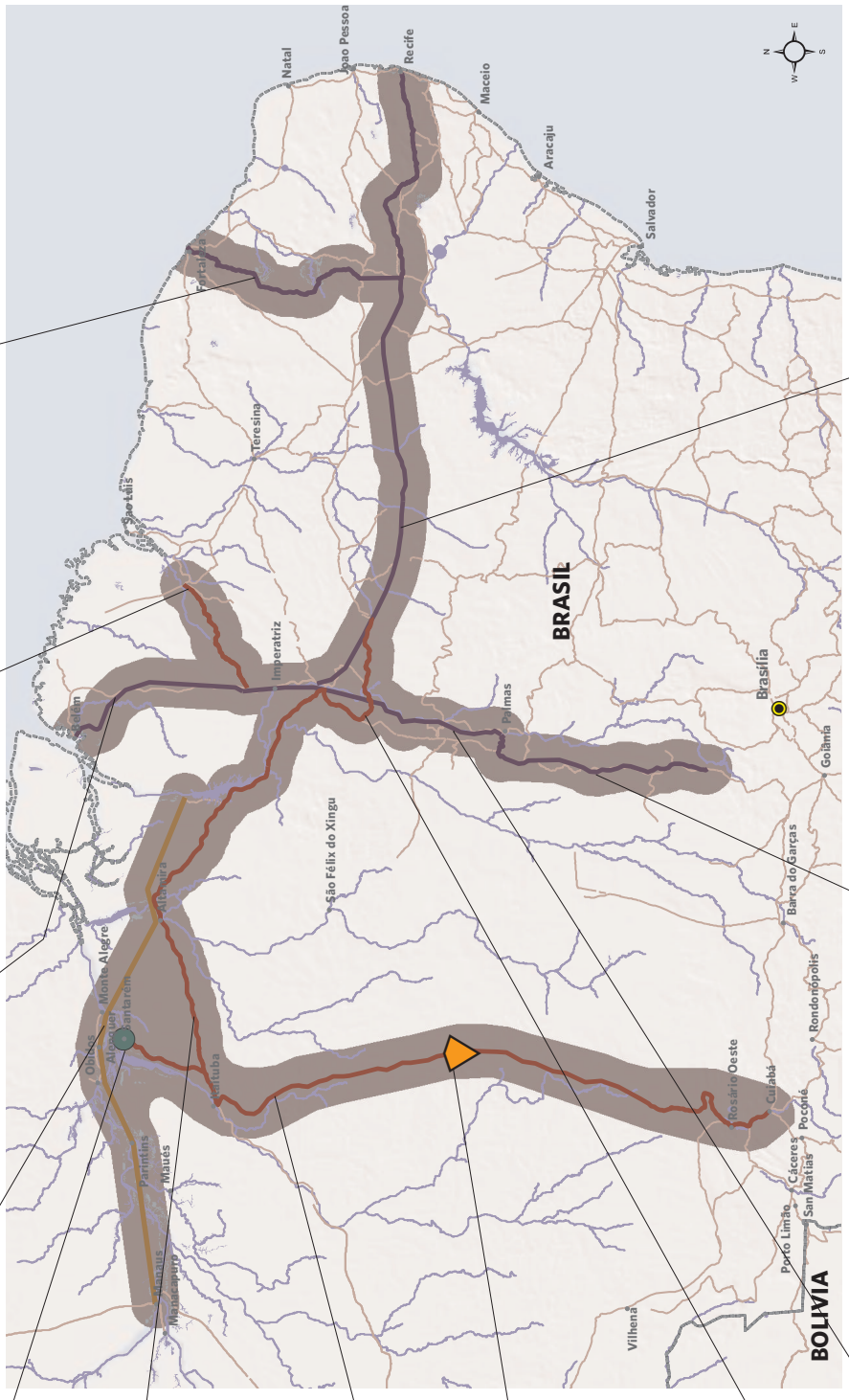
· Reinforce the interconnection of the central eastern area of the continent with the Pacific and Atlantic basins.

** US$ million*

Code	Name	Stage	Estimated investment*	Countries
AMA26	**IMPROVEMENT OF TINGO MARÍA - PUCALLPA ROAD**	Execution	438.4	PE
AMA28	PUCALLPA - CRUZEIRO DO SUL LAND INTERCONNECTION	Profiling	0.0	BR - PE
AMA29	PUCALLPA AIRPORT	Execution	15.8	PE
AMA30	PUCALLPA INTERMODAL LOGISTICS CENTER	Profiling	15.0	PE
AMA31	MODERNIZATION OF EL CALLAO PORT (NEW CONTAINER DOCK)	Execution	704.8	PE
AMA32	LIMA - RICARDO PALMA EXPRESSWAY	Execution	200.0	PE
AMA55	RIO BRANCO - CRUZEIRO DO SUL ROAD CONNECTION (BR-364 / AC)	Completed	573.0	BR
AMA63	IIRSA CENTER, SECTION 2: RICARDO PALMA - LA OROYA - TURN OFF TO CERRO DE PASCO / LA OROYA - HUANCAYO	Execution	127.2	PE
AMA64	IIRSA CENTER, SECTION 3: TURN OFF TO CERRO DE PASCO - TINGO MARÍA	Pre-execution	624.8	PE
AMA65	EL CALLAO LOGISTICS ACTIVITIES ZONE (ZAL CALLAO)	Profiling	68.3	PE
AMA66	EL CALLAO MULTI-PURPOSE NORTHERN TERMINAL	Completed	390.2	PE
AMA67	EL CALLAO MINERAL SHIPPING TERMINAL	Completed	113.2	PE
AMA72	REHABILITATION AND IMPROVEMENT OF THE LIMA - CANTA - UNISH ROAD	Execution	308.1	PE
AMA104	CONSTRUCTION OF NEW PUCALLPA PORT	Pre-execution	55.0	PE
	TOTAL		**3,633.8**	

Profiling · Pre-execution · Execution · Completed

Connection between the Amazon Basin and Northern Northeastern Brazil



73 **Anchor Project: NEW CROSS-NORTHEASTERN RAILWAY PHASE I (SUAPE - SALGUEIRO / PECÉM - ELISEU MARTINS)**

84 REHABILITATION OF ROAD BR-222 AÇAILÂNDIA (MA) - PORTO DE ITAQUI (MA)

77 NORTH-SOUTH RAILWAY PHASE I (VILA DO CONDE - AÇAILÂNDIA)

87 500-KV TRANSMISSION LINE (TUCURUÍ - MANAUS)

76 **Anchor Project: NEW CROSS-NORTHEASTERN RAILWAY PHASE II (ELISEU MARTINS - PORTO FRANCO)**

105 NORTH-SOUTH RAILWAY - PHASE III (PALMAS - CAMPINORTE)

78 NORTH-SOUTH RAILWAY - PHASE II (AÇAILÂNDIA - PALMAS)

35 SANTARÉM PORT

86 PAVING OF ROAD BR-230 MARABÁ (PA) - ITAITUBA (PA)

33 CUIABÁ - SANTARÉM ROAD (BR-163 / MT / PA)

34 ENVIRONMENTAL AND TERRITORIAL MANAGEMENT PROGRAM (CUIABÁ - SANTARÉM ROUTE) (BR-163 / MT / PA)

85 REHABILITATION OF ROAD BR-230 BALSAS (MA) - MARABÁ (PA)

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.

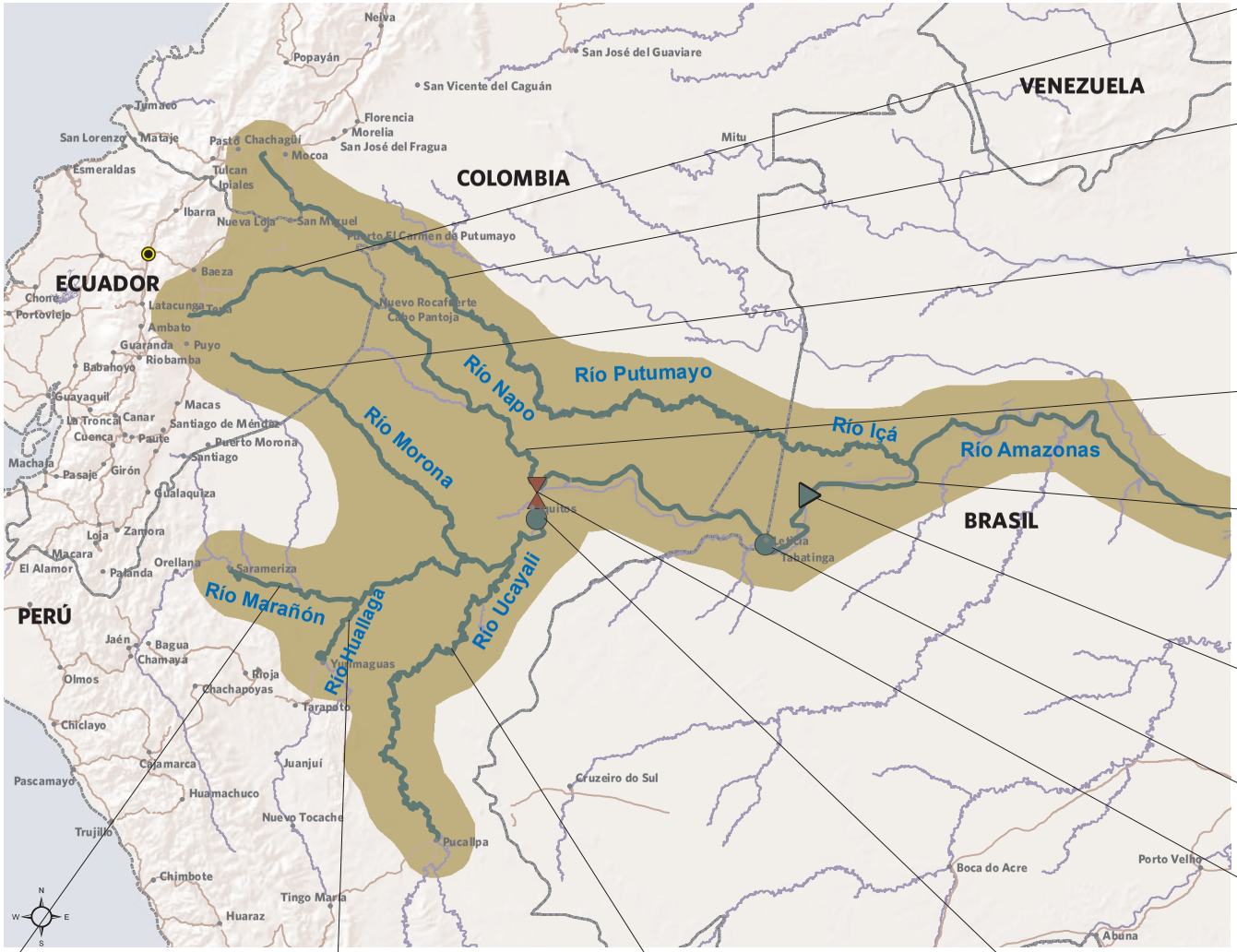
· Provide an efficient transportation infrastructure to attract productive activities to the region.

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

Profiling · Pre-execution · Execution · Completed



42 IMPROVEMENT OF NAVIGATION CONDITIONS ON THE NAPO RIVER (ECUADOR SECTION)

38 IMPROVEMENT OF NAVIGATION CONDITIONS ON THE PUTUMAYO - IÇÁ RIVER

39 IMPROVEMENT OF NAVIGATION CONDITIONS ON THE MORONA RIVER

106 IMPROVEMENT OF NAVIGATION CONDITIONS ON THE NAPO RIVER (PERUVIAN SECTION)

36 **ANCHOR PROJECT: IMPROVEMENT OF NAVIGATION CONDITIONS IN THE SOLIMÕES - AMAZON RIVERS SYSTEM**

57 NETWORK OF RIVER TERMINALS IN THE AMAZON RAINFOREST

70 LETICIA DOCK

44 IQUITOS LOGISTICS CENTER

41 IMPROVEMENT OF NAVIGATION CONDITIONS ON THE MARAÑÓN RIVER WATERWAY, BETWEEN SARAMERIZA AND THE CONFLUENCE WITH UCAYALI RIVER

40 IMPROVEMENT OF NAVIGATION CONDITIONS ON THE HUALLAGA RIVER WATERWAY, BETWEEN YURIMAGUAS AND THE CONFLUENCE WITH MARAÑÓN RIVER

43 IMPROVEMENT OF NAVIGATION CONDITIONS ON THE UCAYALI RIVER WATERWAY, BETWEEN PUCALLPA AND THE CONFLUENCE WITH MARAÑÓN RIVER

56 MODERNIZATION OF IQUITOS PORT

Group 6

Strategic Function

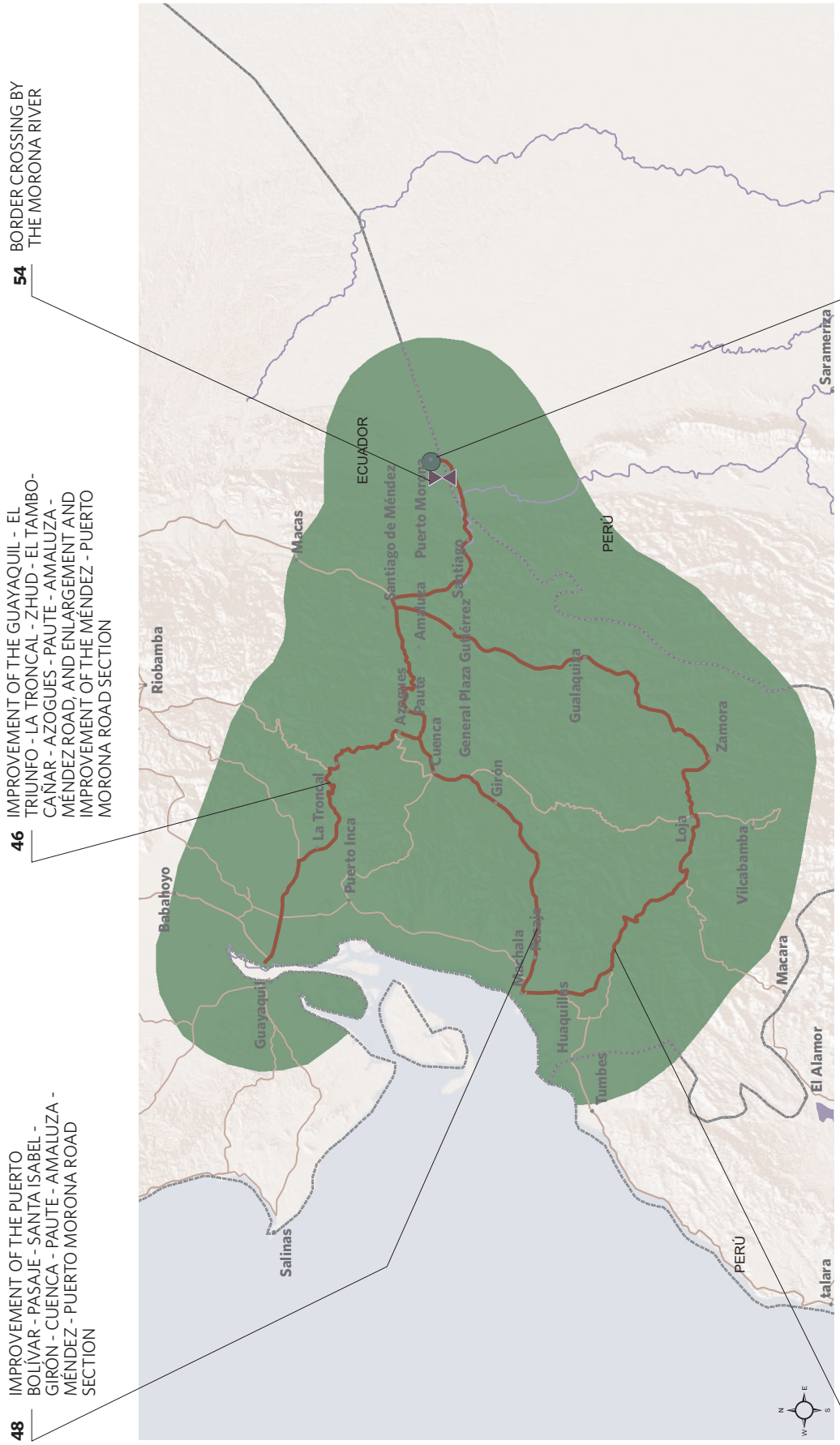
· Improve the navigation condition of the Amazon basin's rivers in order to promote the sustainable integration and development of the region in the economic, social and environmental dimensions and generate long distance transport flows.

** 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		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		39.6	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
	TOTAL		320.6	

Profiling · Pre-execution · Execution · Completed

Access to the Morona – Marañón – Amazon Waterway



Group 7

Strategic Function

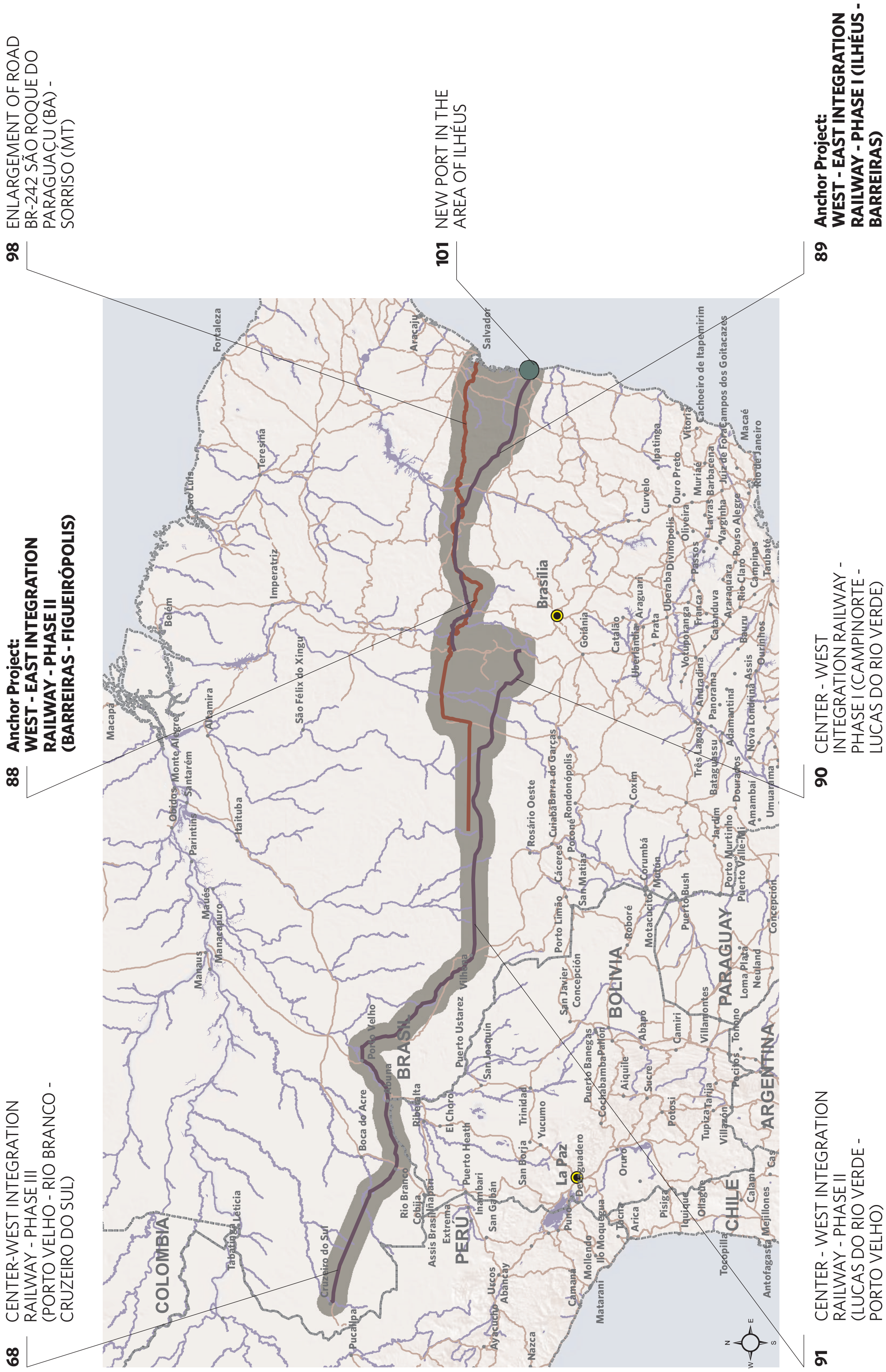
· Improve the logistics of integration among the southern provinces of Ecuador and the northeastern portion of Peru with the state of Amazonas in Brazil through a river route towards Manaus.

** 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 - 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
AMA54	BORDER CROSSING BY THE MORONA RIVER		2.0	EC - PE
	TOTAL		414.7	

Profiling · Pre-execution · Execution · Completed

Porto Velho - Southern Northeastern Brazil Rail Connection



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
	TOTAL		6,150.0	

Profiling · Pre-execution · Execution · Completed

AND

Andean

Bolivia / Colombia / Ecuador / Peru / Venezuela

Population:
111,195,797

Population density:
39.1 Hab./km²

Area:
2,845,658 km²

GDP:
US$ 857.036 billion

Services: 62.9%
Mining and quarrying: 16.8%
Industries: 13.5%
Agriculture: 6.8%

Estimated Investment
US$ million

28,141.2

42
Nationals
64.6%

23
Binationals
35.4%

BOLIVIA	3
COLOMBIA	27
ECUADOR	23
PERU	22
VENEZUELA	13

No. of projects U$S million

Projects by Stage

Profiling
11
19,970.7

Pre-Execution
8
1,543.7

Execution
26
5,633.2

Completed
20
993.7

Projects by Sector

Transport
51
25,810

Energy
14
2,331.2

Projects by Type of Financing

Public
53
24,607.6

Private
4
1,513.2

Public/private
8
2,020.4

Projects by Subsector

Transport

Air
1
47.1

Road
35
7,263.3

Rail
2
18,190.0

River
1
71

Border Crossings
12
238.5

Energy

Energy Interconnection
9
1,103.5

Energy Generation
5
1,227.8

AND

ANDEAN

Presentation of the Hub

Bolivia, Colombia, Ecuador, Peru, Venezuela

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.

The Hub accounts for 16% of the South American territory (2,845,658 km^2) and 28% of its population (111,195,797 inhabitants), being the second more densely populated Hub after the MERCOSUR-Chile Hub. Furthermore, it has 21% of the GDP of the region (US$857.037 billion) 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.

1. See cosiplan.org/ejes#and
2. At 2012 current prices

Map of the Area of Influence of the Andean 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, Amazon, Peru-Brazil-Bolivia and Central Interoceanic 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 five countries that make it up, reaching a total population of about 7,000,000 inhabitants. This is very important in many subnational 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 km^2, which accounts for 27% of the Hub's total area. Many of these administrative units are inhabited by indigenous 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 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$28.141 billion in 65 physical integration projects. This Hub ranks third in terms of estimated investment.

Ecuador contributes almost 95% of its GDP to the Hub, Peru almost 90%, Venezuela approximately 80%, Colombia 76% and 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.

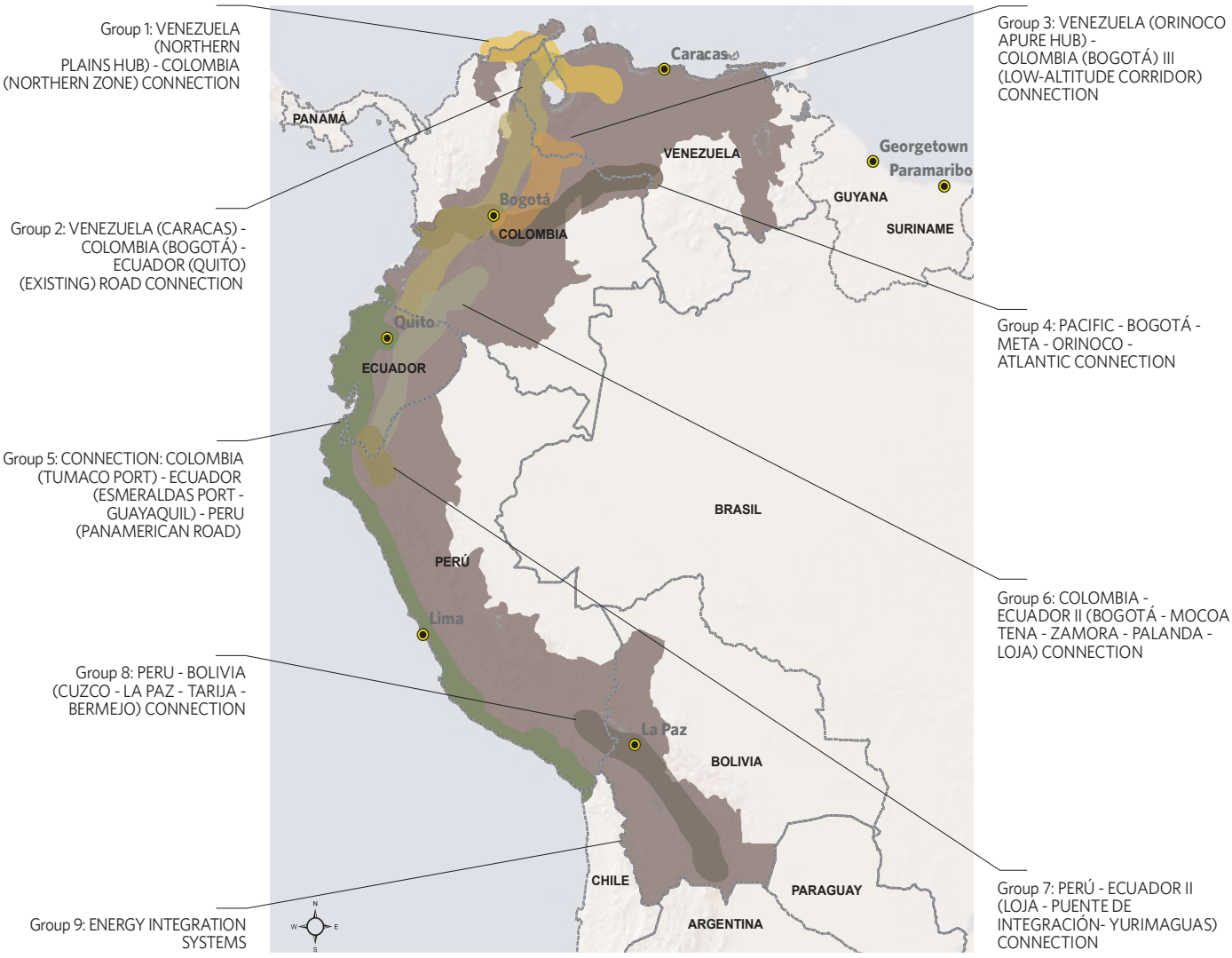
A noteworthy trend in the Hub's global economic performance is its growth rate in the 2008-2012 period, which reached an average of 4%.

The Hub shares some regions of its area of influence with other six Hubs: the Amazon, the Guianese Shield, the Peru-Brazil-Bolivia, the Central Interoceanic, the Paraguay-Paraná Waterway and the Capricorn Hubs.

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.

Map of the Project Groups of the Andean Hub



Project Groups of the Andean Hub

** US$ million*

Group	Name	N. 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	10	3,181.5
3	VENEZUELA (ORINOCO APURE HUB) - COLOMBIA (BOGOTÁ) III (LOW-ALTITUDE CORRIDOR) CONNECTION	5	37.3
4	PACIFIC - BOGOTÁ - META - ORINOCO - ATLANTIC CONNECTION	4	2,048.0
5	CONNECTION: COLOMBIA (TUMACO PORT) - ECUADOR (ESMERALDAS PORT - GUAYAQUIL) - PERU (PANAMERICAN ROAD)	20	20,771.2
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**	**65**	**28,141.2**

***Note: 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 45 projects with an estimated investment of US$27.148 billion.

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 45 active projects, there is information available on the completion date of 19, 17 of which are scheduled to be completed in the next four years (2017-2020).

After having completed these 17 projects, it is expected that only 22% 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$19.970 billion) 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$7.177 billion.

Project to Be Completed in the Next Four Years

** US$ million*

Code	Name	Group	Stage	Estimated investment*	Countries	Estimated Completion Date
AND22	MATAJE RIVER BINATIONAL BORDER SERVICE CENTER (CEBAF)	5	Execution	4.0	CO - EC	March 2017
AND24	REHABILITATION OF THE BORBÓN - SAN LORENZO - MATAJE SECTION	5	Execution	0.0	EC	May 2017
AND48	COMPLETION OF THE PAVING OF THE POTOSÍ - TARIJA ROAD	8	Execution	238.2	BO	May 2017
AND75	UPGRADE OF THE CERRO AZUL - ICA ROAD SECTION TO A FOUR-LANE ROAD	5	Execution	293.9	PE	July 2017
AND39	PAVING OF VILCABAMBA - PUENTE DE INTEGRACIÓN (INTEGRATION BRIDGE) - JAÉN	7	Execution	126.7	EC - PE	August 2017
AND81	CONSTRUCTION OF THE TIENDITAS BORDER CROSSING	2	Execution	14.0	CO - VE	August 2017
AND47	DESAGUADERO BINATIONAL BORDER SERVICE CENTER (CEBAF)	8	Execution	29.9	BO - PE	September 2017
AND29	AUTOPISTA DEL SOL EXPRESSWAY: IMPROVEMENT AND REHABILITATION OF THE PATIVILCA - TRUJILLO SECTION	5	Execution	456.4	PE	July 2018
AND100	REHABILITATION AND CONSTRUCTION OF BRIDGES ALONG THE SULLANA – TUMBES – TURN-OFF TO THE INTERNATIONAL BYPASS ROAD	5	Execution	139.1	PE	July 2018
AND07	BOGOTÁ - BUENAVENTURA ROAD CORRIDOR	2, 4	Execution	1,950.0	CO	August 2018
AND23	LA ESPRIELLA - MATAJE PROJECT, INCLUDING A BRIDGE OVER THE MATAJE RIVER	5	Execution	43.8	CO - EC	August 2018
AND30	AUTOPISTA DEL SOL EXPRESSWAY: IMPROVEMENT AND REHABILITATION OF THE TRUJILLO - SULLANA SECTION	5	Execution	441.2	PE	December 2018
AND85	REHABILITATION AND IMPROVEMENT OF THE CÚCUTA - OCAÑA - AGUACLARA ROAD SECTION	2	Execution	33.3	CO	December 2018
AND79	IMPROVEMENT AND PAVING OF THE MOCOA - SANTA ANA - SAN MIGUEL ROAD SECTION	6	Execution	210.4	CO	December 2019
AND82	IMPLEMENTATION OF THE BINATIONAL BORDER SERVICE CENTER (CEBAF) AT THE TULCÁN - IPIALES (RUMICHACA) BORDER CROSSING	2	Pre-execution	104.7	CO - EC	December 2019
AND05	BOGOTÁ - CÚCUTA ROAD CORRIDOR	2	Pre-execution	875.7	CO	December 2021
AND15	ARAUCA BORDER CROSSING	3	Pre-execution	15.0	CO - VE	December 2021

Profiling · Pre-execution · Execution · Completed

The five projects with the greatest estimated investment account for 82% of the investment in the Hub's active portfolio, and the project with the highest investment of all accounts for 67%.

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. This hinge project is the Bogotá - Buenaventura Road Corridor, which will connect the Pacific and Atlantic oceans through links to river waterways and multimodal projects.

Two projects are at the profiling stage, one of them being Ecuador's Electric Freight Train. Of the other projects, two are at the execution stage and one 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, i ntended 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.

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		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
	TOTAL			**21,845.6**		

Profiling · Pre-execution · Execution · Completed

Completed Projects in the Andean Hub

** US$ million*

Code	Name	Ejectuted 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	10.5	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
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
	TOTAL	**993.7**	

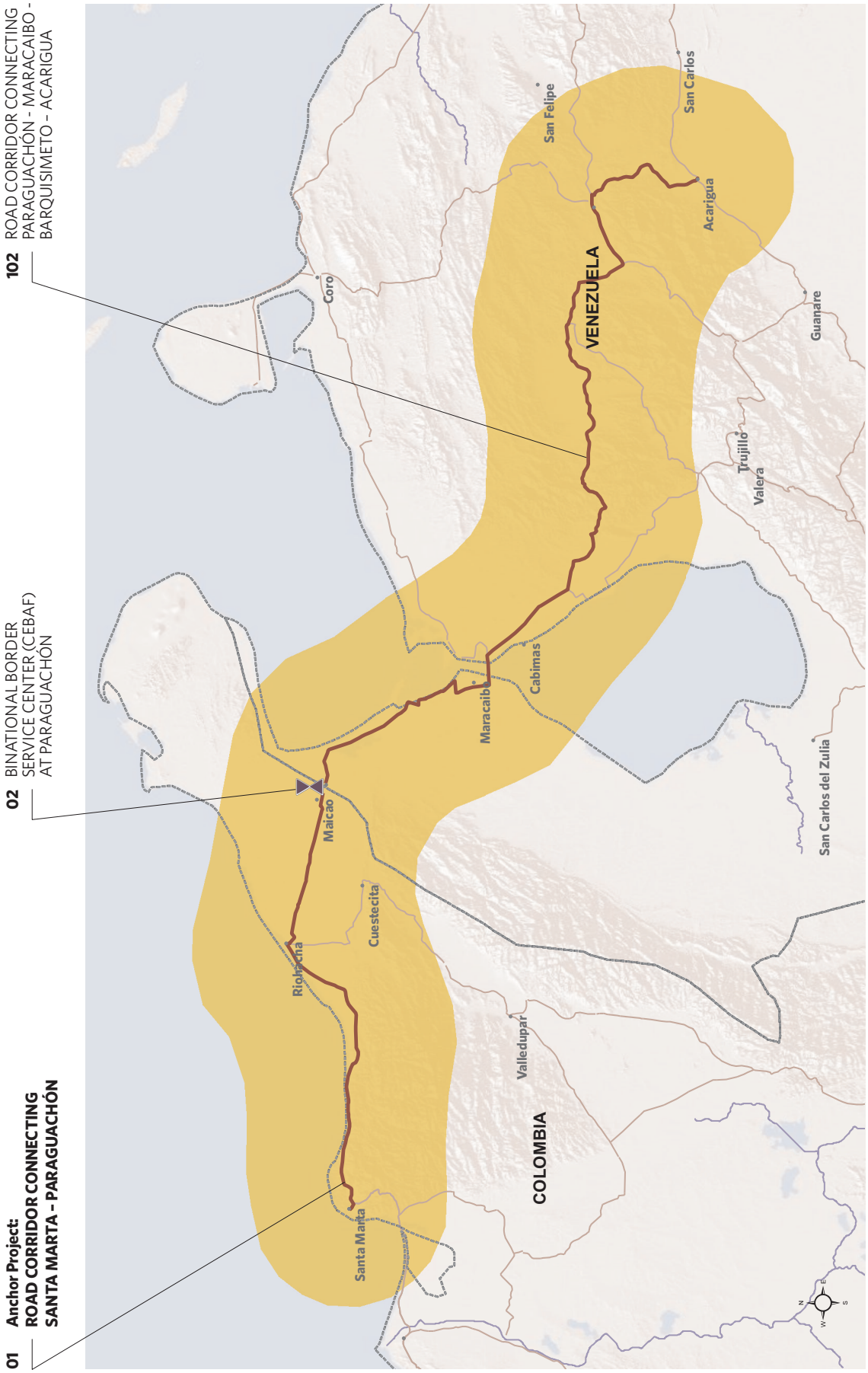
There are 20 completed projects in the Hub for a total investment of US$994 million[3].

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.

3. 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 (Northern Plains Hub) – Colombia (Northern Zone) Connection



Group 1

Strategic Function

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

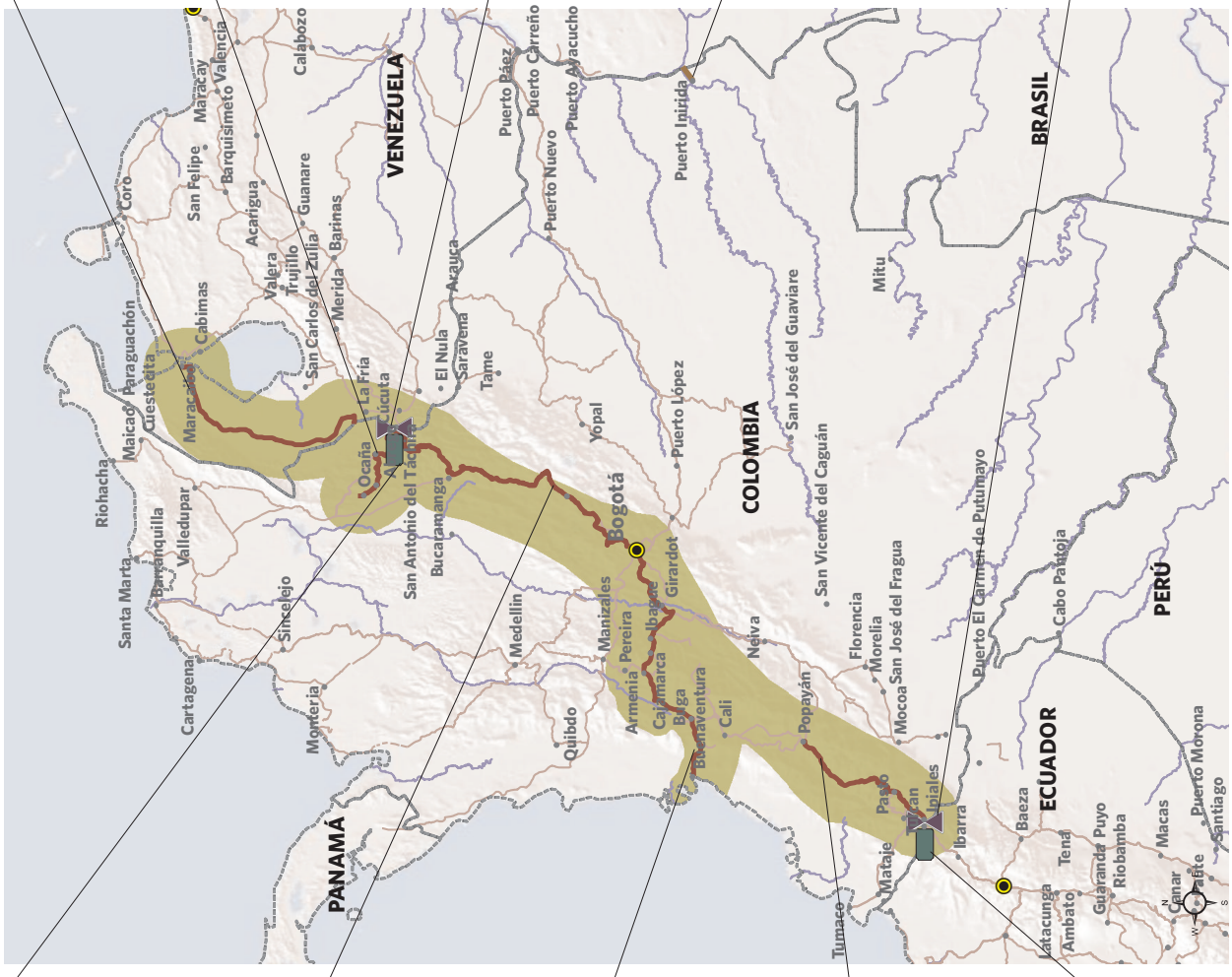
** US$ million*

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

Profiling · Pre-execution · Execution · Completed

Note: 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



Group 2

Strategic Function

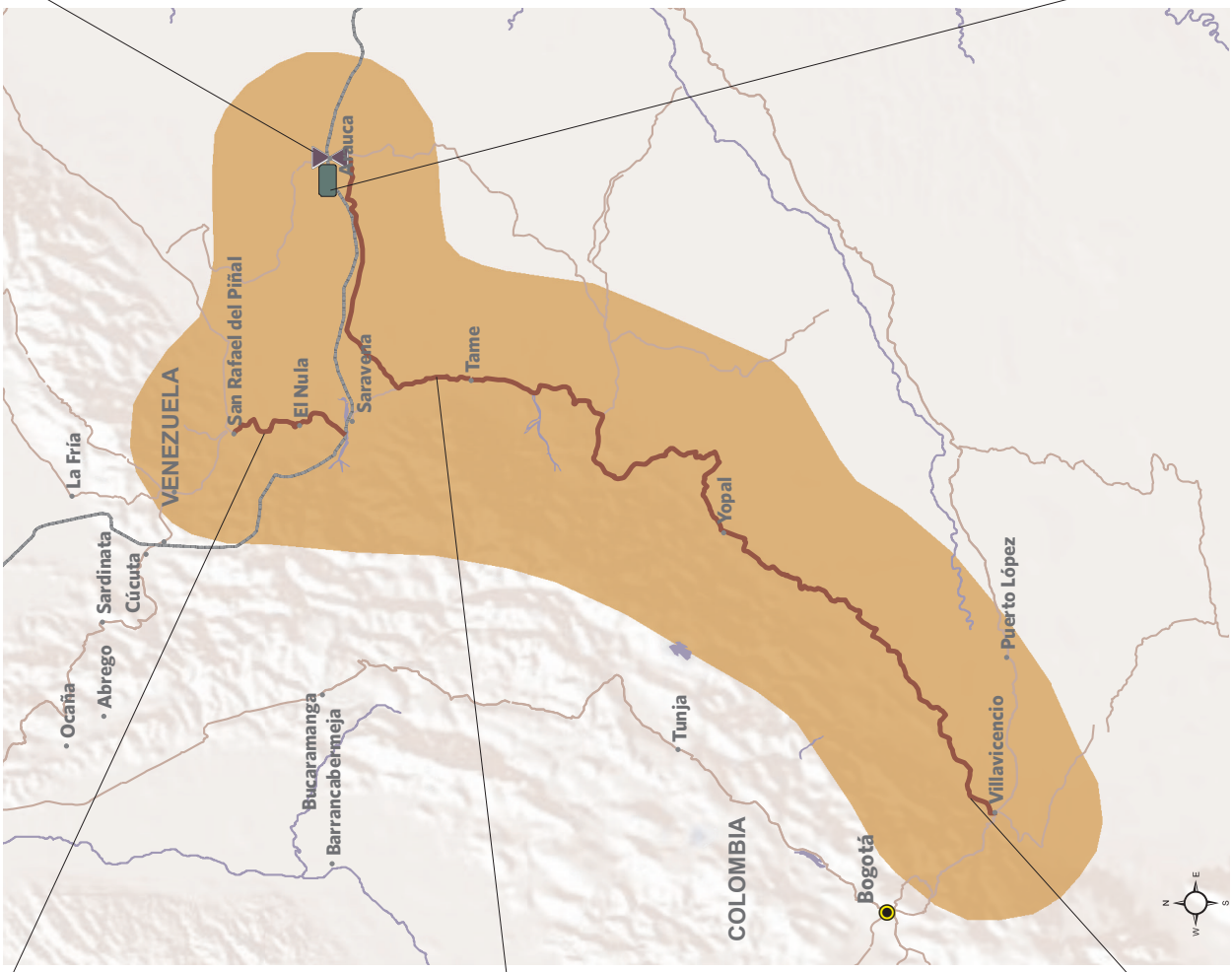
· Reinforce the socioeconomic relations of Ecuador, Colombia, and Venezuela through existing paved roads, which entails improving their border crossings and finding solutions to specific bottlenecks.

** 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
AND81	CONSTRUCTION OF THE TIENDITAS BORDER CROSSING		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
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
	TOTAL		**3,181.5**	

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.

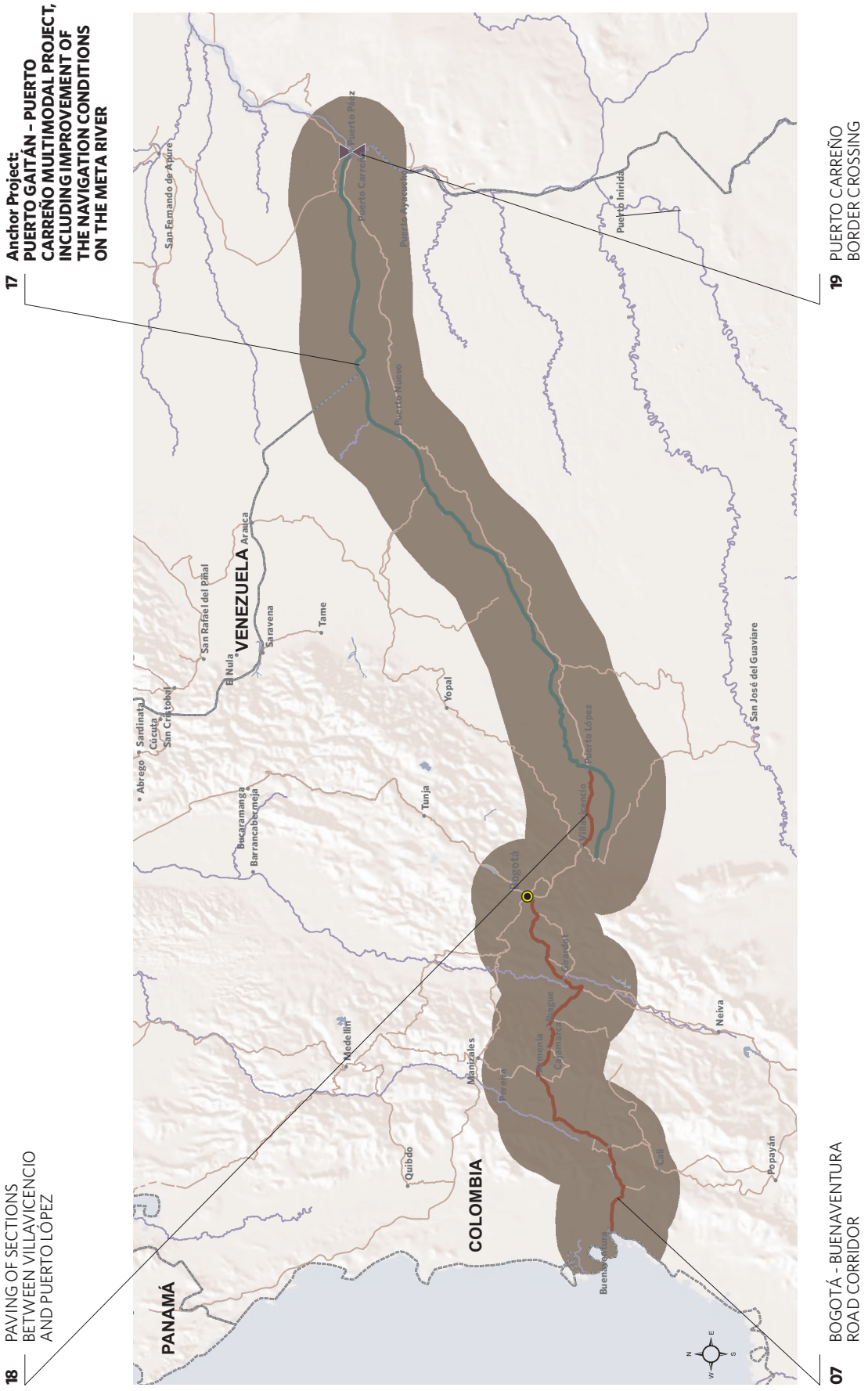
· This corridor will allow the participation in international trade of new regions in Colombia (Arauca) and Venezuela (Barinas).

** US$ million*

Code	Name	Stage	Estimated investment*	Countries
AND12	COMPLETION OF THE PAVING OF THE TAME - VILLAVICENCIO ROAD	Completed	3.6	CO
AND13	IMPROVEMENT OF JOSÉ ANTONIO PÁEZ BRIDGE	Completed	1.3	CO
AND14	COMPLETION OF THE PAVING OF THE TAME - ARAUCA ROAD	Completed	10.5	CO
AND15	**ARAUCA BORDER CROSSING**	Pre-execution	15.0	CO - VE
AND16	EL PIÑAL - SARAVENA ROAD PROJECT	Profiling	6.8	VE
	TOTAL		37.3	

Profiling · Pre-execution · Execution · Completed

Pacific – Bogotá – Meta – Orinoco – Atlantic Connection



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	Execution	1,950.0	CO
AND17	**PUERTO GAITÁN – PUERTO CARREÑO MULTIMODAL PROJECT, INCLUDING IMPROVEMENT OF THE NAVIGATION CONDITIONS ON THE META RIVER**	Profiling	71.0	CO
AND18	PAVING OF SECTIONS BETWEEN VILLAVICENCIO AND PUERTO LÓPEZ	Completed	26.0	CO
AND19	PUERTO CARREÑO BORDER CROSSING	Profiling	1.0	VE
	TOTAL		**2,048.0**	

Profiling · Pre-execution · Execution · Completed

Connection: Colombia (Tumaco Port) - Ecuador (Esmeraldas Port - Guayaquil) - Peru (Panamerican Road)

23 LA ESPRIELLA - MATAJE PROJECT, INCLUDING A BRIDGE OVER THE MATAJE RIVER

24 REHABILITATION OF THE BORBÓN - SAN LORENZO - MATAJE SECTION

21 **Anchor Project: BINATIONAL BORDER SERVICE CENTER (CEBAF) - ROAD AXIS No. 1**

99 UPGRADE OF SULLANA – TUMBES – TURN-OFF TO THE INTERNATIONAL BYPASS ROAD TO A FOUR-LANE ROAD

92 BINATIONAL BORDER SERVICE CENTER (CEBAF) - ROAD AXIS No. 2 SULLANA - EL ALAMOR

88 SULLANA - EL ALAMOR ROAD

100 REHABILITATION AND CONSTRUCTION OF BRIDGES ALONG THE SULLANA – TUMBES – TURN-OFF TO THE INTERNATIONAL BYPASS ROAD

29 AUTOPISTA DEL SOL EXPRESSWAY: IMPROVEMENT AND REHABILITATION OF THE PATIVILCA - TRUJILLO SECTION

75 UPGRADE OF THE CERRO AZUL - ICA ROAD SECTION TO A FOUR-LANE ROAD

22 MATAJE RIVER BINATIONAL BORDER SERVICE CENTER (CEBAF)

95 ECUADOR'S ELECTRIC FREIGHT TRAIN

26 PUERTO INCA - HUAQUILLAS ROAD AND HUAQUILLAS - AGUAS VERDES INTERNATIONAL BRIDGE, HUAQUILLAS BYPASS

25 NEW SANTA ROSA REGIONAL AIRPORT

101 CONSTRUCTION OF TUMBES BYPASS

93 BINATIONAL BORDER SERVICE CENTER (CEBAF) - ROAD AXIS No. 3 SULLANA - MACARÁ - LOJA

89 SULLANA - MACARÁ - LOJA ROAD

30 AUTOPISTA DEL SOL EXPRESSWAY: IMPROVEMENT AND REHABILITATION OF THE TRUJILLO - SULLANA SECTION

27 AUTOPISTA DEL SOL EXPRESSWAY: IMPROVEMENT AND REHABILITATION OF THE ANCÓN - PATIVILCA SECTION

103 TURN OFF TO QUILCA – BORDER WITH CHILE

87 SOUTHERN PANAMERICAN ROAD: FROM ICA TO THE CHILEAN BORDER

Group 5

Strategic Function

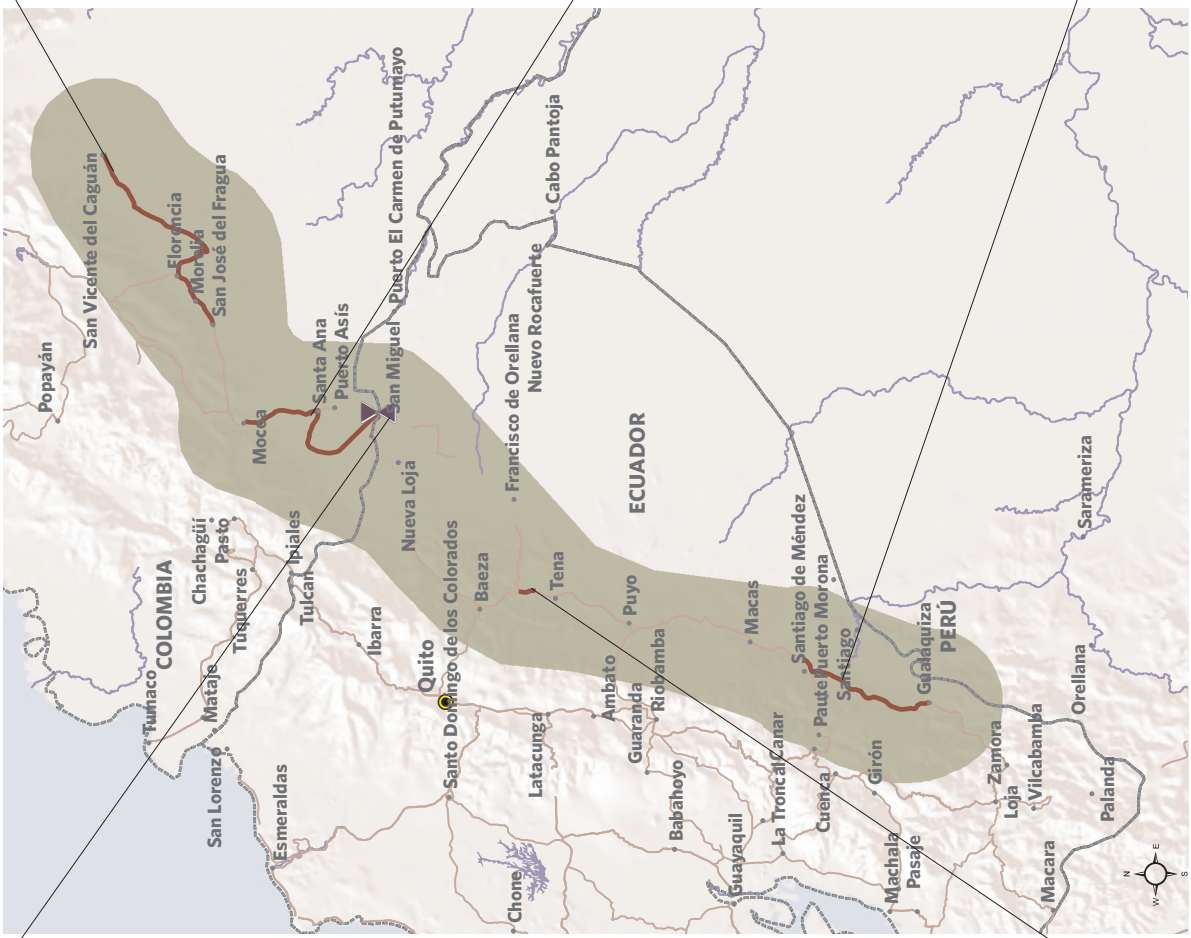
· Reinforce programs and projects of the main road corridor articulating the coastal areas of Peru and Ecuador as well as the Southern Pacific Colombian areas in order to make the production and trade capacity more dynamic and improve the quality of life of populations in border areas.

** US$ million*

Code	Name	Stage	Estimated investment*	Countries
AND21	BINATIONAL BORDER SERVICE CENTER (CEBAF) - ROAD AXIS No. 1	Completed	15.9	EC - PE
AND22	MATAJE RIVER BINATIONAL BORDER SERVICE CENTER (CEBAF)	Execution	4.0	CO - EC
AND23	LA ESPRIELLA - MATAJE PROJECT, INCLUDING A BRIDGE OVER THE MATAJE RIVER	Execution	43.8	CO - EC
AND24	REHABILITATION OF THE BORBÓN - SAN LORENZO - MATAJE SECTION	Execution	0.0	EC
AND25	NEW SANTA ROSA REGIONAL AIRPORT	Completed	47.1	EC
AND26	PUERTO INCA - HUAQUILLAS ROAD AND HUAQUILLAS - AGUAS VERDES INTERNATIONAL BRIDGE, HUAQUILLAS BYPASS	Completed	85.8	EC - PE
AND27	AUTOPISTA DEL SOL EXPRESSWAY: IMPROVEMENT AND REHABILITATION OF THE ANCÓN - PATIVILCA SECTION	Execution	212.6	PE
AND29	AUTOPISTA DEL SOL EXPRESSWAY: IMPROVEMENT AND REHABILITATION OF THE PATIVILCA - TRUJILLO SECTION	Execution	456.4	PE
AND30	AUTOPISTA DEL SOL EXPRESSWAY: IMPROVEMENT AND REHABILITATION OF THE TRUJILLO - SULLANA SECTION	Execution	441.2	PE
AND75	AUTOPISTA DEL SOL EXPRESSWAY: IMPROVEMENT AND REHABILITATION OF THE TRUJILLO - SULLANA SECTION	Execution	293.9	PE
AND87	SOUTHERN PANAMERICAN ROAD: ICA - TURN OFF TO QUIRCA	Profiling	460.0	PE
AND88	SULLANA - EL ALAMOR ROAD	Completed	29.5	PE
AND89	SULLANA - MACARÁ - LOJA ROAD	Completed	48.4	PE
AND92	BINATIONAL BORDER SERVICE CENTER (CEBAF) - ROAD AXIS No. 2 SULLANA - EL ALAMOR	Pre-execution	20.0	EC - PE
AND93	BINATIONAL BORDER SERVICE CENTER (CEBAF) - ROAD AXIS No. 3 SULLANA - MACARÁ - LOJA	Execution	12.0	EC - PE
AND95	ECUADOR'S ELECTRIC FREIGHT TRAIN	Profiling	17.800.0	EC
AND99	UPGRADE OF SULLANA - TUMBES - TURN-OFF TO THE INTERNATIONAL BYPASS ROAD TO A FOUR-LANE ROAD	Pre-execution	472.4	PE
AND100	REHABILITATION AND CONSTRUCTION OF BRIDGES ALONG THE SULLANA - TUMBES - TURN-OFF TO THE INTERNATIONAL BYPASS ROAD	Execution	139.1	PE
AND101	CONSTRUCTION OF TUMBES BYPASS	Pre-execution	54.9	PE
AND103	TURN OFF TO QUILCA – BORDER WITH CHILE	Execution	134.3	PE
	TOTAL		**20,771.2**	

Profiling · Pre-execution · Execution · Completed

Colombia – Ecuador II (Bogotá – Mocoa – Tena – Zamora – Palanda – Loja) Connection



Group 6

Strategic Function

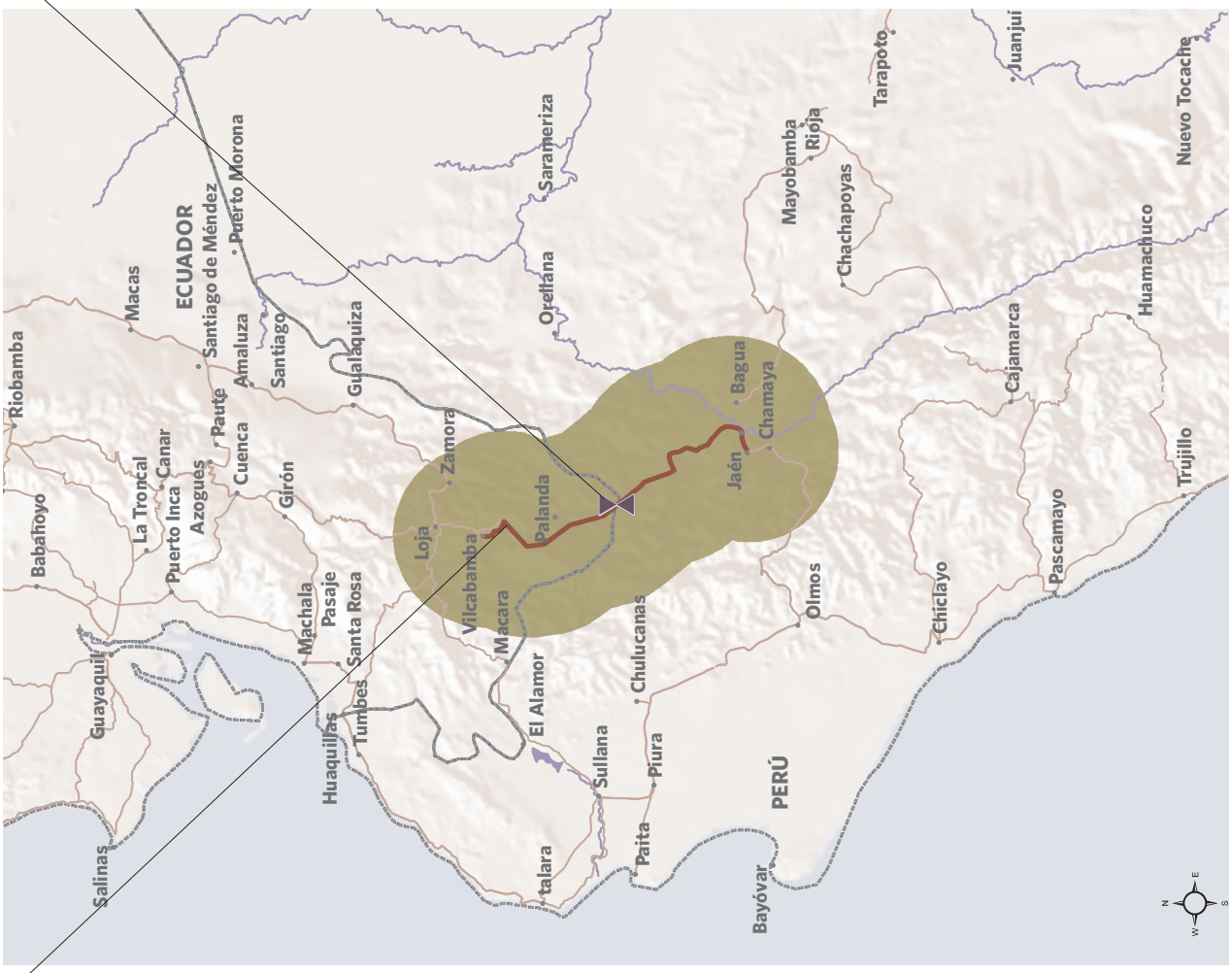
· Develop a corridor that would enhance trade relations between central and southern Colombia and Amazon provinces of northern and central Ecuador.

** US$ million*

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

Profiling · Pre-execution · Execution · Completed

Ecuador II (Loja - Puente De Integración - Yurimaguas) Connection



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*

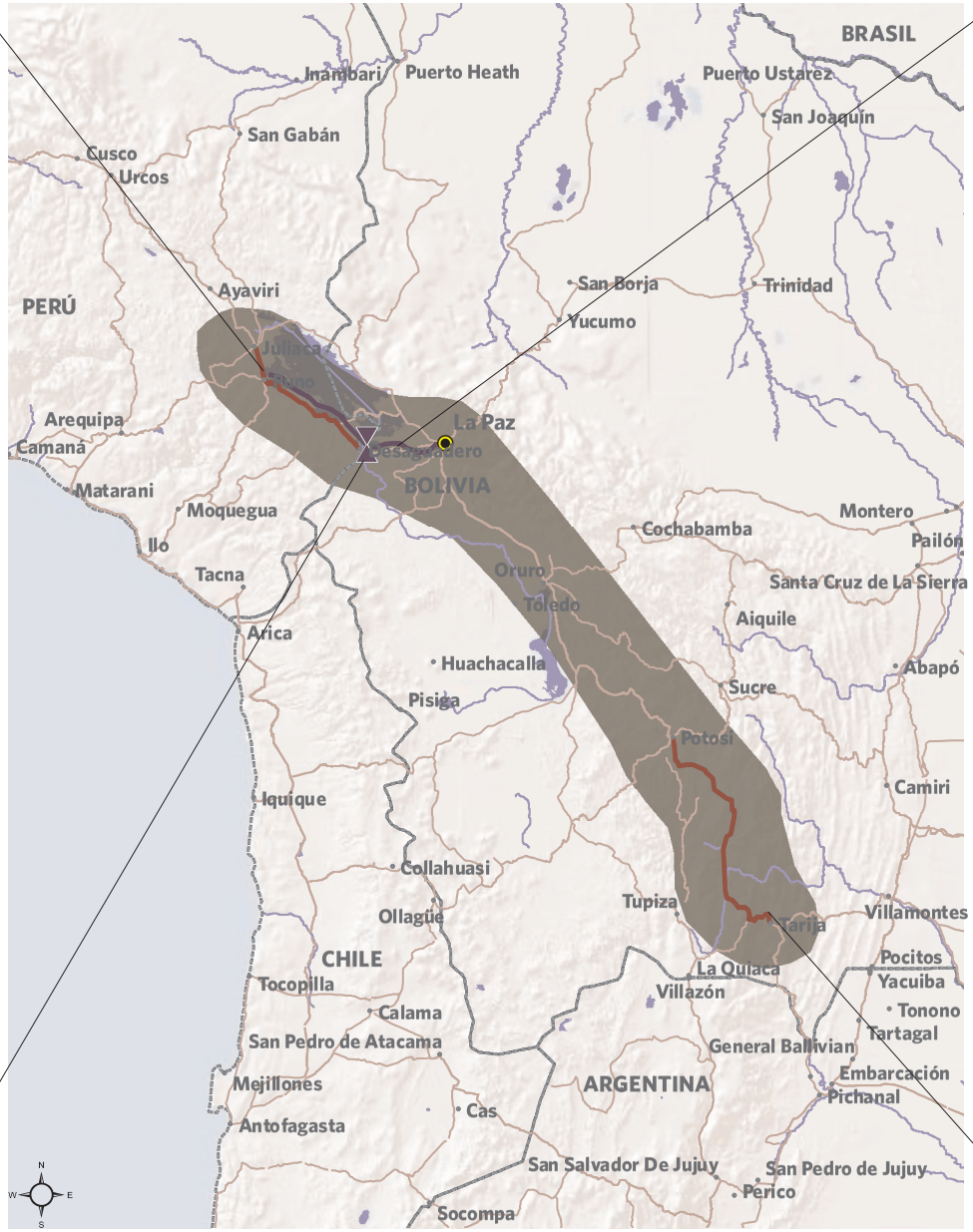
Code	Name	Stage	Estimated investment*	Countries
AND39	**PAVING OF VILCABAMBA – PUENTE DE INTEGRACIÓN (INTEGRATION BRIDGE) – JAÉN**		126.7	EC – PE
AND43	BINATIONAL BORDER SERVICE CENTER (CEBAF) – ROAD AXIS No. 4 PUENTE DE INTEGRACIÓN (INTEGRATION BRIDGE)		2.0	EC – PE
	TOTAL		**146.7**	

Profiling · Pre-execution · Execution · Completed

Peru – Bolivia (Cusco – La Paz – Tarija – Bermejo) Connection

51 EXPANSION AND REHABILITATION OF THE JULIACA - DESAGUADERO ROAD

54 CONSTRUCTION OF THE RAILWAY CONNECTION BETWEEN BOLIVIA AND PERU



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

48 COMPLETION OF THE PAVING OF THE POTOSÍ - TARIJA ROAD

Group 8

Strategic Function

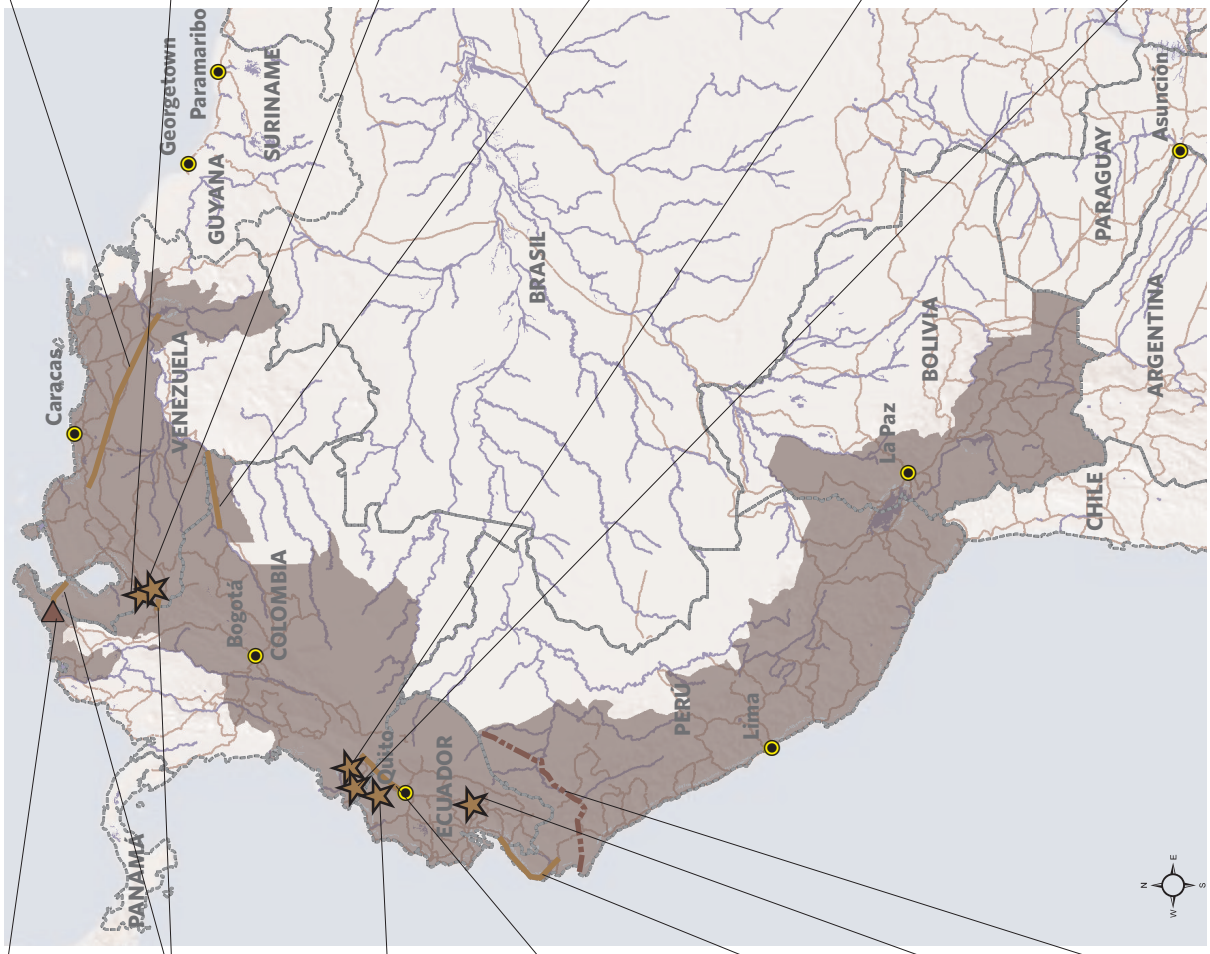
·Reinforce tourism and economic relations among the Andean cities of Peru (Cusco, Puno) and Bolivia (La Paz, Tarija) that operate along roads, and extend these to the central Andean area of Peru and northwestern Argentina.

** US$ million*

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

Profiling · Pre-execution · Execution · Completed

Energy Integration Systems



61 GAS INTERCONNECTION PROJECTS

56 STRENGTHENING OF THE CUATRICENTENARIO - CUESTECITAS AND EL COROZO - SAN MATEO INTERCONNECTIONS

98 GARCÍA MORENO EOLIC PROJECT

57 ELECTRICITY INTERCONNECTION PROJECT BETWEEN COLOMBIA AND ECUADOR: A 230 KV-LINE BETWEEN PASTO (COLOMBIA) AND QUITO (ECUADOR) SUBSTATIONS

65 ELECTRICITY INTERCONNECTION BETWEEN ECUADOR AND PERU

97 CHONTAL HYDROELECTRIC PROJECT

60 EXTENSION OF THE NOR-PERUANO OIL PIPELINE

67 ELECTRICITY TRANSMISSION TO SUPPLY THE WEST

63 URIBANTE CAPARO PROJECT (TRANSMISSION AND GENERATION NETWORKS)

62 SANTO DOMINGO COAL-FIRED POWER PLANT

64 ELECTRICITY INTERCONNECTION PROJECT BETWEEN PUERTO NUEVO - PUERTO PÁEZ (VENEZUELA) AND PUERTO CARREÑO (COLOMBIA)

66 ELECTRICITY INTERCONNECTION BETWEEN COLOMBIA AND ECUADOR PROJECT, SECOND STAGE

96 TUFIÑO - CHILES - CERRO NEGRO BINATIONAL GEOTHERMAL PROJECT

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	Completed	125.2	CO - VE
AND57	ELECTRICITY INTERCONNECTION PROJECT BETWEEN COLOMBIA AND ECUADOR: A 230 KV-LINE BETWEEN PASTO (COLOMBIA) AND QUITO (ECUADOR) SUBSTATIONS	Completed	45.4	CO - EC
AND60	EXTENSION OF THE NOR-PERUANO OIL PIPELINE	Completed	0.0	EC - PE
AND61	GAS INTERCONNECTION PROJECTS	Completed	335.0	CO
AND62	SANTO DOMINGO COAL-FIRED POWER PLANT	Profiling	625.0	VE
AND63	URIBANTE CAPARO PROJECT (TRANSMISSION AND GENERATION NETWORKS)	Execution	0.0	VE
AND64	ELECTRICITY INTERCONNECTION PROJECT BETWEEN PUERTO NUEVO - PUERTO PÁEZ (VENEZUELA) AND PUERTO CARREÑO (COLOMBIA)	Completed	5.0	CO
AND65	ELECTRICITY INTERCONNECTION BETWEEN ECUADOR AND PERU	Execution	0.0	EC - PE
AND66	ELECTRICITY INTERCONNECTION BETWEEN COLOMBIA AND ECUADOR PROJECT, SECOND STAGE	Profiling	0.0	CO - EC
AND67	ELECTRICITY TRANSMISSION TO SUPPLY THE WEST	Profiling	590.0	VE
AND96	TUFIÑO - CHILES - CERRO NEGRO BINATIONAL GEOTHERMAL PROJECT	Profiling	6.9	CO - EC
AND97	CHONTAL HYDROELECTRIC PROJECT, 194 MW	Execution	595.0	EC
AND98	GARCÍA MORENO EOLIC PROJECT	Pre-execution	0.9	EC
	TOTAL		**2,328.4**	

Profiling · Pre-execution · Execution · Completed

CAP

Capricorn

Argentina / Bolivia / Brazil / Chile / Paraguay

Population
53,509,280

Population density
19.7 Hab./km²

Area
2.680.308 km²

GDP
US$ 575.422 billion

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

Estimated Investment
US$ million

15,851

67
Nationals
87%

10
Binationals
13%

ARGENTINA	41	
BOLIVIA	3	
BRAZIL	5	
CHILE	18	
PARAGUAY	20	

Projects by Stage

No. of projects · U$S million

Profiling
6
900.6

Pre-execution
29
7,073.1

Execution
22
4,923.6

Completed
20
2,953.7

Projects by Sector

Transport
74
14,274

Energy
3
1,577

Projects by Type of Financing

Public
66
13,398.8

Private
8
2,130.3

Public/private
3
322

Projects by Subsector

Transport

Air
1
28

Road
42
7,280.1

Rail
14
6,269.1

River
3
175

Sea
4
318

Multimodal
1
20

Border Crossings
9
183.9

Energy

Energy Interconnection
3
1.577

CAP

CAPRICORN

Presentation of the Hub

Argentina - Bolivia - Brazil - Chile - Paraguay

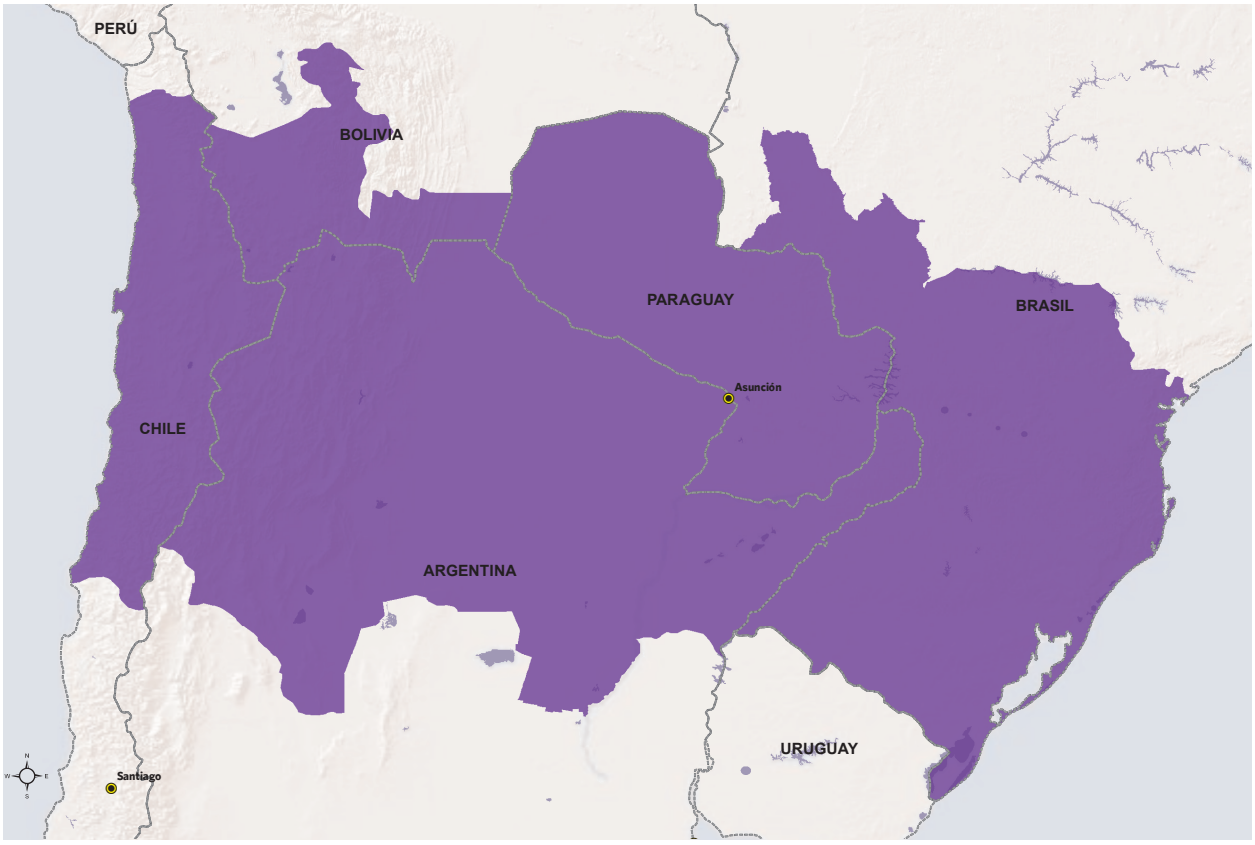
The Capricorn Hub[1] runs along the Pacific coast of Chile, cuts across the Andean region of Bolivia, reaches the north of Argentina, covers the whole of Paraguay, and includes Brazilian states on the Atlantic coast (Rio Grande do Sul, Santa Catarina, Paraná, and a portion of Mato Grosso do Sul). It accounts for 15% of the territory (2,680,308 km^2), 13% of the population (53,509,280 inhabitants), and 13% of the Gross Domestic Product (GDP) of South America, amounting to US$575.422 billion[2].

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

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 63,355 km, of which approximately 87% are in operating condition. There are important railway connections in different degree of preservation and condition 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 27 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.

1. See cosiplan.org/ejes#cap
2. At 2013 current prices

Map of the Area of Influence of the Capricorn Hub



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 162,000 km^2, which accounts 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$15.851 billion in 77 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.

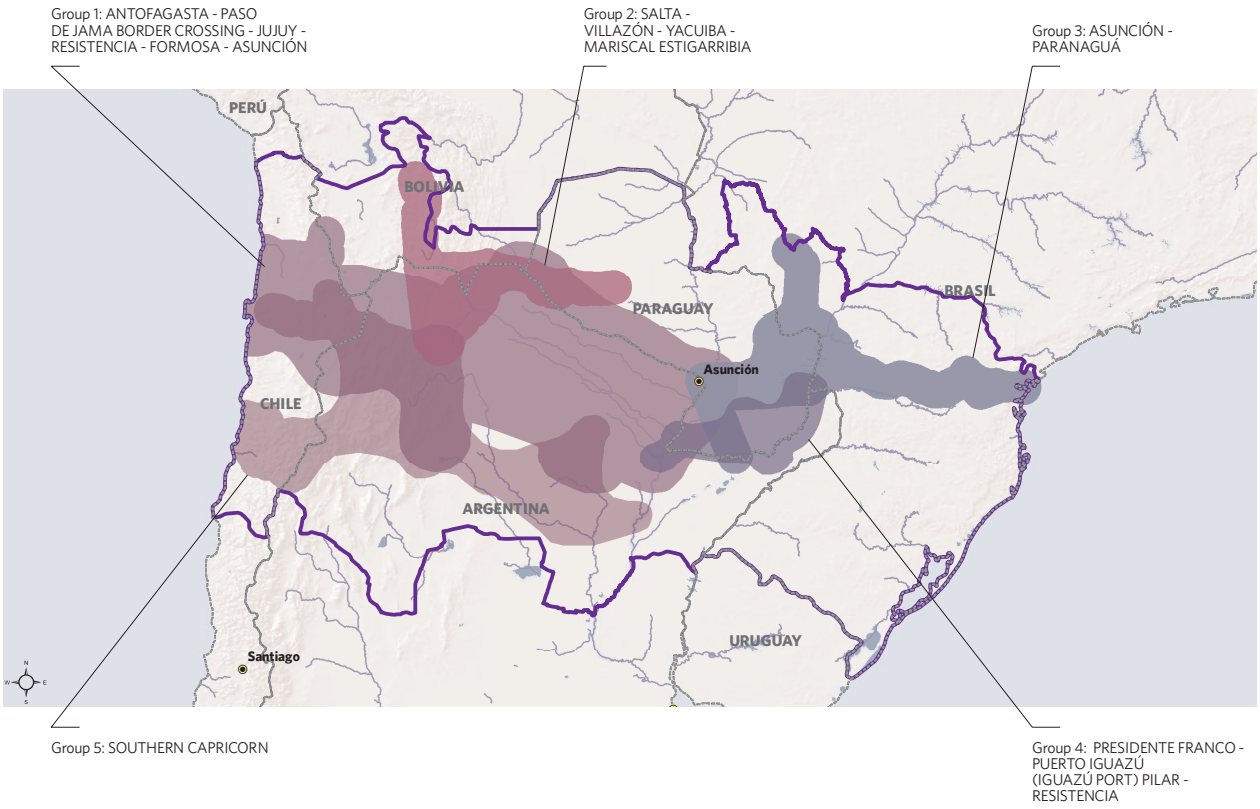
The Hub shares some regions of its area of influence with the MERCOSUR-Chile, Central Interoceanic, and Paraguay-Paraná Waterway Hubs.

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.

Map of the Project Groups of the Capricorn Hub



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	25	5,132.7
2	SALTA - VILLAZÓN - YACUIBA - MARISCAL ESTIGARRIBIA	9	899.6
3	ASUNCIÓN - PARANAGUÁ	13	2,818.1
4	PRESIDENTE FRANCO - PUERTO IGUAZÚ - PILAR - RESISTENCIA	13	4,253.5
5	SOUTHERN CAPRICORN	17	2,747.2
	TOTAL	**77**	**15,851.0**

The Hub's active portfolio features 57 projects with an estimated investment of US$12.897 billion.

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 (40% less).

Of the 57 active projects, there is information available on the estimated completion date of 24. Twenty of these will be completed in the next four years (2017-2020), and it is worthy of note that almost all (17) are national in scope, even though Argentina has 12 projects and Paraguay only five.

According to estimations, by the end of 2020, 70% of the investment planned for the portfolio of the Hub will have been made vis-à-vis the 19% spent so far.

Projects to Be Completed in the Next Four Years

** US$ million*

Code	Name	Group	Stage	Estimated Investment*	Countries	Estimated Completion Date
CAP26	IMPROVEMENT OF THE BORDER CENTER AT PUERTO IGUAZÚ	4		2.0	AR	November 2017
CAP32	CONSTRUCTION OF NATIONAL ROUTE No. 8, FROM CAAZAPÁ TO CORONEL BOGADO	4		212.0	PY	November 2017
CAP100	PAVING OF THE GUARANÍ - CORPUS CHRISTI - PINDOTY PORÁ INTERSECTION ROAD	3		43.0	PY	November 2017
CAP43	PAVING OF NATIONAL ROUTE No. 86 BETWEEN GENERAL GÜEMES AND POZO HONDO	1		200.0	AR	December 2017
CAP63	PAVING OF NATIONAL ROUTE No. 38, RÍO MARAPA - BEGINNING OF EXPRESSWAY - CAMPO DE HERRERA (TUCUMÁN) SECTION	5		300.0	AR	December 2017
CAP68	500-KV TRANSMISSION LINE (YACYRETÁ - VILLA HAYES)	3		297.0	PY	December 2017
CAP62	UPGRADE OF NATIONAL ROUTE No. 34 TO A FOUR-LANE ROAD, BETWEEN THE BORDER WITH SALTA AND SAN PEDRO DE JUJUY	5		254.2	AR	June 2018
CAP04	OPERATIONAL REHABILITATION OF THE BELGRANO FREIGHT RAILWAY - ROLLING STOCK AND EQUIPMENT	1		715.7	AR	December 2018
CAP33	IMPROVEMENT AND CONCESSION OF NATIONAL ROUTE No. 6, CIUDAD DEL ESTE - ENCARNACIÓN SECTION	4		136.0	PY	December 2018
CAP37	REHABILITATION OF THE C3 RAILWAY BRANCH LINE: AVIA TERAI - PINEDO	1		111.6	AR	December 2018
CAP39	REHABILITACIÓN DEL RAMAL FERROVIARIO C14: SALTA - SOCOMPA	1		26.0	AR	December 2018
CAP97	UPGRADE OF NATIONAL ROUTE No. 12 TO A FOUR-LANE ROAD BETWEEN GARUPÁ AND SAN IGNACIO	4		235.0	AR	November 2019
CAP10	TERRITORIAL DEVELOPMENT FOR BORDER INTEGRATION AND CONNECTIVITY IN SALVADOR MAZZA - YACUIBA	2		45.0	AR - BO	December 2019
CAP38	REHABILITATION OF THE C12 RAILWAY BRANCH LINE: AVIA TERAI - METÁN	1		603.6	AR	December 2019
CAP23	STUDY FOR THE OPTIMIZATION OF THE ÑEEMBUCÚ -BERMEJO NODE	4		301.2	AR - PY	March 2020
CAP95	UPGRADE OF NATIONAL ROUTE No. 16 TO A FOUR-LANE ROAD BETWEEN RESISTENCIA AND SÁENZ PEÑA	1		100.6	AR	April 2020
CAP42	REHABILITATION OF NATIONAL ROUTE No. 16 BETWEEN THE INTERSECTION WITH NATIONAL ROUTE No.11 AND THE INTERSECTION WITH NATIONAL ROUTE No. 34	1		348.8	AR	December 2020
CAP07	OPTIMIZATION OF THE CLORINDA - ASUNCIÓN NODE	1		106.2	AR - PY	December 2020
CAP11	REHABILITATION OF JUJUY - LA QUIACA RAILWAY	2		62.0	AR	December 2020
CAP18	CONCESSION FOR THE IMPROVEMENT OF ROUTES No. 2 AND 7 (ASUNCIÓN - CIUDAD DEL ESTE)	3		877.6	PY	December 2020

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 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 CIUDAD DEL ESTE - PILAR ÑEEMBUCÚ RAILWAY	4		2,800.0	PY	Public
CAP18	CONCESSION FOR THE IMPROVEMENT OF ROUTES No. 2 AND 7 (ASUNCIÓN - CIUDAD DEL ESTE)	3		877.6	PY	Private
CAP60	RECONQUISTA - GOYA ROAD BRIDGE	5		850.0	AR	Public
CAP04	OPERATIONAL REHABILITATION OF THE BELGRANO FREIGHT RAILWAY - ROLLING STOCK AND EQUIPMENT	1		715.7	AR	Public
CAP38	REHABILITATION OF THE C12 RAILWAY BRANCH LINE: AVIA TERAI - METÁN	1		603.6	AR	Public
	TOTAL			**5,846.9**		

Profiling · Pre-execution · Execution · Completed

The next four projects with the greatest estimated investment, even if involving much lesser amounts than the above-mentioned, include two rail connectivities and two road projects.

The Hub features 20 completed projects, having required a total investment of US$2.954 billion, equivalent to 19% of the total investment estimated for the Portfolio projects of the Hub.

Completed Projects in the Capricorn Hub

** US$ million*

Code	Name	Ejecuted 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
CAP44	PAVING OF THE POTOSÍ - TUPIZA - VILLAZÓN ROAD	90.0	AR
CAP46	500-KV TRANSMISSION LINE (ITAIPU - VILLA HAYES)	370.0	CH
CAP56	PAVING OF NATIONAL ROUTE No. 95 BETWEEN THE INTERSECTION WITH NATIONAL ROUTE 81 AND VILLA ÁNGELA	35.0	AR
CAP61	CONCESSION OF ANTOFAGASTA EXPRESSWAY	37.0	AR
CAP65	CONSTRUCTION OF A BYPASS OF NATIONAL ROUTE No. 12 AROUND POSADAS CITY (MISIONES PROVINCE)	24.3	AR
CAP67	PAVING OF NATIONAL ROUTE No. 95 BETWEEN VILLA ÁNGELA AND THE INTERSECTION WITH PROVINCIAL (SANTA FE) ROUTE No. 286	555.0	PY
CAP77	PAVING OF NATIONAL ROUTE No. 89, BETWEEN INTERSECTION WITH NATIONAL ROUTE No. 16, IN CHACO AND INTERSECTION WITH NATIONAL ROUTE No. 34, IN TABOADA	5.0	AR - CH
CAP78	BARRANCAS BLANCAS INTEGRATED CONTROL CENTER (PIRCAS NEGRAS BORDER CROSSING)	24.3	AR
CAP80	PAVING OF NATIONAL ROUTE No. 51, CAMPO QUIJANO - SICO BORDER CROSSING SECTION	80.0	CH
CAP88	MEJILLONES PORT COMPLEX	28.0	CH
CAP89	ANTOFAGASTA AIRPORT	1.2	CH
CAP90	HITO CAJÓN BORDER COMPLEX	1.5	CH
CAP91	PAVING OF ROAD B-243, CH27 SAN PEDRO - TOCOPILLA - ANTOFAGASTA CONNECTION	501.0	CH
CAP92	BIOCEANIC RAILWAY CORRIDOR, CHILEAN SECTION (ANTOFAGASTA – SOCOMPA)	180.4	BO
	TOTAL	**2,953.7**	

Antofagasta – Paso de Jama Border Crossing – Jujuy – Resistencia – Formosa – Asunción

102 PAVEMENT OF THE ROAD BETWEEN OLLAGÜE BORDER CROSSING AND CALAMA

02 IMPLEMENTATION OF INTEGRATED (ONE-STOP) BORDER CONTROL AT JAMA BORDER CROSSING

01 **Anchor Project: ACCESS ROADS TO PASO DE JAMA BORDER CROSSING (NATIONAL ROUTE NO. 52 - INTERSECTION WITH NATIONAL ROUTE NO. 9 - BORDER WITH CHILE)**

HITO CAJÓN BORDER COMPLEX **89**

PAVING OF ROAD B-243, CH27 SAN PEDRO - TOCOPILLA - ANTOFAGASTA CONNECTION **90**

CONCESSION OF LOA ROUTE **47**

CONCESSION OF ANTOFAGASTA EXPRESSWAY **46**

MEJILLONES PORT COMPLEX **80**

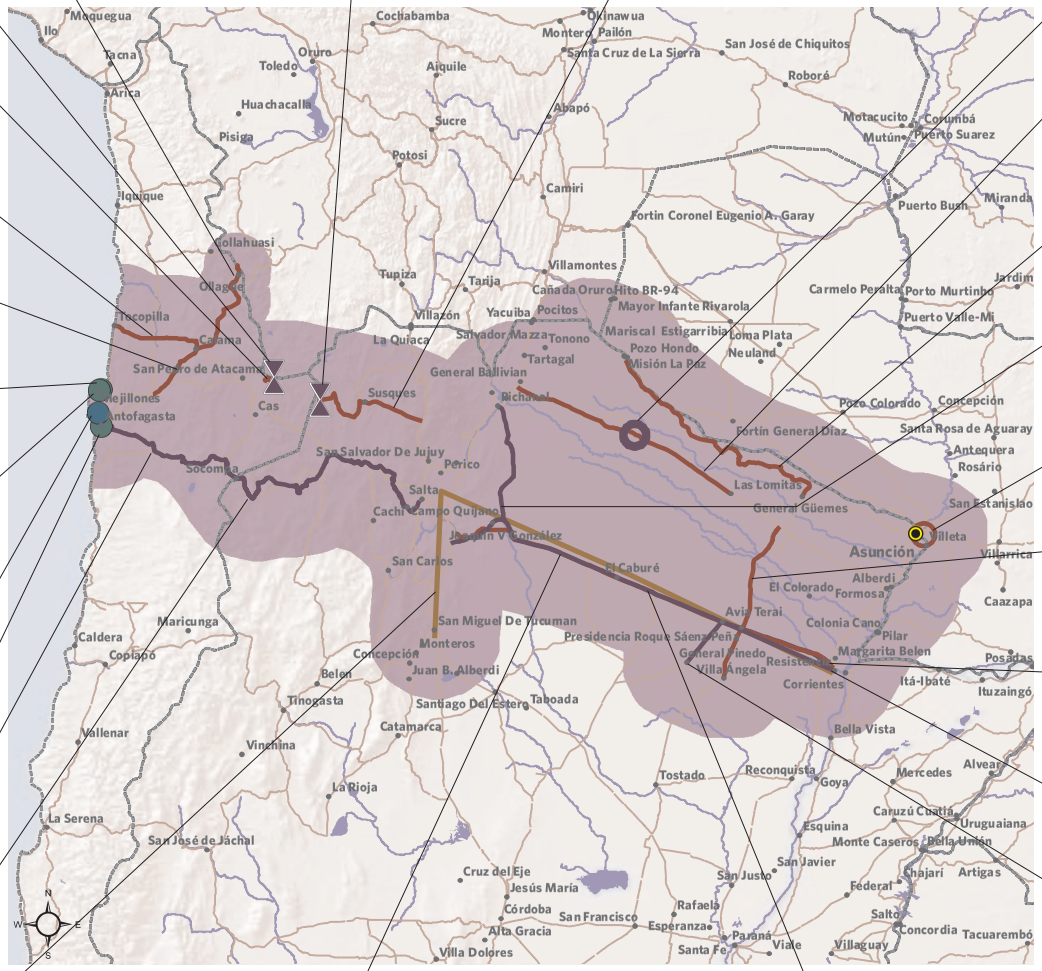
ENLARGEMENT OF THE MEJILLONES PORT COMPLEX (PHASE I) **08**

ANTOFAGASTA AIRPORT **88**

UPGRADE WORKS AT ANTOFAGASTA PORT **09**

BIOCEANIC RAILWAY CORRIDOR, CHILEAN SECTION (ANTOFAGASTA – SOCOMPA) **91**

REHABILITATION OF THE C14 RAILWAY BRANCH LINE: SALTA - SOCOMPA **39**



04 OPERATIONAL REHABILITATION OF THE BELGRANO FREIGHT RAILWAY - ROLLING STOCK AND EQUIPMENT

06 PAVING OF NATIONAL ROUTE NO. 81 BETWEEN LAS LOMITAS AND THE INTERSECTION WITH NATIONAL ROUTE NO. 34

43 PAVING OF NATIONAL ROUTE NO. 86 BETWEEN GENERAL GÜEMES AND POZO HONDO

41 REHABILITATION OF THE C18 RAILWAY BRANCH LINE: JOAQUÍN V. GONZÁLEZ - PICHANAL

07 OPTIMIZATION OF THE CLORINDA - ASUNCIÓN NODE

44 PAVING OF NATIONAL ROUTE NO. 95 BETWEEN THE INTERSECTION WITH NATIONAL ROUTE 81 AND VILLA ÁNGELA

95 UPGRADE OF NATIONAL ROUTE NO. 16 TO A FOUR - LANE ROAD BETWEEN RESISTENCIA AND SÁENZ PEÑA

105 REHABILITATION OF THE C3 RAILWAY BRANCH LINE: RESISTENCIA - AVIA TERAI

37 REHABILITATION OF THE C3 RAILWAY BRANCH LINE: AVIA TERAI - PINEDO

03 ELECTRICITY INTERCONNECTION BETWEEN THE ARGENTINE NORTHWESTERN AND NORTHEASTERN REGIONS

42 REHABILITATION OF NATIONAL ROUTE NO. 16 BETWEEN THE INTERSECTION WITH NATIONAL ROUTE NO. 11 AND THE INTERSECTION WITH NATIONAL ROUTE NO. 34

38 REHABILITATION OF THE C12 RAILWAY BRANCH LINE: AVIA TERAI - METÁN

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).

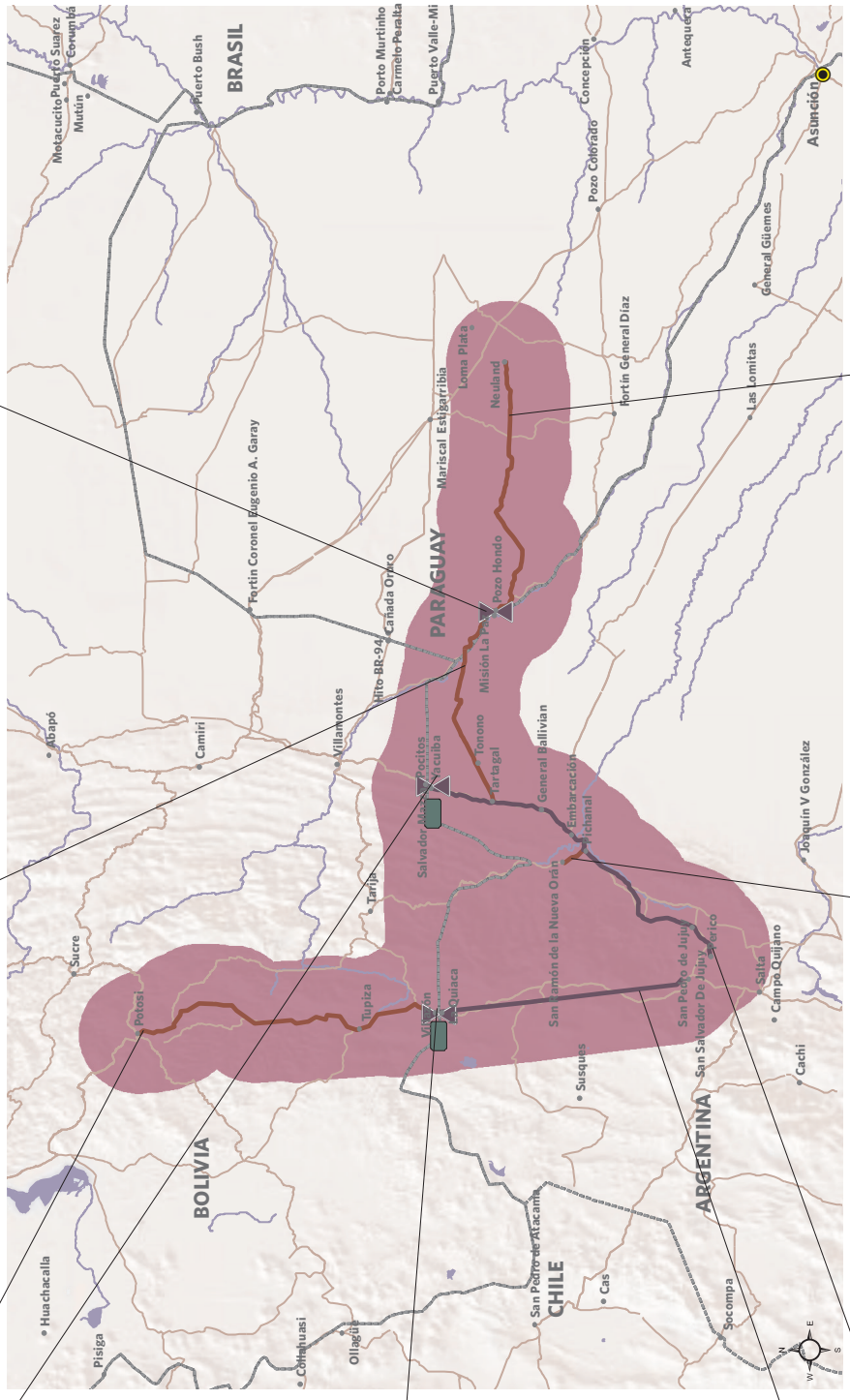
· Facilitate the flow of people among the countries of the Group.

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)**	Completed	54.0	AR
CAP02	IMPLEMENTATION OF INTEGRATED (ONE-STOP) BORDER CONTROL AT JAMA BORDER CROSSING	Completed	4.0	AR - CH
CAP03	ELECTRICITY INTERCONNECTION BETWEEN THE ARGENTINE NORTHWESTERN AND NORTHEASTERN REGIONS	Completed	725.0	AR
CAP04	OPERATIONAL REHABILITATION OF THE BELGRANO FREIGHT RAILWAY - ROLLING STOCK AND EQUIPMENT	Execution	715.7	AR
CAP06	PAVING OF NATIONAL ROUTE No. 81 BETWEEN LAS LOMITAS AND THE INTERSECTION WITH NATIONAL ROUTE No. 34	Completed	100.0	AR
CAP07	OPTIMIZATION OF THE CLORINDA - ASUNCIÓN NODE	Pre-execution	106.2	AR - PY
CAP08	ENLARGEMENT OF THE MEJILLONES PORT COMPLEX (PHASE I)	Completed	120.0	CH
CAP09	UPGRADE WORKS AT ANTOFAGASTA PORT	Completed	18.0	CH
CAP37	REHABILITATION OF THE C3 RAILWAY BRANCH LINE: AVIA TERAI - PINEDO	Execution	111.6	AR
CAP38	REHABILITATION OF THE C12 RAILWAY BRANCH LINE: AVIA TERAI – METÁN	Execution	603.6	AR
CAP39	REHABILITATION OF THE C14 RAILWAY BRANCH LINE: SALTA – SOCOMPA	Execution	26.0	AR
CAP41	REHABILITATION OF THE C18 RAILWAY BRANCH LINE: JOAQUÍN V. GONZÁLEZ – PICHANAL	Execution	252.0	AR
CAP42	REHABILITATION OF NATIONAL ROUTE No. 16 BETWEEN THE INTERSECTION WITH NATIONAL ROUTE No. 11 AND THE INTERSECTION WITH NATIONAL ROUTE No. 34	Execution	348.8	AR
CAP43	PAVING OF NATIONAL ROUTE No. 86 BETWEEN GENERAL GÜEMES AND POZO HONDO	Execution	200.0	AR
CAP44	PAVING OF NATIONAL ROUTE No. 95 BETWEEN THE INTERSECTION WITH NATIONAL ROUTE 81 AND VILLA ÁNGELA	Completed	90.0	AR
CAP46	CONCESSION OF ANTOFAGASTA EXPRESSWAY	Completed	370.0	CH
CAP47	CONCESSION OF LOA ROUTE	Pre-execution	280.0	CH
CAP80	MEJILLONES PORT COMPLEX	Completed	80.0	CH
CAP88	ANTOFAGASTA AIRPORT	Completed	28.0	CH
CAP89	HITO CAJÓN BORDER COMPLEX	Completed	1.2	CH
CAP90	PAVING OF ROAD B-243, CH27 SAN PEDRO - TOCOPILLA - ANTOFAGASTA CONNECTION	Completed	1.5	CH
CAP91	BIOCEANIC RAILWAY CORRIDOR, CHILEAN SECTION (ANTOFAGASTA - SOCOMPA)	Completed	501.0	CH
CAP95	UPGRADE OF NATIONAL ROUTE No. 16 TO A FOUR-LANE ROAD BETWEEN RESISTENCIA AND SÁENZ PEÑA	Execution	100.6	AR
CAP102	PAVEMENT OF THE ROAD BETWEEN OLLAGÜE BORDER CROSSING AND CALAMA	Execution	70.0	CH
CAP105	REHABILITATION OF THE C3 RAILWAY BRANCH LINE: RESISTENCIA - AVIA TERAI	Profiling	225.6	AR
	TOTAL		**5,132.7**	

** US$ million*

Profiling · Pre-execution · Execution · Completed

Salta – Villazón – Yacuiba – Mariscal Estigarribia



Anchor Project: TERRITORIAL DEVELOPMENT FOR BORDER INTEGRATION AND CONNECTIVITY IN SALVADOR MAZZA - YACUIBA

10 PAVING OF THE POTOSÍ - TUPIZA - VILLAZÓN ROAD

92 PAVING OF TARTAGAL - MISIÓN LA PAZ - POZO HONDO ROAD

51 BORDER CENTER AT POZO HONDO

TERRITORIAL DEVELOPMENT FOR BORDER INTEGRATION AND CONNECTIVITY IN LA QUIACA - VILLAZÓN

81 REHABILITATION OF JUJUY - LA QUIACA RAILWAY

11 REHABILITATION AND IMPROVEMENT OF THE BELGRANO FREIGHT RAILWAY, C15 BRANCH LINE (PERICO - POCITOS)

48 UPGRADE TO A FOUR-LANE ROAD AND REHABILITATION OF ROUTE NO. 50, PICHANAL - ORÁN SECTION

49 PAVEMENT OF THE CRUCE CENTINELA - MARISCAL ESTIGARRIBIA - POZO HONDO - MISIÓN LA PAZ ROAD SECTION

70

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	**TERRITORIAL DEVELOPMENT FOR BORDER INTEGRATION AND CONNECTIVITY IN SALVADOR MAZZA - YACUIBA**	Pre-execution	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	Pre-execution	160.0	AR
CAP92	PAVING OF THE POTOSÍ - TUPIZA - VILLAZÓN ROAD	Completed	180.4	BO
CAP48	REHABILITATION AND IMPROVEMENT OF THE BELGRANO FREIGHT RAILWAY, C15 BRANCH LINE (PERICO - POCITOS)	Execution	60.0	AR
CAP49	UPGRADE TO A FOUR-LANE ROAD AND REHABILITATION OF ROUTE No. 50, PICHANAL - ORÁN SECTION	Execution	35.0	AR
CAP51	BORDER CENTER AT POZO HONDO	Pre-execution	1.5	PY
CAP70	PAVEMENT OF THE CRUCE CENTINELA - MARISCAL ESTIGARRIBIA - POZO HONDO - MISIÓN LA PAZ ROAD SECTION	Pre-execution	340.7	PY
CAP81	TERRITORIAL DEVELOPMENT FOR BORDER INTEGRATION AND CONNECTIVITY IN LA QUIACA - VILLAZÓN	Pre-execution	15.0	AR - BO
	TOTAL		**899.6**	

Profiling · Pre-execution · Execution · Completed

Anchor Project: NEW PUERTO PRESIDENTE FRANCO - PORTO MEIRA BRIDGE, WITH A PARAGUAY- BRAZIL INTEGRATED CONTROL AREA **14**

500-KV TRANSMISSION LINE (ITAIPÚ - VILLA HAYES) **67**

CONCESSION FOR THE IMPROVEMENT OF ROUTES NO. 2 AND 7 (ASUNCIÓN - CIUDAD DEL ESTE) **18**

RELOCATION OF THE ASUNCIÓN PORT **22**

ENLARGEMENT OF VILLETA PORT **54**

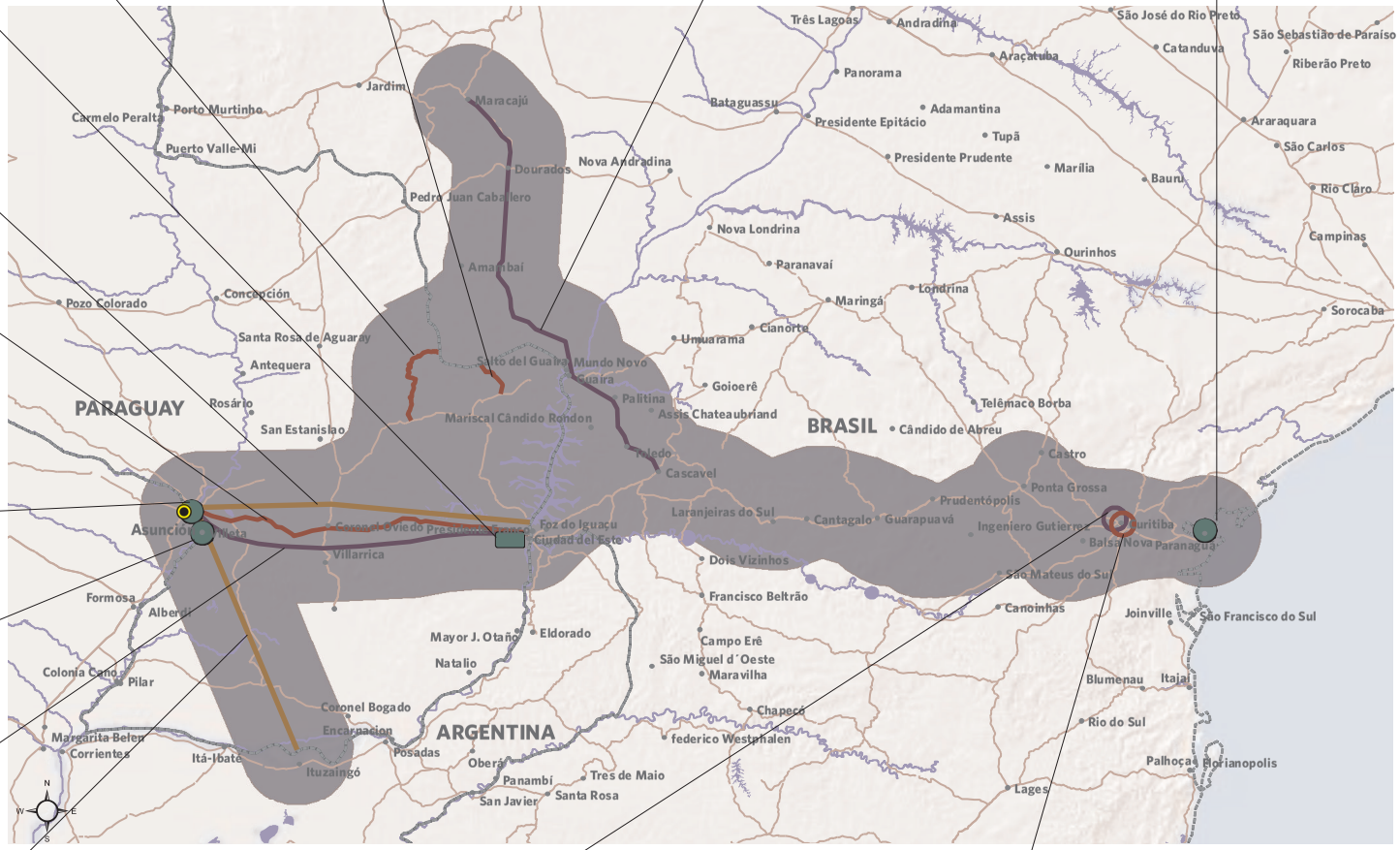
CONSTRUCTION OF ASUNCIÓN - CIUDAD DEL ESTE RAILWAY **19**

99 PAVING OF CURUGUATY - VILLA YGATIMÍ - YPEJHÚ ROAD

100 PAVING OF THE GUARANÍ - CORPUS CHRISTI - PINDOTY PORÁ INTERSECTION ROAD

93 CONSTRUCTION OF CASCAVEL - GUAÍRA - DOURADOS - MARACAJÚ RAILWAY

15 DREDGING IN THE PARANAGUÁ PORT



68 500-KV TRANSMISSION LINE (YACYRETÁ - VILLA HAYES)

17 CONSTRUCTION OF CURITIBA RING RAILWAY

16 COMPLETION OF CURITIBA RING ROAD

Group 3

Strategic Function

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

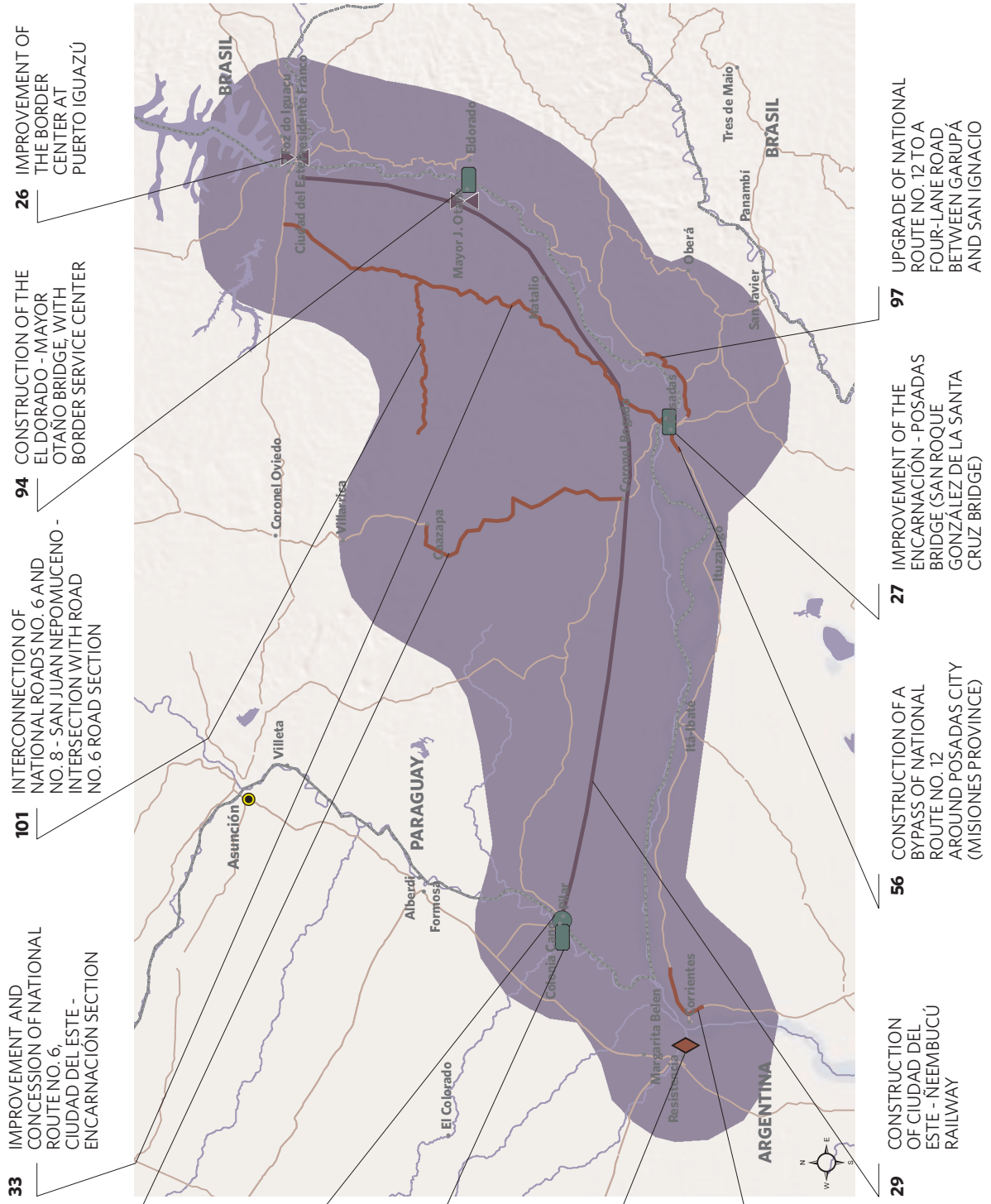
· Promote regional socioeconomic development.

** US$ million*

Code	Name	Stage	Estimated investment*	Countries
CAP14	**NEW PUERTO PRESIDENTE FRANCO – PORTO MEIRA BRIDGE, WITH A PARAGUAY – BRAZIL INTEGRATED CONTROL AREA**	Pre-execution	173.0	BR – PY
CAP15	DREDGING IN THE PARANAGUÁ PORT	Execution	100.0	BR
CAP16	COMPLETION OF CURITIBA RING ROAD	Pre-execution	140.0	BR
CAP17	CONSTRUCTION OF CURITIBA RING RAILWAY	Pre-execution	0.0	BR
CAP18	CONCESSION FOR THE IMPROVEMENT OF ROUTES No. 2 AND 7 (ASUNCIÓN – CIUDAD DEL ESTE)	Execution	877.6	PY
CAP19	CONSTRUCTION OF ASUNCIÓN – CIUDAD DEL ESTE RAILWAY	Profiling	500.0	PY
CAP22	RELOCATION OF THE ASUNCIÓN PORT	Profiling	25.0	PY
CAP68	500-KV TRANSMISSION LINE (YACYRETÁ – VILLA HAYES)	Execution	297.0	PY
CAP67	500-KV TRANSMISSION LINE (ITAIPU – VILLA HAYES)	Completed	555.0	PY
CAP54	ENLARGEMENT OF VILLETA PORT	Profiling	30.0	PY
CAP93	CONSTRUCTION OF CASCAVEL – GUAÍRA – DOURADOS – MARACAJÚ RAILWAY	Profiling	0.0	BR
CAP99	PAVING OF CURUGUATY – VILLA YGATIMÍ – YPEJHÚ ROAD	Pre-execution	77.5	PY
CAP100	PAVING OF THE GUARANÍ – CORPUS CHRISTI – PINDOTY PORÁ INTERSECTION ROAD	Execution	43.0	PY
	TOTAL		2,818.1	

Profiling · Pre-execution · Execution · Completed

Presidente Franco – Puerto Iguazú – Pilar – Resistencia



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	CONSTRUCTION OF NATIONAL ROUTE No. 8, FROM CAAZAPÁ TO 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		235.0	AR
CAP101	INTERCONNECTION OF NATIONAL ROADS No. 6 AND No. 8 - SAN JUAN NEPOMUCENO -INTERSECTION WITH ROAD No. 6 ROAD SECTION		105.0	PY
	TOTAL		**4,253.5**	

Profiling · Pre-execution · Execution · Completed

75 PAVING OF SICO BORDER CROSSING - CASS - SAN PEDRO DE ATACAMA (NATIONAL ROUTE CH-23)

78 PAVING OF NATIONAL ROUTE NO. 51, CAMPO QUIJANO - SICO BORDER CROSSING SECTION

104 PAVING OF BORDER CONTROL SICO - PEINE - BAQUEDANO ROAD

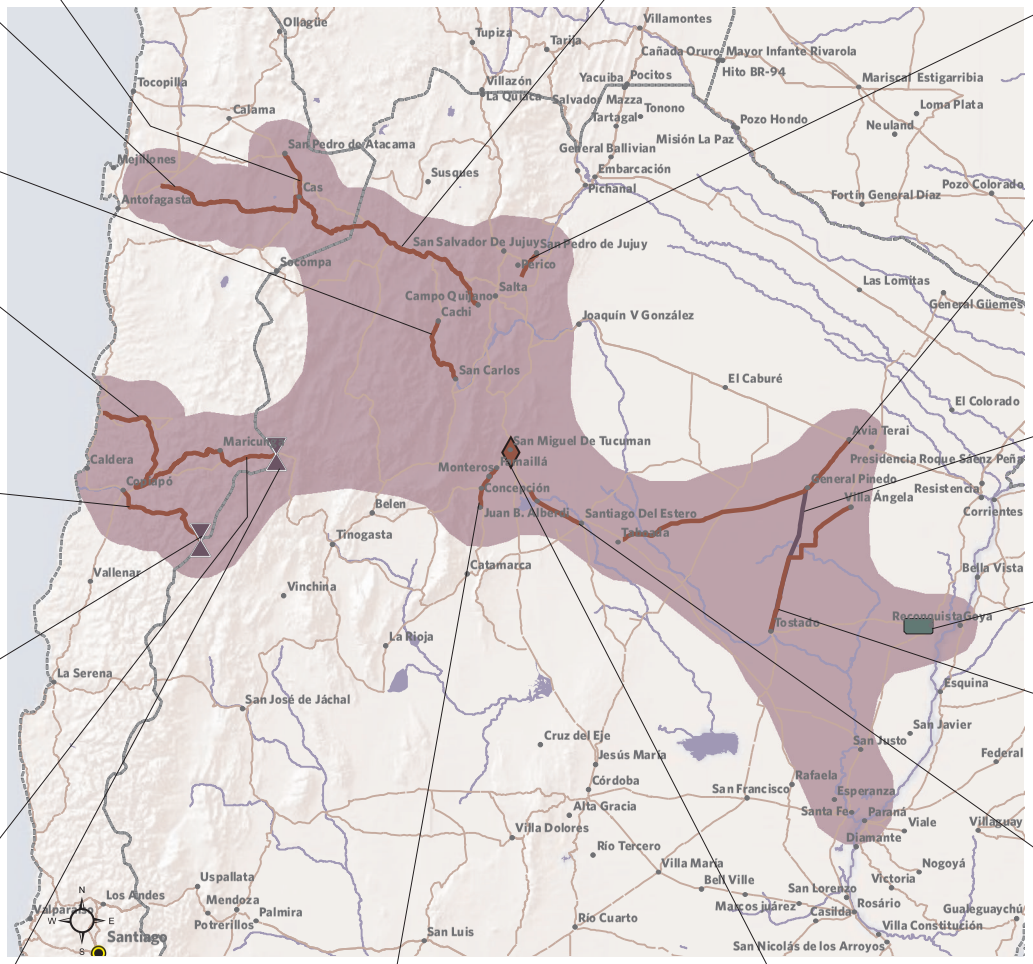
64 PAVING OF NATIONAL ROUTE NO. 40, SAN CARLOS - CACHI ROAD SECTION

103 PAVEMENT OF THE SAN FRANCISCO BORDER CROSSING - DIEGO DE ALMAGRO - CHAÑARAL ROAD

76 IMPROVEMENT OF NATIONAL ROUTE CH-33, COPIAPÓ - PIRCAS NEGRAS SECTION

77 BARRANCAS BLANCAS INTEGRATED CONTROL CENTER (PIRCAS NEGRAS BORDER CROSSING)

73 CONNECTION MARICUNGA COMPLEX (SAN FRANCISCO - INTERNATIONAL BORDER) NATIONAL ROUTE CH-31



62 UPGRADE OF NATIONAL ROUTE NO. 34 TO A FOUR LANE - ROAD, BETWEEN THE BORDER WITH SALTA AND SAN PEDRO DE JUJUY

65 PAVING OF NATIONAL ROUTE NO. 89, BETWEEN INTERSECTION WITH NATIONAL ROUTE NO. 16, IN CHACO AND INTERSECTION WITH NATIONAL ROUTE NO. 34, IN TABOADA

58 REHABILITATION OF THE C6 RAILWAY BRANCH LINE (PINEDO - TOSTADO)

60 RECONQUISTA - GOYA ROAD BRIDGE

61 PAVING OF NATIONAL ROUTE NO. 95 BETWEEN VILLA ÁNGELA AND THE INTERSECTION WITH PROVINCIAL (SANTA FE) ROUTE NO. 286

98 UPGRADE OF NATIONAL ROUTE NO. 9: SANTIAGO DEL ESTERO - TERMAS DE RÍO HONDO - SAN MARTÍN

72 INTEGRATED (ONE-STOP) BORDER CONTROL COMPLEX AT SAN FRANCISCO BORDER CROSSING

63 PAVING OF NATIONAL ROUTE NO. 38, RÍO MARAPA - BEGINNING OF EXPRESSWAY - CAMPO DE HERRERA (TUCUMAN) SECTION

57 **Anchor Project: MULTIMODAL TRANSFER CENTER IN TUCUMÁN**

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**	Pre-execution	20.0	AR
CAP58	REHABILITATION OF THE C6 RAILWAY BRANCH LINE (PINEDO - TOSTADO)	Execution	411.6	AR
CAP60	RECONQUISTA - GOYA ROAD BRIDGE	Pre-execution	850.0	AR
CAP61	PAVING OF NATIONAL ROUTE No. 95 BETWEEN VILLA ÁNGELA AND THE INTERSECTION WITH PROVINCIAL (SANTA FE) ROUTE No. 286	Completed	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	Pre-execution	254.2	AR
CAP63	PAVING OF NATIONAL ROUTE No. 38, RÍO MARAPA - BEGINNING OF EXPRESSWAY - CAMPO DE HERRERA (TUCUMÁN) SECTION	Execution	300.0	AR
CAP64	PAVING OF NATIONAL ROUTE No. 40, SAN CARLOS - CACHI ROAD SECTION	Pre-execution	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	Completed	24.3	AR
CAP72	INTEGRATED (ONE-STOP) BORDER CONTROL COMPLEX AT SAN FRANCISCO BORDER CROSSING	Pre-execution	4.0	AR - CH
CAP73	CONNECTION MARICUNGA COMPLEX (SAN FRANCISCO - INTERNATIONAL BORDER) NATIONAL ROUTE CH-31	Execution	52.0	CH
CAP75	PAVING OF SICO BORDER CROSSING - CASS- SAN PEDRO DE ATACAMA (NATIONAL ROUTE CH-23)	Execution	30.0	CH
CAP76	IMPROVEMENT OF NATIONAL ROUTE CH-33, COPIAPÓ - PIRCAS NEGRAS SECTION	Pre-execution	95.0	CH
CAP77	BARRANCAS BLANCAS INTEGRATED CONTROL CENTER (PIRCAS NEGRAS BORDER CROSSING)	Completed	5.0	AR - CH
CAP78	PAVING OF NATIONAL ROUTE No. 51, CAMPO QUIJANO - SICO BORDER CROSSING SECTION	Completed	24.3	AR
CAP98	UPGRADE OF NATIONAL ROUTE No. 9: SANTIAGO DEL ESTERO - TERMAS DE RÍO HONDO - SAN MARTÍN	Pre-execution	275.0	AR
CAP103	PAVEMENT OF THE SAN FRANCISCO BORDER CROSSING - DIEGO DE ALMAGRO - CHAÑARAL ROAD	Pre-execution	24.8	CH
CAP104	PAVEMENT OF THE SICO BORDER CROSSING - PEINE - BAQUEDANO ROAD	Pre-execution	90.0	CH
	TOTAL		2,747.2	

Profiling · Pre-execution · Execution · Completed

DES

Southern

Argentina / Chile

Population
6,473,238

Population density
9.4 Hab./km²

Area
686,527 km²

GDP
US$ 71.888 billion

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

Estimated Investment
US$ million

4,411.2

40
Nationals
88.9%

5
Binationals
11.1%

ARGENTINA 29
CHILE 21

No. of projects U$S million

Projects by Stage

Profiling
6
316

Pre-execution
20
1,908.1

Execution
13
1,714

Completed
6
473.1

Projects by Sector

Transport
42
3,961.2

Energy
3
450

Projects by Type of Financing

Public
43
4,128.2

Private
1
53

Public/private
1
230

Projects by Subsector

Transport

Road
30
2,927.6

Rail
3
520

Sea
6
496

Border Crossings
3
17.6

Enery

Energy Interconnection
3
450

DES

SOUTHERN

Presentation of the Hub

Argentina - Chile

The Southern Hub[1] covers a portion of the southernmost end of South America 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 in 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 billion)[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.

With regard to infrastructure, the **road network** of the countries that make up the Southern Hub is 323,009 km long, 30% 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 18 airports, six of which are international and 12 domestic. As far as **electricity generation** is concerned, as of 2012 the countries involved in the Hub had an installed power capacity of about 53,211 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 about 11% of the Hub's total territory. Protected areas include two biosphere reserves, two Ramsar sites, and 18 national parks.

1. See cosiplan.org/ejes#des
2. At current 2013 prices

Map of the Area of Influence of the Southern Hub

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 Hub, i.e. the Patagonian plateau and its river valleys, is 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, in Argentina, and the Bío Bío river, in 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$4.411 billion in 45 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 Hub shares part of its area of influence with the Andean Hub.

Project Portfolio

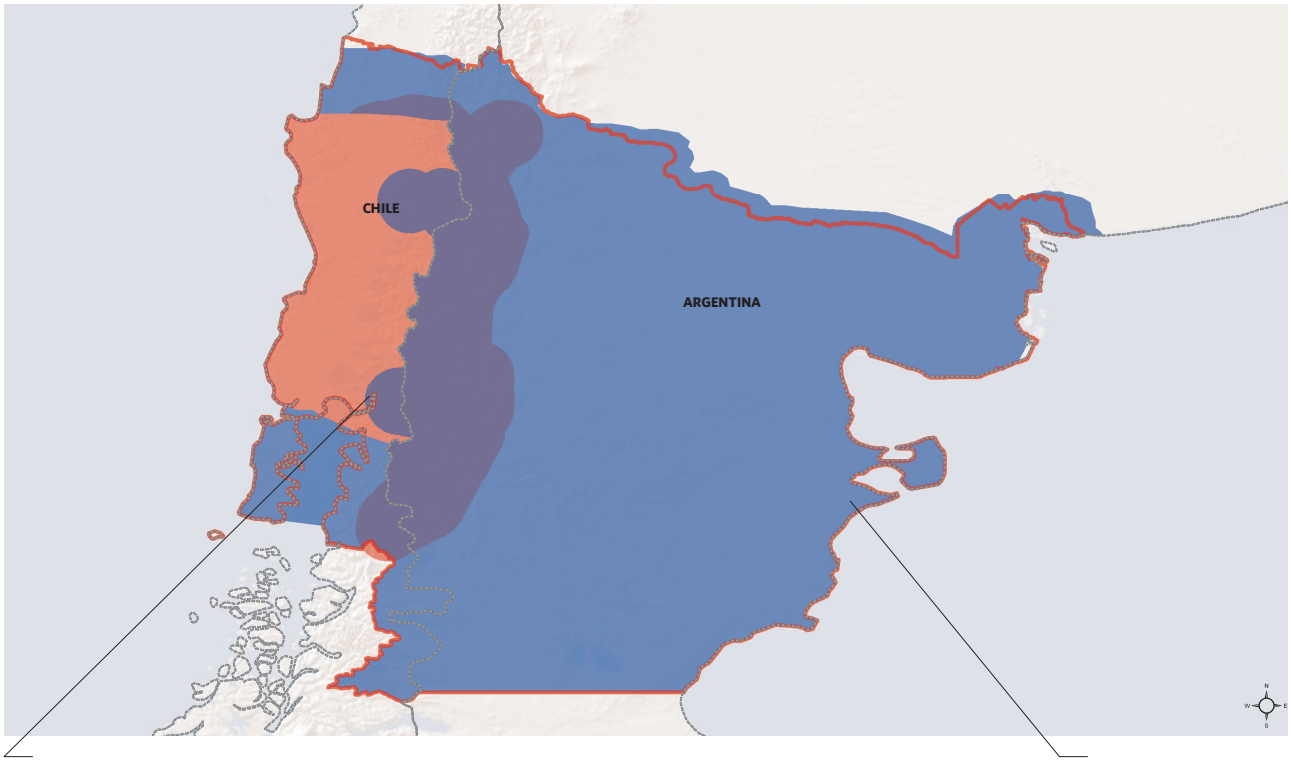
The projects included in the Southern Hub are intended to reduce transportation costs in order to increase trade in goods and services between Argentina and Chile, taking into account the preservation of environmental resources and the strengthening of a binational tourist system in the lakes area.

The active portfolio of the Hub includes 39 for an investment estimated at US$3.938 billion.

There is information available on the estimated completion date of seven of these projects, and five of them will be completed in the next two years (2017-2019).

The 13 projects at the execution stage plus the six completed projects account for half of the estimated investment amount for the Hub's portfolio. Therefore, the other half of the planned investments will be made in 26 projects that are at an early stage (profiling and pre-execution).

Map of the Project Groups of the Southern Hub



Group 2: BINATIONAL TOURIST CIRCUIT OF THE LAKES AREA

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

Project Groups of the Southern Hub

** US$ million*

Group	Name	No. of Projects	Estimated investment*
1	CONCEPCIÓN - BAHÍA BLANCA - SAN ANTONIO ESTE PORT	23	2,120.1
2	BINATIONAL TOURIST CIRCUIT OF THE LAKES AREA	22	2,291.1
	TOTAL	**45**	**4,411.2**

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	Execution	68.0	AR	December 2017
DES18	UPGRADE AND MAINTENANCE OF THE INTERLAGOS ROUTE IN ARGENTINA	2	Execution	200.0	AR	May 2017
DES36	EXPANSION OF COMODORO RIVADAVIA PORT	1	Pre-execution	154.0	AR	December 2017
DES43	ENLARGEMENT OF THE WHARF AT LUIS PIEDRABUENA PORT	2	Execution	17.0	AR	July 2018
DES34	OPTIMIZATION OF THE MADRYN PORT	1	Execution	35.0	AR	June 2019

Profiling · Pre-execution · Execution · Completed

The five projects with the greatest estimated investment account for 41% of the total investment in the Hub's active portfolio.

It should be noted that most of them (4) are at the pre-execution stage, and only the first project, Upgrade and Maintenance of the Interlagos Route in Argentina, is at the execution stage. Worth mentioning is that the two Argentina projects are aimed at enhancing connectivity in the Bahía Blanca hub towards both the Andes and international markets.

The other three projects are being undertaken in Chile and seek to reinforce land connectivity with Argentina.

The five projects belong to the transport sector, and fall in the road, rail and sea s ubsectors. 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.

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
DES23	BAHÍA BLANCA - CIPOLLETTI - AÑELO RAILWAY BRANCH LINE	1		400.0	AR	Public
DES52	PUERTO VARAS - SEA PORT AND AIRPORT	2		321.0	CH	Public
DES51	ROUTE 5 BETWEEN TEMUCO AND VALDIVIA	2		250.0	CH	Public
DES25	ENLARGEMENT OF BAHÍA BLANCA PORT	1		230.0	AR	Public-private
	TOTAL			**1,977.0**		

Profiling · Pre-execution · Execution · Completed

The Hub features six completed projects for a total amount of US$443 million: two of them involve electricity interconnections, accounting for almost 905% 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 45 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 four 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.

Completed Projects in the Southern Hub

** US$ million*

Code	Name	Ejecuted investment*	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
DES11	PAVING OF ROUTE No. CH-181 UP TO THE ARGENTINE BORDER, ACCESS TO PINO HACHADO	5.0	CH
DES13	REPAIR WORKS AT LAS RAÍCES TUNNEL	10.5	CH
DES20	IMPROVEMENT OF THE ACCESS TO THE TROMEN-MAMUIL MALAL BORDER CROSSING	30.0	AR - CH
DES28	CONSTRUCTION OF THE HUA HUM BORDER COMPLEX	7.6	CH
	TOTAL	**473.1**	

Concepción – Bahía Blanca – San Antonio Este Port

06 CONSTRUCTION OF A 500-KV COMAHUE - CUYO REGION ELECTRICITY INTERCONNECTION

08 IMPROVEMENT OF NATIONAL ROUTE NO. 22 BETWEEN BAHÍA BLANCA AND THE BORDER WITH LA PAMPA

23 BAHÍA BLANCA - CIPOLLETTI - AÑELO RAILWAY BRANCH LINE

03 CONSTRUCTION OF BYPASSES AND ENLARGEMENT OF THE CAPACITY OF NATIONAL ROUTE NO. 22, BETWEEN VILLA REGINA AND ZAPALA

24 ZAPALA - LAS LAJAS - CHILEAN BORDER RAILWAY

12 MODERNIZATION OF TALCAHUANO PORT

Anchor Project:
01 IMPLEMENTATION OF THE INTEGRATED CONTROL IN PINO HACHADO BORDER CROSSING

13 REPAIR WORKS AT LAS RAÍCES TUNNEL

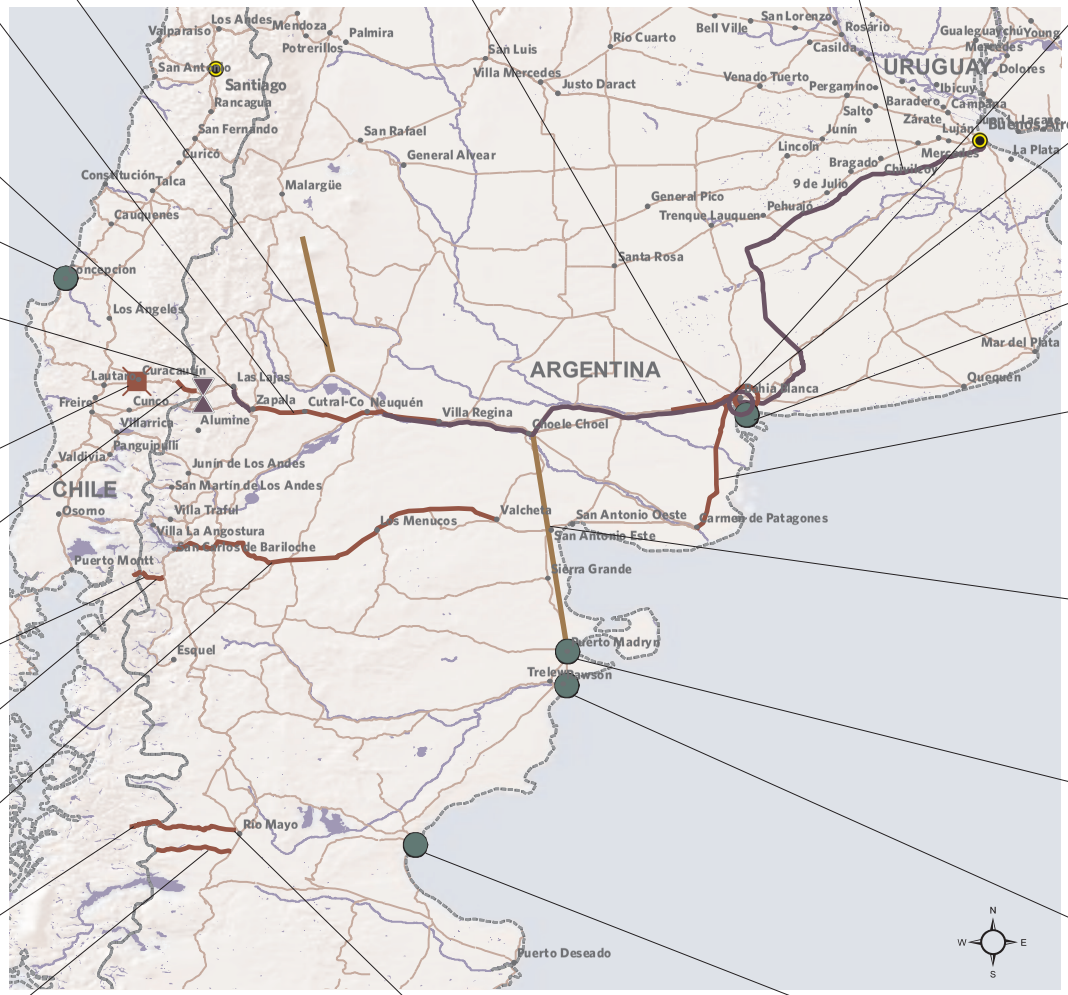
11 PAVING OF ROUTE NO. CH-181 UP TO THE ARGENTINE BORDER, ACCESS TO PINO HACHADO

33 CONSTRUCTION OF ACCESS ROAD TO RÍO MANSO BORDER CROSSING

32 PAVEMENT OF THE ACCESS ROAD TO EL MANSO BORDER CROSSING – PROVINCIAL ROUTE 83

10 PAVING OF NATIONAL ROUTE NO. 23 BETWEEN VALCHETA AND INTERSECTION WITH NATIONAL ROUTE NO. 237

30 PAVEMENT OF THE BANDURRIAS-COYHAIQUE ALTO ROAD



22 RAILWAY RING AND ACCESSES TO BAHÍA BLANCA PORT

04 CONSTRUCTION OF BAHÍA BLANCA BYPASS

25 ENLARGEMENT OF BAHÍA BLANCA PORT

09 IMPROVEMENT OF NATIONAL ROUTE N° 3, BETWEEN BAHÍA BLANCA AND CARMEN DE PATAGONES

07 CONSTRUCTION OF A 500-KV CHOELE CHOEL - PUERTO MADRYN ELECTRICITY INTERCONNECTION

34 OPTIMIZATION OF THE MADRYN PORT

35 EXPANSION OF RAWSON PORT

31 PAVEMENT OF NATIONAL ROUTE 260 AND NATIONAL ROUTE 40 – ACCESS TO HUEMULES BORDER CROSSING

29 PAVEMENT OF THE ACCESS ROAD TO COYHAIQUE ALTO BORDER CROSSING – PROVINCIAL ROUTE 74 AND NATIONAL ROUTE 40

36 EXPANSION OF COMODORO RIVADAVIA PORT

Group 1

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*	Countries
DES01	**IMPLEMENTATION OF INTEGRATED BORDER CONTROL IN PINO HACHADO BORDER CROSSING**		8.0	AR - CH
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
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
DES22	RAILWAY RING AND ACCESSES TO BAHÍA BLANCA PORT		50.0	AR
DES23	BAHÍA BLANCA - CIPOLLETTI - AÑELO RAILWAY BRANCH LINE		400.0	AR
DES24	ZAPALA - LAS LAJAS - CHILEAN BORDER RAILWAY		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
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	EXPANSION OF RAWSON PORT		7.0	AR
DES36	EXPANSION OF COMODORO RIVADAVIA PORT		154.0	AR
	TOTAL		2,120.1	

Profiling · Pre-execution · Execution · Completed

Binational Tourist Circuit of the Lakes Area

40 IMPROVEMENT AND PAVEMENT OF ROUTE Q-45 BETWEEN LOS ÁNGELES AND PICHACHÉN BORDER CROSSING

39 PAVEMENT OF ACCESS TO PICHACHÉN BORDER CROSSING – PROVINCIAL ROUTE 6

19 IMPROVEMENT OF THE ACCESS TO ICALMA BORDER CROSSING

ROUTE 180, NAHUELBUTA **53**

IMPROVEMENT OF ROUTE CH-181 BETWEEN CURACAUTÍN AND PINO HACHADO **46**

UPGRADE WORKS AT THE LAS RAÍCES TUNNEL **50**

IMPROVEMENT AND PAVEMENT OF ROUTE CH-201 BETWEEN COÑARIPE AND CARIRRIÑE BORDER CROSSING **42**

ROUTE 5 BETWEEN TEMUCO AND VALDIVIA **51**

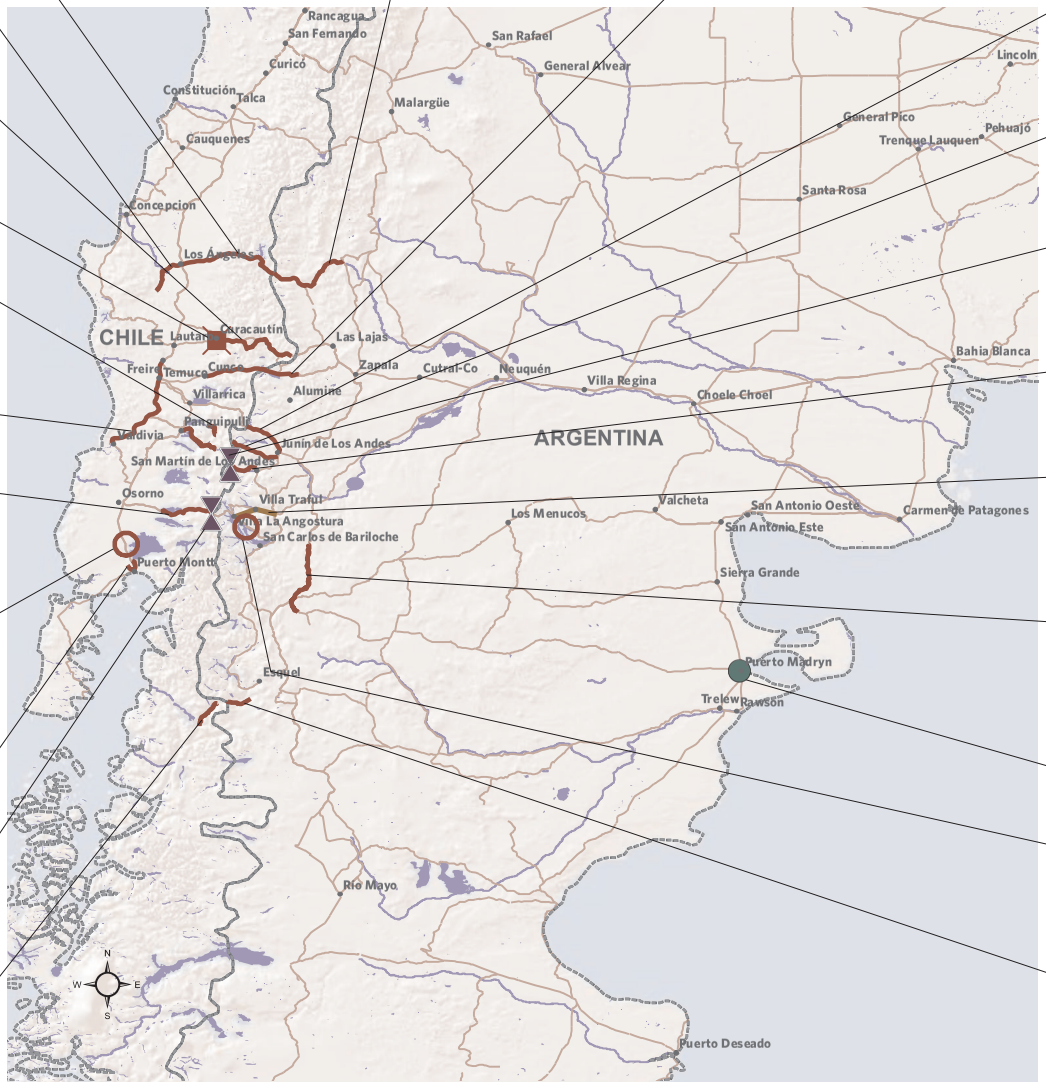
REPAVEMENT OF ROUTE CH-215 BETWEEN ENTRELAGOS AND CARDENAL SAMORÉ BORDER CROSSING **49**

Anchor Project: UPGRADE AND MAINTENANCE OF THE INTERLAGOS ROUTE IN CHILE **16**

PUERTO VARAS - SEA PORT AND AIRPORT **52**

IMPLEMENTATION OF INTEGRATED BORDER CONTROL AT CARDENAL SAMORÉ BORDER CROSSING **17**

PAVEMENT OF ROUTE CH-231 BETWEEN PUERTO RAMÍREZ AND FUTALEUFÚ BORDER CROSSING **38**



20 IMPROVEMENT OF THE ACCESS TO THE TROMEN-MAMUIL MALAL BORDER CROSSING

41 PAVEMENT OF ACCESS TO CARIRRIÑE BORDER CROSSING – PROVINCIAL ROUTE 62

28 CONSTRUCTION OF THE HUA HUM BORDER COMPLEX

21 IMPROVEMENT OF THE ACCESS TO HUA HUM BORDER CROSSING

27 VILLA LA ANGOSTURA - TRAFUL - COSTA DEL LIMAY 132 KV ELECTRICITY INTERCONNECTION LINE

45 PAVEMENT OF NATIONAL ROUTE 1S40, INTERSECTION WITH NATIONAL ROUTE 23 – BORDER WITH CHUBUT

43 ENLARGEMENT OF THE WHARF AT LUIS PIEDRABUENA PORT

18 **Anchor Project: UPGRADE AND MAINTENANCE OF THE INTERLAGOS ROUTE IN ARGENTINA**

37 PAVEMENT OF NATIONAL ROUTE 259 ON ITS ACCESS TO FUTALEUFÚ BORDER CROSSING

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**	Execution	776.0	CH
DES17	IMPLEMENTATION OF INTEGRATED BORDER CONTROL AT CARDENAL SAMORÉ BORDER CROSSING	Pre-execution	2.0	AR - CH
DES18	**UPGRADE AND MAINTENANCE OF THE INTERLAGOS ROUTE IN ARGENTINA**	Execution	200.0	AR
DES19	IMPROVEMENT OF THE ACCESS TO ICALMA BORDER CROSSING	Pre-execution	44.8	AR - CH
DES20	IMPROVEMENT OF THE ACCESS TO THE TROMEN-MAMUIL MALAL BORDER CROSSING	Completed	30.0	AR - CH
DES21	IMPROVEMENT OF THE ACCESS TO HUA HUM BORDER CROSSING	Execution	43.0	AR - CH
DES27	VILLA LA ANGOSTURA - TRAFUL - COSTA DEL LIMAY 132-KV ELECTRICITY INTERCONNECTION LINE	Profiling	30.0	AR
DES28	CONSTRUCTION OF THE HUA HUM BORDER COMPLEX	Completed	7.6	CH
DES37	PAVEMENT OF NATIONAL ROUTE 259 ON ITS ACCESS TO FUTALEUFÚ BORDER CROSSING	Pre-execution	18.0	AR
DES38	PAVEMENT OF ROUTE CH-231 BETWEEN PUERTO RAMÍREZ AND FUTALEUFÚ BORDER CROSSING	Pre-execution	39.0	CH
DES39	PAVEMENT OF ACCESS TO PICHACHÉN BORDER CROSSING - PROVINCIAL ROUTE 6	Profiling	162.0	AR
DES40	IMPROVEMENT AND PAVEMENT OF ROUTE Q-45 BETWEEN LOS ÁNGELES AND PICHACHÉN BORDER CROSSING	Pre-execution	91.0	CH
DES41	PAVEMENT OF ACCESS TO CARIRRIÑE BORDER CROSSING - PROVINCIAL ROUTE 62	Execution	3.0	AR
DES42	IMPROVEMENT AND PAVEMENT OF ROUTE CH-201 BETWEEN COÑARIPE AND CARIRRIÑE BORDER CROSSING	Pre-execution	36.1	CH
DES43	ENLARGEMENT OF THE WHARF AT LUIS PIEDRABUENA PORT	Pre-execution	17.0	AR
DES45	PAVEMENT OF NATIONAL ROUTE 1S40, INTERSECTION WITH NATIONAL ROUTE 23 - BORDER WITH CHUBUT	Execution	3.0	AR
DES46	IMPROVEMENT OF ROUTE CH-181 BETWEEN CURACAUTÍN AND PINO HACHADO	Pre-execution	140.0	CH
DES49	REPAVEMENT OF ROUTE CH-215 BETWEEN ENTRELAGOS AND CARDENAL SAMORÉ BORDER CROSSING	Pre-execution	77.6	CH
DES50	UPGRADE WORKS AT THE LAS RAÍCES TUNNEL	Profiling	0.0	CH
DES51	ROUTE 5 BETWEEN TEMUCO AND VALDIVIA	Pre-execution	250.0	CH
DES52	PUERTO VARAS - SEA PORT AND AIRPORT	Pre-execution	321.0	CH
DES53	ROUTE 180, NAHUELBUTA	Pre-execution	0.0	CH
	TOTAL		2,291.1	

Profiling · Pre-execution · Execution · Completed

GUY

Guianese Shield

Brazil / Guyana / Suriname / Venezuela

Population:
17,100,505

Population density:
10.7 Hab./km²

Area:
1,603,643 km²

GDP:
US$ 338.964 billion

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

Estimated Investment

US$ million

4,581.3

BRAZIL	8	
GUYANA	8	
SURINAME	7	
VENEZUELA	7	

13 Nationals 65%

4 Binationals 20%

3 Multinationals 15%

No. of projects · U$S million

Projects by Stage

Profiling	Pre-execution	Execution	Completed
6	3	5	6
51	3,570.8	873	86.5

Projects by Sector

Transport	Energy	Communications
18	1	1
4,581.3		

Projects by Type of Financing

Public	Public/private
18	2
3,930.4	650.9

Projects by Subsector

Transport

Road	Rail	Sea	Border Crossings
13	1	3	1
1,555.4		3,020	5.9

Energy

Energy Interconnection	Energy Generation
1	1

Communications

Communications Interconnection
1

GUY

GUIANESE SHIELD

Presentation of the Hub

Brazil - Guyana - Suriname - Venezuela

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 smaller 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$338.964 billion[2]).

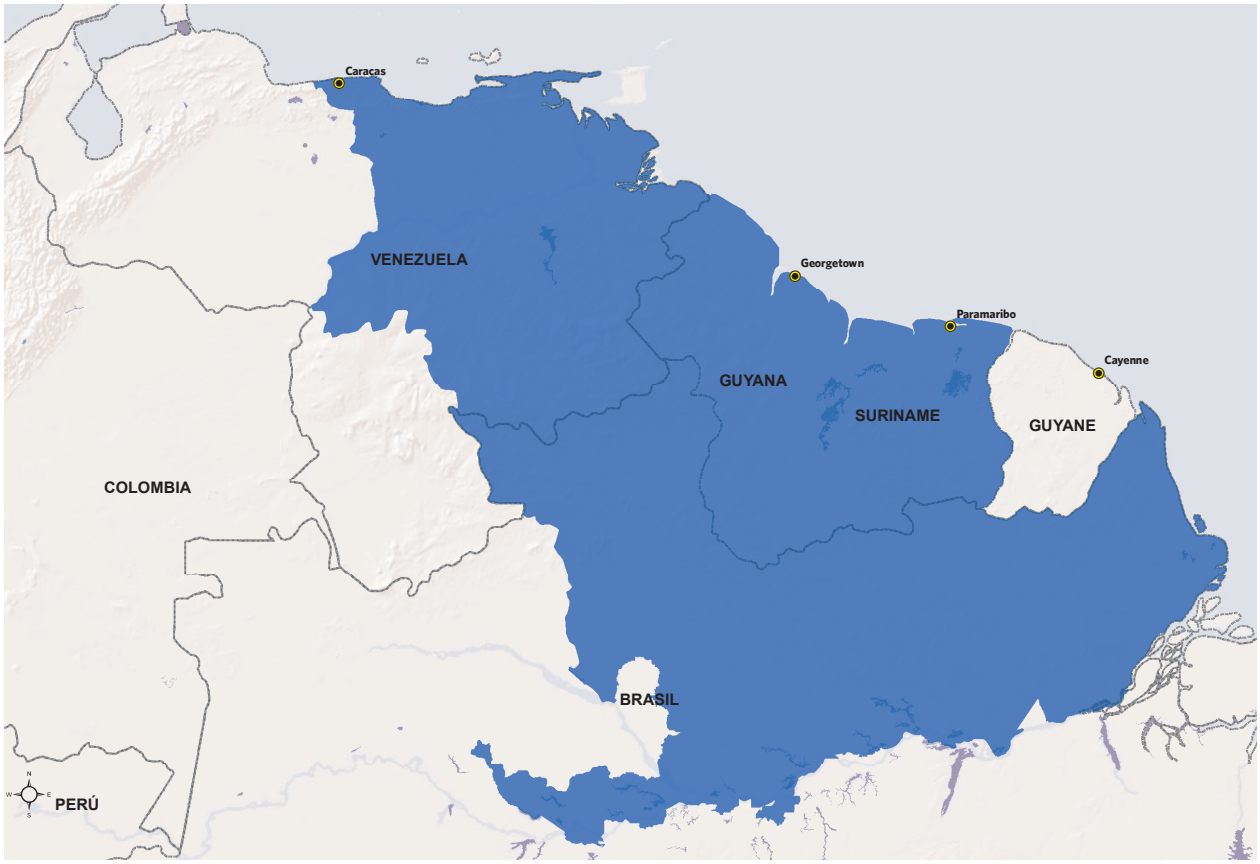
With regard to infrastructure, the **road network** of the countries involved in the Guianese Shield Hub covers a total length of 1,705,547 km, 25% of which are paved. The **rail network** is 30,608 km long. The **port system** of the Hub is made up of 28 major ports, three of which handle more than 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. Seventeen of the airports 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.

1. See cosiplan.org/ejes#guy
2. At current 2014 prices

Map of the Area of Influence of the Guianese Shield Hub



At present, there are around 125 territorial units with some degree of **protection**, accounting for an area of approximately 950,000 km^2, which is significantly great taking into account that it is equivalent to about 60% of the total area of the Hub. A major part of the protected land consists of the vast nature reserves in southern Venezuela, which involve 470,000 km^2 of woods and virgin rainforest hosting the highest level of biodiversity of the planet, in terms not only of the number of species but also of unique ecosystems.

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 billion 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 and Andean Hubs.

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).

The active portfolio of the Hub includes 14 projects for an estimated investment of US$4.495 billion.

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 (2017-2020).

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%.

Map of the Project Groups of the Guianese Shield Hub

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

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 2018
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.

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 transport works. For the five projects, public as well as public-private financing sources are considered.

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	2		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	2		350.1	BR - GU SU	Public-private
GUY18	ROUTES INTERCONNECTING VENEZUELA (CIUDAD GUAYANA) - GUYANA (GEORGETOWN) - SURINAME (APURA - ZANDERIJ - PARAMARIBO)	2		300.8	GU - SU VE	Public-private
GUY09	LETHEM - LINDEN ROAD	1		250.0	GU	Public
	TOTAL			**4,327.9**		

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 involve bridges built over rivers, whereas two are road sections.

Completed Projects in the Guianese Shield Hub

** US$ million*

Code	Name	Ejecuted Investment*	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
	TOTAL	**86.5**	

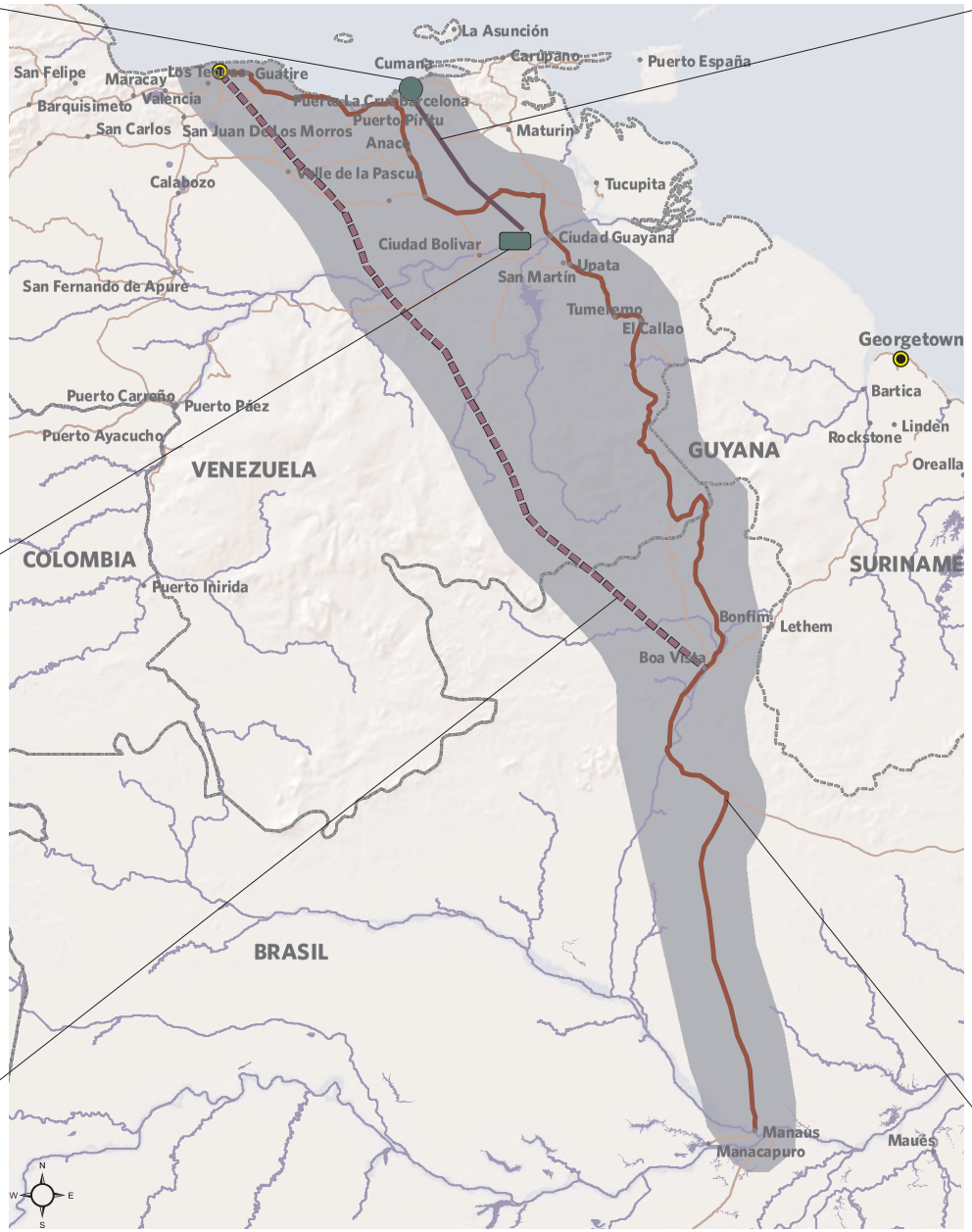
Venezuela – Brazil Interconnection

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

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

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

Group 1

Strategic Function

· Develop economic sectors having potential, such as heavy industry, durable goods, mining and jewelry, agribusiness and tourism (both ecotourism 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.

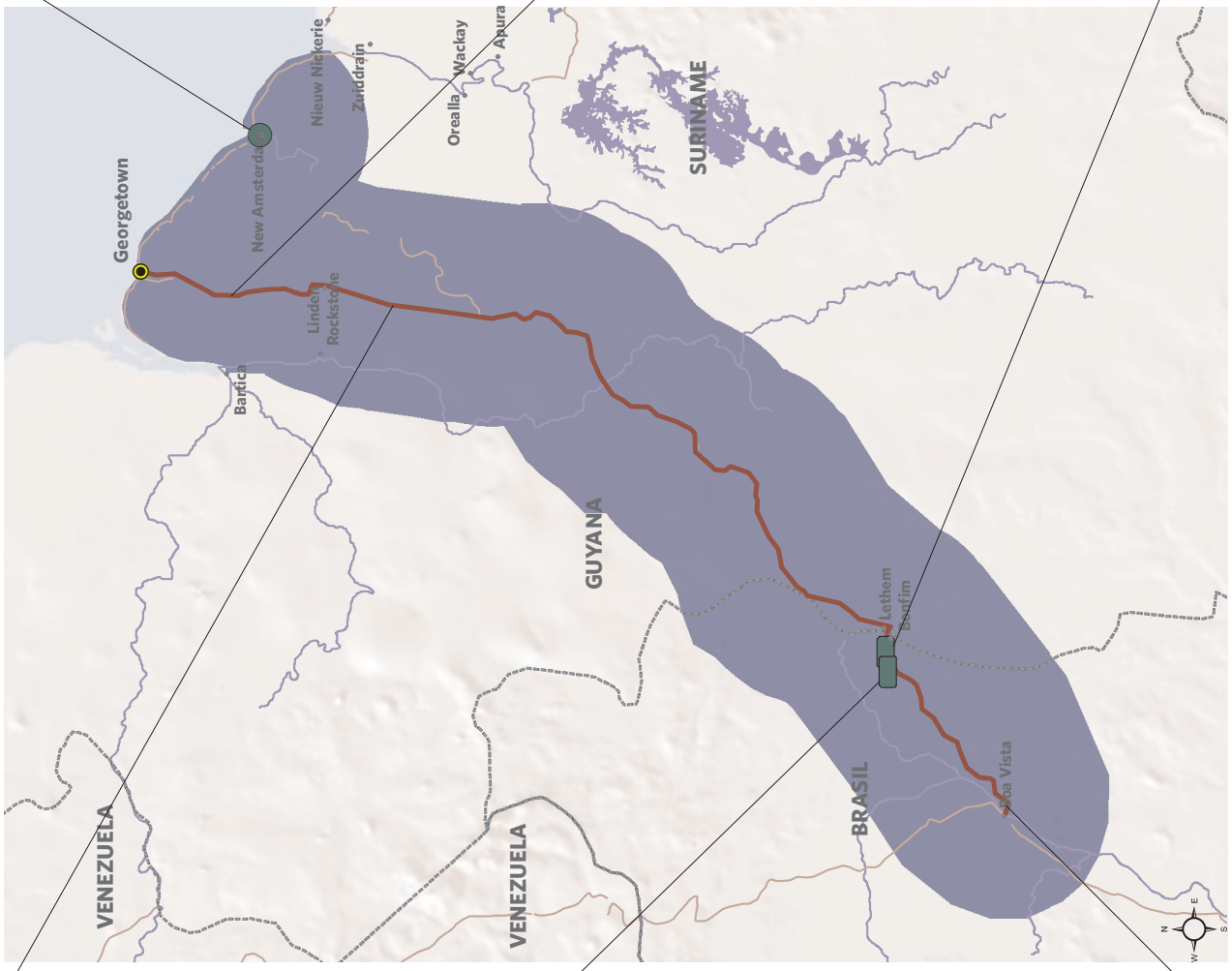
· Connect Manaus with the south of Venezuela.

** US$ million*

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

Profiling · Pre-execution · Execution · Completed

Brazil – Guyana Interconnection



Group 2

Strategic Function

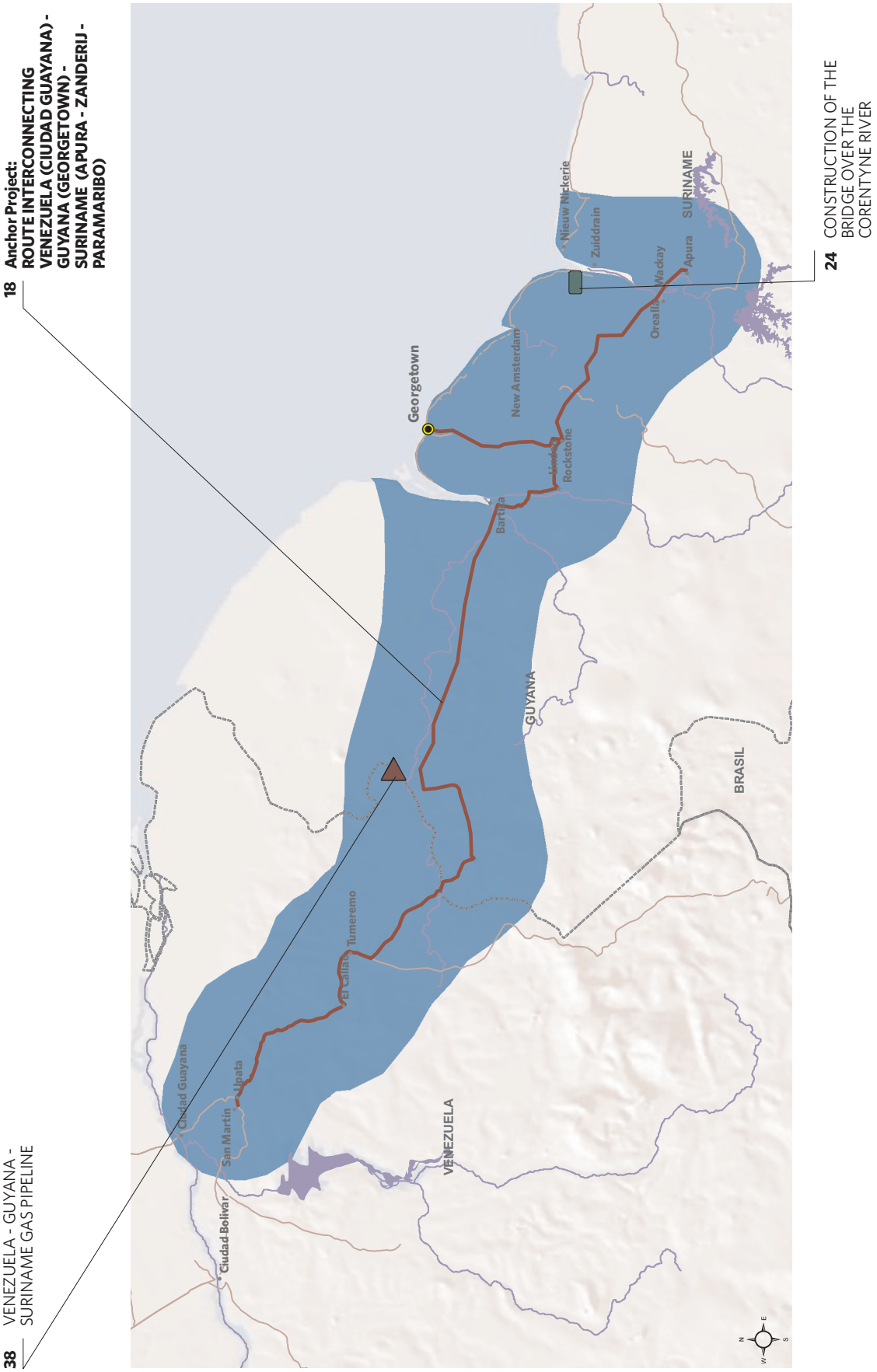
· Support the sustainable development and integration of the Brazilian states of Amazonas and Roraima with Guyana, through the consolidation of the infrastructure that connects both countries.

** US$ million*

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

Profiling · Pre-execution · Execution · Completed

Venezuela (Ciudad Guayana) – Guyana (Georgetown) – Suriname (Paramaribo) Interconnection



Group 3

Strategic Function

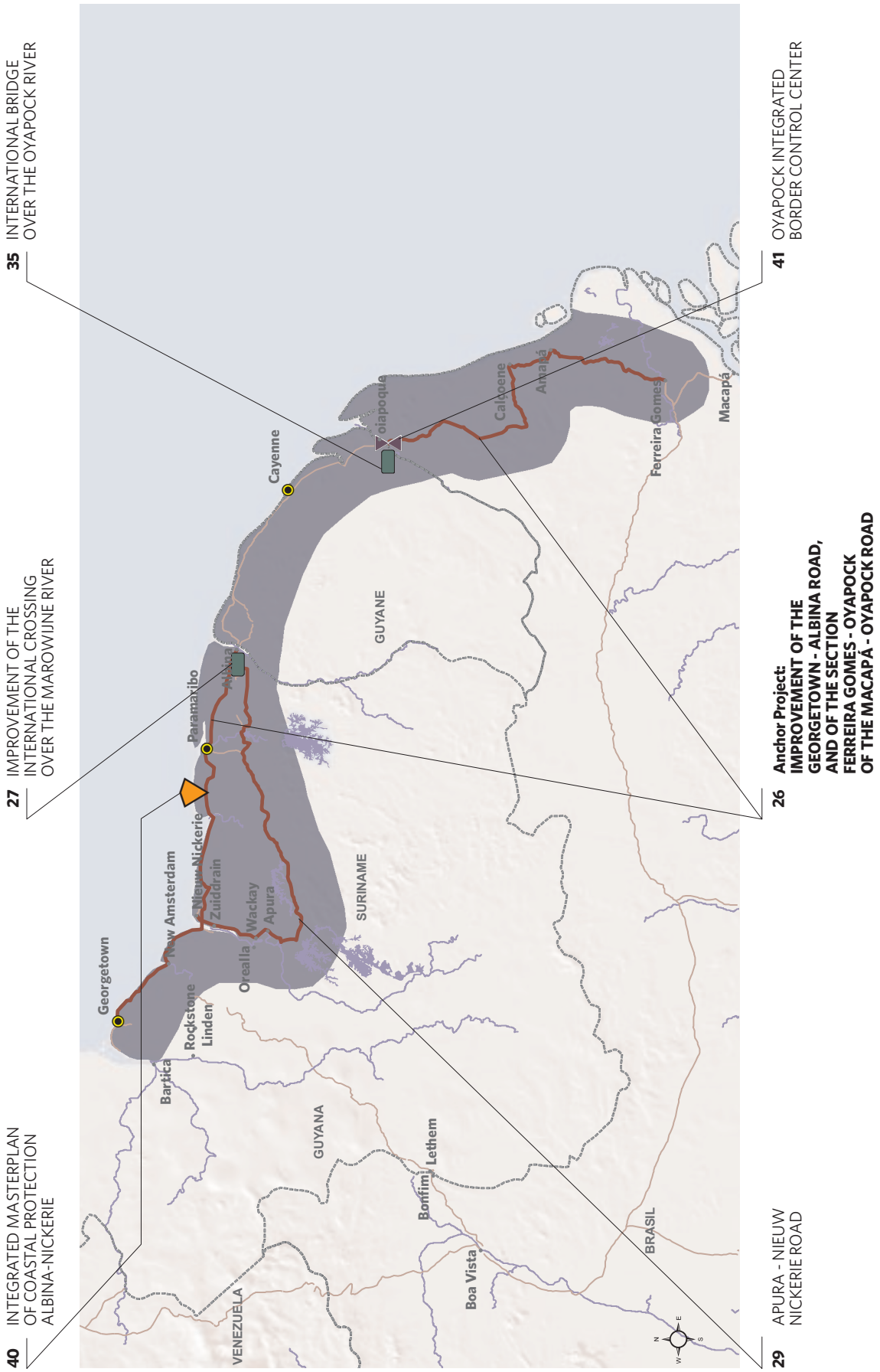
· Implement and develop an integration link in the north of South America that connects Venezuela, Guyana and Suriname.

** 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
	TOTAL		**301.8**	

Profiling Pre-execution Execution Completed

Guyana – Suriname – French Guiana – Brazil Interconnection



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
	TOTAL		3,596.0	

Profiling · Pre-execution · Execution · Completed

HPP

Paraguay-Paraná Waterway

Argentina / Bolivia / Brazil / Paraguay / Uruguay

Population:
119,035,634

Population density:
28.3 Hab./km²

Area:
4,201,862 km²

GDP:
US$ 1,491,032 billion

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

Estimated Investment
US$ million

7,534.2

73
Nationals
86.9%

10
Binationals
11.9%

1
Multinationals
1.2%

ARGENTINA	43	
BOLIVIA	8	
BRAZIL	6	
PARAGUAY	26	
URUGUAY	13	

No. of projects U$S million

Projects by Stage

Profiling
22
1,51.2

Pre-execution
18
1,339.1

Execution
24
2,831.2

Completed
20
2,112.7

Projects by Sector

Transport
75
5,992.2

Energy
7
1,535

Communications
2
7

Projects by Type of Financing

Public
82
7,431.7

Private
1
4,9

Public/private
1
97.6

Projects by Subsector

Transport

Air
1

Road
21
2,059

Rail
11
1,653.3

River
39
2,077

Multimodal
3
202.9

Energy

Energy Interconnection
4
65

Energy Generation
3
1,470

Communications

Communications Interconnection
2
7

HPP

PARAGUAY-PARANÁ WATERWAY

Presentation of the Hub

Argentina - Bolivia - Brazil - Paraguay - Uruguay

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 km^2), 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 (4,201,862 km^2), 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.

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 on 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 46 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 53 **major airports**, evenly distributed throughout the whole territory of the Hub. Passenger service is adequate, airport

1. See cosiplan.org/ejes#hpp
2. At 2013 current prices

Map of the Area of Influence of the Paraguay–Paraná Waterway Hub

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 communitie**s 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 rura l waged workers, and in some cases, if they own land, they are also engaged in subsistence agriculture.

Regarding **protected areas**, there are about 460 administrative units with some degree of environmental protection, covering an area of approximately 410,000 km^2, 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$7.534 billion in 84 physical integration projects. This Hub ranks second in number of projects of the COSIPLAN Portfolio, 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%.

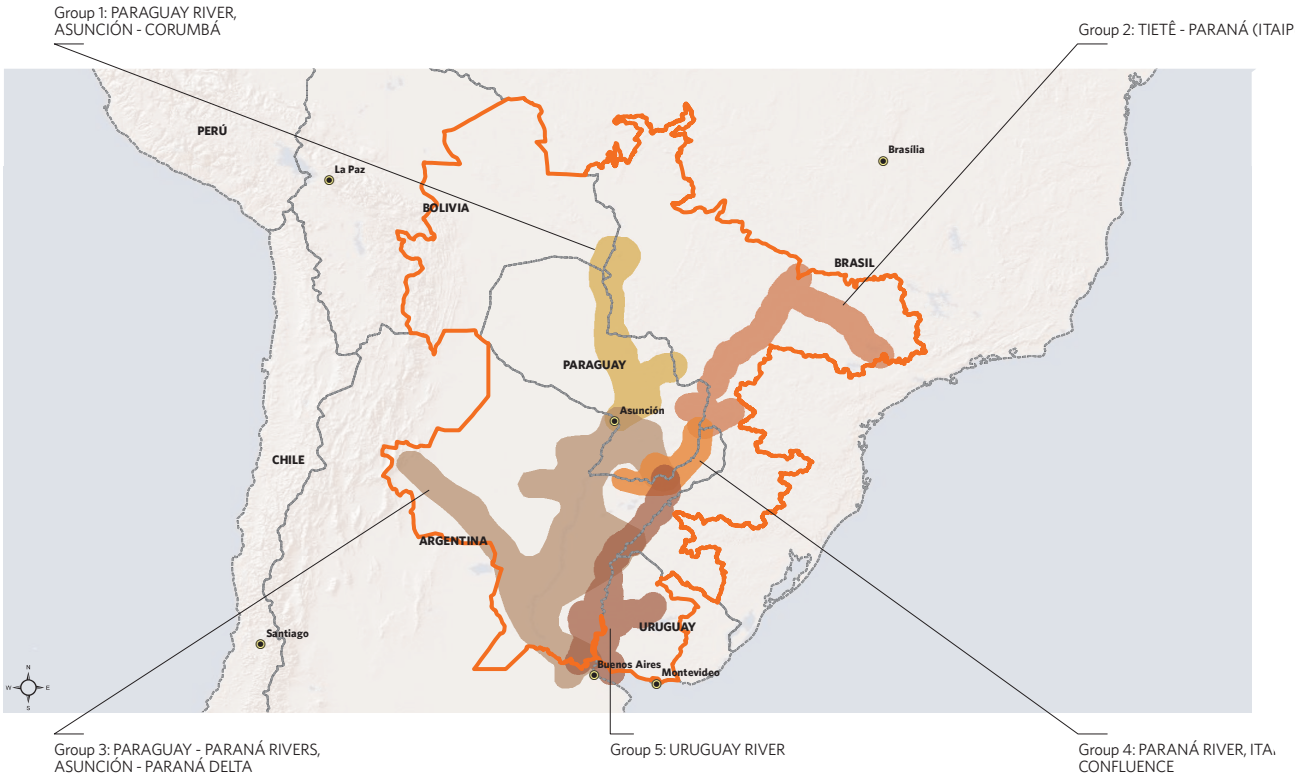
Brazil and Argentina account for more than 77% of the trade between the countries involved in the Hub. Furthermore, Brazil is the main destination of the exports made by the other four countries, receiving more 61% of their foreign trade, particularly from Argentina, as more than 80% of its exports within 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, the Capricorn, and the MERCOSUR-Chile Hubs, to which it is linked by road and rail corridors.

Project Portfolio

The projects of the Paraguay-Paraná Waterway Hub are intended to: (i) strengthen competitiveness in landlocked 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.

Map of the Project Groups of the Paraguay-Paraná Waterway Hub



Project Groups of the Paraguay-Paraná Waterway Hub

** US$ million*

Group	Name	No. of projects	Estimated investment*
1	PARAGUAY RIVER, ASUNCIÓN - CORUMBÁ	12	734.2
2	TIETÊ - PARANÁ (ITAIPU)	8	847.5
3	PARAGUAY - PARANÁ RIVERS, ASUNCIÓN - PARANÁ DELTA	35	3,841.4
4	PARANÁ RIVER, ITAIPU - CONFLUENCE	13	592.7
5	URUGUAY RIVER	16	1,518.4
	TOTAL	**84**	**7,534.2**

The active portfolio of the Hub includes 64 projects with an estimated investment of US$5.421 billion.

Of the 64 active projects, there is information available on the estimated completion date of 21. Twenty of these will be completed in the next four years (2017-2020), and with the exception of four projects, all of them are national in scope. By the time these 15 projects are finished and if we take into account the projects already completed, almost 64% of the investment estimated for the Hub's portfolio will have been made.

Project to Be Completed in the Next Four Years

** US$ million*

Code	Name	Group	Stage	Estimated investment*	Countries	Estimated Completion Date
HPP12	PAVING OF THE CONCEPCIÓN -VALLEMÍ ROAD (ROUTES A06 AND PY14)	1	Execution	113.0	PY	December 2017
HPP42	BINATIONAL PROJECT FOR THE IMPROVEMENT OF NAVIGATION CONDITIONS ON THE PARAGUAY RIVER, FROM CONFLUENCIA TO ASUNCIÓN	3	Profiling	45.5	AR-PY	December 2017
HPP64	PAVING OF THE VILLETA - ALBERDI ROAD SECTION	3	Execution	51.0	PY	December 2017
HPP96	REHABILITATION OF THE SALTO PORT, ACCESSES AND STORAGE AREA	5	Execution	4.0	UY	December 2017
HPP125	PAVING OF ROAD SECTION SANTA ROSA – CAPITÁN BADO (NATIONAL ROAD No.11 – BORDER WITH BRAZIL)	1	Execution	122.5	PY	December 2017
HPP09	IMPROVEMENT OF NAVIGATION CONDITIONS ON THE PARAGUAY RIVER (ASUNCIÓN - APA)	1	Execution	110.0	UY	March 2018
HPP44	DEEPENING OF THE FAIRWAY IN THE PARANÁ RIVER FROM CONFLUENCIA TO THE PLATA RIVER	3	Execution	110.3	PY	March 2018
HPP19	IMPROVEMENT OF NAVIGATION CONDITIONS ON THE TIETÊ RIVER	2	Execution	800.0	AR	April 2018
HPP07	IMPROVEMENT OF NAVIGATION CONDITIONS ON THE PARAGUAY RIVER (BETWEEN APA AND CORUMBÁ)	1	Pre-execution	39.0	BR	May 2018
HPP122	REHABILITATION AND MAINTENANCE OF THE TAMENGO CANAL	1	Pre-execution	10.5	BO - BR PY	June 2018
HPP57	ROSARIO CITY BELTWAY	3	Execution	173.9	BO	October 2018
HPP108	IMPROVEMENT OF NAVIGATION CONDITIONS ON THE ALTO PARANÁ RIVER (UPSTREAM OF SALTOS DEL GUAIRÁ)	2	Execution	15.0	AR	December 2018
HPP76	CONSTRUCTION AND REHABILITATION OF THE ARTIGAS - POSADAS RAILWAY	4	Pre-execution	150.0	BR	May 2019
HPP97	NUEVA PALMIRA BELTWAY AND PORT ACCESS ROADS NETWORK	5	Execution	15.0	AR - PY	June 2019
HPP59	PAVING OF NATIONAL ROUTE No. 11 BETWEEN SANTA FE AND SAN JUSTO	3	Pre-execution	91.3	UY	September 2019
HPP65	REHABILITATION AND IMPROVEMENT OF THE PIEDRA SOLA - SALTO GRANDE RAILWAY CORRIDOR	5	Execution	127.3	AR	December 2019
HPP120	REHABILITATION OF THE ALGORTA - FRAY BENTOS RAILWAY BRANCH LINE	5	Execution	100.0	UY	March 2020
HPP123	UPGRADE OF NATIONAL ROUTE No. 11 TO A FOUR-LANE ROAD BETWEEN ROSARIO AND OLIVEROS	3	Pre-execution	97.6	UY	April 2020
HPP88	BINATIONAL PROJECT FOR THE IMPROVEMENT OF NAVIGATION CONDITIONS ON THE URUGUAY RIVER	5	Execution	40.0	AR	July 2020
HPP55	FORMOSA CITY BELTWAY	3	Execution	139.8	AR - UY	November 2020

Profiling · Pre-execution · Execution · Completed

The five projects with the highest estimated investment fall in the transport sector and a ccount for 40% of the estimated investment of the active portfolio of the Hub. The first project with the greatest investment accounts for 15% of the total amount estimated.

It should be stated that these five projects are national in scope and are financed with public funds. The first two fall in the river subsector, two in the rail subsector, and one in the road subsector.

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 TIETÊ RIVER	2		800.0	BR	Public
HPP115	IMPROVEMENT OF THE NAVIGATION CONDITIONS ON THE NEGRO RIVER	5		350.0	UY	Public
HPP82	REHABILITATION OF THE ZÁRATE - POSADAS RAILWAY BRANCH LINE	5		347.0	AR	Public
HPP124	UPGRADE OF NATIONAL ROUTE No. 11 TO A FOUR-LANE ROAD: RESISTENCIA - FORMOSA - CLORINDA	3		330.0	AR	Public
HPP40	ENHANCEMENT OF RAILWAY ACCESSES TO THE CITY OF ROSARIO	3		317.0	AR	Public
	TOTAL			**2,144.0**		

Profiling · Pre-execution · Execution · Completed

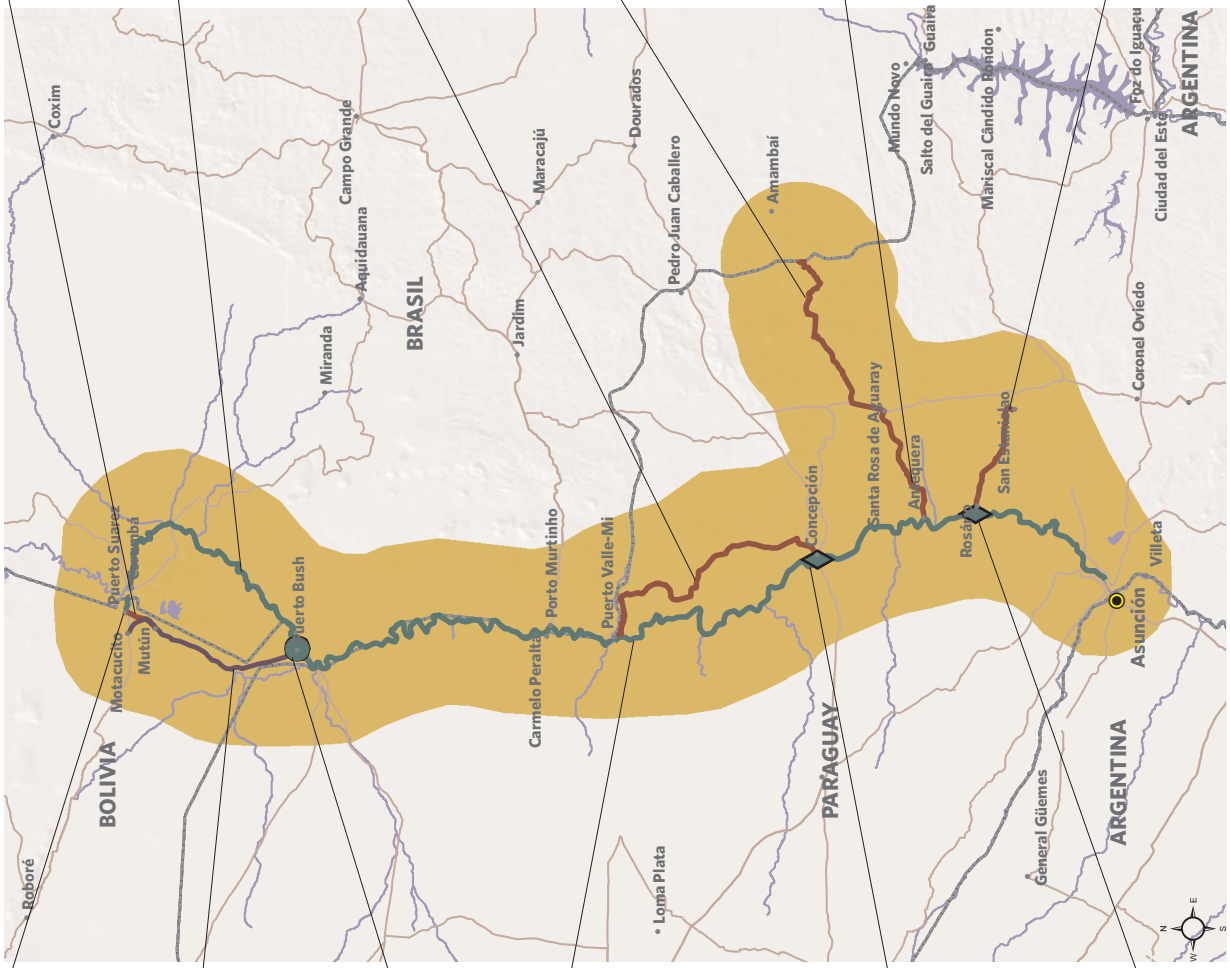
There are 20 completed projects in the Hub, having required a total investment amount of US$2.113 billion.

Completed Projects in the Paraguay-Paraná Waterway Hub

** US$ million*

Code	Name	Ejecuted Investment*	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	668.0	AR
HPP35	SAN MARTÍN THERMOELECTRIC POWER STATION IN TIMBÚES	738.0	AR
HPP36	TRANSFORMER STATION IN MERCEDES	25.0	AR
HPP56	SANTA FE CITY BELTWAY	200.0	AR
HPP61	PAVING OF NATIONAL ROUTE No. 9 BETWEEN COLONIA CANO AND EL COLORADO	60.0	AR
HPP73	ACCESS ROADS TO ENCARNACIÓN	26.0	PY
HPP77	DIVERSION OF THE AGUAPEY STREAM	64.0	PY
HPP67	REHABILITATION OF THE ZÁRATE - ROSARIO RAILWAY BRANCH LINE	42.0	AR
HPP83	IMPROVEMENT OF RIVER ACCESSES TO THE URUGUAYAN PORTS ON THE URUGUAY RIVER	1.0	UY
HPP92	DESIGN AND DREDGING OF THE ALTERNATIVE CASA BLANCA CANAL	7.4	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
HPP105	RECONSTRUCTION OF THE GARUPÁ - POSADAS RAILWAY SECTION	100.0	AR
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
	TOTAL	**2,112.7**	

Paraguay River, Asunción – Corumbá



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.

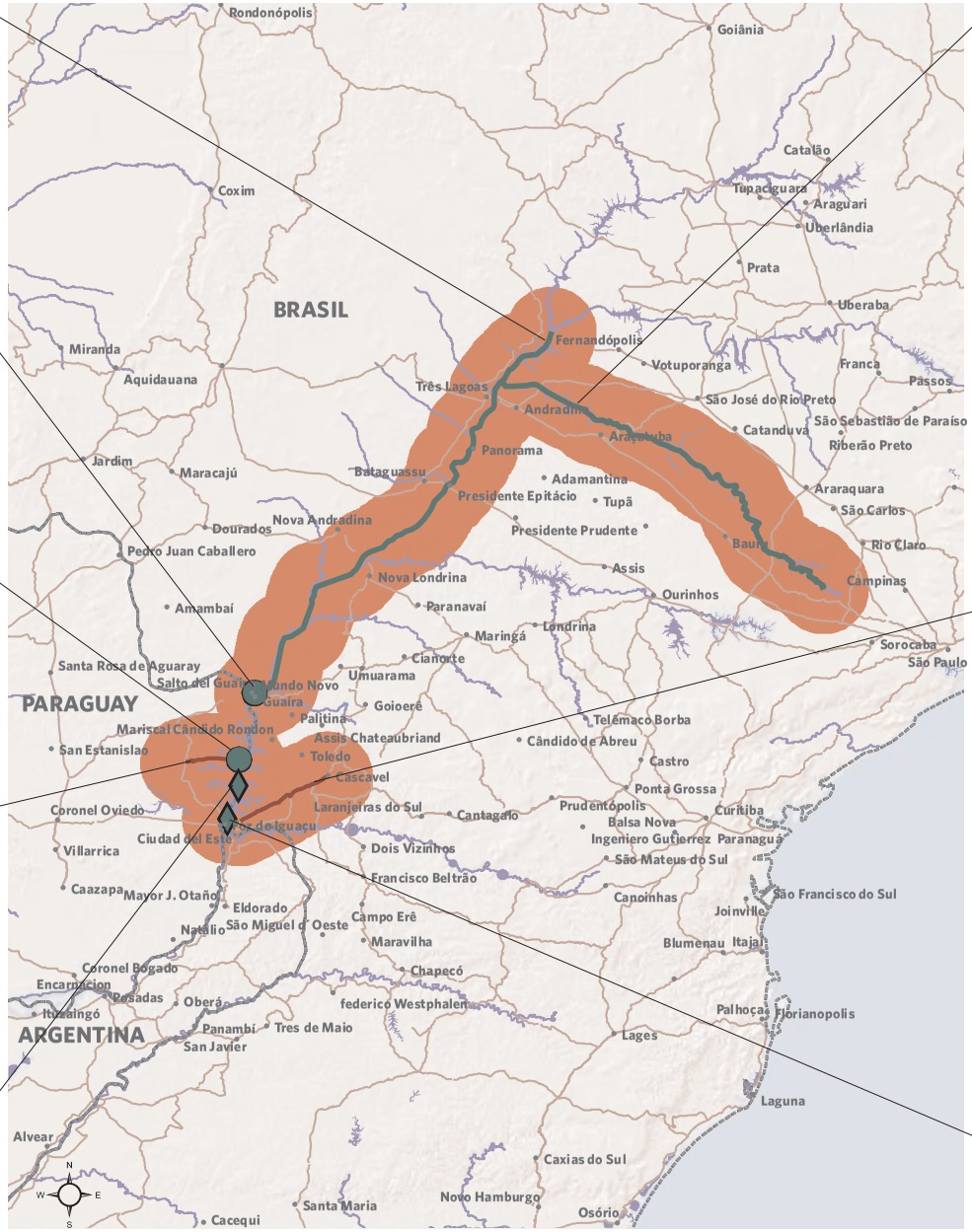
· Strengthen competitiveness in inland countries and regions by efficiently connecting them to the Atlantic ocean.

** US$ million*

Code	Name	Stage	Estimated investment*	Countries
HPP01	MOTACUCITO - MUTÚN - PUERTO BUSCH ROAD - RAIL CONNECTION	Pre-execution	202.9	BO
HPP03	PAVING OF THE PUERTO SUÁREZ - MUTÚN ROAD	Execution	18.8	BO
HPP07	IMPROVEMENT OF NAVIGATION CONDITIONS ON THE PARAGUAY RIVER (BETWEEN APA AND CORUMBÁ)	Pre-execution	39.0	BO - BR PY
HPP08	COMMUNICATIONS SYSTEM FOR THE PARAGUAY RIVER (ASUNCIÓN - UPSTREAM)	Profiling	4.0	BO - PY
HPP09	**IMPROVEMENT OF NAVIGATION CONDITIONS ON THE PARAGUAY RIVER (ASUNCIÓN - APA)**	Execution	110.0	PY
HPP10	PAVING OF THE SAN ESTANISLAO - PUERTO ROSARIO ROAD SECTION (ROUTES No. B11 AND B09)	Completed	66.5	PY
HPP11	PAVING OF THE SANTA ROSA - PUERTO ANTEQUERA ROAD SECTION (NATIONAL ROUTE No. 11)	Completed	47.0	PY
HPP12	PAVING OF THE CONCEPCIÓN -VALLEMÍ ROAD (ROUTES A06 AND PY14)	Execution	113.0	PY
HPP106	SYSTEM FOR WATER LEVEL PREDICTION IN THE PARAGUAY RIVER (APA - ASUNCIÓN)	Profiling	0.0	BO - PY
HPP122	REHABILITATION AND MAINTENANCE OF THE TAMENGO CANAL	Pre-execution	10.5	BO
HPP125	PAVING OF ROAD SECTION SANTA ROSA - CAPITÁN BADO (NATIONAL ROAD No.11 - BORDER WITH BRAZIL)	Execution	122.5	PY
HPP127	CONSTRUCTION OF THE BUSCH PORT	Completed	0.0	BO
	TOTAL		**734.2**	

Profiling · Pre-execution · Execution · Completed

Tietê – Paraná (Itaipu)



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

REHABILITATION OF SALTO DEL GUAIRÁ PORT **31**

ENLARGEMENT OF PUERTO INDIO **30**

PAVING OF TRUNK ROAD II **32**

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

19 IMPROVEMENT OF NAVIGATION CONDITIONS ON THE TIETÊ RIVER

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

28 **Anchor Project: ITAIPU DIVERSION BINATIONAL PROJECT**

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 landlocked 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		25.7	PY
HPP108	IMPROVEMENT OF NAVIGATION CONDITIONS ON THE ALTO PARANÁ RIVER (UPSTREAM OF SALTOS DEL GUAIRÁ)		15.0	BR
	TOTAL		**847.5**	

Profiling · Pre-execution · Execution · Completed

Paraguay - Paraná Rivers, Asunción - Paraná Delta

42 Anchor Project: BINATIONAL PROJECT FOR THE IMPROVEMENT OF NAVIGATION CONDITIONS ON THE PARAGUAY RIVER, FROM CONFLUENCIA TO ASUNCIÓN

61 PAVING OF NATIONAL ROUTE NO. 9 BETWEEN COLONIA CANO AND EL COLORADO

54 FENDER SYSTEM FOR BARRANQUERAS PORT

58 PAVING OF NATIONAL ROUTE NO. 11, INTERSECTION WITH PROVINCIAL ROUTE NO. 13

38 REHABILITATION OF THE TUCUMÁN - ROSARIO RAILWAY BRANCH LINE

60 PAVING OF NATIONAL ROUTE NO. 13 BETWEEN THE INTERSECTION WITH NATIONAL ROUTE NO. 11 AND VILLA ÁNGELA

43 IMPROVEMENT OF RIVER ACCESSES TO PARANÁ RIVER PORTS

59 PAVING OF NATIONAL ROUTE NO. 11 BETWEEN SANTA FE AND SAN JUSTO

41 ENHANCEMENT OF RAILWAY ACCESSES TO THE CITY OF SANTA FE

48 ENLARGEMENT OF DIAMANTE PORT

123 UPGRADE OF NATIONAL ROUTE NO. 11 TO A FOUR-LANE ROAD BETWEEN ROSARIO AND OLIVEROS

35 SAN MARTÍN THERMOELECTRIC POWER STATION IN TIMBÚES

40 ENHANCEMENT OF RAILWAY ACCESSES TO THE CITY OF ROSARIO

50 ROSARIO PORT MASTER PLAN

124 UPGRADE OF NATIONAL ROUTE NO. 11 TO A FOUR-LANE ROAD: RESISTENCIA - FORMOSA - CLORINDA

64 PAVING OF THE VILLETA - ALBERDI ROAD SECTION

62 COMMUNICATIONS SYSTEM FOR THE PARAGUAY RIVER (BETWEEN ASUNCIÓN AND ITS CONFLUENCE)

67 REHABILITATION OF THE ZÁRATE - ROSARIO RAILWAY BRANCH LINE

44 DEEPENING OF THE FAIRWAY IN THE PARANÁ RIVER FROM CONFLUENCIA TO THE PLATA RIVER

45 ENLARGEMENT OF BARADERO PORT

63 OPTIMIZATION OF THE PORT TERMINAL SYSTEM IN GREATER ASUNCIÓN (ROAD AND RIVER ACCESSES; SITES FOR TERMINALS)

55 FORMOSA CITY BELTWAY

103 CONSTRUCTION AND REHABILITATION OF THE ASUNCIÓN - ARTIGAS RAILWAY

126 PAVING OF THE ALBERDI - PILAR ROAD SECTION

49 ENLARGEMENT AND MODERNIZATION OF CORRIENTES PORT

116 HIGH-VOLTAGE TRANSMISSION LINE BETWEEN MERCEDES AND GOYA

36 TRANSFORMER STATION IN MERCEDES

117 HIGH-VOLTAGE TRANSMISSION LINE BETWEEN MERCEDES AND PASO DE LOS LIBRES

56 SANTA FE CITY BELTWAY

33 IMPROVEMENT IN THE COMMUNICATION SYSTEM FOR THE PARANÁ RIVER (BETWEEN SANTA FE AND ITS CONFLUENCE)

57 ROSARIO CITY BELTWAY

46 ENLARGEMENT OF IBICUY PORT

05 DEVELOPMENT OF INFRASTRUCTURE FOR THE FUTURE BOLIVIAN FREE TRADE ZONE IN ZÁRATE

34 BELGRANO THERMOELECTRIC POWER STATION IN CAMPANA

47 ENLARGEMENT OF SAN PEDRO PORT

Group 3

Strategic Function

· Strengthen and boost the integration of the production chains along the Hub.

· Reinforce integration of landlocked 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		668.0	AR
HPP35	SAN MARTÍN THERMOELECTRIC POWER STATION IN TIMBÚES		738.0	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		317.0	AR
HPP41	ENHANCEMENT OF RAILWAY ACCESSES TO THE CITY OF SANTA FE		70.0	AR
HPP42	**BINATIONAL PROJECT FOR THE IMPROVEMENT OF NAVIGATION CONDITIONS ON THE PARAGUAY RIVER, FROM CONFLUENCIA 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 CONFLUENCIA 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
HPP54	FENDER SYSTEM FOR BARRANQUERAS PORT		15.0	AR
HPP55	FORMOSA CITY BELTWAY		139.8	AR
HPP56	SANTA FE CITY BELTWAY		200.0	AR
HPP57	ROSARIO CITY BELTWAY		173.9	AR

continue >>

Paraguay – Paraná Rivers, Asunción – Paraná Delta

>>

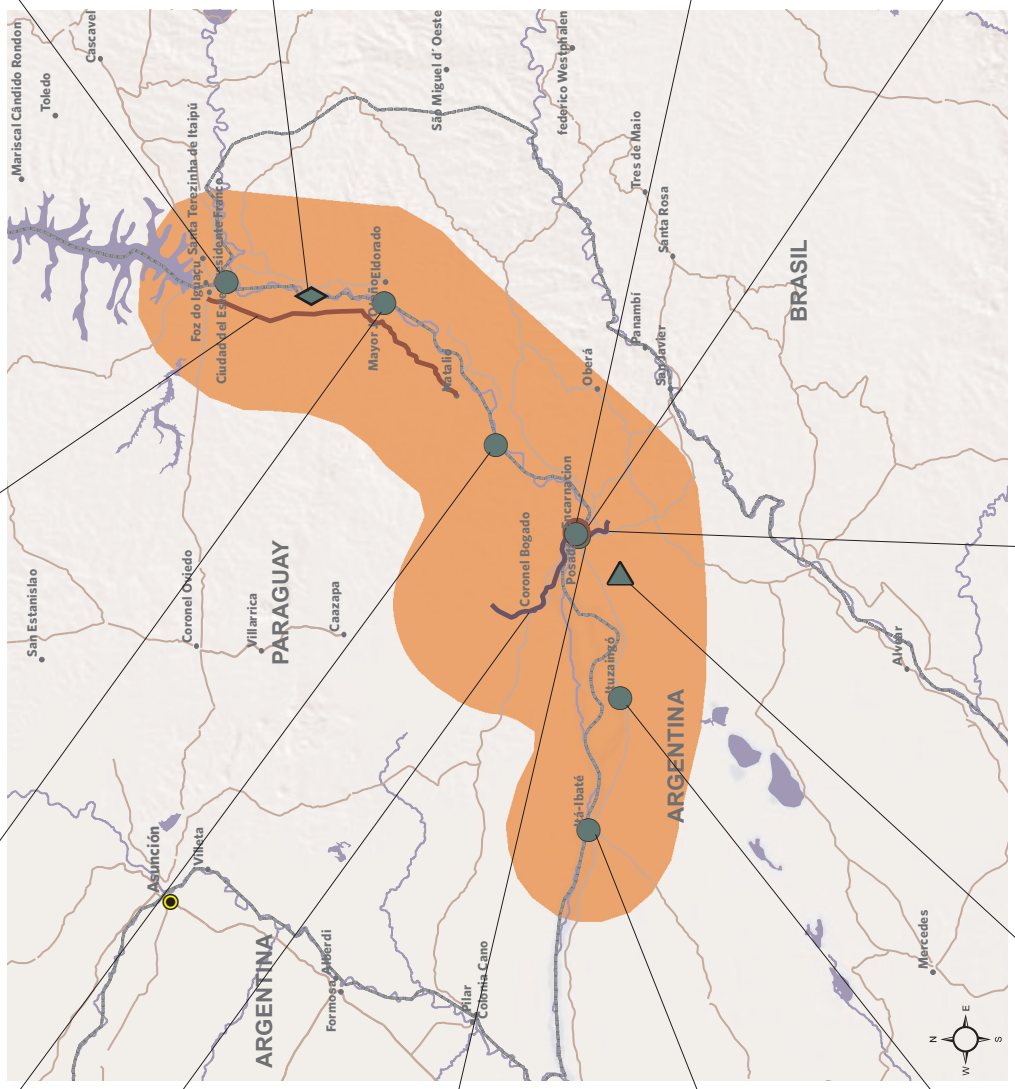
** US$ million*

Code	Name	Stage	Estimated investment*	Countries
HPP58	PAVING OF NATIONAL ROUTE No. 11, INTERSECTION WITH PROVINCIAL ROUTE No. 13	Execution	100.0	AR
HPP59	PAVING OF NATIONAL ROUTE No. 11 BETWEEN SANTA FE AND SAN JUSTO	Pre-execution	91.3	AR
HPP60	PAVING OF NATIONAL ROUTE No. 13 BETWEEN THE INTERSECTION WITH NATIONAL ROUTE No. 11 AND VILLA ÁNGELA	Pre-execution	100.0	AR
HPP61	PAVING OF PROVINCIAL ROUTE No. 9 BETWEEN COLONIA CANO AND EL COLORADO	Completed	60.0	AR
HPP62	COMMUNICATIONS SYSTEM FOR THE PARAGUAY RIVER (BETWEEN ASUNCIÓN AND ITS CONFLUENCE)	Profiling	3.0	AR – PY
HPP63	OPTIMIZATION OF THE PORT TERMINAL SYSTEM IN GREATER ASUNCIÓN (ROAD AND RIVER ACCESSES; SITES FOR TERMINALS)	Profiling	0.0	PY
HPP64	PAVING OF THE VILLETA - ALBERDI ROAD SECTION	Execution	51.0	PY
HPP67	REHABILITATION OF THE ZÁRATE - ROSARIO RAILWAY BRANCH LINE	Completed	42.0	AR
HPP103	CONSTRUCTION AND REHABILITATION OF THE ASUNCIÓN - ARTIGAS RAILWAY	Profiling	0.0	PY
HPP116	HIGH-VOLTAGE TRANSMISSION LINE BETWEEN MERCEDES AND GOYA	Completed	25.0	AR
HPP117	HIGH-VOLTAGE TRANSMISSION LINE BETWEEN MERCEDES AND PASO DE LOS LIBRES	Completed	15.0	AR
HPP123	UPGRADE OF NATIONAL ROUTE No. 11 TO A FOUR-LANE ROAD BETWEEN ROSARIO AND OLIVEROS	Pre-execution	97.6	AR
HPP124	UPGRADE OF NATIONAL ROUTE No. 11 TO A FOUR-LANE ROAD: RESISTENCIA - FORMOSA - CLORINDA	Execution	330.0	AR
HPP126	PAVING OF THE ALBERDI - PILAR ROAD SECTION	Pre-execution	100.0	PY
TOTAL			**3,841.4**	

Profiling · Pre-execution · Execution · Completed

Group 3

Paraná River, Itaipu – Confluence



79 PAVING OF THE PRESIDENTE FRANCO - M. OTAÑO - NATALIO ROAD SECTION AND ACCESS ROADS TO NINE PORTS ON THE PARANÁ RIVER

80 MODERNIZATION OF THE IGUAZÚ PORT

72 **Anchor Project: BINATIONAL PROJECT FOR THE IMPROVEMENT OF NAVIGATION CONDITIONS ON THE ALTO PARANÁ RIVER**

107 ENCARNACIÓN PORT

73 ACCESS ROADS TO ENCARNACIÓN

68 ENLARGEMENT OF EL DORADO PORT

105 RECONSTRUCTION OF THE GARUPÁ - POSADAS RAILWAY SECTION

77 DIVERSION OF THE AGUAPEY STREAM

78 CONSTRUCTION OF THE KAARENDY PORT ON THE PARANÁ RIVER

76 CONSTRUCTION AND REHABILITATION OF THE ARTIGAS - POSADAS RAILWAY

66 RESTRUCTURING OF POSADAS AND SANTA ANA PORTS

70 ENLARGEMENT OF ITÁ-IBATÉ PORT

69 ENLARGEMENT OF ITUZAINGÓ PORT

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 landlocked countries and regions by efficiently connecting them to the Atlantic ocean.

** US$ million*

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

Profiling · Pre-execution · Execution · Completed

96 REHABILITATION OF THE SALTO PORT ACCESSES AND STORAGE AREA

88 **Anchor Project:**
BINATIONAL PROJECT FOR THE IMPROVEMENT OF NAVIGATION CONDITIONS ON THE URUGUAY RIVER

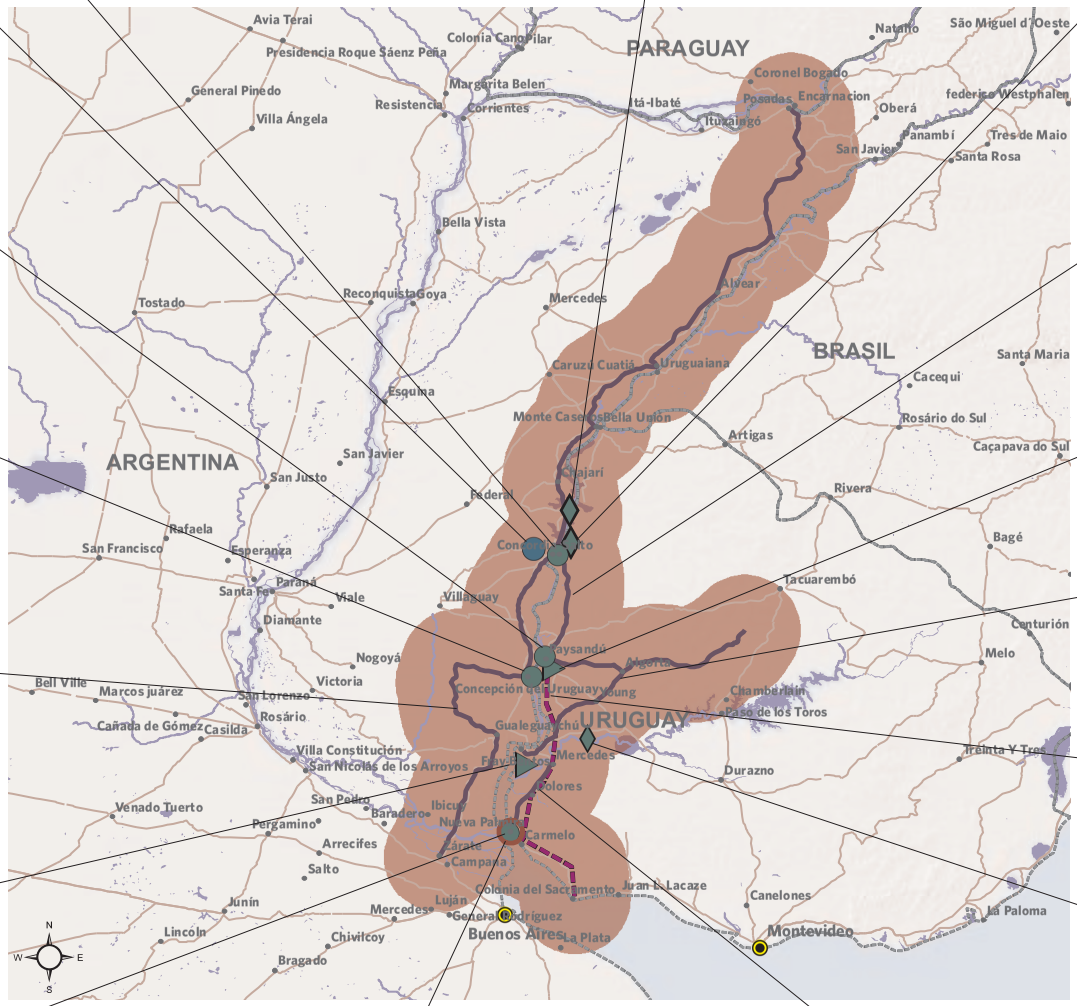
EXPANSION AND REHABILITATION OF THE CONCORDIA AIRPORT **118**

REHABILITATION OF THE PAYSANDÚ PORT ACCESSES AND STORAGE AREA **95**

IMPROVEMENTS IN CONCEPCIÓN DEL URUGUAY PORT **86**

REHABILITATION OF THE ZÁRATE - POSADAS RAILWAY BRANCH LINE **82**

IMPROVEMENT OF RIVER ACCESSES TO THE URUGUAYAN PORTS ON THE URUGUAY RIVER **83**



87 COMPLETION OF THE CONSTRUCTION OF LOCKS AT SALTO GRANDE DAM

65 REHABILITATION AND IMPROVEMENT OF THE PIEDRA SOLA - SALTO GRANDE RAILWAY CORRIDOR

92 DESIGN AND DREDGING OF THE ALTERNATIVE CASA BLANCA CANAL

120 REHABILITATION OF THE ALGORTA - FRAY BENTOS RAILWAY BRANCH LINE

89 PAYSANDÚ - COLONIA GAS PIPELINE

115 IMPROVEMENT OF THE NAVIGATION CONDITIONS ON THE NEGRO RIVER

94 IMPROVEMENT OF NUEVA PALMIRA PORT ACCESSES AND INFRASTRUCTURE

97 NUEVA PALMIRA BELTWAY AND PORT ACCESS ROADS NETWORK

90 CONSTRUCTION OF THE MERCEDES - NUEVA PALMIRA PORT RAILWAY BRANCH LINE

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	Execution	127.3	UY
HPP82	REHABILITATION OF THE ZÁRATE - POSADAS RAILWAY BRANCH LINE	Profiling	347.0	AR
HPP83	IMPROVEMENT OF RIVER ACCESSES TO THE URUGUAYAN PORTS ON THE URUGUAY RIVER	Completed	1.0	UY
HPP86	IMPROVEMENTS IN CONCEPCIÓN DEL URUGUAY PORT	Execution	10.7	AR
HPP87	COMPLETION OF THE CONSTRUCTION OF LOCKS AT SALTO GRANDE DAM	Pre-execution	300.0	AR - UY
HPP88	**BINATIONAL PROJECT FOR THE IMPROVEMENT OF NAVIGATION CONDITIONS ON THE URUGUAY RIVER**	Execution	40.0	AR - UY
HPP89	PAYSANDÚ - COLONIA GAS PIPELINE	Profiling	0.0	UY
HPP90	CONSTRUCTION OF THE MERCEDES - NUEVA PALMIRA PORT RAILWAY BRANCH LINE	Profiling	200.0	UY
HPP92	DESIGN AND CONSTRUCTION OF THE ALTERNATIVE CASA BLANCA CANAL	Completed	7.4	UY
HPP94	IMPROVEMENT OF NUEVA PALMIRA PORT ACCESSES AND INFRASTRUCTURE	Completed	10.0	UY
HPP95	REHABILITATION OF THE PAYSANDÚ PORT, ACCESSES AND STORAGE AREA	Completed	6.0	UY
HPP96	REHABILITATION OF THE SALTO PORT, ACCESSES AND STORAGE AREA	Execution	4.0	UY
HPP97	NUEVA PALMIRA BELTWAY AND PORT ACCESS ROADS NETWORK	Execution	15.0	UY
HPP115	IMPROVEMENT OF THE NAVIGATION CONDITIONS ON THE NEGRO RIVER	Profiling	350.0	UY
HPP118	EXPANSION AND REHABILITATION OF THE CONCORDIA AIRPORT	Profiling	0.0	AR
HPP120	REHABILITATION OF THE ALGORTA - FRAY BENTOS RAILWAY BRANCH LINE	Execution	100.0	UY
	TOTAL		**1,518.4**	

Profiling · Pre-execution · Execution · Completed

COSIPLAN 2017

IOC

Central Interoceanic

Bolivia / Brazil / Chile / Paraguay / Peru

Population:
103,310,62

Population density:
35.8 Hab./km²

Area:
2,881,860 km²

GDP:
US$ 1,348,366 billion

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

Estimated Investment
US$ million

19,901.5

53
Nationals
84.1%

10
Binationals
15.9%

BOLIVIA	26
BRAZIL	12
CHILE	17
PARAGUAY	10
PERU	8

Projects by Stage

No. of projects · U$S million

Profiling
5
39,965.5

Pre-execution
14
9,258.7

Execution
21
5,590.9

Completed
23
1,086.4

Projects by Sector

Transport
59
19,565.8

Energy
2
321.7

Communications
2
14

Projects by Type of Financing

Public
45
6,010.8

Private
14
5,861.2

Public/private
4
8,029.5

Projects by Subsectors

Transport

Air
6
193.1

Road
32
6,394.8

Rail
6
11,813

Sea
5
843.8

Multimodal
2
263.5

Border Crossings
8
57,6

Energy

Energy Interconnection
1

Energy Generation
1
321.7

Communications

Communications Interconnection
2
14


NÚCLEO SOCIAL COMUNITARIO
JANUALDO MARQUIL

IOC

CENTRAL INTEROCEANIC

Presentation of the Hub

Bolivia - Brazil - Chile - Paraguay - Peru

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 (2,881,860 km²) and 25% of the population (103,310,620 inhabitants) of South America, and is one of the three most densely populated Hubs, with 36 inhabitants per km2. It also ranks third in terms of GDP, accounting for almost 30% of the region's GDP (US$1,348,366 million[2]).

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.

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 30 airports —15 international. Concerning **electricity generation**, the installed power capacity in the countries of the Hub is 159,332 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.

1. See cosiplan.org/ejes#ioc
2. At 2014 current prices

Map of the Area of Influence of the Central Interoceanic Hub

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 km^2, 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 km^2 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$19.9 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, Andean, Peru-Brazil-Bolivia, Amazon, Paraná-Paraguay Waterway and Capricorn Hubs.

Project Portfolio

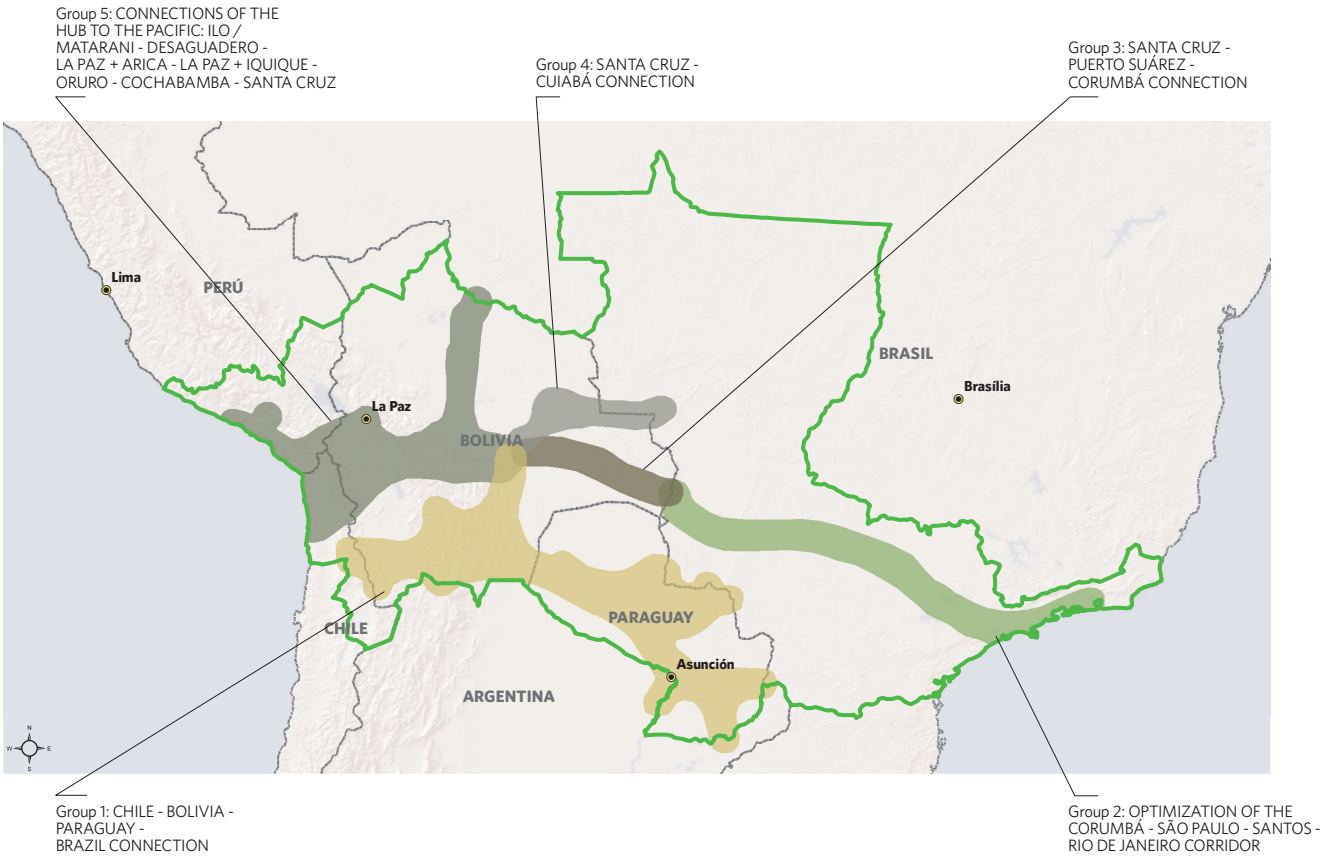
The projects included in the Central Interoceanic Hub are intended to expand t he rail infrastructure in order to reduce regional transportation costs in the following connectivities: from isolated territories of the hinterland towards the Pacific ocean; from the countries to the Atlantic ocean, from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

The active portfolio of the Hub includes 40 projects with an estimated investment of US$18.815 billion.

Of the 40 active projects, there is information available on the estimated completion date of 14. Thirteen of them are to be completed in the next four years (2017-2020).

According to estimations, by the time these 13 projects are completed, 47% of the estimated investment amount for the Hub's Portfolio would have been made.

Map of the Project Groups of the Central Interoceanic Hub



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	443.0
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	11,164.3
	TOTAL	**63**	**19,901.5**

Projects to Be Completed in the Next Four Years

** US$ million*

Code	Name	Group	Stage	Estimated investment*	Countries	Estimated Completion Date
IOC16	RIO DE JANEIRO BYPASS AND ACCESS ROAD TO ITAGUAÍ PORT	2	Execution	1,200.0	BR	December 2017
IOC17	IMPROVEMENT OF THE CORUMBÁ - SANTOS (SP) RAILWAY SECTION	2	Profiling	3,700.0	BR	December 2017
IOC27	BANEGAS BRIDGE	4	Execution	46.7	BO	December 2017
IOC42	REHABILITATION AND IMPROVEMENT OF THE CAMANÁ - MATARANI - ILO ROAD	5	Execution	438.1	PE	December 2017
IOC75	CONSTRUCTION OF ROUTE No. 5 SECTION BETWEEN BELLA VISTA AND THE CONNECTION WITH APA RIVER BRIDGE	1	Execution	48.5	PY	December 2017
IOC80	UPGRADE OF LA PAZ - SANTA CRUZ ROUTE TO A FOUR-LANE ROAD	5	Execution	269.0	BO	December 2017
IOC01	PAVING OF THE CARMELO PERALTA - LOMA PLATA ROAD SECTION	1	Pre-execution	255.5	PY	February 2018
IOC72	IMPROVEMENT OF ROUTE No. 9 TRANSCHACO (INFANTE RIVAROLA - ASUNCIÓN ROAD SECTION)	1	Execution	598.5	PY	July 2018
IOC79	TACNA - LA PAZ ROAD INTEGRATION, TACNA - COLLPA SECTION	5	Execution	165.2	BO - PE	July 2018
IOC14	CAMPO GRANDE BYPASS	2	Execution	12.0	BR	December 2018
IOC35	IMPROVEMENT OF ARICA PORT	5	Execution	62.4	CH	December 2018
IOC40	ENLARGEMENT AND IMPROVEMENT OF THE ARICA - TAMBO QUEMADO ROAD	5	Execution	117.0	CH	December 2018
IOC82	TRINIDAD - PUERTO USTÁREZ ROAD	5	Execution	1,280.4	BO	December 2020

Profiling · Pre-execution · Execution · Completed

The five projects with the greatest estimated investment account for 75% of all the investment in the active portfolio of the Hub.

It should be noted that all of them are national: two belong to Bolivia and three to Brazil.

All types of financing 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, Bioceanic Railway Corridor for Integration (Bolivian Section), is financed by a public-private partnership. All the projects considered belong to the transportation sector; three concern rail projects and two road works.

The Five Projects of the Active Portfolio with the Greatest Estimated Investment

** US$ million*

Code	Name	Group	Stage	Estimated Investment*	Countries	Type of Financing
IOC81	BIOCEANIC RAILWAY CORRIDOR FOR INTEGRATION (BOLIVIAN SECTION)	5		7,000.0	BO	Public-private
IOC17	IMPROVEMENT OF THE CORUMBÁ - SANTOS (SP) RAILWAY SECTION	2		3,700.0	BR	Private
IOC82	TRINIDAD - PUERTO USTÁREZ ROAD	5		1,280.4	BO	Public
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
	TOTAL			**14,180.4**		

Profiling · Pre-execution · Execution · Completed

There are 23 completed projects in the Hub, having demanded a total investment amount of US$1.0864 billion.

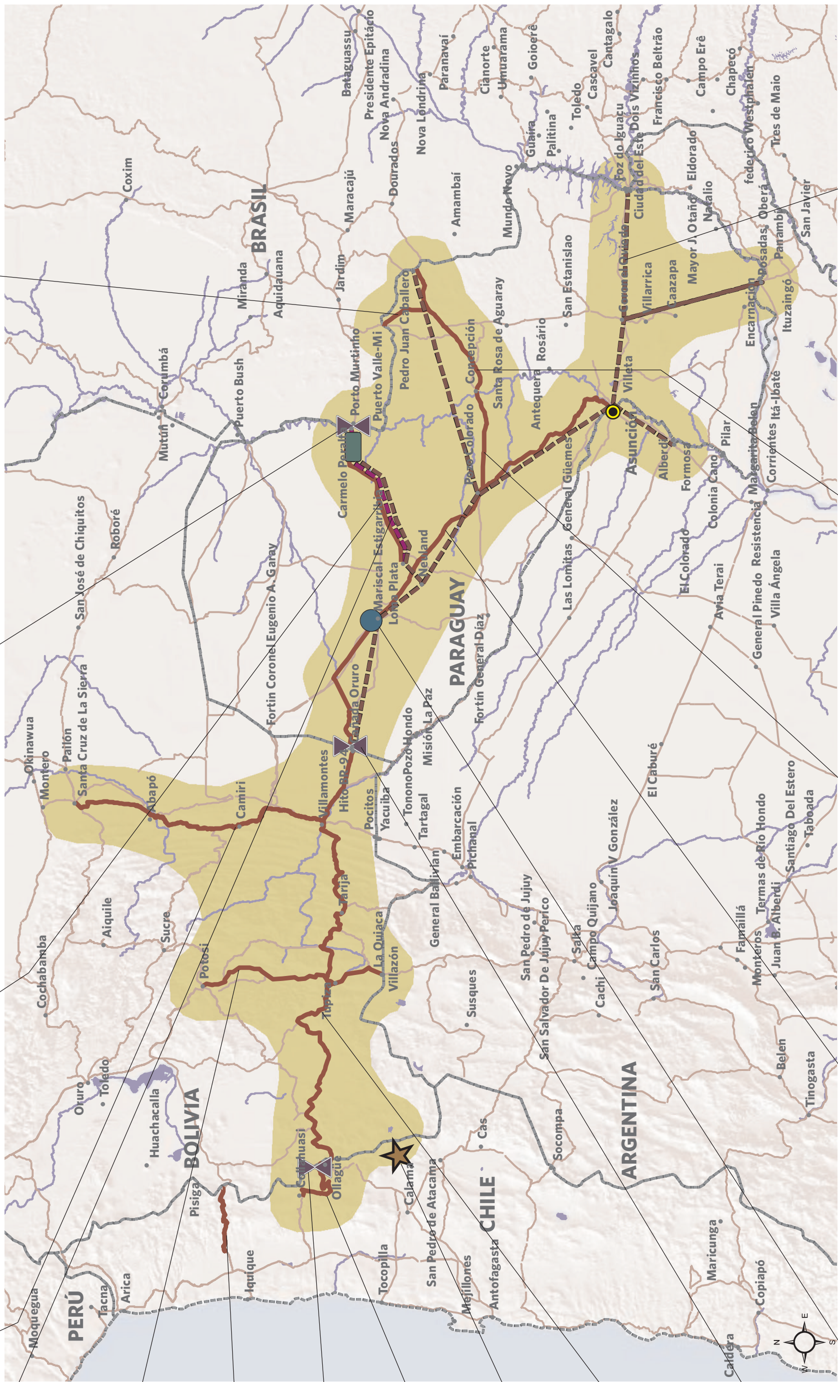
All the completed projects belong to the transport sector, except for one communications interconnection project. The projects financed by the private sector were less than half the projects financed by the public sector, although in terms of investment, private financing is as significant as public financing. These projects are divided into the six subsectors, but the road, border crossings, rail, and air projects stand out. Most are national in scope, with a greater participation of Chile (7), Bolivia and Brazil (4). Peru follows, with three works handed over. Paraguay has completed one project, and Bolivia also participates in four binational projects already completed.

Completed Projects in the Central Interoceanic Hub

** US$ million*

Code	Name	Ejecuted Investment*	Countries
IOC04	PAVING OF THE POTOSÍ - TUPIZA - VILLAZÓN ROAD	180.4	BO
IOC09	INFANTE RIVAROLA - CAÑADA ORURO BORDER CROSSING	1.9	BO - PY
IOC13	CAMPO GRANDE RING RAILWAY	31.0	BR
IOC15	CORUMBÁ BYPASS	8.0	BR
IOC20	IMPROVEMENT OF CORUMBÁ - CAMPO GRANDE RAILWAY SECTION (TREM DO PANTANAL)	22.0	BR
IOC24	INSTALLATION OF AN OPTICAL FIBER LINE ALONG THE PAILÓN - PUERTO SUÁREZ ROAD	12.0	BO
IOC25	PUERTO SUÁREZ - CORUMBÁ INTEGRATED CONTROL AREA	2.0	BO - BR
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
IOC32	TOLEDO - PISIGA ROAD	130.5	BO
IOC33	PISIGA - COLCHANE BORDER CROSSING	10.0	BO - CH
IOC34	IMPROVEMENT OF ARICA AIRPORT	10.0	CH
IOC36	PAVING AND IMPROVEMENT OF THE IQUIQUE - COLCHANE ROAD	42.0	CH
IOC39	REHABILITATION OF THE "PUENTE DE LA AMISTAD" BRIDGE (OR EISENHOWER BRIDGE)	3.0	BO
IOC62	IMPROVEMENT OF MATARANI PORT	37.0	PE
IOC66	ARICA - LA PAZ RAILWAY REHABILITATION AND CONCESSION (CHILEAN SECTION)	60.0	CH
IOC67	IMPROVEMENT OF TACNA AIRPORT	51.5	PE
IOC69	ENLARGEMENT OF THE IQUIQUE AIRPORT	16.6	CH
IOC71	CONCESSION OF THE DIEGO ARACENA AIRPORT - IQUIQUE ROAD FOR ITS UPGRADE TO A FOUR-LANE ROAD	173.0	CH
IOC74	IMPROVEMENT OF THE CONCEPCIÓN - PEDRO JUAN CABALLERO ROAD SECTION	12.5	PY
IOC85	CONSTRUCTION OF THE CHUNGARÁ BORDER COMPLEX	37.0	CH
IOC86	IMPROVEMENT OF THE CHACALLUTA BORDER COMPLEX	1.0	CH
IOC89	MINERAL CONCENTRATE RECEPTION, STORAGE AND SHIPPING SYSTEM AT THE MATARANI PORT	230.0	PE
	TOTAL	**1,086.4**	

Chile - Bolivia - Paraguay - Brazil Connection



60 IMPROVEMENT OF THE SANTA CRUZ - YACUIBA ROAD

01 **Anchor Project: PAVING OF THE CARMELO PERALTA - LOMA PLATA ROAD SECTION**

77 **Anchor Project: CONSTRUCTION OF THE CARMELO PERALTA (PARAGUAY) - PORTO MURTINHO (BRASIL) INTERNATIONAL BRIDGE AND BORDER CROSSING**

75 CONSTRUCTION OF ROUTE NO. 5 SECTION BETWEEN BELLA VISTA AND THE CONNECTION WITH APA RIVER BRIDGE

07 IMPROVEMENT OF MARISCAL ESTIGARRIBIA AIRPORT

72 IMPROVEMENT OF ROUTE NO. 9 TRANSCHACO (INFANTE RIVAROLA - ASUNCIÓN ROAD SECTION)

73 REHABILITATION OF THE POZO COLORADO - CONCEPCIÓN ROAD SECTION

74 IMPROVEMENT OF THE CONCEPCIÓN - PEDRO JUAN CABALLERO ROAD SECTION

10 URUPABOL GAS PIPELINE (SECTION I)

06 OPTICAL FIBER CONNECTION BETWEEN LOMA PLATA AND THE BRAZILIAN BORDER

04 PAVING OF THE POTOSÍ - TUPIZA - VILLAZÓN ROAD

90 CANCOSA-IQUIQUE ROUTE

03 OLLAGÜE - ESTACIÓN ABAROA BORDER CROSSING

05 CONSTRUCTION OF THE OLLAGÜE - COLLAHUASI ROAD

59 LAGUNA COLORADA GEOTHERMAL PROJECT

02 CONSTRUCTION OF THE CAÑADA ORURO - VILLAMONTES - TARIJA - ESTACIÓN ABAROA ROAD

09 INFANTE RIVAROLA - CAÑADA ORURO BORDER CROSSING

Group 1

Strategic Function

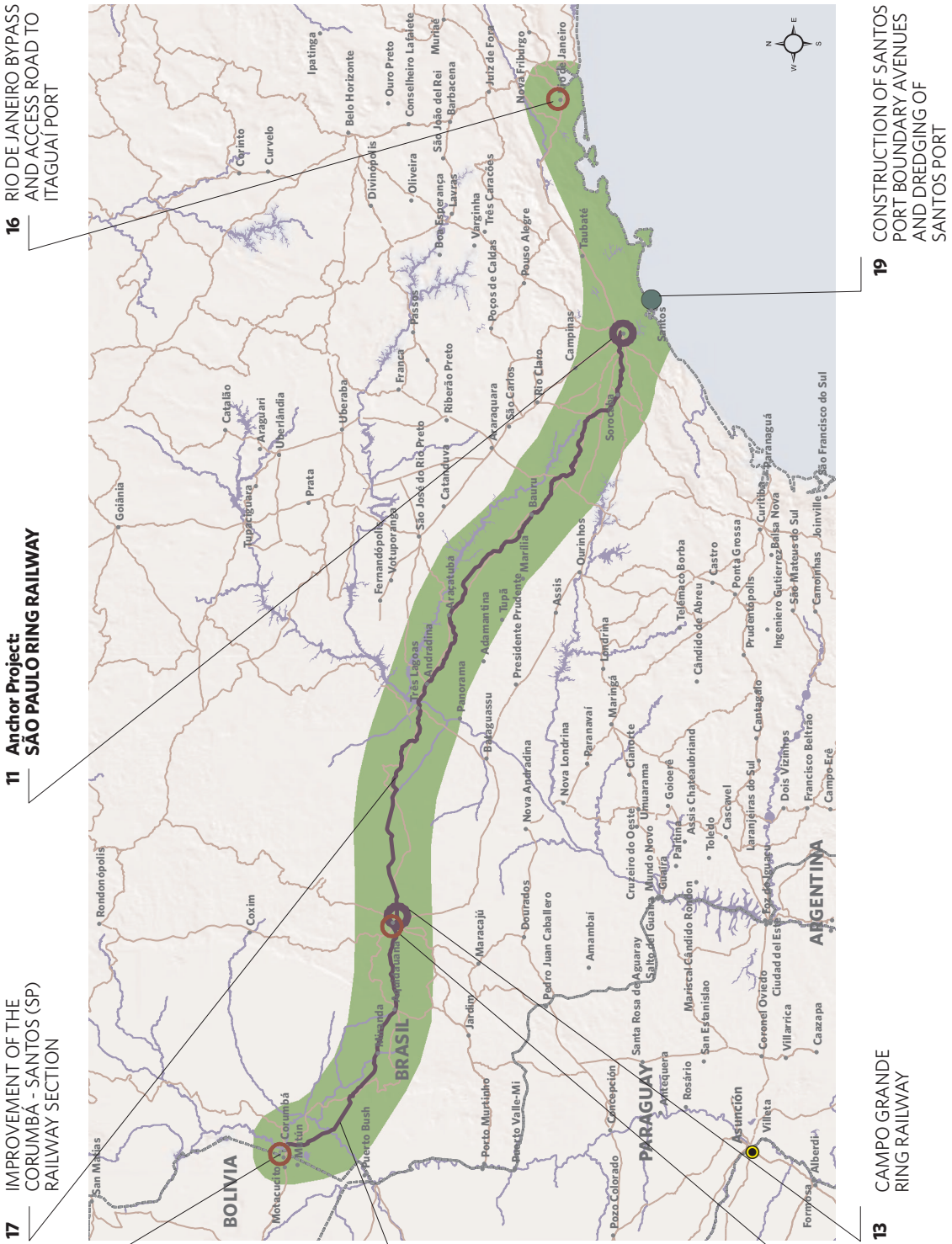
- Interconnect regional production areas (transportation, energy, and communications).
- Provide new access of the hinterlands to the Pacific ocean, articulating isolated territories.
- Increase the economic complementariness among the countries.

** US$ million*

Code	Name	Stage	Estimated Investment*	Countries
IOC01	**PAVING OF THE CARMELO PERALTA - LOMA PLATA ROAD SECTION**	Pre-execution	255.5	PY
IOC02	CONSTRUCTION OF THE CAÑADA ORURO - VILLAMONTES - TARIJA - ESTACIÓN ABAROA ROAD	Execution	210.0	BO
IOC03	OLLAGÜE - ESTACIÓN ABAROA BORDER CROSSING	Pre-execution	2.2	BO - CH
IOC04	PAVING OF THE POTOSÍ - TUPIZA - VILLAZÓN ROAD	Completed	180.4	BO
IOC05	CONSTRUCTION OF THE OLLAGÜE - COLLAHUASI ROAD	Pre-execution	12.8	CH
IOC06	OPTICAL FIBER CONNECTION BETWEEN LOMA PLATA AND THE BRAZILIAN BORDER	Profiling	2.0	PY
IOC07	IMPROVEMENT OF MARISCAL ESTIGARRIBIA AIRPORT	Pre-execution	30.0	PY
IOC09	INFANTE RIVAROLA - CAÑADA ORURO BORDER CROSSING	Completed	1.9	BO - PY
IOC10	URUPABOL GAS PIPELINE (SECTION I) (*)	Pre-execution	0.0	BO - PY
IOC59	LAGUNA COLORADA GEOTHERMAL PROJECT	Pre-execution	321.8	BO
IOC60	IMPROVEMENT OF THE SANTA CRUZ - YACUIBA ROAD	Execution	104.0	BO
IOC72	IMPROVEMENT OF ROUTE No. 9 TRANSCHACO (INFANTE RIVAROLA - ASUNCIÓN ROAD SECTION)	Execution	598.5	PY
IOC73	REHABILITATION OF THE POZO COLORADO - CONCEPCIÓN ROAD SECTION	Execution	47.0	PY
IOC74	IMPROVEMENT OF THE CONCEPCIÓN - PEDRO JUAN CABALLERO ROAD SECTION	Completed	12.5	PY
IOC75	CONSTRUCTION OF ROUTE No. 5 SECTION BETWEEN BELLA VISTA AND THE CONNECTION WITH APA RIVER BRIDGE	Execution	48.5	PY
IOC77	**CONSTRUCTION OF THE CARMELO PERALTA (PARAGUAY) - PORTO MURTINHO (BRAZIL) INTERNATIONAL BRIDGE AND BORDER CROSSING**	Profiling	0.0	BR - PY
IOC90	CANCOSA - IQUIQUE ROUTE	Pre-execution	18.6	CH
	TOTAL		**1,845.6**	

Profiling · Pre-execution · Execution · Completed

Optimization of the Corumbá – São Paulo – Santos – Rio de Janeiro Corridor



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.

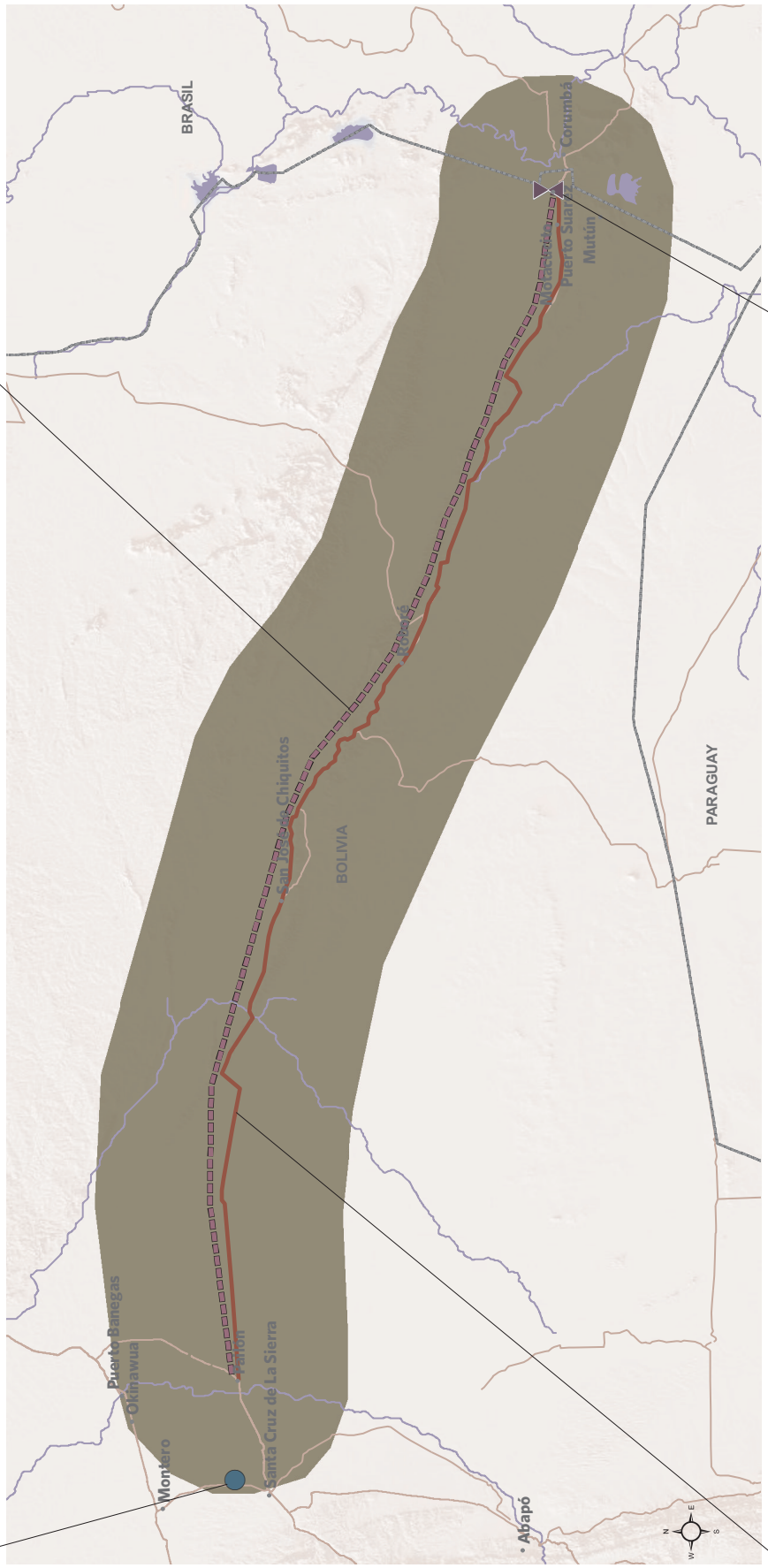
· Increase the railway component in the regional transportation matrix.

** 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
	TOTAL		6,307.4	

Profiling · Pre-execution · Execution · Completed

Santa Cruz – Puerto Suárez – Corumbá Connection



24 INSTALLATION OF AN OPTICAL FIBER LINE ALONG THE PAILÓN - PUERTO SUÁREZ ROAD

25 PUERTO SUÁREZ - CORUMBÁ INTEGRATED CONTROL AREA

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

22 **Anchor Project: CONSTRUCTION OF PAILÓN - SAN JOSÉ - PUERTO SUÁREZ ROAD**

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.

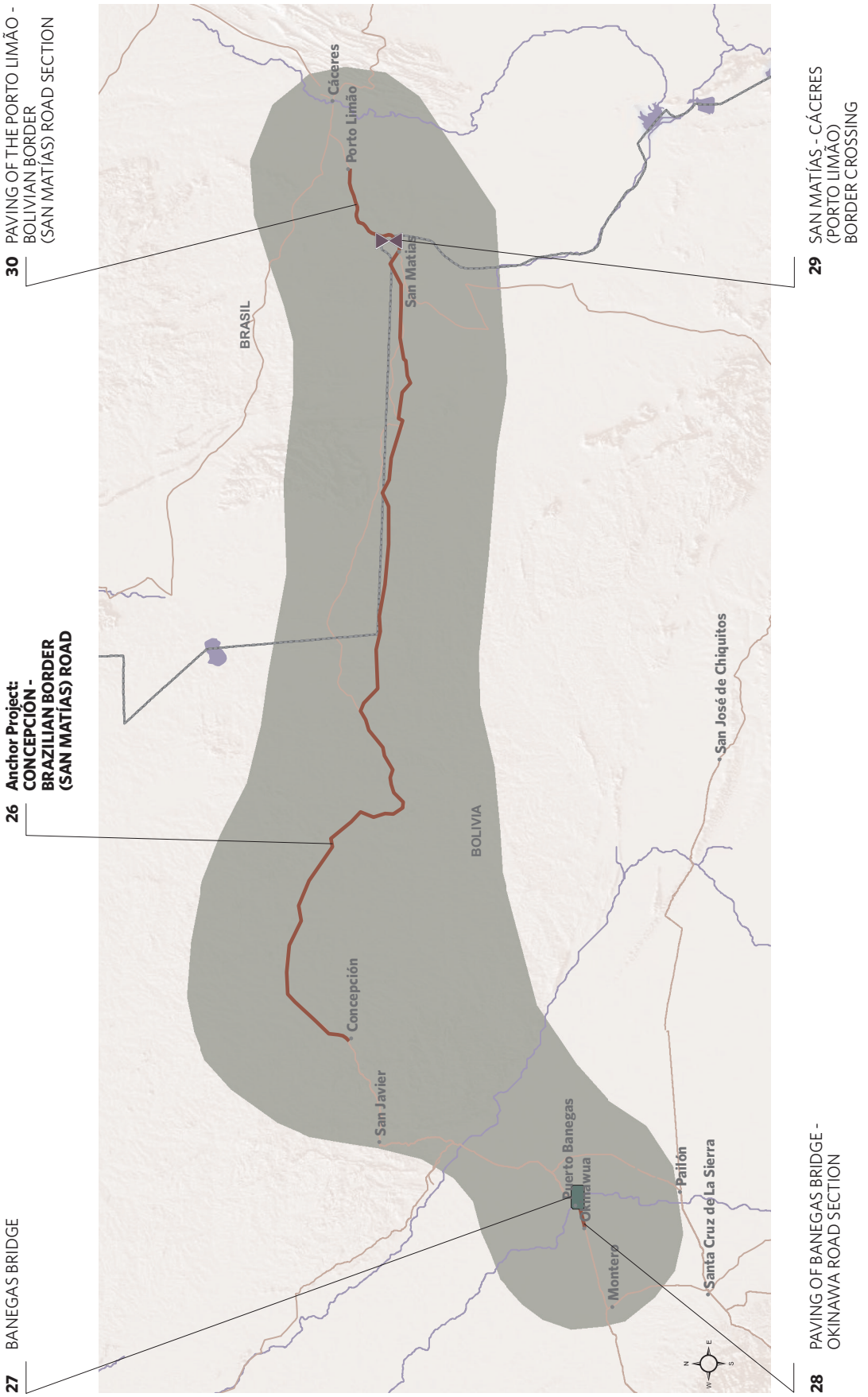
· Support tourism in the region of Pantanal.

** US$ million*

Code	Name	Stage	Estimated Investment*	Countries
IOC22	**CONSTRUCTION OF PAILÓN - SAN JOSÉ - PUERTO SUÁREZ ROAD**	Execution	409.0	BO
IOC24	INSTALLATION OF AN OPTICAL FIBER LINE ALONG THE PAILÓN - PUERTO SUÁREZ ROAD	Completed	12.0	BO
IOC25	PUERTO SUÁREZ - CORUMBÁ INTEGRATED CONTROL AREA	Completed	2.0	BO - BR
IOC78	PASSENGER AND CARGO HUB AIRPORT FOR SOUTH AMERICA (VIRU VIRU, SANTA CRUZ, INTERNATIONAL HUB AIRPORT)	Pre-execution	20.0	BO
	TOTAL		**443.0**	

Profiling · Pre-execution · Execution · Completed

Santa Cruz – Cuiabá Connection



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.

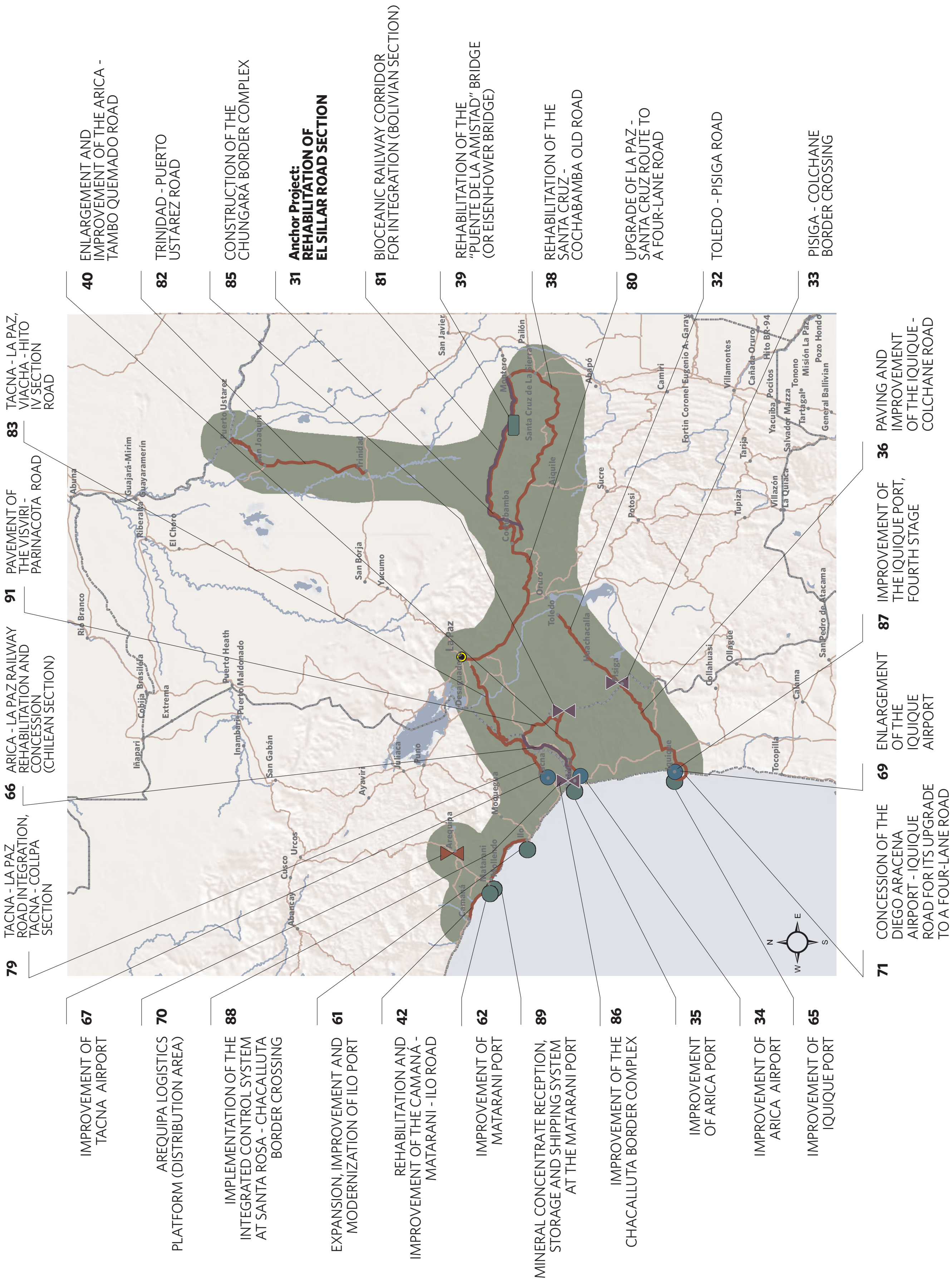
· Support the development of the agricultural potential in the central-eastern region of Bolivia.

** US$ million*

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



Group 5

Strategic Function

· Increase trade and tourism, promote production integration among the cities located within the area of influence of the Hub, and 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**		453.4	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		43.1	PE
IOC61	EXPANSION, IMPROVEMENT AND 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)		60.0	CH
IOC67	IMPROVEMENT OF TACNA AIRPORT		51.5	PE
IOC69	IMPROVEMENT OF TACNA 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		165.2	BO - PE
IOC80	UPGRADE OF LA PAZ - SANTA CRUZ ROUTE TO A FOUR-LANE ROAD		269.0	BO
IOC81	BIOCEANIC RAILWAY CORRIDOR FOR INTEGRATION (BOLIVIAN SECTION)		7,000.0	BO

continue >>

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
IOC82	TRINIDAD - PUERTO USTÁREZ ROAD	Execution	1,280.4	BO
IOC83	TACNA - LA PAZ, VIACHA - MILESTONE IV SECTION ROAD	Execution	16.0	BO
IOC85	CONSTRUCTION OF THE CHUNGARÁ BORDER COMPLEX	Completed	37.0	CH
IOC86	IMPROVEMENT OF THE CHACALLUTA BORDER COMPLEX	Completed	1.0	CH
IOC87	IMPROVEMENT OF THE IQUIQUE PORT, FOURTH STAGE	Pre-execution	65.0	CH
IOC88	IMPLEMENTATION OF THE INTEGRATED CONTROL SYSTEM AT SANTA ROSA - CHACALLUTA BORDER CROSSING	Execution	1.5	CH – PE
IOC89	MINERAL CONCENTRATE RECEPTION, STORAGE AND SHIPPING SYSTEM AT THE MATARANI PORT	Completed	230.0	PE
IOC91	PAVEMENT OF THE VISVIRI - PARINACOTA ROAD	Execution	16.2	CH
	TOTAL		**11,164.3**	

Profiling · Pre-execution · Execution · Completed

Group 5

COSIPLAN 2017

MCC

MERCOSUR - Chile

Argentina / Brazil / Chile / Paraguay / Uruguay

Population density:
141,453,273

Population:
44 Hab./km²

Area:
3,216,623 km²

GDP:
US$ 1,973,410 billion

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

Estimated Investment
US$ million

58,515.6

99
Nationals
86.1%

16
Binationals
13.9%

ARGENTINA	49
BRAZIL	26
CHILE	19
PARAGUAY	8
URUGUAY	29

No. of projects U$S million

Projects by Stage

Profiling
6
4,540

Pre-Execution
37
21,399

Execution
43
22,868,3

Completed
29
9,708.3

Projects by Sector

Transport
96
39,379.5

Energy
18
19,136.1

Communications
1

Projects by Type of Financing

Public
85
42,297.6

Private
17
9,332

Public/private
13
6,886

Projects by Subsector

Transport

Air
8
6,424.5

Road
55
26,658.3

Rail
6
2,969.9

River
7
44.8

Sea
9
2,881

Multimodal
2
27

Border Crossings
9
374

Energy

Energy Interconnection
6
3,048.1

Energy Generation
12
16,088

Communications

Communications Interconnection
1

MCC

MERCOSUR-CHILE

Presentation of the Hub

Argentina - Brazil - Chile - Paraguay - Uruguay

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 km^2).

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 (48%), amounting to a total of US$1,973,410 million[2].

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 15% of which are paved. The **rail network** covers 66,424 km, about 80% 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 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 in 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.

1. See cosiplan.org/ejes#mcc
2. At current 2012 prices

Map of the Area of Influence of the MERCOSUR-Chile Hub

The presence of **indigenous communities** is low, accounting for only 1% 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 km^2, i.e. 6% of the Hub's territory. There are mainly two types of **hazards** affecting the Hub: seismic and volcanic geodynamic processes or tsunamis resulting from earthquakes, and meteorological and hydrological hazards that produce floods and landslides in the eastern part of the Hub.

The countries involved in the MERCOSUR-Chile Hub plan investments for US$58.515 billion in 115 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, Southern, and Capricorn Hubs.

Project Portfolio

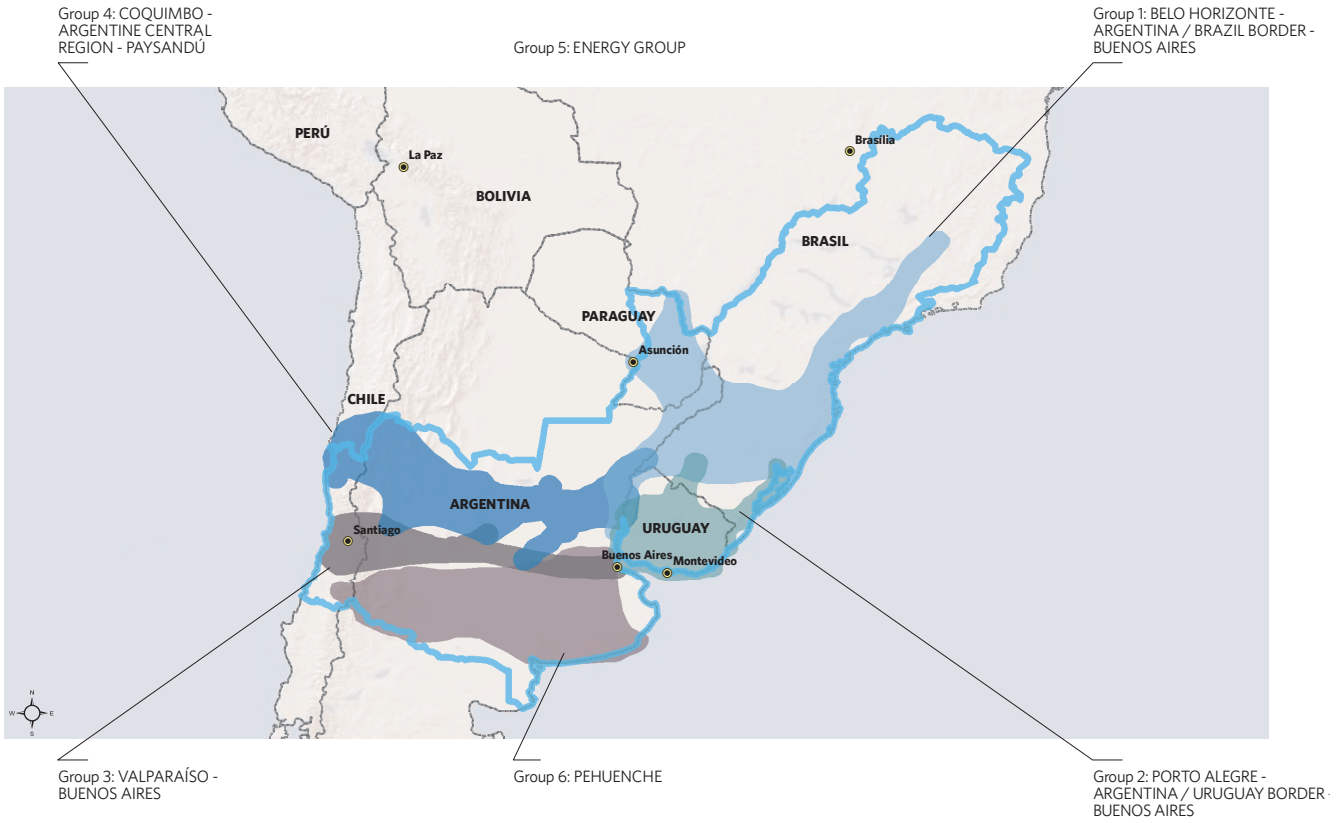
The projects included in the MERCOSUR-Chile Hub are intended to: (i) develop infrastructure and logistics to increase trade between the local, regional and global markets; (ii) increase the competitiveness of existing production chains and develop new chains at the regional level; (iii) optimize the 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.

The active portfolio of the Hub includes 86 projects for an estimated investment of US$48.807 billion.

Of the 86 active projects, there is information available on the estimated completion date of 42, 35 of which are scheduled to be completed in the next four years (2017-2020).

Map of the Project Groups of the MERCOSUR-Chile Hub



Project Groups of the MERCOSUR-Chile Hub

** US$ million*

Group	Name	No. pf projects	Estimated investment*
1	BELO HORIZONTE - ARGENTINA / BRAZIL BORDER - BUENOS AIRES	19	16,644.1
2	PORTO ALEGRE - ARGENTINA / URUGUAY BORDER - BUENOS AIRES	26	3,071.3
3	VALPARAÍSO - BUENOS AIRES	22	9,813.8
4	COQUIMBO - ARGENTINE CENTRAL REGION - PAYSANDÚ	19	6,179.6
5	ENERGY GROUP	17	18,966.1
6	PEHUENCHE	12	3,840.7
	TOTAL	**115**	**58,515.6**

Projects to Be Completed in the Next Four Years

** US$ million*

Code	Name	Group	Stage	Estimated Investment*	Countries	Estimated Completion Date
MCC45	INTERNATIONAL ROUTE No. CH-60, BETWEEN VALPARAÍSO AND LOS ANDES	3		447.0	CH	September 2017
MCC162	ROUTE 43 BETWEEN LA SERENA AND OVALLE	4		221.0	CH	September 2017
MCC35	IMPLEMENTATION OF INTEGRATED (ONE-STOP) BORDER CONTROL AT PEHUENCHE BORDER CROSSING	6		30.0	AR - CH	November 2017
MCC76	SAN NICOLÁS / ZÁRATE - PEHUENCHE BORDER CROSSING ROAD CORRIDOR	6		1,000.0	AR	November 2017
MCC123	ELECTRICITY INTERCONNECTION BETWEEN URUGUAY AND BRAZIL	5		349.0	BR - UY	November 2017
MCC153	NEW LOS LIBERTADORES BORDER COMPLEX (CRISTO REDENTOR SYSTEM OPTIMIZATION)	3		76.0	CH	November 2017
MCC159	LA CHARQUEADA PORT TERMINAL AND DREDGING OF THE CEBOLLATI RIVER	2		7.0	UY	November 2017
MCC160	PORT TERMINAL AND DREDGING OF TACUARÍ	2		7.0	UY	November 2017
MCC94	PAVING OF NATIONAL ROUTE No. 150, BETWEEN ISCHIGUALASTO AND THE BORDER WITH CHILE (AGUA NEGRA BORDER CROSSING)	4		55.6	AR	December 2017
MCC21	ENLARGEMENT OF RIO GRANDE PORT DOCKS	2		435.7	BR	December 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 2017

continue >>

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Projects to Be Completed in the Next Four Years

** US$ million*

Code	Name	Group	Stage	Estimated Investment*	Countries	Estimated Completion Date
MCC129	REPOWERING OF EMBALSE NUCLEAR POWER PLANT	5		2,149.0	AR	February 2018
MCC30	REHABILITATION OF THE MONTEVIDEO - RIVERA RAILWAY	2		134.9	UY	March 2018
MCC103	PUNTA DEL TIGRE COMBINED CYCLE THERMAL POWER PLANT II (500 MW)	5		531.0	UY	June 2018
MCC38	PAVING OF NATIONAL ROUTE No. 40S BETWEEN MALARGÜE AND THE BORDER WITH NEUQUÉN	6		34.7	AR	July 2018
MCC43	UPGRADE OF NATIONAL ROUTE No. 7 TO A FOUR-LANE ROAD BETWEEN LUJÁN AND THE INTERSECTION WITH NATIONAL ROUTE No. 188 (JUNÍN)	3		498.0	AR	August 2018
MCC68	NORTHEASTERN ARGENTINA GAS PIPELINE	5		1.870.0	AR	December 2018
MCC85	DREDGING OF MIRIM LAKE	2		2.9	BR	December 2018
MCC154	REHABILITATION OF THE CRISTO REDENTOR TUNNEL AND CARACOLES (CRISTO REDENTOR SYSTEM OPTIMIZATION)	3		770.0	AR - CH	December 2018
MCC155	BINATIONAL MANAGEMENT CONTROL SYSTEM AT THE CRISTO REDENTOR BORDER CROSSING (CRISTO REDENTOR SYSTEM OPTIMIZATION)	3		0.0	AR - CH	December 2018
MCC157	DREDGING OF THE TACUARÍ RIVER	2		1.4	BR	December 2018
MCC100	UPGRADE OF NATIONAL ROUTE No. 19 TO A FOUR-LANE ROAD BETWEEN NATIONAL ROUTE No. 11 AND CÓRDOBA	4		434.0	AR	March 2019
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	4		234.6	AR	May 2019
MCC20	UPGRADE WORKS OF RIO GRANDE - PELOTAS ROAD SECTION (BR-392/RS)	2		500.0	BR	June 2019
MCC158	DREDGING OF AND INSTALLATION OF SIGNS, MARKERS AND AIDS TO NAVIGATION ON THE MIRIM LAKE - DOS PATOS LAKE SYSTEM	2		2.6	BR	June 2019
MCC147	REPAVING OF NATIONAL ROUTE No. 5 BETWEEN LUJÁN AND THE ACCESS TO BRAGADO	6		327.4	AR	July 2019
MCC57	REPAVING AND UPGRADE OF NATIONAL ROUTE No. 158 TO A FOUR-LANE ROAD, BETWEEN SAN FRANCISCO AND RÍO CUARTO	4		199.5	AR	November 2019
MCC149	REPAVING OF NATIONAL ROUTE No. 205 BETWEEN THE INTERSECTION WITH NATIONAL ROUTE No. 3 AND SALADILLO	6		94.6	AR	November 2019
MCC146	REPAVING OF NATIONAL ROUTE No. 3: SAN MIGUEL DEL MONTE - LAS FLORES - AZUL	6		560.1	AR	December 2019
MCC132	CONSTRUCTION OF THE SAN PABLO RING ROAD (NORTHERN SECTION)	1		2,810.0	BR	December 2019
MCC22	CONSTRUCTION OF THE JAGUARÃO - RÍO BRANCO INTERNATIONAL BRIDGE	2		93.5	BR - UY	December 2019
MCC142	UPGRADE OF NATIONAL ROUTE No. 8 TO A FOUR-LANE ROAD BETWEEN RÍO CUARTO AND VILLA MERCEDES	3		39.8	AR	January 2020
MCC148	REPAVING OF NATIONAL ROUTE No. 33 BETWEEN PIGÜÉ AND BAHÍA BLANCA	6		544.2	AR	January 2020
MCC133	ENLARGEMENT OF THE ARTURO MERINO BENÍTEZ AIRPORT (SANTIAGO)	3		590.0	CH	June 2020

Profiling · Pre-execution · Execution · Completed

According to estimations, by the time these 35 projects are completed, almost 43% of the investment amount estimated for the Hub's portfolio will have been spent.

The five projects with the highest estimated investment account for 41% of the investment in the Hub's active portfolio.

Almost all projects belong to Argentina or Brazil, only one of them is shared by Argentina and Paraguay, and all type of financing is being considered for all the projects.

The two binational projects fall in the energy sector and seek to contribute to the diversification of the energy matrix of the Hub. The other projects fall in the transport sector, and include a rail corridor, an airport and a ring road.

The completed projects in the Hub are 29 and the investment amount made is US$9.708 billion.

The Five Projects of the Active Portfolio with the Highest Estimated Investment

** US$ million*

Code	Name	Group	Stage	Estimated Investment*	Countries	Tpe of Financing
MCC62	CONSTRUCTION OF THE CORPUS CHRISTI HYDROELECTRIC POWER STATION	5		8,000.0	AR - PY	Public
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
MCC120	IMPROVEMENT AND REHABILITATION OF SAN MARTÍN RAILWAY (MENDOZA - BUENOS AIRES)	3		2,800.0	AR	Public-private
MCC63	CONSTRUCTION OF THE GARABÍ HYDROELECTRIC POWER STATION	5		2,728.0	AR - BR	Public
	TOTAL			**19,888.0**		

Profiling · Pre-execution · Execution · Completed

Completed Projects in the MERCOSUR-Chile Hub

** US$ million*

Code	Name	Ejecuted 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
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

continue >>

>> Completed Projects in the MERCOSUR-Chile Hub

** US$ million*

Code	Name	Ejecuted Investment*	Countries
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
MCC18	REHABILITATION OF PORTO ALEGRE - URUGUAIANA ROAD SECTION (BR-290/RS)	250.0	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
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
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
MCC51	IMPROVEMENT OF SAN ANTONIO PORT	370.0	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)	0.0	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
MCC90	CONSTRUCTION OF A DRY PORT NEAR MONTEVIDEO PORT	25.0	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
MCC145	PAVING OF NATIONAL ROUTE No. 40 BETWEEN THE ACCESS TO MENDOZA AIRPORT AND THE BORDER WITH SAN JUAN	210.0	AR
MCC163	UPGRADE OF ROUTE 5 LA SERENA - VALLENAR SECTION TO A FOUR-LANE ROAD	388.0	CH
	TOTAL	**9,708.3**	

Belo Horizonte – Argentina / Brazil Border – Buenos Aires

11 COMPLETION OF THE UPGRADE OF THE SÃO PAULO - CURITIBA ROAD SECTION (BR-116 / SP) TO A FOUR-LANE ROAD

06 ENLARGEMENT OF CAMPINAS AIRPORT

07 ENLARGEMENT OF GUARULHOS AIRPORT

82 PEDRO JUAN CABALLERO AIRPORT

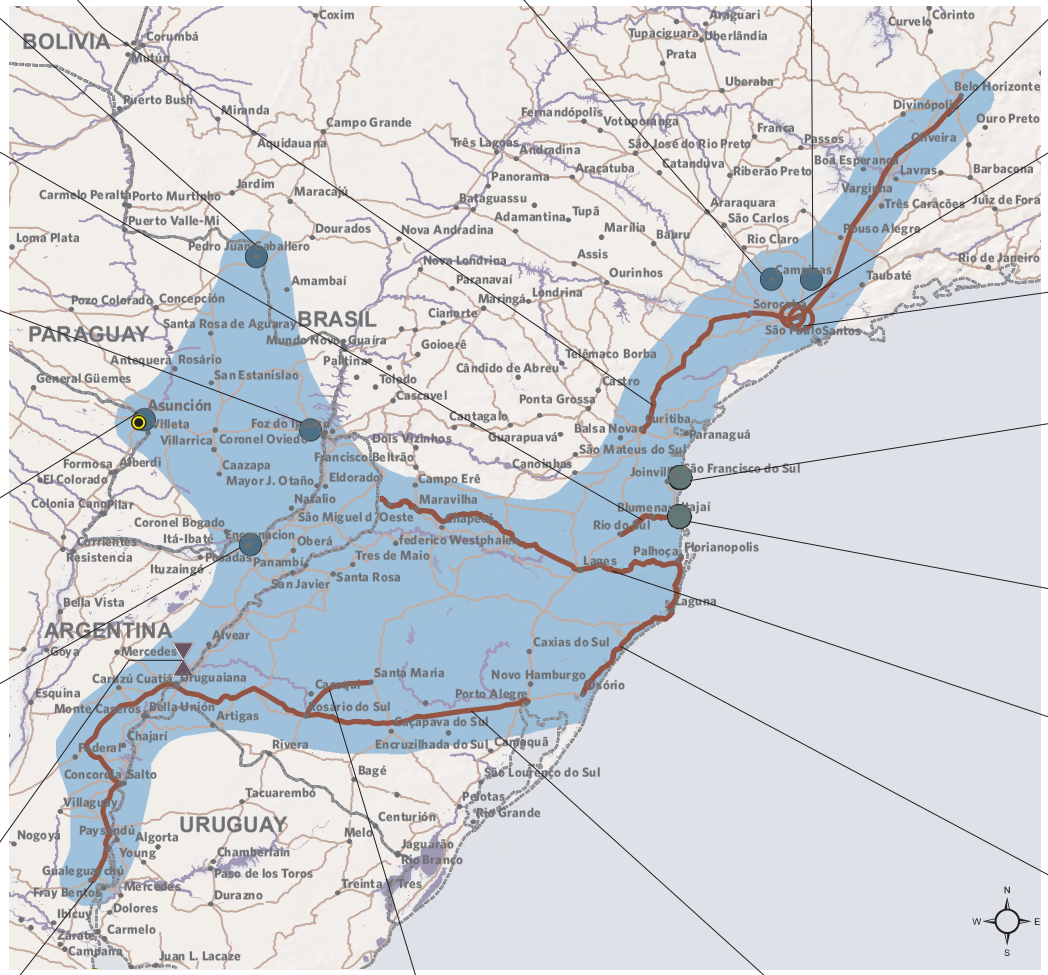
05 UPGRADE WORKS IN THE NAVEGANTES - RIO DO SUL ROAD SECTION (BR-470 / SC)

83 GUARANÍ AIRPORT - REGIONAL FREIGHT HUB

119 MODERNIZATION OF ASUNCIÓN AIRPORT

84 ENCARNACIÓN AIRPORT

02 CONSTRUCTION OF FACILITIES FOR IMPLEMENTATION OF INTEGRATED CARGO CONTROL IN PASO DE LOS LIBRES



01 **Anchor Project: UPGRADE OF NATIONAL ROUTE NO. 14 TO A FOUR-LANE ROAD, BETWEEN PASO DE LOS LIBRES AND GUALEGUAYCHÚ**

14 CONSTRUCTION OF THE SANTA MARÍA - ROSARIO DO SUL ROAD SECTION (BR-158 / RS)

18 REHABILITATION OF PORTO ALEGRE - URUGUAIANA ROAD SECTION (BR-290 / RS)

04 COMPLETION OF THE UPGRADE OF THE BELO HORIZONTE - SÃO PAULO ROAD SECTION (BR-381 / SP / MG) TO A FOUR-LANE ROAD

132 CONSTRUCTION OF THE SAN PABLO RING ROAD (NORTHERN SECTION)

12 CONSTRUCTION OF THE SÃO PAULO RING ROAD (SOUTHERN SECTION)

08 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)

09 IMPROVEMENT OF THE ITAJAÍ (SC) PORT INFRASTRUCTURE (REHABILITATION OF NORTHERN DOCK AND DREDGING)

13 CONSTRUCTION AND PAVING OF ROUTE NO. BR-282 / SC BETWEEN FLORIANÓPOLIS AND THE BORDER WITH ARGENTINA

15 UPGRADE OF THE PALHOÇA - OSORIO ROAD SECTION TO A FOUR-LANE ROAD (BR-101 / SC / RS)

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.

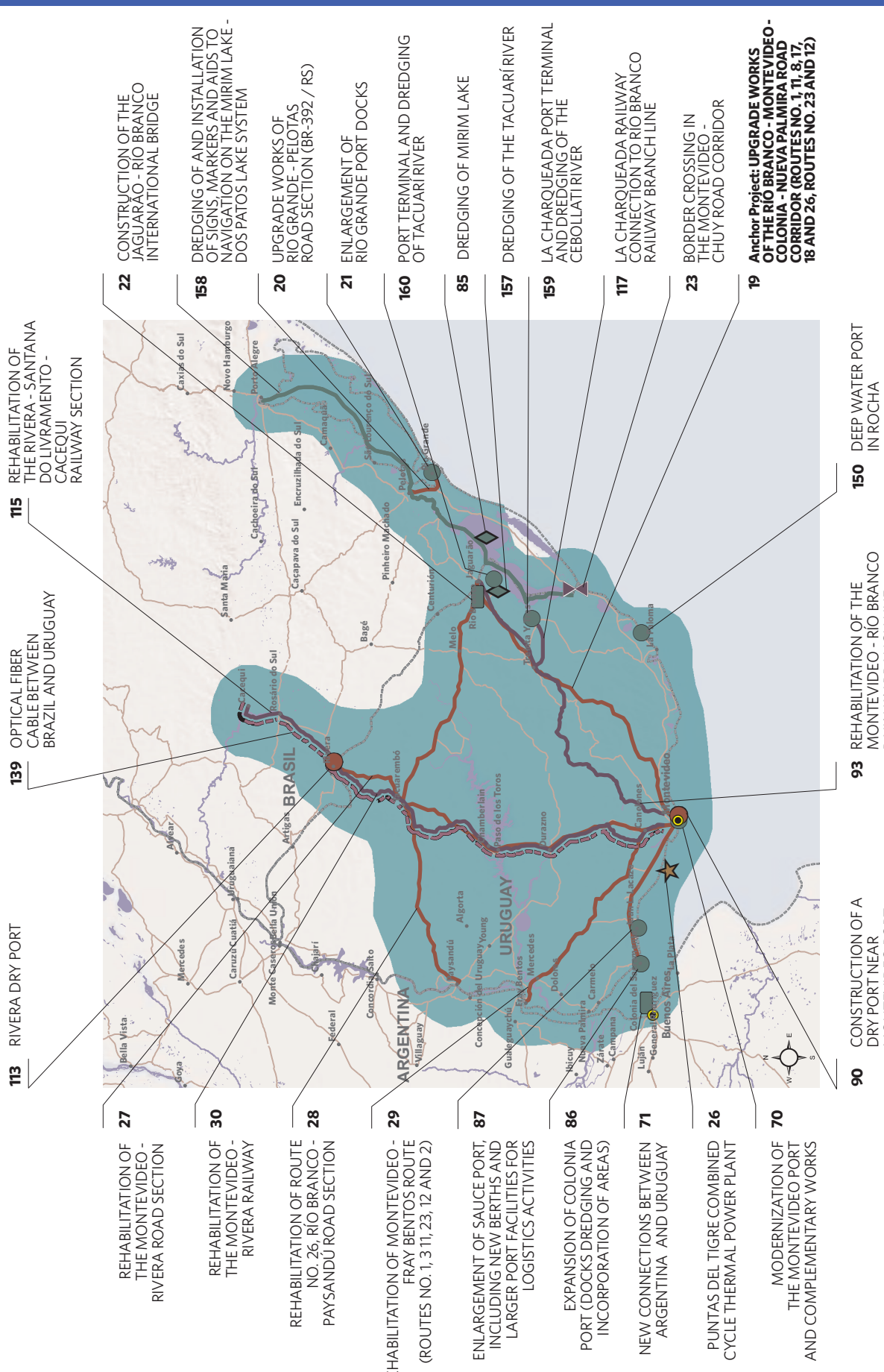
· Optimize the logistics base so that the industry located in this area can reinforce its competitiveness at the regional and global level.

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**	Completed	780.0	AR
MCC02	CONSTRUCTION OF FACILITIES FOR IMPLEMENTATION OF INTEGRATED CARGO CONTROL IN PASO DE LOS LIBRES	Completed	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	Completed	1,300.0	BR
MCC05	UPGRADE WORKS IN THE NAVEGANTES - RIO DO SUL ROAD SECTION (BR-470 / SC)	Execution	400.0	BR
MCC06	ENLARGEMENT OF CAMPINAS AIRPORT	Execution	3,550.0	BR
MCC07	ENLARGEMENT OF GUARULHOS AIRPORT	Execution	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)	Execution	131.6	BR
MCC09	IMPROVEMENT OF THE ITAJAÍ (SC) PORT INFRASTRUCTURE (REHABILITATION OF NORTHERN DOCK AND DREDGING)	Execution	68.0	BR
MCC11	COMPLETION OF THE UPGRADE OF THE SÃO PAULO - CURITIBA ROAD SECTION (BR-116 / SP) TO A FOUR-LANE ROAD	Execution	350.0	BR
MCC12	CONSTRUCTION OF THE SÃO PAULO RING ROAD (SOUTHERN SECTION)	Completed	2,700.0	BR
MCC13	CONSTRUCTION AND PAVING OF ROUTE No. BR-282 / SC, BETWEEN FLORIANÓPOLIS AND THE BORDER WITH ARGENTINA	Completed	100.0	BR
MCC14	CONSTRUCTION OF THE SANTA MARÍA - ROSARIO DO SUL ROAD SECTION (BR-158 / RS)	Completed	30.0	BR
MCC15	UPGRADE OF THE PALHOÇA - OSORIO ROAD SECTION TO A FOUR-LANE ROAD (BR-101 / SC / RS)	Execution	2,000.0	BR
MCC18	REHABILITATION OF PORTO ALEGRE - URUGUAIANA ROAD SECTION (BR-290 / RS)	Completed	250.0	BR
MCC82	PEDRO JUAN CABALLERO AIRPORT	Pre-execution	2.5	PY
MCC83	GUARANÍ AIRPORT - REGIONAL FREIGHT HUB	Pre-execution	50.0	PY
MCC84	ENCARNACIÓN AIRPORT	Completed	12.0	PY
MCC119	MODERNIZATION OF ASUNCIÓN AIRPORT	Pre-execution	200.0	PY
MCC132	CONSTRUCTION OF THE SAN PABLO RING ROAD (NORTHERN SECTION)	Execution	2,810.0	BR
	TOTAL		**16,644.1**	

*US$ million

Profiling · Pre-execution · Execution · Completed

Porto Alegre – Argentina / Uruguay Border – Buenos Aires



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		**56.6**	**UY**
MCC29	REHABILITATION OF MONTEVIDEO - FRAY BENTOS ROUTE (ROUTES No. 1, 3, 11, 23, 12 AND 2)		**38.0**	**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**

continue >>

Porto Alegre – Argentina / Uruguay Border – Buenos Aires

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** US$ million*

Code	Name	Stage	Estimated Investment*	Countries
MCC93	REHABILITATION OF THE MONTEVIDEO - RÍO BRANCO RAILWAY BRANCH LINE	Pre-execution	0.0	UY
MCC113	RIVERA DRY PORT	Pre-execution	2.0	UY
MCC115	REHABILITATION OF THE RIVERA - SANTANA DO LIVRAMENTO - CACEQUI RAILWAY SECTION	Completed	5.0	BR - UY
MCC117	LA CHARQUEADA RAILWAY CONNECTION TO RÍO BRANCO RAILWAY BRANCH LINE	Profiling	0.0	UY
MCC139	OPTICAL FIBER CABLE BETWEEN BRAZIL AND URUGUAY	Completed	0.0	BR - UY
MCC150	DEEP WATER PORT IN ROCHA	Pre-execution	1,000.0	UY
MCC157	DREDGING OF THE TACUARÍ RIVER	Execution	1.4	BR
MCC158	DREDGING OF AND INSTALLATION OF SIGNS, MARKERS AND AIDS TO NAVIGATION ON THE MIRIM LAKE - DOS PATOS LAKE SYSTEM	Pre-execution	2.6	BR
MCC159	LA CHARQUEADA PORT TERMINAL AND DREDGING OF THE CEBOLLATI RIVER	Execution	7.0	UY
MCC160	PORT TERMINAL AND DREDGING OF TACUARÍ	Pre-execution	7.0	UY
TOTAL			**3,071.3**	

Profiling · Pre-execution · Execution · Completed


MCC
Group 2

Valparaíso – Buenos Aires

155 BINATIONAL MANAGEMENT CONTROL SYSTEM AT THE CRISTO REDENTOR BORDER CROSSING (CRISTO REDENTOR SYSTEM OPTIMIZATION)

153 NEW LOS LIBERTADORES BORDER COMPLEX (CRISTO REDENTOR SYSTEM OPTIMIZATION)

39 REPAVING OF NATIONAL ROUTE NO. 7 BETWEEN POTRERILLOS AND THE BORDER WITH CHILE

151 INTEGRATED FREIGHT CONTROL CENTER AT USPALLATA (CRISTO REDENTOR SYSTEM OPTIMIZATION)

142 UPGRADE OF NATIONAL ROUTE NO. 8 TO A FOUR LANE ROAD BETWEEN RÍO CUARTO AND VILLA MERCEDES

40 NATIONAL ROUTE NO. 7, CONSTRUCTION OF LAGUNA LA PICASA ROAD BYPASS

43 UPGRADE OF NATIONAL ROUTE NO. 7 TO A FOUR-LANE ROAD BETWEEN LUJÁN AND THE INTERSECTION WITH NATIONAL ROUTE NO. 188 (JUNÍN)

152 PASSENGER CONTROL CENTER AT LOS HORCONES (CRISTO REDENTOR SYSTEM OPTIMIZATION)

154 **Anchor Project: REHABILITATION OF THE CRISTO REDENTOR TUNNEL AND CARACOLES (CRISTO REDENTOR SYSTEM OPTIMIZATION)**

48 LOS SAUCES LAND PORT (LOS ANDES)

45 INTERNATIONAL ROUTE NO. CH-60, BETWEEN VALPARAÍSO AND LOS ANDES

134 ENLARGEMENT OF THE VALPARAÍSO PORT

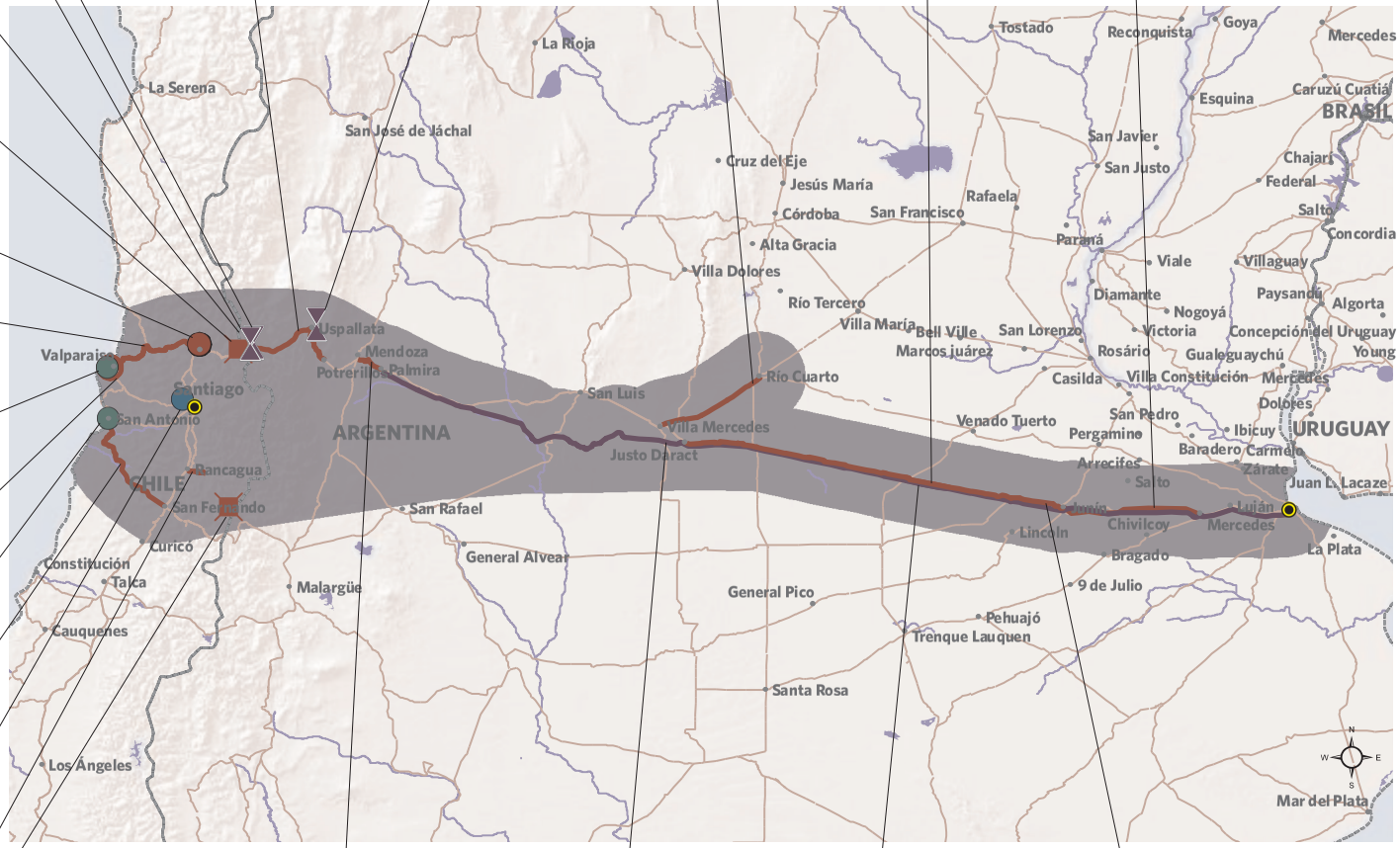
46 IMPROVEMENT OF ROAD ACCESS TO VALPARAÍSO PORT

51 IMPROVEMENT OF SAN ANTONIO PORT

49 "THE FRUIT ROAD": SAN ANTONIO - SAN FERNANDO

133 ENLARGEMENT OF THE ARTURO MERINO BENÍTEZ AIRPORT (SANTIAGO)

135 PAVING OF THE RANCAGUA - COYA ROAD, LAS LEÑAS BORDER CROSSING



136 BINATIONAL TUNNEL AT THE LAS LEÑAS BORDER CROSSING

42 NATIONAL ROUTE NO. 7, CONSTRUCTION OF A BYPASS FROM PALMIRA TO THE INTERSECTION WITH NATIONAL ROUTE NO. 40 S

120 IMPROVEMENT AND REHABILITATION OF SAN MARTÍN RAILWAY (MENDOZA - BUENOS AIRES)

41 NATIONAL ROUTE NO. 7, CONSTRUCTION OF LAGUNA LA PICASA RAILWAY BYPASS

140 UPGRADE OF NATIONAL ROUTE NO. 7 TO A FOUR-LANE ROAD BETWEEN JUNÍN AND THE BORDER WITH SAN LUIS

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 regional and 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
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)		498.0	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)		2,800.0	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		1,600.0	AR - CH

continue >>

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		39.8	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)**		770.0	AR - CH
MCC155	BINATIONAL MANAGEMENT CONTROL SYSTEM AT THE CRISTO REDENTOR BORDER CROSSING (CRISTO REDENTOR SYSTEM OPTIMIZATION)		0.0	AR - CH
	TOTAL		**9,813.8**	

Profiling Pre-execution Execution Completed

Group 3

Coquimbo – Argentine Central Region – Paysandú

95 PAVING OF NATIONAL ROUTE NO. 76, BETWEEN VINCHINA AND PIRCAS NEGRAS BORDER CROSSING (PROVINCE OF LA RIOJA)

96 IMPROVEMENT OF NATIONAL ROUTE NO. 38, BETWEEN CÓRDOBA AND PATQUÍA, AND ROAD BYPASS NORTH OF CÓRDOBA HILLS

100 UPGRADE OF NATIONAL ROUTE NO. 19 TO A FOUR-LANE ROAD BETWEEN NATIONAL ROUTE NO. 11 AND CÓRDOBA

PIRCAS NEGRAS BORDER CROSSING **108**

IMPROVEMENT OF NATIONAL ROUTE NO. CH-41 UP TO AGUA NEGRA BORDER CROSSING **112**

UPGRADE OF THE LA SERENA - VALLENAR SECTION TO A FOUR-LANE ROAD **163**

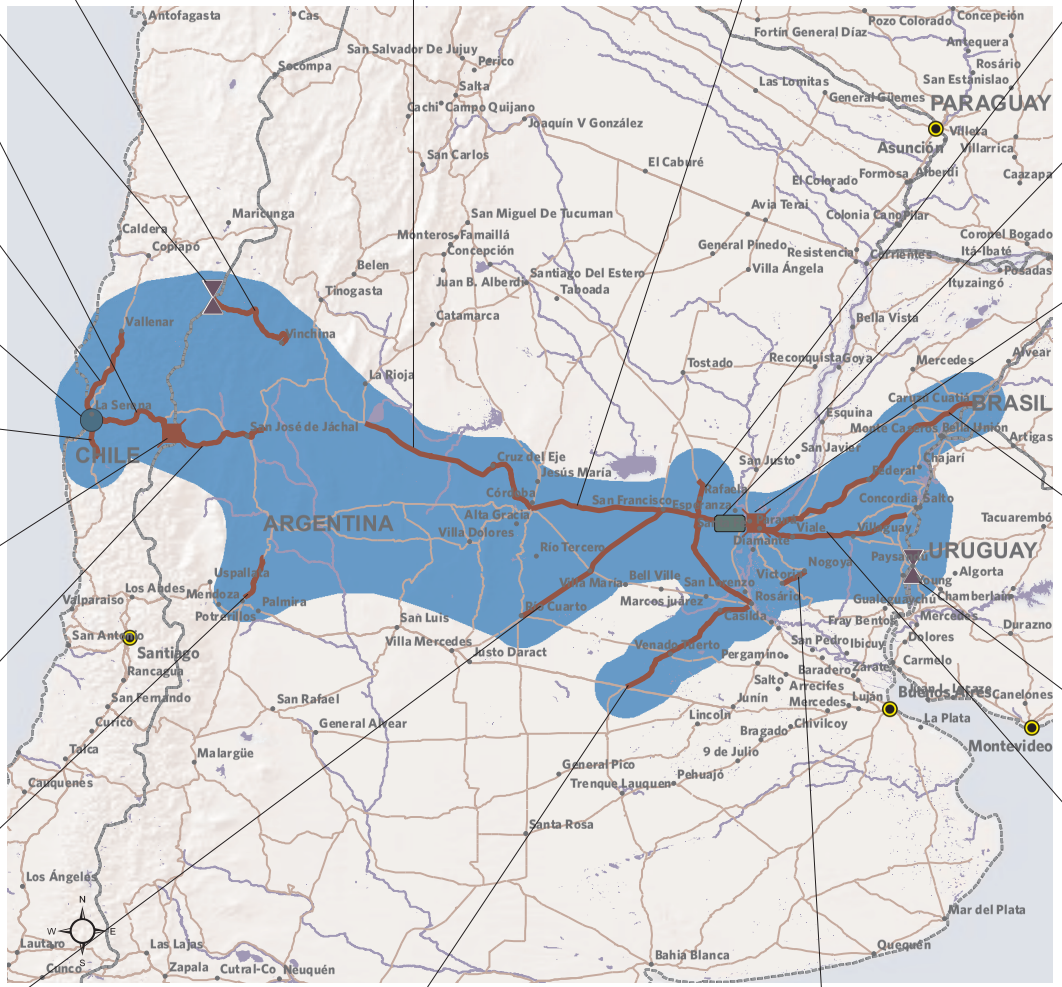
CONSTRUCTION OF THE NEW AIRPORT OF REGION IV **137**

ROUTE 43 BETWEEN LA SERENA AND OVALLE **162**

AGUA NEGRA BINATIONAL TUNNEL **110**

PAVING OF NATIONAL ROUTE NO. 150, BETWEEN ISCHIGUALASTO AND THE BORDER WITH CHILE (AGUA NEGRA BORDER CROSSING) **94**

PAVING OF NATIONAL ROUTE NO. 40 BETWEEN THE ACCESS TO MENDOZA AIRPORT AND THE BORDER WITH SAN JUAN **145**



144 UPGRADE OF NATIONAL ROUTE NO. 34 TO A FOUR-LANE ROAD BETWEEN ROSARIO AND SUNCHALES

121 NEW PHYSICAL CONNECTION BETWEEN PARANÁ AND SANTA FE

52 **Anchor Project: REHABILITATION AND UPGRADE OF NATIONAL ROUTE NO. 168 TO A FOUR-LANE ROAD FROM PARANÁ (UNDERWATER ROAD TUNNEL) TO SANTA FE**

122 IMPROVEMENT AND UPGRADE OF NATIONAL ROUTE NO. 127 TO A FOUR-LANE ROAD BETWEEN PASO DE LOS LIBRES AND PARANÁ

99 IMPROVEMENT OF PAYSANDÚ BORDER CROSSING

59 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

57 REPAVING AND UPGRADE OF NATIONAL ROUTE NO. 158 TO A FOUR-LANE ROAD, BETWEEN SAN FRANCISCO AND RÍO CUARTO

143 UPGRADE OF NATIONAL ROUTE NO. 33 TO A FOUR-LANE ROAD BETWEEN RUFINO AND ROSARIO

53 ENLARGEMENT OF PROVINCIAL ROUTE NO. 26 BETWEEN VICTORIA AND NOGOYÁ

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.

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**	Completed	40.0	AR
MCC53	ENLARGEMENT OF PROVINCIAL ROUTE No. 26 BETWEEN VICTORIA AND NOGOYÁ	Execution	6.0	AR
MCC57	REPAVING AND UPGRADE OF NATIONAL ROUTE No. 158 TO A FOUR-LANE ROAD, BETWEEN SAN FRANCISCO AND RÍO CUARTO	Pre-execution	199.5	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	Execution	234.6	AR
MCC94	PAVING OF NATIONAL ROUTE No. 150, BETWEEN ISCHIGUALASTO AND THE BORDER WITH CHILE (AGUA NEGRA BORDER CROSSING)	Execution	55.6	AR
MCC95	PAVING OF NATIONAL ROUTE No. 76, BETWEEN VINCHINA AND PIRCAS NEGRAS BORDER CROSSING (PROVINCE OF LA RIOJA)	Execution	120.0	AR
MCC96	IMPROVEMENT OF NATIONAL ROUTE No. 38, BETWEEN CÓRDOBA AND PATQUÍA, AND ROAD BYPASS NORTH OF CÓRDOBA HILLS	Execution	100.0	AR
MCC99	IMPROVEMENT OF PAYSANDÚ BORDER CROSSING	Pre-execution	12.0	UY
MCC100	UPGRADE OF NATIONAL ROUTE No. 19 TO A FOUR-LANE ROAD BETWEEN NATIONAL ROUTE No. 11 AND CÓRDOBA	Execution	434.0	AR
MCC110	AGUA NEGRA BINATIONAL TUNNEL	Pre-execution	1,600.0	AR - CH
MCC112	IMPROVEMENT OF NATIONAL ROUTE No. CH-41 UP TO AGUA NEGRA BORDER CROSSING	Execution	123.0	CH
MCC121	NEW PHYSICAL CONNECTION BETWEEN PARANÁ AND SANTA FE	Execution	735.1	AR
MCC122	IMPROVEMENT AND UPGRADE OF NATIONAL ROUTE No. 127 TO A FOUR-LANE ROAD BETWEEN PASO DE LOS LIBRES AND PARANÁ	Execution	104.4	AR
MCC137	CONSTRUCTION OF THE NEW AIRPORT OF REGION IV (LA FLORIDA - LA SERENA)	Pre-execution	120.0	CH
MCC143	UPGRADE OF NATIONAL ROUTE No. 33 TO A FOUR-LANE ROAD BETWEEN RUFINO AND ROSARIO	Pre-execution	700.4	AR
MCC144	UPGRADE OF NATIONAL ROUTE No. 34 TO A FOUR-LANE ROAD BETWEEN ROSARIO AND SUNCHALES	Pre-execution	776.0	AR
MCC145	PAVING OF NATIONAL ROUTE No. 40 BETWEEN THE ACCESS TO MENDOZA AIRPORT AND THE BORDER WITH SAN JUAN	Completed	210.0	AR
MCC162	ROUTE 43 BETWEEN LA SERENA AND OVALLE	Execution	221.0	CH
MCC163	UPGRADE OF ROUTE 5 LA SERENA - VALLENAR SECTION TO A FOUR-LANE ROAD	Completed	388.0	CH
	TOTAL		**6,179.6**	

** US$ million*

Profiling · Pre-execution · Execution · Completed

Energy Group

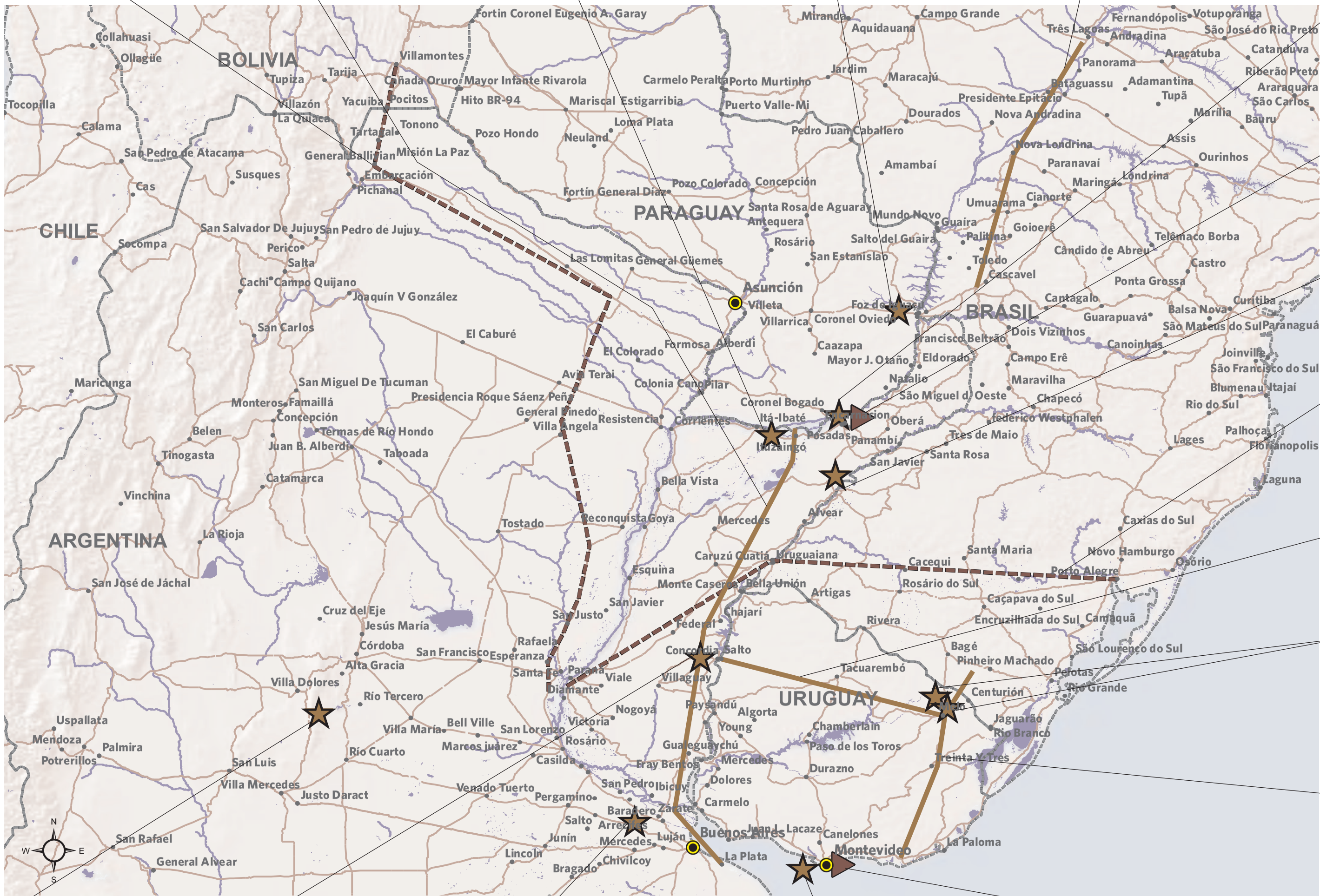
68 NORTHEASTERN ARGENTINA GAS PIPELINE

03 YACIRETÁ - BUENOS AIRES ELECTRICITY TRANSMISSION LINE

64 YACYRETÁ HYDROELECTRIC DAM: RAISE RESERVOIR STORAGE LEVEL TO 83

61 **Anchor Project: ITAIPÚ SYSTEM (EXISTING)**

66 ITAIPÚ - LONDRINA - ARARAQUARA ELECTRICITY TRANSMISSION LINE



62 CONSTRUCTION OF THE CORPUS CHRISTI HYDROELECTRIC POWER STATION

130 URUPABOL GAS PIPELINE (SECTION II)

63 CONSTRUCTION OF THE GARABÍ HYDROELECTRIC POWER STATION

65 ALDEA BRASILERA (ARGENTINA) - URUGUAIANA - PORTO ALEGRE GAS PIPELINE

125 ELECTRICITY INTERCONNECTION BETWEEN SALTO GRANDE AND MELO

104 CENTURIÓN AND TALAVERA MICRO-HYDROELECTRIC POWER STATIONS (65-MW TOTAL) ON THE JAGUARÃO RIVER

123 ELECTRICITY INTERCONNECTION BETWEEN URUGUAY AND BRAZIL

129 REPOWERING OF EMBALSE NUCLEAR POWER PLANT

156 MODERNIZATION OF THE SALTO GRANDE ELECTRIC POWER PLANT

101 ATUCHA II NUCLEAR POWER PLANT

103 PUNTA DEL TIGRE COMBINED CYCLE THERMAL POWER PLANT II (500 MW)

102 LNG REGASIFICATION FACILITIES IN URUGUAY

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	Completed	600.0	AR
MCC61	**ITAIPU SYSTEM (EXISTING)**	Completed	16,000.0	BR - PY
MCC62	CONSTRUCTION OF THE CORPUS CHRISTI HYDROELECTRIC POWER STATION	Pre-execution	8,000.0	AR - PY
MCC63	CONSTRUCTION OF THE GARABÍ HYDROELECTRIC POWER STATION	Pre-execution	2,728.0	AR - BR
MCC64	YACYRETÁ HYDROELECTRIC DAM: RAISE RESERVOIR STORAGE LEVEL TO 83	Completed	1,200.0	AR - PY
MCC65	ALDEA BRASILERA (ARGENTINA) - URUGUAIANA - PORTO ALEGRE GAS PIPELINE	Execution	510.0	BR
MCC66	ITAIPU - LONDRINA - ARARAQUARA ELECTRICITY TRANSMISSION LINE	Completed	149.1	BR
MCC68	NORTHEASTERN ARGENTINA GAS PIPELINE	Execution	1,870.0	AR
MCC101	ATUCHA II NUCLEAR POWER PLANT	Completed	740.0	AR
MCC102	LNG REGASIFICATION FACILITIES IN URUGUAY	Pre-execution	0.0	UY
MCC103	PUNTA DEL TIGRE COMBINED CYCLE THERMAL POWER PLANT II (500 MW)	Execution	531.0	UY
MCC104	CENTURIÓN AND TALAVERA MICRO-HYDROELECTRIC POWER STATIONS (65-MW TOTAL) ON THE JAGUARÃO RIVER	Profiling	60.0	UY
MCC123	ELECTRICITY INTERCONNECTION BETWEEN URUGUAY AND BRAZIL	Execution	349.0	BR - UY
MCC125	ELECTRICITY INTERCONNECTION BETWEEN SALTO GRANDE AND MELO	Profiling	80.0	UY
MCC129	REPOWERING OF EMBALSE NUCLEAR POWER PLANT	Execution	2,149.0	AR
MCC130	URUPABOL GAS PIPELINE (SECTION II) (*)	Profiling	0.0	PY - UY
MCC156	MODERNIZATION OF THE SALTO GRANDE ELECTRIC POWER PLANT	Pre-execution	0.0	AR - UY
	TOTAL		**18,966.1**	

Profiling · Pre-execution · Execution · Completed

76 SAN NICOLÁS / ZÁRATE- PEHUENCHE BORDER CROSSING ROAD CORRIDOR

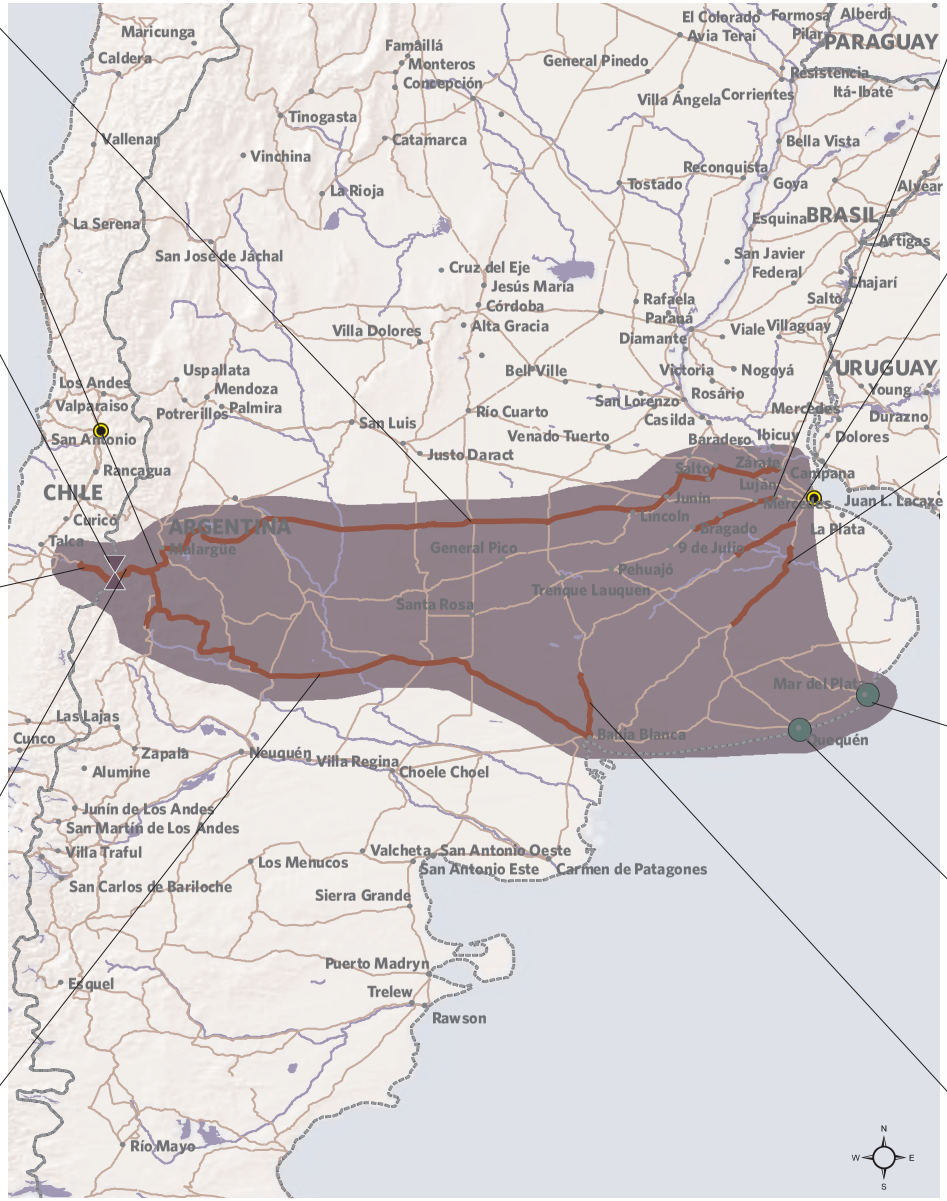
38 PAVING OF NATIONAL ROUTE NO. 40S BETWEEN MALARGÜE AND THE BORDER WITH NEUQUÉN

35 IMPLEMENTATION OF INTEGRATED (ONE-STOP) BORDER CONTROL AT PEHUENCHE BORDER CROSSING

47 **Anchor Project: PAVING OF PUENTE ARMERILLO - PEHUENCE BORDER CROSSING ROAD SECTION (ROUTE CH-115)**

37 **Anchor Project: PAVING OF NATIONAL ROUTE NO. 145, FROM INTERSECTION WITH NATIONAL ROUTE NO. 40 SOUTH TO THE ACCESS TO PEHUENCHE BORDER CROSSING**

118 BAHÍA BLANCA - PEHUENCHE BORDER CROSSING ROAD CORRIDOR



147 REPAVING OF NATIONAL ROUTE No. 5 BETWEEN LUJÁN AND THE ACCESS TO BRAGADO

149 REPAVING OF NATIONAL ROUTE No. 205 BETWEEN THE INTERSECTION WITH NATIONAL ROUTE No. 3 AND SALADILLO

146 REPAVING OF NATIONAL ROUTE No. 3: SAN MIGUEL DEL MONTE - LAS FLORES - AZUL

78 ENLARGEMENT OF MAR DEL PLATA PORT

79 IMPROVEMENT OF QUEQUÉN PORT

148 REPAVING OF NATIONAL ROUTE No. 33 BETWEEN PIGÜÉ AND BAHÍA BLANCA

Group 6

Strategic Function

· Offer connectivity alternatives and associated 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		34.7	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
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	REPAVING OF NATIONAL ROUTE No. 3: SAN MIGUEL DEL MONTE - LAS FLORES - AZUL		560.1	AR
MCC147	REPAVING OF NATIONAL ROUTE No. 5 BETWEEN LUJÁN AND THE ACCESS TO BRAGADO		327.4	AR
MCC148	REPAVING OF NATIONAL ROUTE No. 33 BETWEEN PIGÜÉ AND BAHÍA BLANCA		544.2	AR
MCC149	REPAVING OF NATIONAL ROUTE No. 205 BETWEEN THE INTERSECTION WITH NATIONAL ROUTE No. 3 AND SALADILLO		94.6	AR
	TOTAL		3,840.7	

Profiling · Pre-execution · Execution · Completed

PBB

Peru - Brazil - Bolivia

Bolivia / Brazil / Peru

Population:
12,730,732

Population density:
11 Hab./km²

Area:
1,159,504 km²

GDP:
US$ 71.115 billion

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

Estimated Investment
US$ million

32,648.3

17
Nationals
70. 8%

7
Binationals
29.2%

BOLIVIA	13	
BRAZIL	8	
PERU	10	

No. of projects U$S million

Projects by Stage

Profiling
6
5,035

Pre-execution
7
1,992.8

Execution
5
1,431.5

Completed
6
24,189

Projects by Sector

Transport
19
4,392.7

Energy
5
28,255.6

Projects by type of financing

Public
17
7,743.3

Private
5
2,873

Public/private
2
22,032

Projects by Subsector

Transport

Air
3
751.6

Road
10
3,580.8

River
3

Border Crossings
3
60.3

Energy

Energy Generation
3
24,409

Energy Interconnection
2
3,846.6

PBB

PERU-BRAZIL-BOLIVIA

Presentation of the Hub

Bolivia - Brazil - Peru

The Peru-Brazil-Bolivia Hub[1] runs along the Peruvian departments of Tacna, Moquegua, Arequipa, Apurimac, 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$ 71.115 billion[2]).

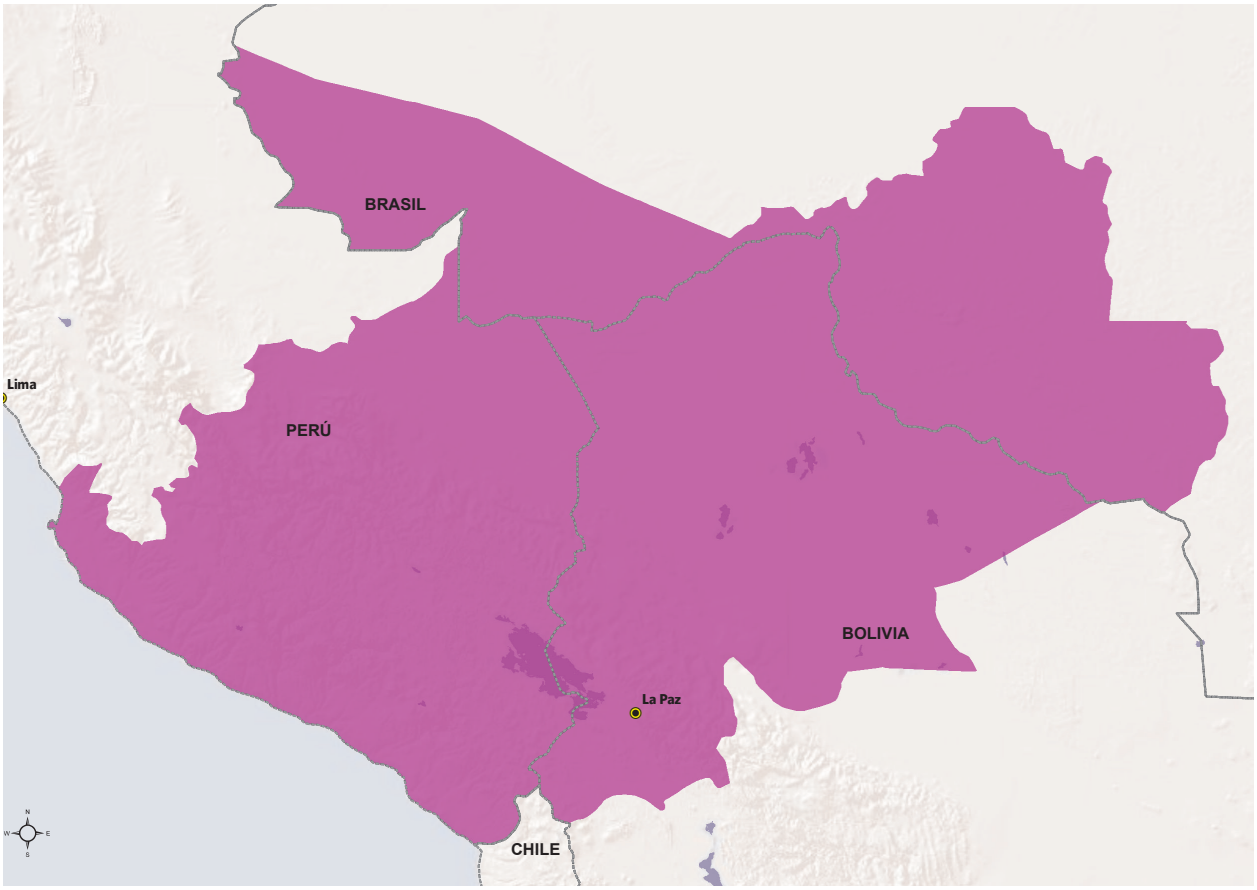
As regards infrastructure, the **road network** of the countries involved in the Hub is 1,742,580 km long, 12% of which are paved. The rail network has a length of 36,155 km. The **port system** includes eight major ports, two of which handle more than 1.5 million tons per year. The airport system has 19 airports, 11 of which are domestic. As for **electricity generation**, the countries involved in the Hub have an installed power capacity of 132,326 MW, 91% of which are contributed by Brazil.

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, or their members are rural or mining wage-earners.

Concerning **protected areas**, there are about 132 territorial units with some degree of 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 and flora and fauna conservation areas, including two biosphere reserves, three Ramsar sites, and 16 national parks.

1. See cosiplan.org/ejes#pbb
2. At 2013 constant prices

Map of the Area of Influence of the Peru-Brazil-Bolivia Hub



Overall, the whole 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$32.648 billion in 24 physical integration projects, five of which belong to the energy sector and account for 87% 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, Andean, and Central Interoceanic Hubs.

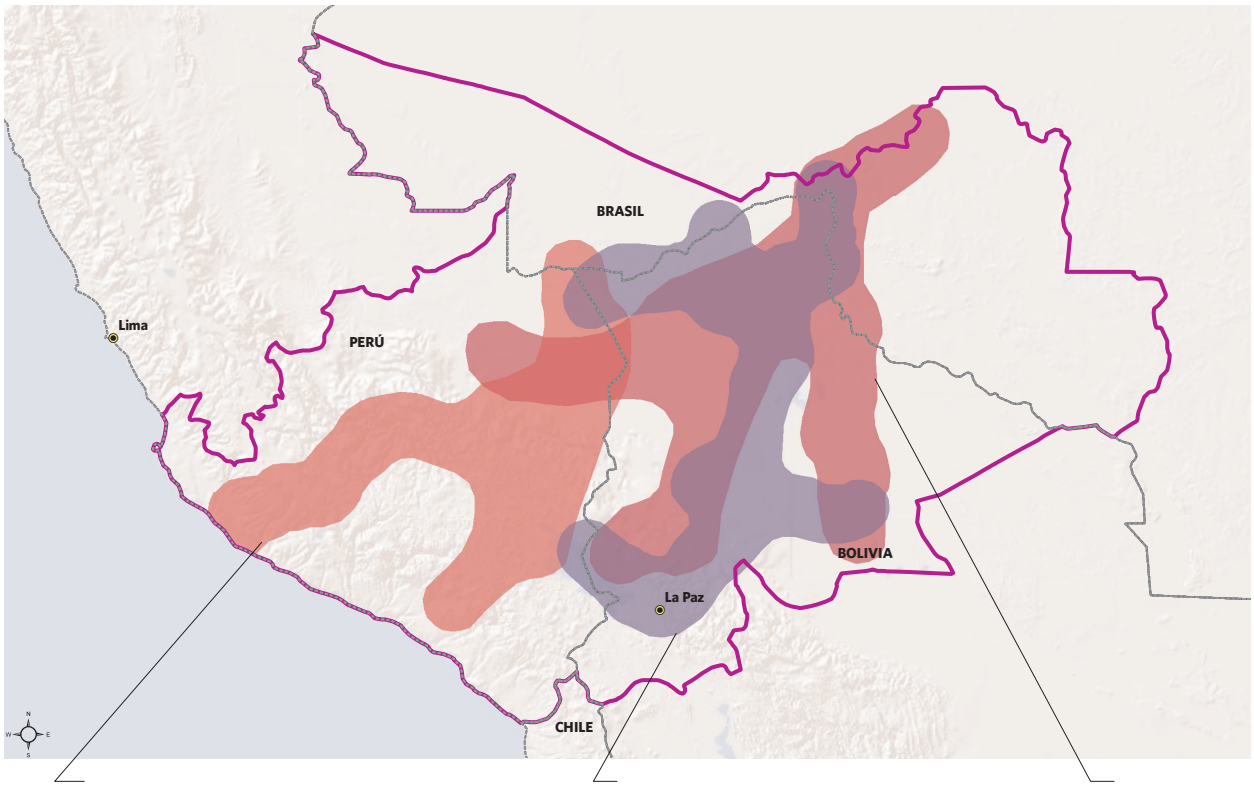
Project Portfolio

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.

The active portfolio of the Hub includes 18 projects for an estimated investment of US$8.459 billion.

Of the 18 active projects, only two have information available on its estimated completion date, and they both would be completed in the next two years (2018-2019).

Map of the Project Groups of the Peru-Brazil-Bolivia Hub



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	2,933.9
2	RIO BRANCO - COBIJA - RIBERALTA - YUCUMO - LA PAZ CORRIDOR	9	1,482.4
3	MADEIRA - MADRE DE DIOS - BENI RIVER CORRIDOR	7	28,232.0
	TOTAL	**24**	**32,648.3**

Project to Be Completed in the Next Two Years

** US$ million*

Code	Name	Group	Stage	Estimated Investment*	Countries	Estimated Completion Date
PBB64	BRIDGE OVER THE MADEIRA RIVER IN ABUNÃ (BR-364/RO)	2		48.0	BR	December 2018
PBB06	COBIJA - EL CHORO - RIBERALTA ROAD	2		695.9	BO	August 2019

Profiling · Pre-execution · Execution · Completed

The Five Projects of the Active Portfolio with the Greatest Estimated Investment

** US$ million*

Code	Name	Group	Stage	Estimated investment*	Countries	Type of financing
PBB17	BINATIONAL HYDROELECTRIC POWER STATION (BOLIVIA - BRAZIL)	3		5,000.0	BO - BR	Public
PBB12	CACHUELA ESPERANZA HYDROELECTRIC POWER STATION (MADRE DE DIOS RIVER, BOLIVIA)	3		1,200.0	BO	Public
PBB06	COBIJA - EL CHORO - RIBERALTA ROAD	2		695.9	BO	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
	TOTAL			**8,147.9**		

Profiling · Pre-execution · Execution · Completed

According to estimations, by the time the five projects at the execution stage are completed, about 17% of the investment estimated for the Hub's portfolio will have been spent.

The five projects with the highest estimated investment account for 96% of the Hub's active portfolio.

The first and second involve the construction of hydroelectric power stations, although their pre-feasibility studies have not been conducted yet; therefore, their estimated investment will be updated when the results of such studies are available. The other three projects involve two road works at the execution stage and an air project at the pre-execution stage.

There are six projects already completed in the Hub, having demanded a total investment amount of US$24.189 billion.

The Madeira River Hydroelectric Power Complex (Santo Antônio and Jirau Hydroelectric Power Stations), the project with the greatest estimated investment of the 562 included in the COSIPLAN Portfolio (US$ 18.209 billion), was recently completed.

In Brazil, this new complex involved 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 was financed by the BNDES (the Brazilian Development Bank) and by a private bank consortium.

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.

The transmission line between the two hydroelectric power plants on the Madeira River and the central system was already completed, requiring a total investment of US$3.823 billion and consolidating the distribution of renewable energy in the region.

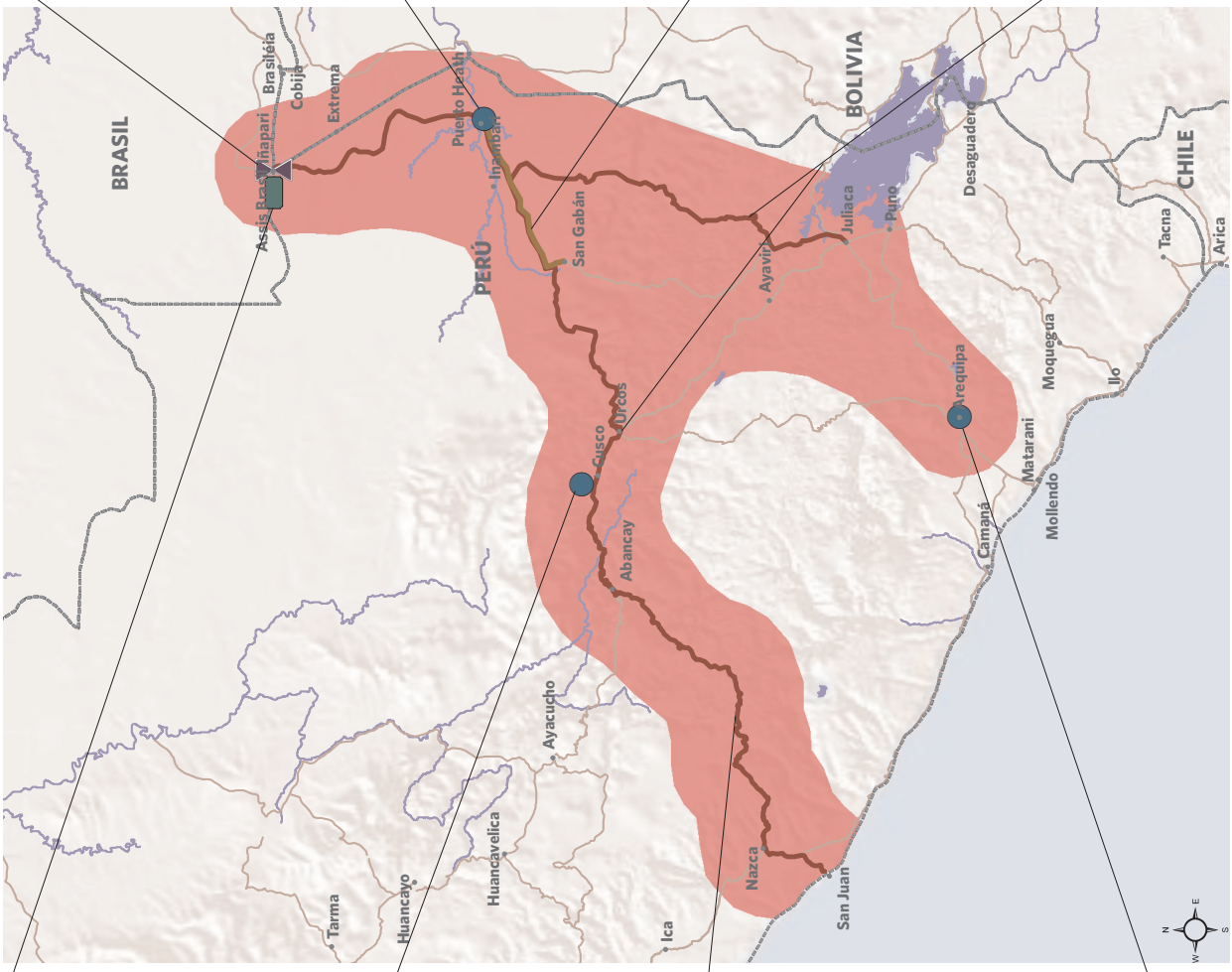
Also completed is anchor project Paving of Iñapari - Puerto Maldonado - Inambari Road, and Inambari - Juliaca / Inambari - Cusco Roads. These paving works, demanding nearly US$2 billion, were complemented by others, among which the following can be mentioned: the completion of the bridge over the Acre 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.

Completed Projects in the Peru-Brazil-Bolivia Hub

** US$ million*

Code	Name	Ejecuted investment*	Countries
PBB01	PAVING OF IÑAPARI - PUERTO MALDONADO - INAMBARI ROAD, AND INAMBARI - JULIACA / INAMBARI - CUSCO ROADS	1,976.0	PE
PBB03	BRIDGE OVER THE ACRE RIVER	12.0	BR - PE
PBB16	MADEIRA RIVER HYDROELECTRIC POWER COMPLEX (SANTO ANTÔNIO AND JIRAU HYDROELECTRIC POWER STATIONS)	18,209.0	BR
PBB18	ELECTRICITY TRANSMISSION LINE BETWEEN THE TWO HYDROELECTRIC POWER STATIONS ON THE MADEIRA RIVER AND THE CENTRAL SYSTEM	3,823.0	BR
PBB59	SAN GABÁN - PUERTO MALDONADO ELECTRICITY TRANSMISSION LINE	23.6	PE
PBB63	"IIRSA SUR" SOUTHERN INTEROCEANIC ROAD, SECTION 1: SAN JUAN DE MARCONA - ABANCAY - CUSCO - URCOS	145.4	PE
	TOTAL	**24,189.0**	

Corridor Porto Velho – Rio Branco – Assis – Puerto Maldonado – Cusco / Juliaca – Ports in the Pacific



02 PERU - BRAZIL BORDER CROSSING: CONSTRUCTION OF A BINATIONAL BORDER SERVICE CENTER (CEBAF)

04 IMPROVEMENT OF PUERTO MALDONADO AIRPORT

59 SAN GABÁN - PUERTO MALDONADO ELECTRICITY TRANSMISSION LINE

01 **Anchor Project: PAVING OF IÑAPARI - PUERTO MALDONADO - INAMBARI ROAD, AND INAMBARI - JULIACA / INAMBARI - CUSCO ROADS**

03 BRIDGE OVER THE ACRE RIVER

67 CONSTRUCTION OF THE INTERNATIONAL AIRPORT OF CHINCHERO, CUSCO

63 "IIRSA SUR" SOUTHERN INTEROCEANIC ROAD, SECTION 1: SAN JUAN DE MARCONA - ABANCAY - CUSCO - URCOS

62 IMPROVEMENT OF AREQUIPA AIRPORT

Group 1

Strategic Function

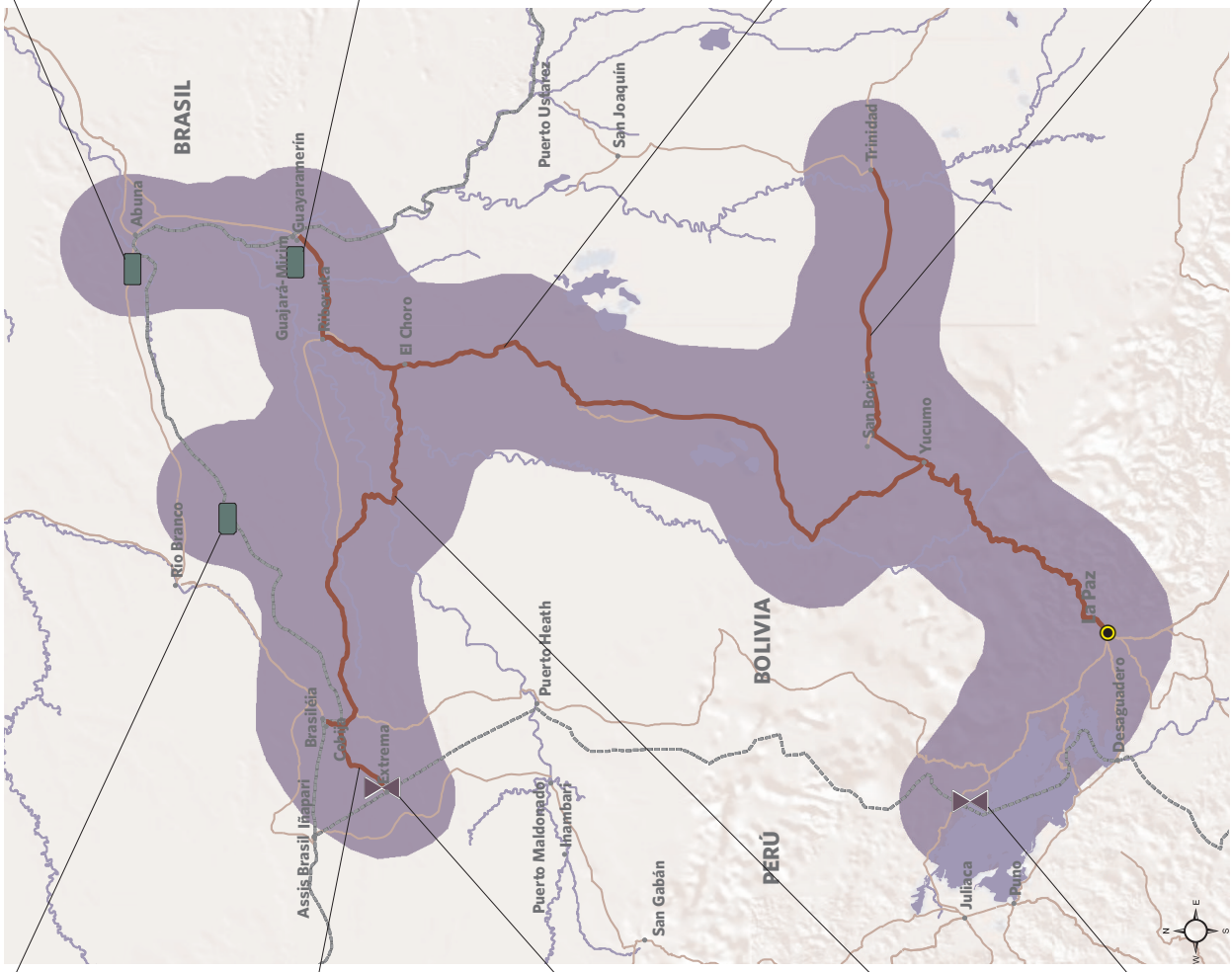
· Consolidate the socioeconomic development of the macro-region in the south of Peru and the states of Acre and Rondônia, in Brazil, to facilitate trade and tourism, and provide logistics services that guarantee access of these territories to international markets, promoting the integration process.

** US$ million*

Code	Name	Stage	Estimated investment*	Countries
PBB01	**PAVING OF IÑAPARI - PUERTO MALDONADO - INAMBARI ROAD, AND INAMBARI - JULIACA / INAMBARI - CUSCO ROADS**	Completed	1.976,0	PE
PBB02	PERU - BRAZIL BORDER CROSSING: CONSTRUCTION OF A BINATIONAL BORDER SERVICE CENTER (CEBAF)	Pre-execution	25,3	BR - PE
PBB03	BRIDGE OVER THE ACRE RIVER	Completed	12,0	BR - PE
PBB04	IMPROVEMENT OF PUERTO MALDONADO AIRPORT	Execution	42,4	PE
PBB59	SAN GABÁN - PUERTO MALDONADO ELECTRICITY TRANSMISSION LINE	Completed	23,6	PE
PBB62	IMPROVEMENT OF AREQUIPA AIRPORT	Execution	51,2	PE
PBB63	"IIRSA SUR" SOUTHERN INTEROCEANIC ROAD, SECTION 1: SAN JUAN DE MARCONA - ABANCAY - CUSCO - URCOS	Completed	145,4	PE
PBB67	CONSTRUCTION OF THE INTERNATIONAL AIRPORT OF CHINCHERO, CUSCO	Pre-execution	658,0	PE
	TOTAL		**2,933.9**	

Profiling · Pre-execution · Execution · Completed

Rio Branco – Cobija – Riberalta – Yucumo – La Paz Corridor



Group 2

Strategic Function

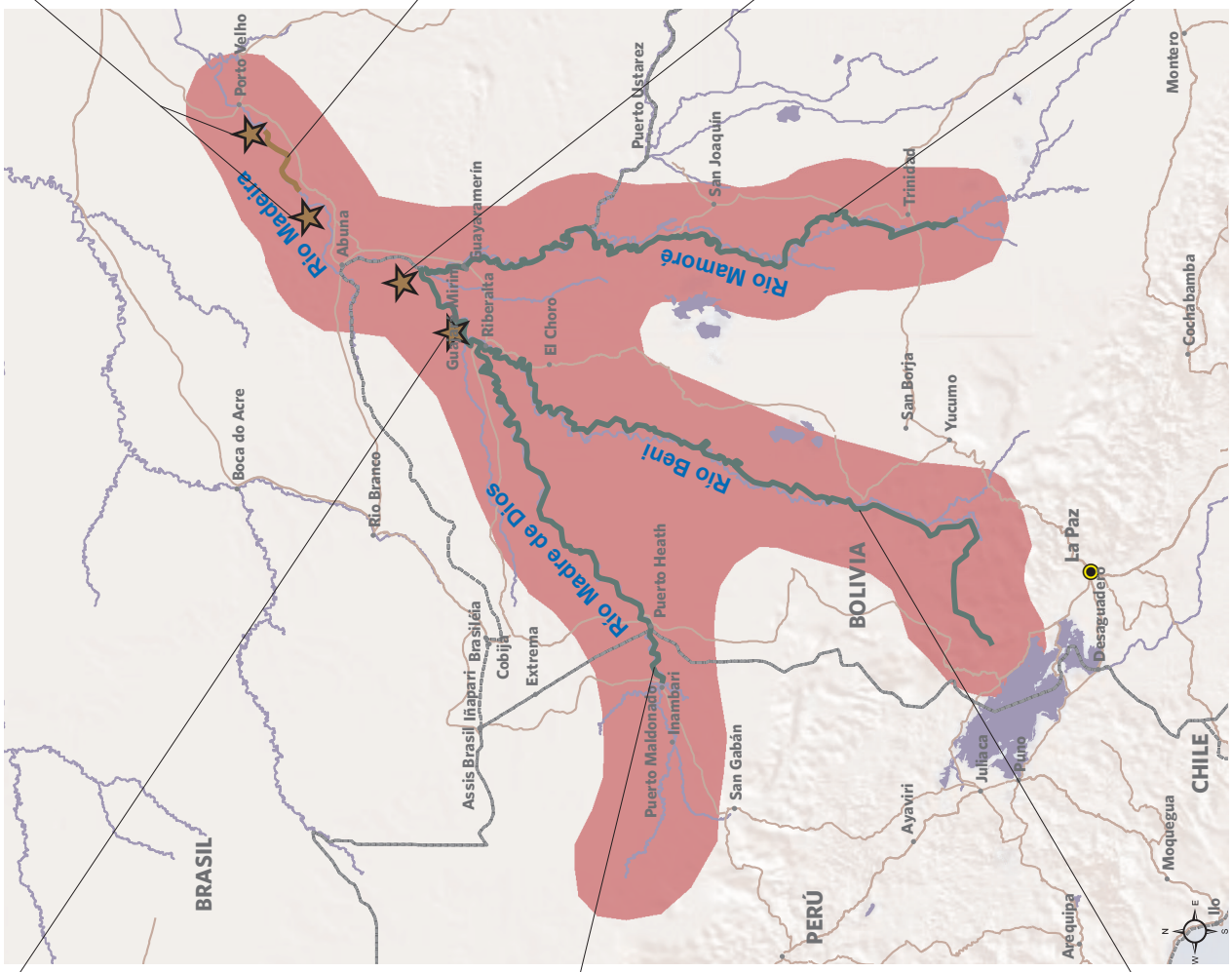
· Provide new possibilities for socioeconomic development in the Madre de Dios - Acre - Pando (MAP) region through its connection to the central Bolivian hub.

** US$ million*

Code	Name	Stage	Estimated investment*	Countries
PBB05	GUAYARAMERÍN - RIBERALTA / YUCUMO - LA PAZ ROAD SECTIONS	Execution	594.0	BO
PBB06	COBIJA - EL CHORO - RIBERALTA ROAD	Execution	695.9	BO
PBB07	YUCUMO - TRINIDAD ROAD	Pre-execution	5.5	BO
PBB08	COBIJA - EXTREMA ROAD	Pre-execution	29.0	BO
PBB09	SAN LORENZO (PERU) - EXTREMA (BOLIVIA) BORDER CROSSING	Profiling	15.0	BO - PE
PBB60	**GUAYAMERÍN (BOLIVIA) - GUAJARÁ-MIRIM (BRAZIL) INTERNATIONAL BRIDGE, OVER THE MAMORÉ RIVER**	Pre-execution	75.0	BO - BR
PBB64	BRIDGE OVER THE MADEIRA RIVER IN ABUNÃ (BR-364/RO)	Execution	48.0	BR
PBB65	INTERNATIONAL BRIDGE OVER THE IGARAPÉ RAPIRAN RIVER BETWEEN PLÁCIDO DE CASTRO (BRAZIL) AND MONTEVIDEO (BOLIVIA)	Profiling	0.0	BO - BR
PBB66	TILALI (PERU) - PUERTO ACOSTA (BOLIVIA) BORDER CROSSING	Profiling	20.0	BO - PE
	TOTAL		1,482.4	

Profiling · Pre-execution · Execution · Completed

Madeira – Madre De Dios – Beni River Corridor



16 MADEIRA RIVER HYDROELECTRIC POWER COMPLEX (SANTO ANTÔNIO AND JIRAU HYDROELECTRIC POWER STATIONS)

18 ELECTRICITY TRANSMISSION LINE BETWEEN THE TWO HYDROELECTRIC POWER STATIONS ON THE MADEIRA RIVER AND THE CENTRAL SYSTEM

17 BINATIONAL HYDROELECTRIC POWER STATION (BOLIVIA - BRAZIL)

13 ICHILO - MAMORÉ WATERWAY

12 CACHUELA ESPERANZA HYDROELECTRIC POWER STATION (MADRE DE DIOS RIVER, BOLIVIA)

15 NAVIGATION CONDITIONS ON THE MADRE DE DIOS WATERWAY AND RIVER PORT

14 IMPROVEMENT OF NAVIGATION CONDITIONS ON THE BENI RIVER

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
	TOTAL		**28,232.0**	

Profiling · Pre-execution · Execution · Completed

PLANNING THE TERRITORY

The work undertaken by IIRSA between 2000 and 2010 and by COSIPLAN since 2011 have focused on infrastructure project planning as a key component for 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.

In order to frame infrastructure planning, theoretical and practical tools linking the territory and infrastructure were used, mainly, the Indicative Territorial Planning Methodology, the tool that made the set-up of an Integration Infrastructure Project Portfolio possible. This methodology is based on the identification of Integration and Development Hubs, which organize the South American territory and structure the Portfolio.

The COSIPLAN website hosts a section especially devoted to the Integration and Development Hubs[1], which has infographics concerning their socioeconomic and environmental description as well as georeferenced maps using Google Maps platform.

1. *cosiplan.org/ejes*

The Integration and Development Hubs

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

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.

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.

Ten Integration and Development Hubs[2], with areas of influence that may be superimposed on one another, have been defined:

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


AND
ANDEAN
PBB
PERU-BRAZIL-BOLIVIA
GUY
GUIANESE SHIELD
AMA
AMAZON
MCC
MERCOSUR-CHILE
DES
SOUTHERN
ADS
SOUTHERN ANDEAN
HPP
PARAGUAY-PARANÁ WATERWAY
CAP
CAPRICORN
IOC
CENTRAL INTEROCEANIC

The Indicative Territorial Planning Methodology

The development of the Indicative Territorial Planning Methodology[3] 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 increasing social development, while creating new economic opportunities for the local population.

The process of application of the Methodology 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 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 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 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.

3. *cosiplan.org/mpti*

3. The Planning of the Territory

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 their implementation. On the basis of these two dimensions, an assessment of the project groups was conducted in order to establish investment priorities.

The Second Stage of the application of the Indicative Territorial Planning Methodology (2005-2010) was launched with the approval of an action plan designed to take a qualitative leap forward in the Project Portfolio and the territorial planning process with the following objectives:

· 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;

· 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[4], and non-reimbursable funds for pre-investment studies were created[5]. Likewise, new territorial planning methodologies[6] and analytical tools[7] were developed, particularly the following: the Production Integration and Logistics (IPrLg) Methodology[8], the Strategic Environmental and Social Evaluation (EASE) Methodology[9], and the Project Portfolio Database (at present, the COSIPLAN Project Information System – SIP).

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.

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 (PTIs)[10], the Methodology for the Incorporation of Disaster Risk Management (DRM) in Regional Integration Infrastructure Projects)[11], the COSIPLAN Project Information System (SIP)[12], and the COSIPLAN Geo-referenced Information System (GIS)[13].

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

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

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

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

8. cosiplan.org/iprlg

9. cosiplan.org/ease

10. cosiplan.org/pti

11. cosiplan.org/grd

12. cosiplan.org/sip

13. cosiplan.org/sig

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

Their objective 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 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 i nfluence of the Portfolio project groups or the API projects.

Production Integration and Logistics 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 inter dependent relations in order to leverage the impact of infrastructure implementation on the development of these activities.

Methodology for the Incorporation of Disaster Risk Management

The aim of this methodology is to prevent or reduce the effects of natural disasters (earthquakes, tsunamis, landslides, floods, and volcanic eruptions) affecting South American infrastructure, and to devise plans for connectivity and public infrastructure recovery.

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.

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 (SIP).

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[14]. Annual progress reports are prepared on the basis of the information in the system.

The SIP is made up of three components that have been interconnected online since 2013 for both access and information upload.

1. 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.

2. API Project Database. This contains the files of the 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.

3. 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.

The number of visits to the SIP between October 2016 and 2017 exceeded **50,000**, with total users amounting to almost 40,000. The countries that make up UNASUR are the ones that most frequently visit the system, the leading country being Peru, followed by Argentina. Spain and the United States are among the ten countries producing the greatest number of queries.

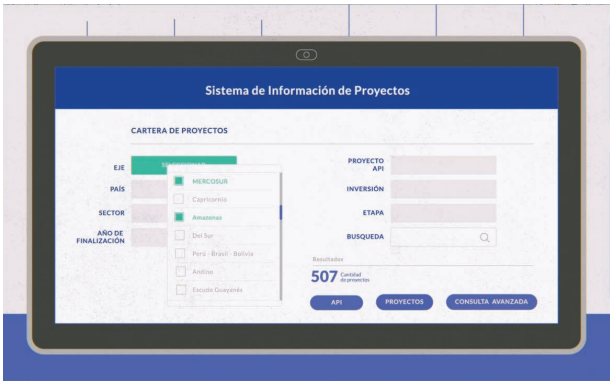
SIP Evolution

The first version of this system was built in **2004**. Between **2007** and **2010**, important improvements were introduced to this IT tool and regular reviews to ensure information consistency in each file were conducted.

Between **2011** and **2013**, two components were added on occasion of the set-up of the Integration Priority Project Agenda (API): a module consolidating the information about the API projects, and a Continuous Monitoring System (CMS) for such projects.

14. *National, binational or multinational projects*

In **2014** and **2015**, 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: (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 S ystem (CMS) to all the Portfolio projects; and (v) API progress indicators.



In addition, 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. Several reports were enhanced and created. The charts were modified, and the API Structured Projects CMS was opened to public access.

In **2016** and **2017**, the need for users to become easily acquainted with the system and planning concepts was addressed. To this end, the home page was redesigned to make it more modern, including dynamic visualizations and infographics of the Portfolio and API projects. Furthermore, geo-referenced files were created in Google Earth for each Portfolio and API project, which were in turn included in the project files to help users locate the projects easily. Also, a video was shot presenting the objective of the SIP as well as its main features and functionalities.

The Life Cycle Scheduling Methodology

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 —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 countries 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 0%	Pre-execution 30%					Execution 65%				Completed 5%
0%	6%	12%	18%	24%	30%	50%	65%	80%	95%	100%
Initial status	Resources for studies	Studies underway	Studies approved	Permits granted	Resources for works	First quarter of works	Second quarter of works	Third quarter of works	Fourth quarter of works	Works handed over

· **Profiling.** This is the starting point in the project life cycle.

· **Pre-execution.** Normally, this stage involves studies (pre-feasibility, feasibility and investment), permits of various kinds (environmental, jurisdictional and others), and resource mobilization from various sources to finance the works and other actions that precede the execution of the physical works. Five main milestones are identified:

- Resources for studies. This sub-stage starts with the formalities required to secure the financial resources needed to carry out the studies, and is deemed completed when such resources are actually available and all the institutional arrangements for the studies to begin (e.g. awarding them through tender processes) have been made.

- Studies underway. This sub-stage is deemed to start when any pre-execution study has been launched, and the project will be recorded as such until completion of the study representing the highest level of complexity required by the project concerned.

- Studies approved. 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. ■

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www.cosiplan.org

COSIPLAN Project Information System

www.cosiplan.org/proyectos

Acronyms and abbreviations

AMA	Amazon Hub
AND	Andean Hub
API	Integration Priority Project Agenda
AR	Argentina
BID	Inter-American Development Bank
BO	Bolivia
BR	Brazil
CAF	Development Bank of Latin America
CAP	Capricorn Hub
CCT	Technical Coordination Committee
CEBAF	Binational 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
IIRSA	Initiative for the Integration of Regional Infrastructure in South America
IOC	Central Interoceanic Hub
IPRLG	Production Integration and Logistics
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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Technical Coordination Committee

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FONPLATA

INTAL

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