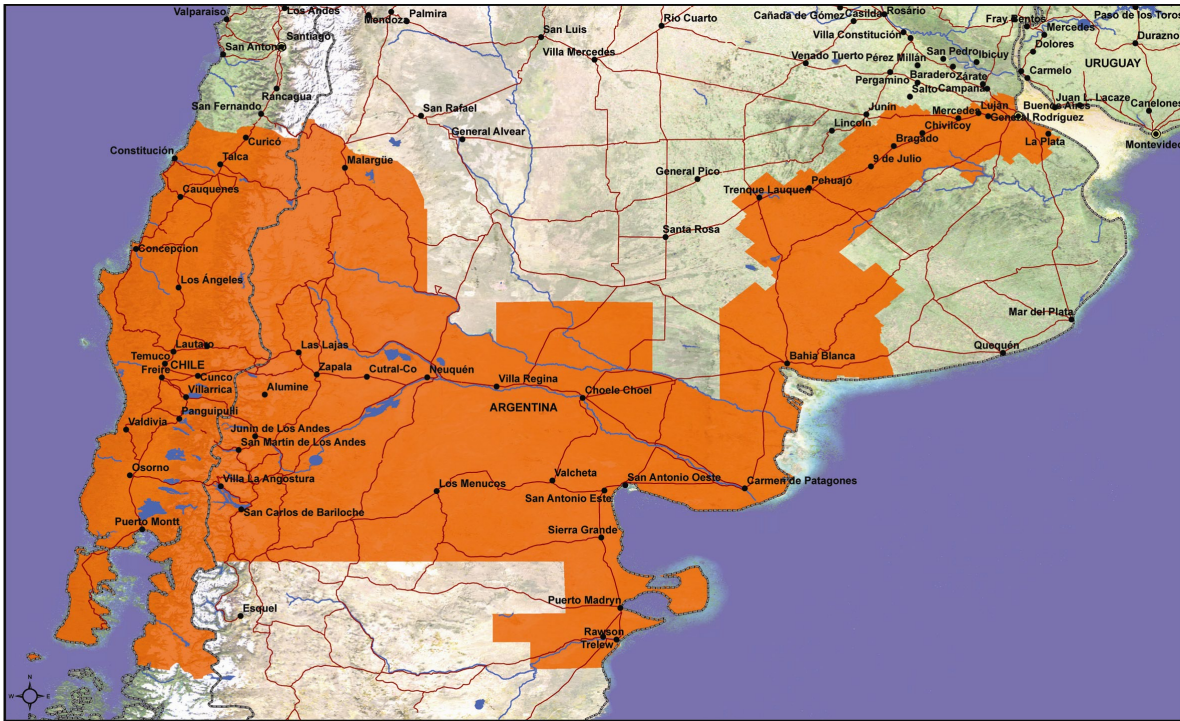


III.6. Southern Hub

III.6.1. Hub's Location and Area of Influence

The Southern Hub's area of influence was defined as the area located approximately between 35° and 43° S, its ends having important port facilities on the Atlantic and Pacific oceans, which accounts for its bioceanic character. This area of influence is relatively dynamic, since it also relates to the physical location of the projects included in the groups into which the Hub has been divided. The map below shows its geographic location:

Map 44 - Location and Area of Influence of the Southern Hub



The region thus delimited comprises the provinces of Neuquén and Río Negro, and six Southern districts of the province of Buenos Aires, in Argentina, and Regions VII, VIII, IX, XIV, and X, in Chile (del Maule, Bío-Bío, Araucanía, de los Ríos, and de Los Lagos, respectively).

The area of influence defined for the Southern Hub covers 502,492 km², accounting for 14.21% of the total area of the two countries that make up the Hub. Its main cities, ports, and border crossings are listed in the table below:

Table 103 - Area, Population, Main Cities, Border Crossings, and Maritime and River Ports within the Hub

Countries - Territorial Units	Area km ²	Population 2008	Main Cities	Border Crossings	Maritime and River Ports
ARGENTINA	2,780,400	39,745,613			
Neuquén	94,078	547,742	Neuquén	Pino Hachado	
Río Negro	203,013	597,476	Viedma	Cdal. Samoré	San Antonio
South of Buenos Aires Province ¹	39,180	465,817	Bahía Blanca		Bahía Blanca
<i>Area of Influence</i>	<i>336,271</i>	<i>1,611,035</i>			
CHILE	756,102	16,763,470			
Region VII del Maule	30,296	991,500	Talca		
Region VIII Bío-Bío	37,069	2,009,500	Concepción	Pichachén	Talcahuano
Region IX Araucanía	31,842	953,800	Temuco	Pino Hachado	
Region XIV de los Ríos ²	18,430	376,704	Valdivia		
Region X de Los Lagos	48,584	815,400	Puerto Montt	Cdal. Samoré	Puerto Montt
<i>Area of Influence</i>	<i>166,221</i>	<i>5,147,025</i>			
Total Countries in the Hub	3,536,502	56,509,083			
Total area of Influence	502,492	6,758,060			

Notes:

¹ Includes the municipalities of Puán, Villarino, Patagones, Bahía Blanca, Tornquist, and Coronel Rosales.

² Region XIV was created in July 2007 and is located between Regions IX and X.

III.6.2. Hub's Basic Characterization

Demography

The total population of the area of influence defined for the Southern Hub was estimated at 6,758,060 inhabitants in 2008, accounting for 11.96% of the total population of the two countries that make up the Hub. Furthermore, the Hub's area of influence reached an average population density of 13.45 inhabitants per km². This indicator ranges from a maximum 54.21 inhabitants per km² in Region VIII, Bío-Bío, in Chile, to a minimum 2.94 inhabitants per km² in the territory of the province of Río Negro, in Argentina.

Economic Aspects

The GDP for the Southern Hub's area of influence was estimated at US\$ 38,989.3 million at constant 2000 market prices, based on the 2007 statistics calculated by ECLAC for each country and on the GDP share as estimated by each national statistics institute for the territorial units of each country that makes up the Hub. This amount accounts for 8.27% of the total GDP, for the same year, of the two countries within the Hub.

The GDP resulting from adding the GDPs of the two countries that make up the Hub at constant 2000 values has changed positively between 2000 and 2007 by 31.04%, i.e. an annual average growth rate of 3.94%. As to the relative growth dynamics of the economic activities in the two countries of the region, the sectors that grew the most in the last seven years were transport, storage, and communications; construction; manufacturing industries; and agriculture, hunting, forestry, and fisheries, in this order.

Exports from the area of influence of the Southern Hub amounted to US\$ 11,265.7 million in 2008,¹³ which, compared to the annual figure in 2000 (US\$ 4,509.8 million), represents a 149.81% growth in eight years. Furthermore, if the value of exports from the Hub in 2008 is compared to the annual figure of all the exports from the two countries that make up the Hub, the former accounts for 8.07% of the latter (US\$ 139,683.8 million).

In terms of value, 95.82% of the exports from the two countries that make up the Southern Hub are extra-regional, while the exports between the countries of the Hub (i.e. intra-regional) represent 4.18% (US\$ 5,840.9 million), whereas in 2000 intra-regional exports were 7.44% of the total exports (US\$ 3,313.2 million/US\$ 44,554.6 million).

Refined copper is the most important among the five leading products exported from the two countries in the Southern Hub, accounting for about 15.02% of the total value of exports in 2008 by the two countries and 32.48% of total the total value of exports by the same countries for their five leading products, followed by copper ores and concentrates (9.32%). Soy oil, soybeans, and petroleum derivatives rank third, fourth and fifth, respectively. In 2008, the sum of the five leading products exported from each country accounted for 46.25% of the total value of exports from the countries that make up the Hub.

The transportation means used for cargo shipments (exports and imports), in terms of the volume traded from and to the countries that make up the Hub (Argentina and Chile) in 2007 were as follows: by sea, 81.96%; by railway, 11.07%; by road, 5.37%; by air, 0.51%, and by "other means," 1.09%.

By comparison, in 2000 cargo movements by volume from and to the same countries were as follows: by sea, 76.81%; by railway, 8.79%; by road, 6.39%; by air, 0.37%, and by "other means," 7.64%.

It is important to note that, although the area of the Southern Hub has very little impact on the two countries' total exports, its export volume is constantly on the rise. For example, through the Chilean border crossings in the area (Pichachén, Pino Hachado, Icalma, and Cardenal Samoré), the total Chilean exports volume traded by road in 2008 reached 254,933.7 tons, which accounted for 0.53% of the total 48,341,629 tons exported by Chile last year, whereas in 2000 the volume exported by Chile through such border crossings reached 114,741 tons, representing 0.32% of the total volume exported by Chile in that year (35,607,107 tons).

The paragraphs below describe the main economic activities carried out in the region under analysis, broken down into the territorial units that make up the Hub:

- **Argentina - Provinces of Neuquén and Río Negro and six districts in the South of the province of Buenos Aires:**

Neuquén: Oil and gas production; electrical energy; fisheries; apples and pears; tourism, trade and transport.

Río Negro: Oil, gas, electrical energy; flagstone; gypsum; salt; winegrowing industry; preserved food; apples, pears, peaches, plums, raspberries, other berries; tourism, trade, and transport.

South of Buenos Aires: Cereal production; cattle and sheep raising; transport and trade.

- **Chile - Regions VII del Maule, VIII Bío-Bío, IX Araucanía, XIV de los Ríos and X de los Lagos:**

Region VII, del Maule: Sugar; electrical energy plants; juices; preserved food; clay, winegrowing industry; rice; apples, pears, grapes, cherries.

¹³ To arrive at this amount, exports from the Argentine provinces were estimated based on the figures of the first half of 2008, the last recorded data available to date.

Region VIII, Bío-Bío: Footwear; furs; textiles; sugar; metal industries; chemical industries; cement; paper mills; iron and steel industry; tourism; apples, pears, beets, lentils; sardines, anchovy and hake.

Region IX, Araucanía: Mills; beer; oils; dairies; wheat, oats and rye; apples, raspberries and other berries; tourism; flowers.

Region XIV, de los Ríos: Tourism; mills; beer; oils; dairies; wheat, oats and rye; apples, raspberries and other berries.

Region X de los Lagos: Dairies; meat; aquaculture; tourism; oysters, algae, salmon breeding; berries, blueberries, blackberries and currants; potatoes, beets; tourism.

Current Infrastructure

The Hub's integration infrastructure is in general not only limited but also deficient, although both circumstances can be overcome because there is potential for rapid development and reconditioning. It should be pointed out that in the last years important road works completing the Hub's interoceanic connection were concluded (paving of the section that is missing up to the border with Argentina, access to Pino Hachado, Route 181 CH).

- The road network of the countries that make up the Southern Hub covers 59,655 km, accounting for 19.20% of all the national road networks in the two countries involved in the Hub. Furthermore, 23.25% of the national road networks in the Hub's area of influence is paved. Road infrastructure in the Argentine-Chilean border is characterized by having to cross an important natural barrier, the Andes. Due to this natural barrier, this infrastructure is set up in such a way that it restricts transport by concentrating it through a small number of border crossings opened in the mountains to interconnect these countries.
- Railway transport: The railway network of the Southern Hub's countries covers 43,321 km, 82.76% of which are active lines. There are railway connections in the Chilean region of the Southern Hub between Valparaíso and Puerto Montt, and in the Argentine region, between Bahía Blanca and Zapala and between Bahía Blanca and Bariloche. In general terms, railway systems are old and in poor condition, representing a limitation for large trains to tap the local economies. One of the projects included in the Hub is the "Zapala-Las Lajas Railway" project, which, with 110 km on the Argentine side and 80 km on the Chilean side, would connect the ports on both oceans in this region.
- The Hub's maritime port infrastructure is made up of the following main ports: Penco, Lirquen, Talcahuano, San Vicente and Coronel; Corral and Puerto Montt, located in Chilean Regions VIII and X, respectively, on the Pacific ocean; and San Antonio Oeste, San Antonio Este and Bahía Blanca in the province of Buenos Aires, on the Atlantic ocean. All of them have adequate facilities for the traffic, movement, and conditioning of import and export goods, but there are bottlenecks in the access to them due to deficiencies in the road infrastructure and inconsistencies in the development of cities and their ports; these must be solved. Between 2000 and 2007, the total cargo movement in the seven Chilean ports plus Bahía Blanca port, in Argentina, has grown by 134.94% (from 16,243,931 tons to 38,172,318 tons). In turn, in the Chilean ports already mentioned, cargo movements fell from 69.92% in 2000 to 68.88% in 2007.
- Airport infrastructure in the Hub is adequate, therefore all the area could be very well connected by air.
- With regard to the energy sector, electricity is generated in both the Argentine provinces and Chilean regions of the Hub. Argentine provinces produce oil and gas as well. At the national level, 53% of the energy generation in Chile derives from hydroelectric power stations; in Argentina, this accounts for 36.7%. The topography of the Hub's area (in both countries) makes it possible to install hydroelectric power stations.¹⁴ There are two gas pipelines in the area to export gas to Chile: one from Loma Lata (Neuquén) to Concepción (Region VIII), covering a distance of 645 km, and the other from Mendoza to Santiago.

¹⁴ In Argentina, electricity generation is an important activity in Neuquén and Río Negro. In Chile there is a Central Interconnected System including, among others, the stations located in the area of the Hub.

III.6.3. The Hub's Development Potential

The area of influence of the Southern Hub represents a market of almost 7 million inhabitants along its 0.5 million km², with a GDP of about US\$ 38,989.3 million (equitably contributed by both countries). Institutionally speaking, this area is undergoing an 18-year long integration process (MERCOSUR) that has set up a clear pattern of gradual regulatory convergence and coordination of investments in transport, energy, and telecommunications interconnection infrastructure.

In the Hub's area of influence there are well-consolidated areas, regions with a very low population density and extended areas reserved to environmental preservation (National Parks and Reserves, both in Chile and Argentina). Therefore, issues such as the advance of the agricultural frontier in sensitive areas and its subsequent problems (deforestation, conflicts over land use and natural resources), climate changes at the regional and global levels, or changes in the quality of water must be analyzed carefully in any development plan for the region.

As mentioned before, the area is characterized by the presence of agricultural and manufacturing industries, electricity generation businesses, oil and gas, agricultural production, forestry, fisheries, and the provision of services, among which tourism plays a major role.

These activities are expected to consolidate in the future, particularly those related to agricultural products (fruits), aquaculture (salmon-breeding), winegrowing industries, and agroindustries. Other industries will keep their market share, and as far as the service sector is concerned, tourism will continue taking the lead.¹⁵

¹⁵ This activity will be encouraged as accesses at border crossings are improved.

III.6.4. The Hub's Groups

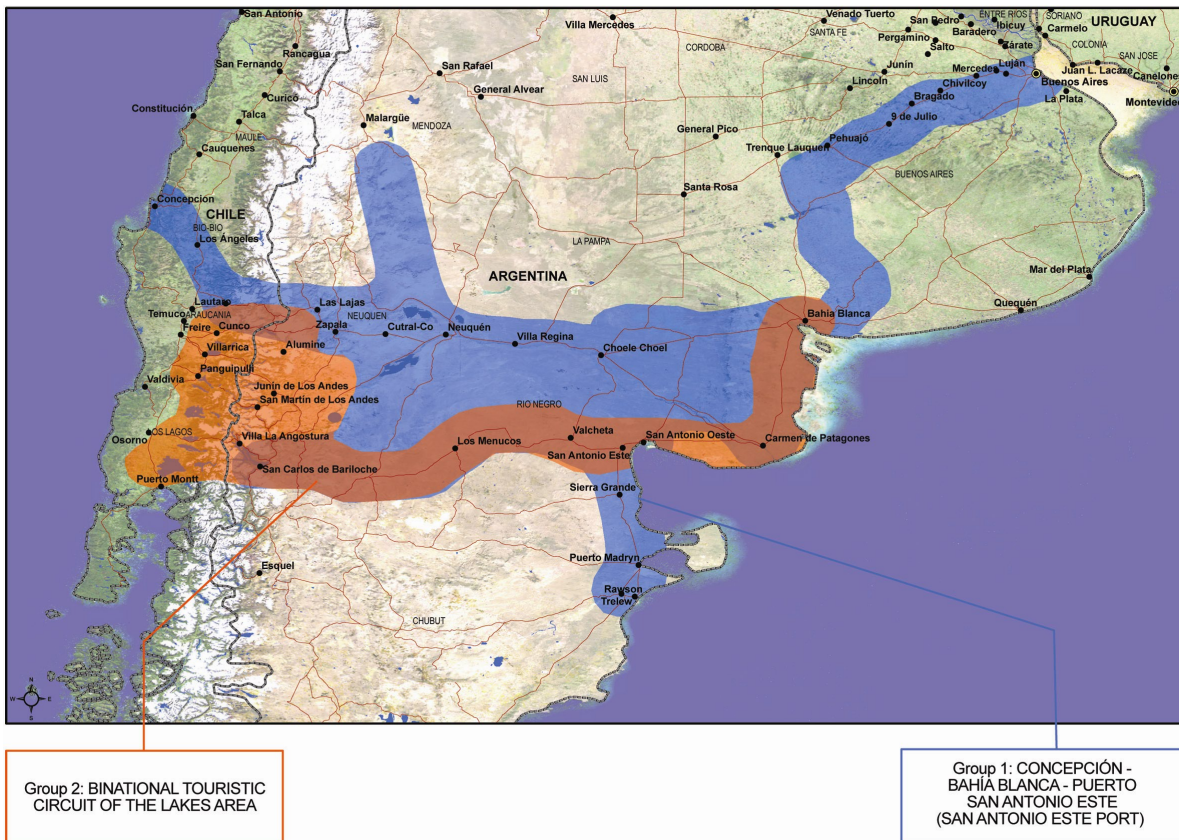
Delegations from the two countries that make up the Southern Hub have agreed by consensus to maintain the following two project groups for the Hub:

Table 104 - Groups Identified in the Southern Hub

Groups	Countries Involved
Group 1: Concepción - Bahía Blanca - Puerto San Antonio Este (San Antonio Este Port)	Argentina-Chile
Group 2: Binational Touristic Circuit of the Lakes Area	Chile-Argentina

The map below shows the geographic location and area of influence of each group:

Map 45 - Southern Hub's Groups



III.6.5. Project Groups and Strategic Functions

Group 1: Concepción - Bahía Blanca - Puerto San Antonio Este (San Antonio Este Port)

STRATEGIC FUNCTION

- Reduce transportation costs and thus enhance trade and economic complementariness between the countries.
- Create economic and social development opportunities.

Map 46 - Southern Hub - Group 1

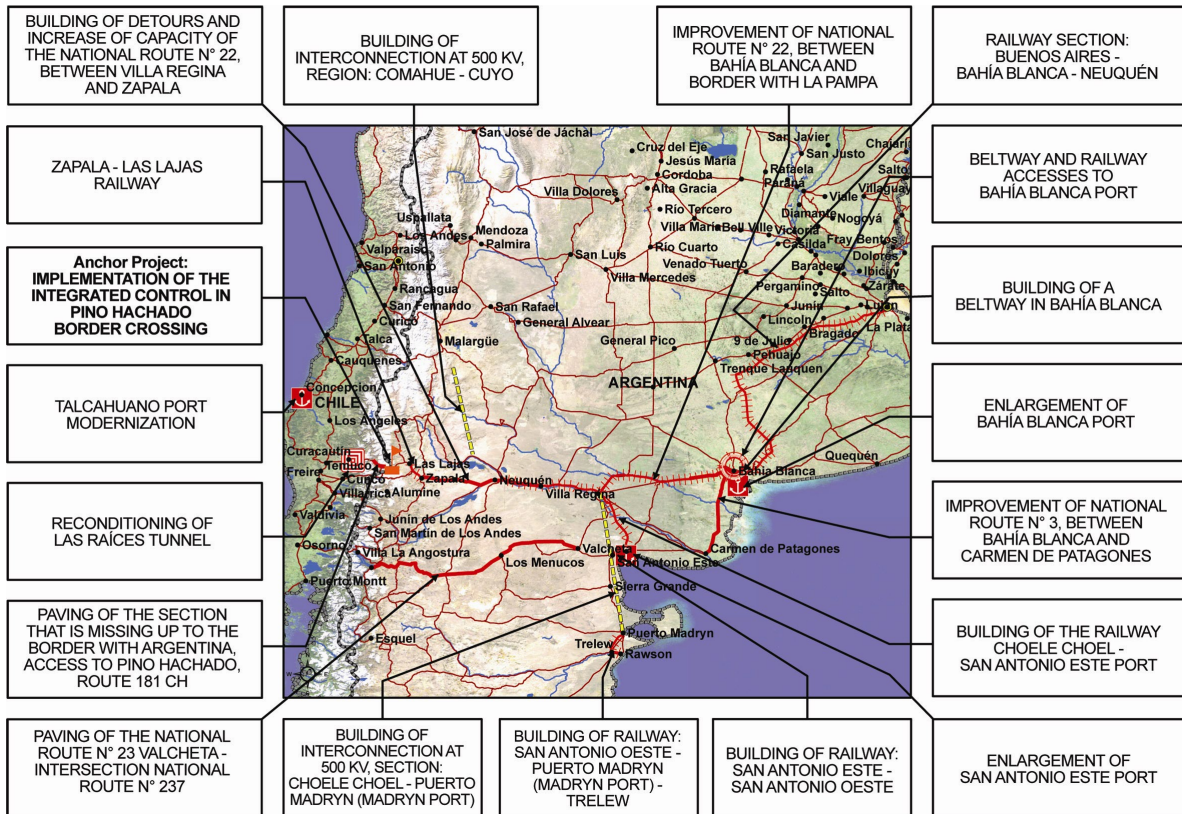


Table 105 - Southern Hub - Group 1: Related Investments

Southern Hub: Group 1	Estimated Investment (US\$ million)
Implementation of the Integrated Control in Pino Hachado Border Crossing	6.0
Enlargement of San Antonio Este Port	25.0
Building of Detours and Increase of Capacity of the National Route No 22, between Villa Regina and Zapala	70.0
Building of a Beltway in Bahía Blanca	8.0
Building of the Railway Choele Choel - San Antonio Este Port	40.0
Building of Interconnection at 500 kV, Region: Comahue - Cuyo	350.0
Building of Interconnection at 500 kV, Section: Choele Choel - Puerto Madryn (Madryn Port)	80.0
Improvement of National Route No 22, between Bahía Blanca and Border with La Pampa	33.0
Improvement of National Route No 3, between Bahía Blanca and Carmen de Patagones	65.0
Paving of the National Route No 23 Valcheta - Intersection National Route No 237	120.0
Paving of the Section that is Missing up to the Border with Argentina, Access to Pino Hachado, Route 181 CH	5.0
Talcahuano Port Modernization	25.0
Reconditioning of Las Raíces Tunnel	10.5
Building of Railway: San Antonio Oeste - Puerto Madryn (Madryn Port) - Trelew	48.0
Building of Railway: San Antonio Este - San Antonio Oeste	8.5
Beltway and Railway Accesses to Bahía Blanca Port	250.
Railway Section: Buenos Aires - Bahía Blanca - Neuquén	180.0
Zapala - Las Lajas Railway	70.0
Enlargement of Bahía Blanca Port	290.0
TOTAL	1,684.0

Group 2: Binational Touristic Circuit of the Lakes Area

STRATEGIC FUNCTION

- Reinforce the binational tourism system in the lake area.
- Create economic and social development opportunities.
- Favor conservation of the area's environmental resources.

Map 47 - Southern Hub - Group 2

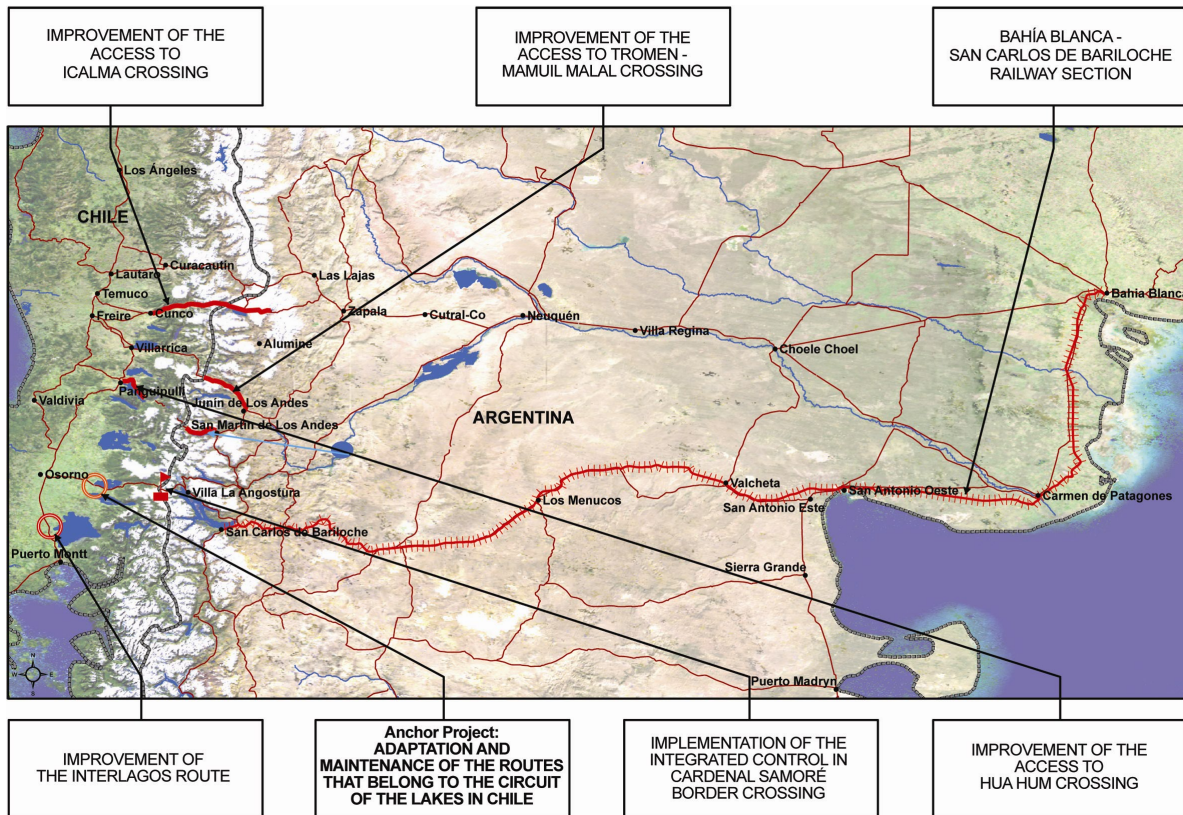


Table 106 - Southern Hub - Group 2: Related Investments

Southern Hub: Group 2	Estimated Investment (US\$ million)
Adaptation and Maintenance of the Routes that Belong to the Circuit of the Lakes in Chile	175.0
Implementation of the Integrated Control in Cardenal Samoré Border Crossing	2.0
Improvement of the Interlagos Route	200.0
Improvement of the Access to Icalma Crossing	13.0
Improvement of the Access to Tromen - Mamuil Malal Crossing	27.0
Improvement of the Access to Hua Hum Crossing	32.0
Bahía Blanca - San Carlos de Bariloche Railway Section	400.0
TOTAL	849.0

III.6.6. The Southern Hub's Project Portfolio

General Aspects

The countries have agreed to include twenty-six projects in the Southern Hub, accounting for an estimated investment of US\$ 2,533.0 million, as summarized below:

Table 107 - General Aspects of the Southern Hub's Portfolio

Southern Hub	Name	Number of Projects	Estimated Investment (US\$ million)
Group 1	Concepción - Bahía Blanca - Puerto San Antonio Este (San Antonio Este Port)	19	1,684.0
Group 2	Binational Touristic Circuit of the Lakes Area	7	849.0
TOTAL		26	2,533.0

Sector-based Breakdown

The following is a sector-based breakdown of the Hub's projects:

Table 108 - Sector-based Breakdown of the Southern Hub's Portfolio

Sector / Subsector	Transport		Energy	
	Number of Projects	Estimated Investment (US\$ million)	Number of Projects	Estimated Investment (US\$ million)
Road	12	758.5		
Maritime	3	340.0		
Border Crossing	2	8.0		
Railway	7	996.5		
Energy interconnection			2	430.0
TOTAL	24	2,103.0	2	430.0

Project Typology

The Hub's project typology is summarized in the following tables:

Table 109 - Road Transport Project Typology in the Southern Hub

Project Typology	Number of Projects	Estimated Investment (US\$ million)
Expansion of road capacity	1	70.0
Paving (new works)	3	64.0
Rehabilitation of roads and structures	7	616.5
Bypasses and city accesses	1	8.0
TOTAL	12	758.5

Table 110 - Railway Transport Project Typology in the Southern Hub

Project Typology	Number of Projects	Estimated Investment (US\$ million)
Railway construction	4	166.5
Railway Repairs	2	580.0
Railway bypasses	1	250.0
TOTAL	7	996.5

Table 111 - Energy Project Typology in the Southern Hub

Project Typology	Number of Projects	Estimated Investment (US\$ million)
Energy interconnection	2	430.0
TOTAL	2	430.0

Table 112 - Maritime Transport Project Typology in the Southern Hub

Project Typology	Number of Projects	Estimated Investment (US\$ million)
Refitting of sea ports	1	25.0
Enlargement of land infrastructure in sea ports	2	315.0
TOTAL	3	340.0

Table 113 - Border Crossing Project Typology in the Southern Hub

Project Typology	Number of Projects	Estimated Investment (US\$ million)
Infrastructure for new border control centers	2	8.0
TOTAL	2	8.0

Anchor Projects

The countries identified two anchor projects in the Hub, totaling an estimated investment of US\$ 181.0 million, according to the following detail:

Table 114 - Southern Hub's Anchor Projects

Group	Anchor Project	Estimated Investment (US\$ million)	Financing Source	Scope	Project Stage
1	Implementation of the Integrated Control in Pino Hachado Border Crossing	6.0	Public	Binational	Pre-execution
2	Adaptation and Maintenance of the Routes that Belong to the Circuit of the Lakes in Chile	175.0	Public	National	Execution
	TOTAL	181.0			