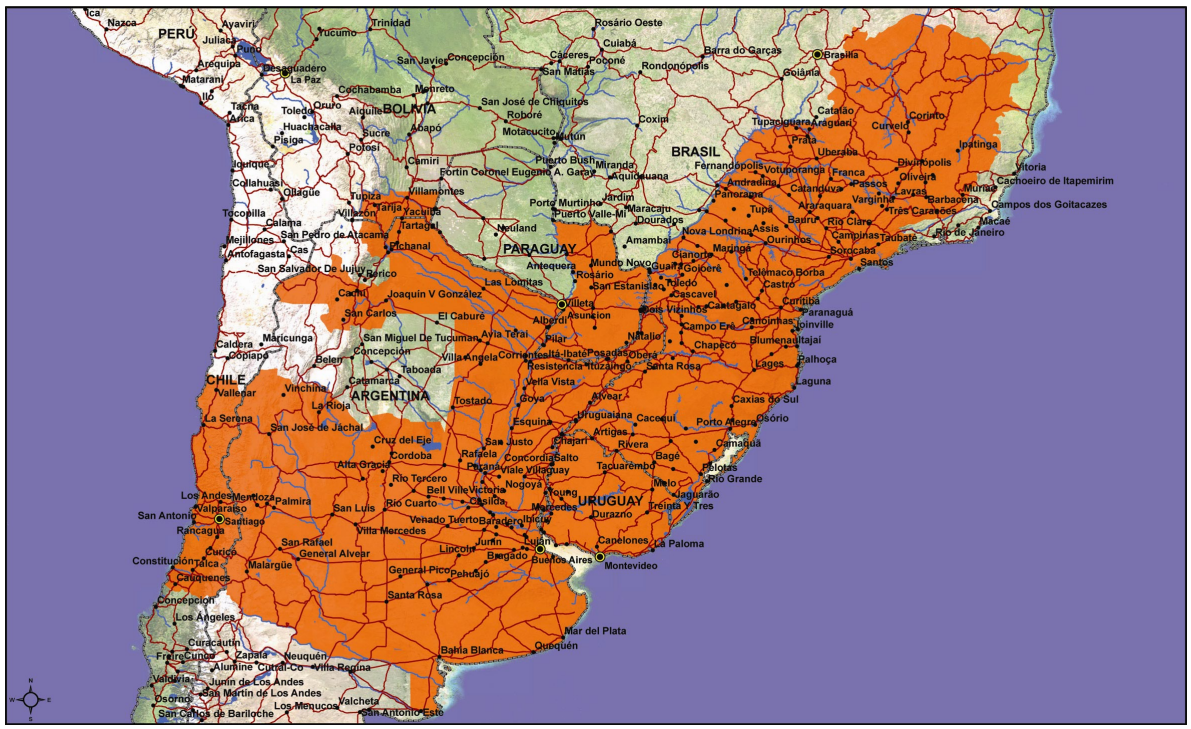
III.8. MERCOSUR - Chile Hub

III.8.1. Hub's Location and Area of Influence

The MERCOSUR - Chile Hub was defined by delimiting an area of influence that runs across South America and includes the connection of the main economic centers and ports in Chile, Argentina, Paraguay, Uruguay, and Brazil. 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 the current area of the MERCOSUR - Chile Hub:

Map 55 - Location and Area of Influence of the MERCOSUR - Chile Hub



The territory defined encompasses Chile's Metropolitan Region and Regions IV, V, VI, and VII (Coquimbo, Valparaíso, del Libertador General Bernardo O'Higgins, and del Maule, respectively); the Argentine provinces of Mendoza, San Juan, La Rioja, San Luis, Córdoba, La Pampa, Santa Fe, Buenos Aires, Entre Ríos, Corrientes, and Misiones, as well as Argentina's Federal Capital; the Brazilian states of Rio Grande do Sul, Santa Catarina, Paraná, São Paulo, and Minas Gerais; Paraguay's Eastern Region, and the entire Uruguayan territory. The territories of the Argentine province of La Rioja and Chile's Region VII, del Maule, which had not been included in the Hub's originally defined area, were made a part of it after the incorporation of the Hub's new Group 6 (Pehuenche).

The area of influence defined for the MERCOSUR - Chile Hub covers 3,216,277 km^2, accounting for 25.46% of the total area of the five countries that make up the Hub. Its main cities, ports, and border crossings are listed in the table below:

Table 133 - Area, Population, Main Cities, Border Crossings, and Maritime and River Ports within the MERCOSUR - Chile Hub

Countries - Territorial Units	Area km²	Population 2008	Main Cities	Border Crossings	Maritime and River Ports
ARGENTINA	**2,780,400**	**39,745,613**			
Misiones	29,801	1,077,987	Posadas	San Javier	
Corrientes	88,199	1,013,443	Corrientes	Paso Libres	Corrientes
Entre Ríos	78,781	1,255,787	Paraná	Pto. Unzué	Diamante
Santa Fe	133,007	3,242,551	Rosario		San Lorenzo
Córdoba	165,321	3,340,041	Córdoba		
San Luis	76,748	437,544	San Luis		
San Juan	89,651	695,640	San Juan	Agua Negra	
La Rioja	89,680	341,207	La Rioja	Pircas Negras	
Capital Federal	200	3,042,581	Buenos Aires		Buenos Aires
Buenos Aires	307,571	15,052,177	La Plata		Quequén
La Pampa	143,440	333,550	La Pampa		
Mendoza	148,827	1,729,660	Mendoza	Cristo Red.	
Area of Influence	*1,351,226*	*31,562,168*			
BRAZIL	**8,514,877**	**189,612,814**			
Minas Gerais	586,528	19,850,072	Belo Horizonte		
São Paulo	248,209	41,011,635	São Paulo		
Paraná	199,315	10,590,169	Curitiba	Foz do Iguaçu	Paranaguá
Santa Catarina	95,346	6,052,587	Florianópolis	D. Cerqueira	S. Francisco
Rio Grande do Sul	281,748	10,855,214	Porto Alegre	Uruguaiana	Porto Alegre
Area of Influence	*1,411,146*	*88,359,677*			
PARAGUAY	**406,752**	**6,230,000**			
Eastern Region	159,827	6,064,411	Ciudad del Este	Ciudad Este	Asunción
Area of Influence	*159,827*	*6,064,411*			

Countries - Territorial Units	Area km²	Population 2008	Main Cities	Border Crossings	Maritime and River Ports
CHILE	**756,102**	**16,763,470**			
Region IV, Coquimbo	40,580	698,000	La Serena	Agua Negra	Coquimbo
Region V, Valparaíso	16,396	1,720,600	Valparaíso	Cristo Red.	Valparaíso
Metropolitan Region	15,403	6,745,700	Santiago		San Antonio
Region VI, O'Higgins	16,387	866,200	Rancagua		
Region VII, del Maule	30,296	991,500	Talca	Pehuenche	
Area of Influence	*119,062*	*11,022,000*			
URUGUAY	**175,016**	**3,334,052**	Montevideo	Chuy, Santana	Montevideo
Area of Influence	*175,016*	*3,334,052*		*Río Branco*	
Total Countries in the Hub	**12,458,131**	**255,685,949**			
Total Area of Influence	***3,216,277***	***140,342,308***			

III.8.2. Hub's Basic Characterization

Demography

The total population of the area of influence defined for the MERCOSUR - Chile Hub was estimated at 140,342,308 inhabitants in 2008, accounting for a 54.89% of the total population of the five countries that make up the Hub. Furthermore, the Hub's area of influence reached an average population density of 43.64 inhabitants per km². This indicator ranges from a maximum 165.23 inhabitants per km² in the Brazilian state of São Paulo to a minimum 2.33 inhabitants per km² in the territory of the Argentine province of La Pampa.

Economic Aspects

The gross domestic product (GDP) for the MERCOSUR - Chile Hub's area of influence was estimated at US$ 892,494.6 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 represents 67.77% of the total GDP, for the same year, of the countries within the Hub.

The GDP resulting from adding the GDPs of all the countries that make up the Hub at constant 2000 values has changed positively between 2000 and 2007 by 27.67%, i.e. an annual average growth rate of 3.55%. As to the economic activities in the countries of the region, the sectors that grew the most in the last seven years were the following: transportation, storage and communications; and agriculture, hunting, forestry, and fishing, in this order.

Exports from the area of influence of the MERCOSUR - Chile Hub amounted to US$ 220,439.7 million in 2008, which, compared to the annual figure in 2000 (US$ 72,079.9 million), represents a 205.82% 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 countries that make up the MERCOSUR - Chile Hub, the former accounts for 64.44% of the latter (US$ 342,059.9 million).

In terms of value, 83.57% of the exports from the countries that make up the MERCOSUR - Chile Hub were extra-regional in 2008, while the exports to the countries of the Hub (i.e. intra-regional) represented 16.43% (US$ 57,183.4 million), whereas in 2000 intra-regional exports were 22.89% of the total exports (US$ 23,463.9 million/US$ 102,809.4 million).

Refined copper (including melted down copper) is the most important among the five leading exports from the countries in the MERCOSUR - Chile Hub, accounting for about 6.14% of the five countries' total value of exports in 2008, followed by soybeans (4.81%). Crude oil, non-agglomerated iron ores and concentrates, and oilcake, flours and meals of oil seeds and other vegetable oil residues rank third, fourth, and fifth, respectively. In 2008, the sum of the five leading products exported from each country accounted for 34.00% of the total value of exports from the countries that make up the MERCOSUR - Chile Hub.

The transportation means used for international cargo shipments (exports and imports) in terms of the volume traded to and from the countries that make up the MERCOSUR - Chile Hub (Argentina, Brazil, Chile, Paraguay, and Uruguay) in 2007 were as follows: by sea, 88.73%; by railway, 3.17%; by road, 3.87%; by river, 2.56%; by air, 0.26%; and by "other means," 1.41%.

By comparison, in 2000 international cargo movements by volume to and from the same countries were as follows: by sea, 85.96%; by railway, 3.08%; by road, 4.92%; by river, 2.57%; by air, 0.26%; and by "other means," 3.21%.

As for the cargo movements through the Uruguaiana - Paso de Los Libres border crossing between Brazil and Argentina (South America's most important border crossing in terms of volume, with road and rail transport movements), it is worth noting that in 2008 the volume of exports that crossed through Uruguaiana from Brazil to Argentina by road tallied 1,531,514.70 tons, accounting for 78.47% of the total cargo exports by road that used this border crossing, 68.90% of exports by volume carried by road from Brazil to Argentina, and 29.17% of all exports by road from Brazil to all destinations. Meanwhile, in 2008 the volume of exports that entered Argentina via Uruguaiana by railway was 207,066.60 tons, accounting for 56.76% of the total cargo by railway from Brazil that used this border crossing. In 2000, 1,381,867.90 tons entered Argentina by road via Uruguaiana, representing 77.26% of the total volume exported by road and through this border crossing from Brazil. In addition, in 2000, 122,695.30 tons were exported by railway from Brazil to Argentina through this border crossing, accounting for 78.57% of Brazil's total exports by rail through such border crossing.

The main economic activities carried out in the territorial units that make up the MERCOSUR - Chile Hub follow the production profiles indicated below:

- ***Brazil - States of Minas Gerais, São Paulo, Paraná, Santa Catarina, and Rio Grande do Sul:***

  Minas Gerais: Automobile, chemical, food, metallurgical, iron and steel, cellulose, paper and cement industrial production; cattle and swine raising; leather and textile industries; rice, orange, coffee, tobacco, soybean, and sugar cane.
  São Paulo: Vehicle and transport material industries; aviation industry; sugar and alcohol industry; services; cattle raising and dairy products; agriculture (soybean and corn); poultry; fruits and vegetables.
  Paraná: Vehicle and transport material industries; textiles; agriculture (soybean, corn, wheat and sugarcane); metallurgical and mechanic industry; poultry, swine, and cattle raising.
  Santa Catarina: Chemical, metallurgical, plastic, iron and steel industrial production; agriculture (wheat, soybean, poultry, and swine raising); textiles, and tourism.
  Rio Grande do Sul: Oil refining, automobile industry, chemicals, cellulose and paper, agriculture (soybean, wheat, rice, and swine and cattle raising).

- ***Paraguay - Eastern Region:*** Production of soybean, soybean oil and meal; leather industry, beef cattle, wood, cotton, wheat, corn, sugarcane, cotton textiles.

- ***Argentina - Provinces of Misiones, Corrientes, Entre Ríos, Santa Fe, Córdoba, San Luis, San Juan, La Rioja, Buenos Aires, La Pampa and Mendoza, and Federal Capital:***

  Misiones: Advanced production and processing of tea and yerba mate; citrus fruits such as tangerine, orange and lemon; forestry resources, cellulose production, paper and cardboard, and tourism.
  Corrientes: Advanced production and processing of tea and yerba mate; citrus fruits (orange, tangerine, lemon, and grapefruit); vegetables (tomato, bell pepper, melon pear, and eggplant); tobacco, corn, rice, watermelon, pumpkin; cattle and sheep raising, and leather.
  Entre Ríos: Grains (rice, wheat, oatmeal, corn, and sorghum); oilseeds (sunflower, flax, and soy), fruits (lemon, grapefruit, orange, and tangerine), vegetables (potato, onion, tomato, and bell pepper), forestry resources, and poultry breeding.
  Santa Fe: Agribusiness, metallurgy and metalworking cluster, specialized in agricultural machinery and its repairs parts, as well as car parts; dairy industry, agricultural production (soy, wheat, and corn), edible oil companies, cattle raising, leather, and port logistics.
  Córdoba: Industrial production (automobile, agribusiness, metallurgy, and metalworking); peanut, sorghum, corn, soybean, wheat, and sunflower production; grapevine, olive and palm tree; edible oil companies; cattle and sheep raising.
  San Luis: Industrial production (food, home appliances, metallurgy), services, agricultural production (soybean and sunflower; alfalfa, rye and corn; potato, garlic, onion, and peanut), cattle raising, leather, non-metallic minerals (salt, tungsten, basalt, granite, limestone, flagstone, marble, and onyx).
  San Juan: Winegrowing industry; agricultural production (grapevine, olive, apricot, apple, quince, peach, plum, pear, and almond; onion, garlic, and tomato); cement production, calcium carbide, ferroalloys, and silicon metal.
  La Rioja: Agricultural production (olive, apricot, quince, pear, and dried fruits; onion, garlic, and tomato); non-metallic mining; sheep breeding.
  Federal Capital: Industrial production (automobiles, chemicals, food, metallurgy, iron and steel), services, and tourism.
  Buenos Aires: Oilseed and grain cluster; soybean convergence and processing center; production of vegetable oils, meals, and pellets; iron and steel, chemical, petrochemical, metalworking, and automobile production; services and tourism.
  La Pampa: Agricultural production (wheat, corn, oats, rye, barley; sunflower, and soybean); apple, pear, plum, and grape; tomato, onion, and pumpkin; cattle and sheep raising, leather, dairy products; non-metallic mining (salt, gypsum, sodium sulfate, bentonite, gravel, and calcrete).
  Mendoza: Winegrowing industry, olive preserves, and grape juice; metalworking (engines and turbines, gantry cranes, hydro-mechanical and iron and steel equipment; pumps and compressors, food machinery, petroleum industry equipment, and synthetic rubber and plastics manufacture equipment); mining, services, agricultural production (fresh pears and apples, and pitted prunes; garlic, potato, tomato, onion, pepper, and carrot), oil and gas production.

- ***Uruguay - Entire territory:*** Agricultural production: soybean, corn, wheat, rice, sugarcane, sorghum, and sunflower; citrus fruit; apple, pear, peach; cattle and sheep raising, leather, wool, dairy products; forestry resources, cellulose, wood; chemical products; non-metallic minerals, and machinery and equipment.

- ***Chile - Regions IV, Coquimobo and V, Valparaíso, Metropolitan Region, Regions VI, del Libertador and VII, del Maule:***

  Region IV, Coquimbo: Metallic mining (molybdenum, manganese, iron, copper, and gold); winegrowing activities; table grapes and fishing. Tourism is very strong in the region.
  Region V, Valparaíso: Automobile, tobacco, and cement industries; metallic mining (copper and molybdenum); oil and metal refineries; avocado, grapevine, cherimoya, and flowers; port logistics services. Tourism (Easter Island) is very strong in the region.
  Metropolitan Region: Food, beverage, and tobacco industrial production; services, tourism; poultry and swine raising.
  Region VI, del Libertador: Agricultural production (corn, poultry, and swine raising), cattle raising; copper mining production.
  Region VII, del Maule: Manufacturing industry; rice, beetroot, and bean production; forestry resources.

Current Infrastructure

The area of influence of the MERCOSUR - Chile Hub encompasses some regions that have attained a high level of economic consolidation as well as other relatively less developed areas, and the Hub's integration infrastructure is basically consistent with this circumstance. Hence, in well-consolidated areas, infrastructure intervention generally responds to the need for enhanced services in view of the significant growth in transport demand. In relatively less developed regions, 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 is important to underscore that in recent years progress has been attained in relation to the execution of major road projects designed to improve the Hub's international connectivity ("Duplication of the Route No 14, between Paso de Los Libres and Gualeguaychú" and "Building and Paving of the Route: BE-282/SC Florianópolis-Border with Argentina").

Building, remodeling or improvement of infrastructure works may generate biogeophysical and/or socio-economic environmental impacts. Therefore, in the assessment conducted in 2006 of the IIRSA's projects included in the Implementation Agenda based on Consensus (see paper IIRSA [2006]), the environmental concern was discussed and it was determined, among other conclusions, that the MERCOSUR - Chile Hub is not included among the most sensitive territories. Notwithstanding this, in designing and executing projects maximum attention should be paid to the significance of environmental issues in the achievement of sustainable development, as the region boasts a wide array of biomes: low-altitude and mountain savannas, tropical moist forest, and Mediterranean forests. The Hub's Northeast area features the Serra do Mar forest, the Araucaria moist forest and the Alto Paraná Atlantic forest ecoregions; the Uruguayan savannas are located in the Southeast; the Humid Chaco and the Arid Chaco occupy the central portion of the Hub's territory; the Southern Andean Steppe extends along the West; and the Chilean matorral is found on the Pacific coast.

- The road network of the countries that make up the MERCOSUR - Chile Hub covers 1,093,908 km, accounting for 52.04% of all the national road networks in the five countries involved in the Hub. Furthermore, 14.63% of the national road networks in the Hub's area of influence is paved. Most borders between countries feature major natural barriers, such as the Andes, between Chile and Argentina; the Paraguay and Paraná rivers, between Argentina and Paraguay; and the Uruguay river, between Argentina and Uruguay, and Argentina and Brazil.

- Railway transport: The railway network of the countries within the MERCOSUR - Chile Hub covers 68,892 km, 87.68% of which are active lines with varying quality of service. The largest portion of it is located in the Hub's area of influence. Within the Hub's area there are railways that connect Argentina and Paraguay, Argentina and Brazil, Argentina and Uruguay, and Brazil and Uruguay. One of the Hub's projects is the "Railway Project: Los Andes (Chile)-Mendoza (Argentina) (Central Trans-Andean Railway)," which would rehabilitate rail connection between Argentina and Chile and enable rail linkage between both oceans in the region.

- The Hub's maritime port infrastructure is made up of the following main ports, listed according to their cargo movement: Coquimbo, Pelambres and Guayacán; Quintero, Valparaíso and San Antonio, located in Chile's Regions IV and V, respectively, on the Pacific ocean; the port of Buenos Aires, Argentina, on the La Plata river; the port of Asunción, on the Paraguay river, in Paraguay; the port of Montevideo, on the Atlantic ocean; and the ports of Santos, São Sebastião, Paranaguá, San Francisco do Sul, Rio Grande, and Porto Alegre, in the Brazilian states of São Paulo, Paraná, Santa Catarina, and Rio Grande do Sul, respectively. All the ports listed have adequate facilities for the traffic, movement, and conditioning of import and export goods. Between 2001 and 2007, the total cargo movement in the Brazilian ports mentioned grew by 37.38% (from 165,211,291 tons to 226,972,679 tons), while freight movement in the Chilean ports in the area experienced a 57.97% increase (from 23,992,490 tons to 37,901,751 tons).

- Airport infrastructure in the Hub is adequate, therefore all the area can be very well connected by air. IIRSA plans the development of projects for this Hub that involve works in seven airports in the region (two in Brazil, four in Paraguay, and one in Uruguay).

- The MERCOSUR - Chile Hub contains the large hydroelectric dams located on the Paraná and Uruguay rivers, thus ensuring energy connection between Brazil and Paraguay, Brazil and Uruguay, Argentina and Paraguay, Argentina and Brazil, and Argentina and Uruguay. There is also energy connection between Argentina and Chile. By late 2006, the five countries had a total installed capacity of 147,258.53 MW, most of which was located in the Hub's area, with 64.64% of it belonging to Brazil.

  In the Hub's area of influence there is a gas pipeline between Argentina and Chile (from Mendoza to Santiago de Chile), another between Argentina and Brazil (linking San Jerónimo and Uruguaiana), and another one between Argentina and Uruguay (from San Jerónimo to Paysandú).

  Group 5, the "Energy Group," which features twelve major projects related to energy generation and interconnection in the area, has been included in the Hub.

III.8.3. The Hub's Development Potential

The area of influence of the MERCOSUR - Chile Hub represents a market of more than 140 million inhabitants along its 3.22 million km^2, with a gross domestic product of about US$ 892,494.6 million (89.95% of which is contributed by the areas of influence of Argentina and Brazil). Institutionally speaking, this area is undergoing an 18-year long integration process (MERCOSUR).

Looking ahead, the development scheme based on the combination of powerful agricultural production, agribusiness, processing industry, and provision of a wide range of services is expected to continue. The vigorous agricultural production activity will create new pressures on the existing infrastructure.

Space-wise, intermediate cities are expected to grow, which will result in the generation of new, or a gradual increase in existing, transport flows as well as new integration needs. This pressure on infrastructure adds to the one discussed in the paragraph above.

There is a growing trend in the Hub's trade with the rest of the world, with Latin America, and among the Hub's countries themselves, and this situation is expected to continue in the future. Foreign trade corridors (roads, railways, and ports) should be prepared to meet these cargo flows. As far as seaports (Atlantic and Pacific) are concerned, new operational and infrastructure challenges will have to be faced to maintain and improve their efficiency.

The Hub's infrastructure has a high road density, and it may be said to be consolidated in terms of primary roads. However, the foreseeable growth in demand (agricultural production, intermediate cities, foreign trade) will translate into larger traffic volumes, capacity limitations, and the need for a greater road maintenance effort.

Hence, the countries' endeavors should be focused on meeting these challenges through expansion (four lane highways) and improvement (road expansion and paving) works in corridors that may provide for ready access to borders, coastlines, and domestic markets. In addition, rural and local projects may contribute to making the road network denser and increasing agricultural productivity.

To meet the growth in transportation demand, railways play a major role, particularly in the case of agricultural and mineral freight transport.

The increasing demand for energy constitutes an opportunity to strengthen energy integration systems.

III.8.4. The Hub's Groups

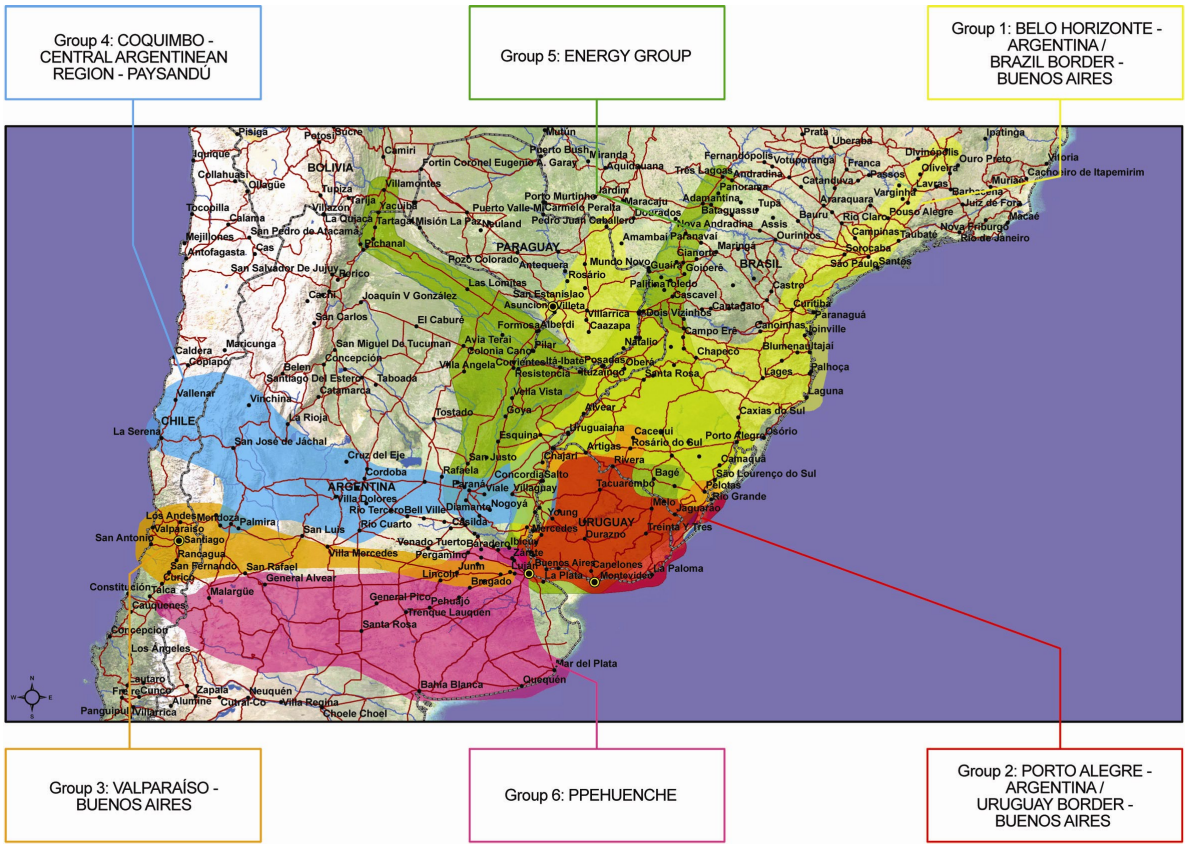
Delegations from the five member countries decided by consensus to bring the number of Hub's groups to six:

Table 134 - Groups Identified in the MERCOSUR - Chile Hub

Groups	Countries Involved
Group 1: Belo Horizonte - Argentina/Brazil Border - Buenos Aires	Argentina - Paraguay - Brazil
Group 2: Porto Alegre - Argentina/Uruguay Border - Buenos Aires	Argentina - Uruguay - Brazil
Group 3: Valparaíso - Buenos Aires	Argentina - Chile
Group 4: Coquimbo - Central Argentinean Region - Paysandú	Argentina - Chile - Uruguay
Group 5: Energy Group	Argentina - Uruguay - Paraguay - Brazil
Group 6: Pehuenche	Argentina - Chile

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

Map 56 - MERCOSUR - Chile Hub's Groups



Group 1: Belo Horizonte - Argentina/Brazil Border - Buenos Aires

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 trade and services flows between the economic centers in Argentina and Brazil.
- Optimize the logistics base so that the industry located in this area can reinforce its competitiveness at the global level.

Map 57 - MERCOSUR - Chile Hub - Group 1

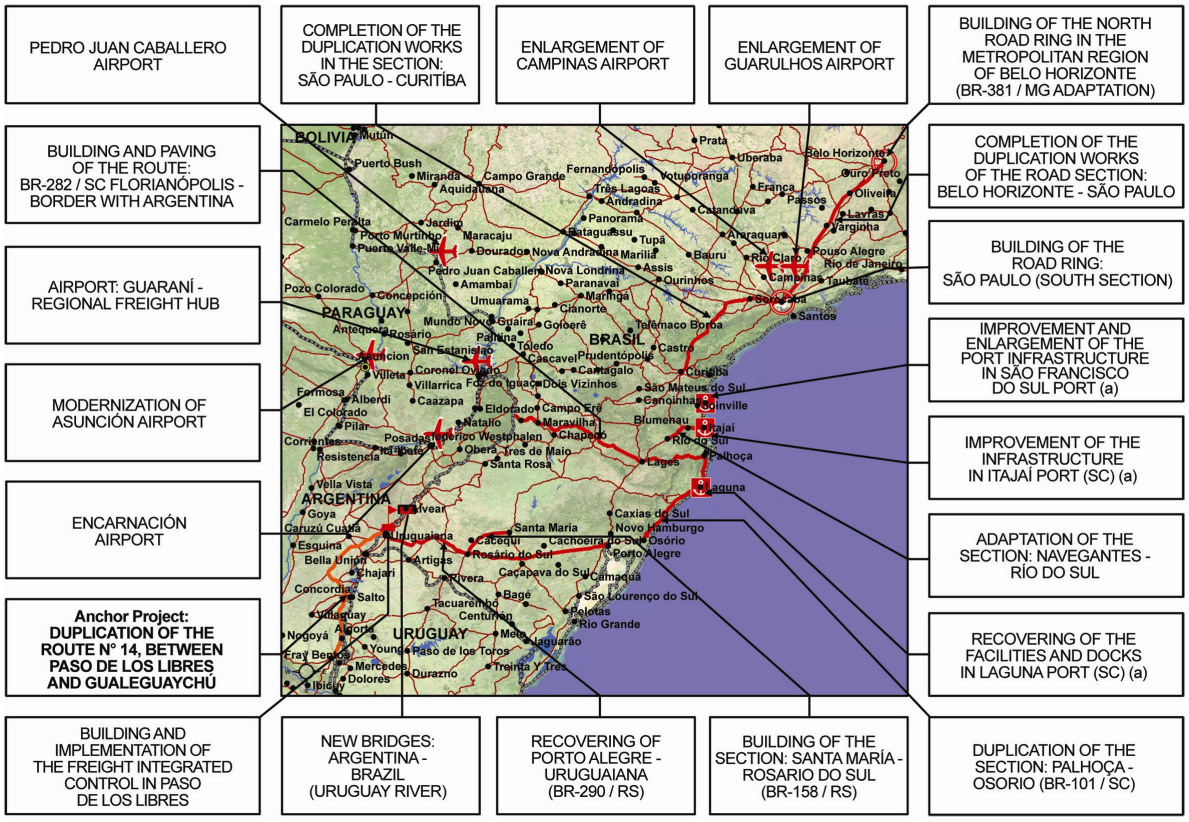


Table 135 - MERCOSUR - Chile Hub - Group 1: Related Investments

MERCOSUR - Chile Hub: Group 1	Estimated Investment (US$ million)
Duplication of the Route No 14, between Paso de Los Libres and Gualeguaychú	780.0
Building and Implementation of the Freight Integrated Control in Paso de Los Libres	10.0
Completion of the Duplication Works of the Road Section: Belo Horizonte - São Paulo	1,318.0
Adaptation of the Section: Navegantes - Rio do Sul	50.0
Enlargement of Campinas Airport	1,400.0
Enlargement of Garulhos Airport	505.0
Improvement and Enlargement of the Port Infrastructure in São Francisco do Sul Port [(a)]	133.0
Improvement of the Infrastructure in Itajaí Port (SC) [(a)]	31.0
Building of the North Road Ring in the Metropolitan Region of Belo Horizonte (BR-381/MG Adaptation)	140.0
Completion of the Duplication Works in the Section: São Paulo - Curitiba	200.0
Modernization of Asunción Airport	0.0
Building of the Road Ring: São Paulo (South Section)	1,800.0
Building and Paving of the Route: BR-282/SC Florianópolis - Border with Argentina	90.0
Building of the Section Santa María - Rosario do Sul (BR-158/RS)	30.0
Duplication of the Section: Palhoça - Osorio (BR-101/SC)	1,200.0
New Bridges: Argentina - Brazil (Uruguay River)	500.0
Recovering of the Facilities and Docks in Laguna Port (SC) [(a)]	25.0
Recovering of Porto Alegre - Uruguaiana BR-290/RS	30.0
Pedro Juan Caballero Airport	2.5
Airport: Guaraní - Regional Freight Hub	50.0
Encarnación Airport	25.0
TOTAL	8,319.5

Note: [(a)] A modification to this project proposed by Brazil is under the consideration of the countries

Group 2: Porto Alegre - Argentina/Uruguay Border - Buenos Aires

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 trade and services flows between the economic centers in Argentina and Brazil.
- Optimize the logistics base so that the industry located in this area can reinforce its competitiveness at the global level.

Map 58 - MERCOSUR - Chile Hub - Group 2

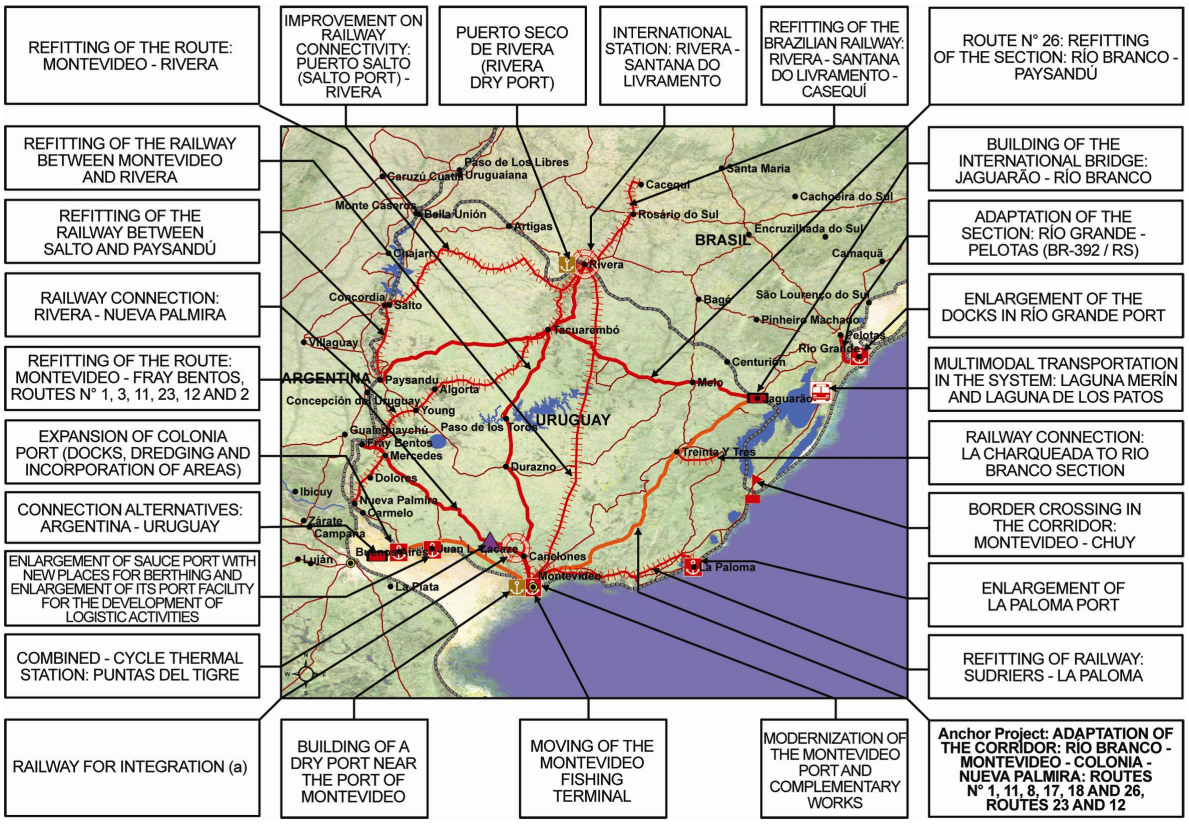


Table 136 - MERCOSUR - Chile Hub - Group 2: Related Investments

MERCOSUR - Chile Hub: Group 2	Estimated Investment (US$ million)
Adaptation of the Corridor: Río Branco - Montevideo - Colonia - Nueva Palmira: Routes No 1, 11, 8, 17, 18 and 26, Routes 23 and 12	246.7
Puerto Seco de Rivera (Rivera Dry Port)	0.0
Improvement on Railway Connectivity: Puerto Salto (Salto Port)-Rivera	0.0
Refitting of the Brazilian Railway: Rivera - Santana do Livramento - Casequí	0.0
Railway Connection: Rivera - Nueva Palmira	0.0
Railway Connection: La Charqueada to Río Branco Section	0.0
Adaptation of the Section: Río Grande - Pelotas (BR-392/RS)	170.0
Enlargement of the Docks in Rio Grande Port	375.0
Building of the International Bridge: Jaguarão - Río Branco	35.0
Border Crossing in the Corridor: Montevideo - Chuy	3.0
Enlargement of La Paloma Port	250.0
Combined-cycle Thermal Station: Puntas del Tigre	170.0
Refitting of the Route: Montevideo-Rivera	88.5
Route No 26: Refitting of the Section: Río Branco - Paysandú	39.8
Refitting of the Route: Montevideo - Fray Bentos 1, 3, 11, 23, 12 and 2	6.8
Refitting of the Railway between Montevideo and Rivera	54.5
Refitting of the Railway between Salto and Paysandú	9.3
Modernization of the Montevideo Port and Complementary Works	169.0
Connection Alternatives: Argentina - Uruguay	0.0
Multimodal Transportation in the System: Laguna Merín and Laguna de Los Patos	0.0
Expansion of Colonia Port (Docks, Dredging, and Incorporation of Areas)	46.0
Enlargement of Sauce Port with New Places for Berthing and Enlargement of its Port Facility for the Development of Logistic Activities	10.0
Moving of the Montevideo Fishing Terminal	35.0
Building of a Dry Port near the Port of Montevideo	25.0
Refitting of Railway: Sudriers - La Paloma	12.0
International Station: Rivera - Santana do Livramento	0.0
Railway for Integration [(a)]	247.0
TOTAL	1,992.6

Note: [(a)] Since the "Railway for Integration" project may include the new railway sections, Uruguay will review what sections are comprised by this project to verify whether the new projects replace this project.

Group 3: Valparaíso - Buenos Aires

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 trade and services flows between the economic centers in Argentina and Chile.
- Optimize the logistics base so that the industry located in this area can reinforce its competitiveness at the global level.
- Facilitate the fact that Chile serves as a logistics platform for the remaining countries of the Hub to develop markets for their products and services in Asia.

Map 59 - MERCOSUR - Chile Hub - Group 3

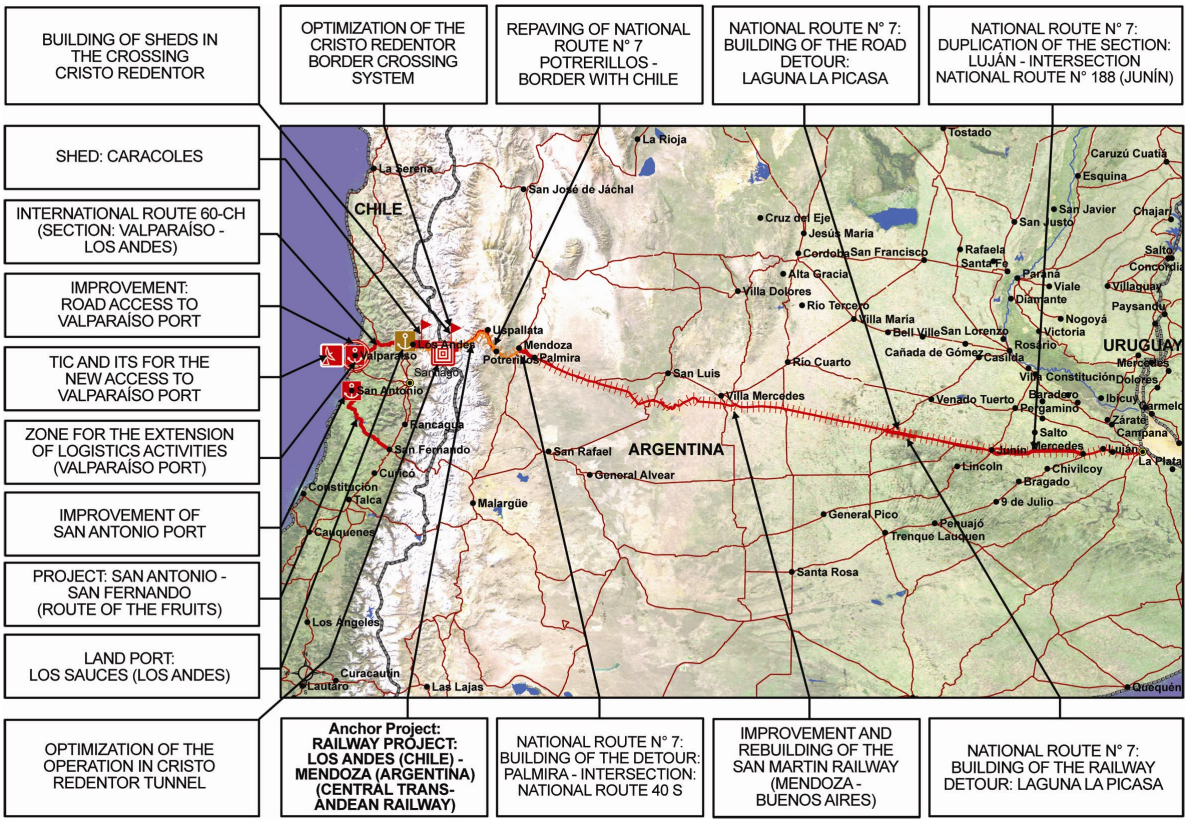


Table 137- MERCOSUR - Chile Hub - Group 3: Related Investments

MERCOSUR - Chile Hub: Group 3	**Estimated Investment (US$ million)**
Railway Project: Los Andes (Chile) - Mendoza (Argentina) (Central Trans-Andean Railway)	4,800.0
Zone for the Extension of Logistics Activities (Valparaíso Port)	45.0
TIC and ITS for the New Access to Valparaíso Port	5.0
Optimization of the Operation in Cristo Redentor Tunnel	2.0
Improvement and Rebuilding of the San Martín Railway (Mendoza - Buenos Aires)	0.0
Optimization of the Cristo Redentor Border Crossing System	7.0
Building of Sheds in the Crossing Cristo Redentor	42.0
Repaving of National Route No 7 Potrerillos - Border with Chile	27.0
National Route No 7: Building of the Road Detour: Laguna La Picasa	20.0
National Route No 7: Building of the Railway Detour: Laguna La Picasa	30.0
National Route No 7: Building or the Detour: Palmira - Intersection: National Route 40S	25.0
National Route No 7: Duplication of the Section: Luján - Intersection National Route No 188 (Junín)	90.0
Shed: Caracoles	18.0
International Route 60-CH (Section Valparaíso - Los Andes)	286.0
Improvement: Road Access to Valparaíso Port	155.0
Land Port: Los Sauces (Los Andes)	12.5
Project: San Antonio - San Fernando (Route of the Fruits)	300.0
Improvement of San Antonio Port	34.5
TOTAL	5,899.0

Group 4: Coquimbo - Central Argentinean Region - Paysandú

STRATEGIC FUNCTION

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

Map 60 - MERCOSUR - Chile Hub - Group 4

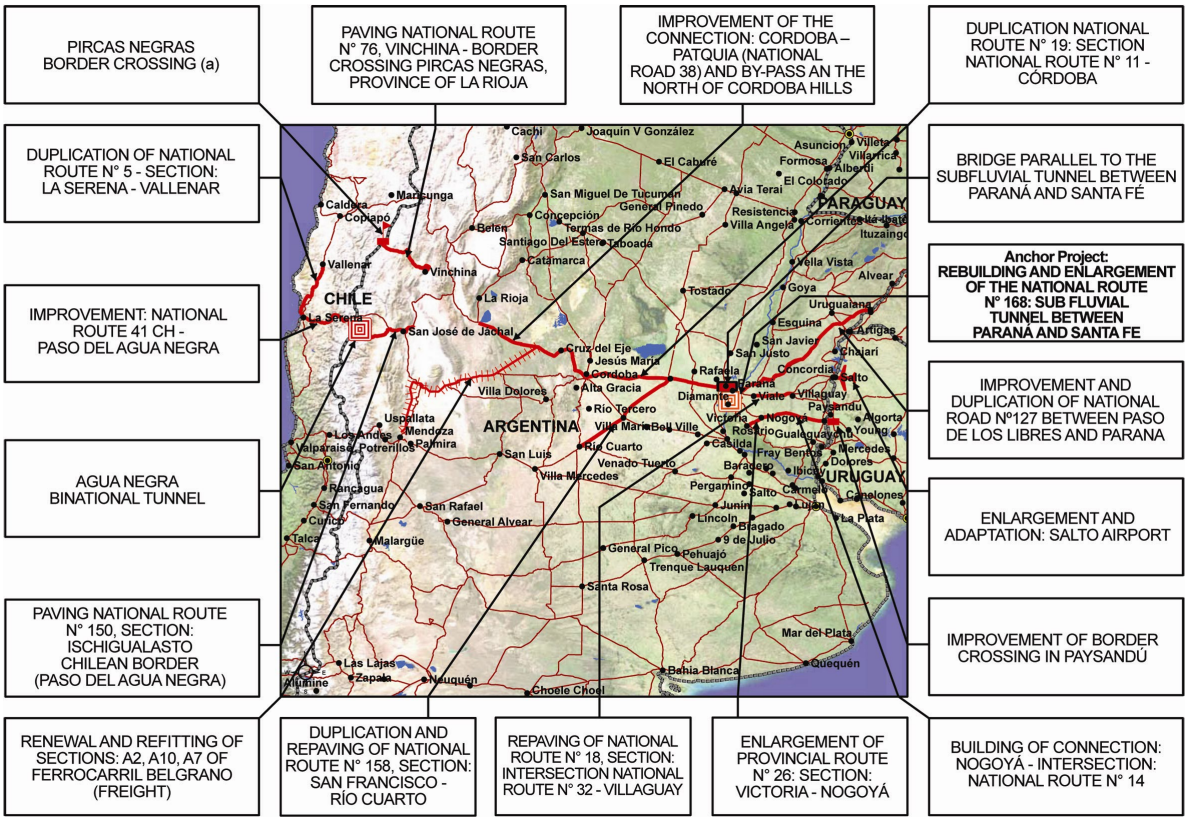


Table 138 - MERCOSUR - Chile Hub - Group 4: Related Investments

MERCOSUR - Chile Hub: Group 4	Estimated Investment (US$ million)
Rebuilding and Enlargement of the National Route No 168: Sub-fluvial Tunnel between Paraná and Santa Fe	44.0
Duplication National Route No 19: Section National Route No 11 - Córdoba	0.0
Pircas Negras Border Crossing [(a)]	30.0
Agua Negra Binational Tunnel	400.0
Duplication National Route N° 5: Section La Serena - Vallenar	330.0
Improvement: National Route 41 CH - Paso del Agua Negra	60.0
Bridge Parallel to the Subfluvial Tunnel between Paraná and Santa Fe	0.0
Improvement and Duplication of National Road N° 127 between Paso de Los Libres and Paraná	0.0
Enlargement of Provincial Route No 26: Section: Victoria - Nogoyá	6.0
Building of Connection: Nogoyá - Intersection: National Route No 14	0.0
Duplication and Repaving of National Route N° 158, Section: San Francisco - Río Cuarto	350.0
Repaving of National Route No 18, Section: Intersection National Route No 32 - Villaguay	10.0
Paving National Route No 150, Section: Ischigualasto - Chilean Border (Paso del Agua Negra)	100.0
Paving National Route No 76, Vinchina - Border Crossing Pircas Negras, Province of La Rioja	100.0
Improvement of the Connection: Córdoba - Patquía (National Road 38) and By-pass in the North of the Córdoba Hills	100.0
Renewal and Refitting of Sections: A2, A10, A7 of Ferrocarril Belgrano (Freight)	225.0
Enlargement and Adaptation: Salto Airport	0.0
Improvement of Border Crossing in Paysandú	0.8
TOTAL	1,755.8

Note: [(a)] Hinge project with Group 5 of Capricorn Hub.

Group 5: Energy Group

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.

Map 61 - MERCOSUR - Chile Hub - Group 5

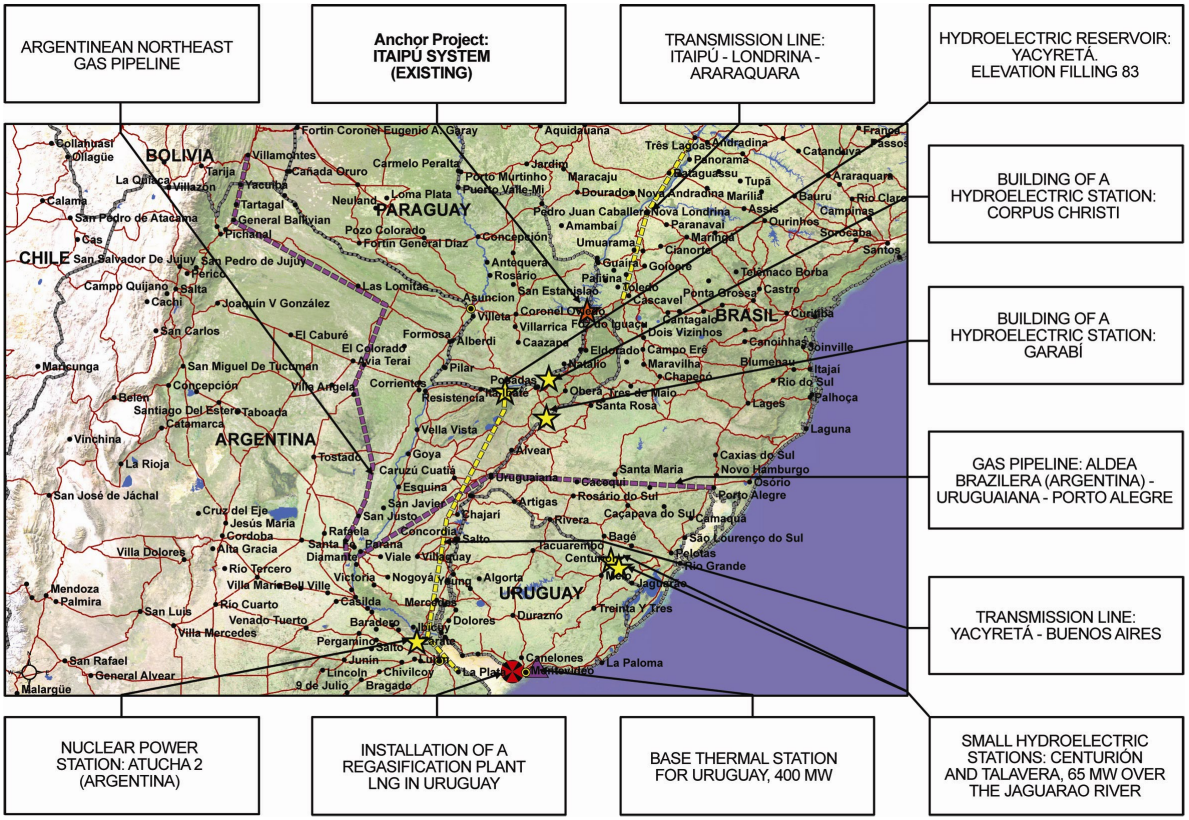


Table 139 - MERCOSUR - Chile Hub - Group 5: Related Investments

MERCOSUR - Chile Hub: Group 5	**Estimated Investment (US$ million)**
Itaipú System (Existing) (*)	16,000.0
Transmission Line: Yacyretá - Buenos Aires	150.0
Nuclear Power Station: Atucha 2 (Argentina)	740.0
Installation of a Regasification Plant LNG in Uruguay	1,090.0
Base Thermal Station for Uruguay, 400 MW	480.0
Small Hydroelectric Stations: Centurión and Talavera, 65 MW over the Jaguarão River	60.0
Building of a Hydroelectric Station: Corpus Christi	4,200.0
Building of a Hydroelectric Station: Garabí	1,700.0
Hydroelectric Reservoir: Yacyretá. Elevation Filling 83	1,200.0
Gas Pipeline: Aldea Brazilera (Argentina) - Uruguaiana - Porto Alegre	510.0
Transmission Line: Itaipú - Londrina - Araraquara	149.1
Argentinean Northeast Gas Pipeline	1,000.0
TOTAL	11,279.1

Note: (*) As this existing project's investments were mostly made before the creation of IIRSA, they are not included in the total amount.

Group 6: Pehuenche

STRATEGIC FUNCTION

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

Map 62 - MERCOSUR - Chile Hub - Group 6

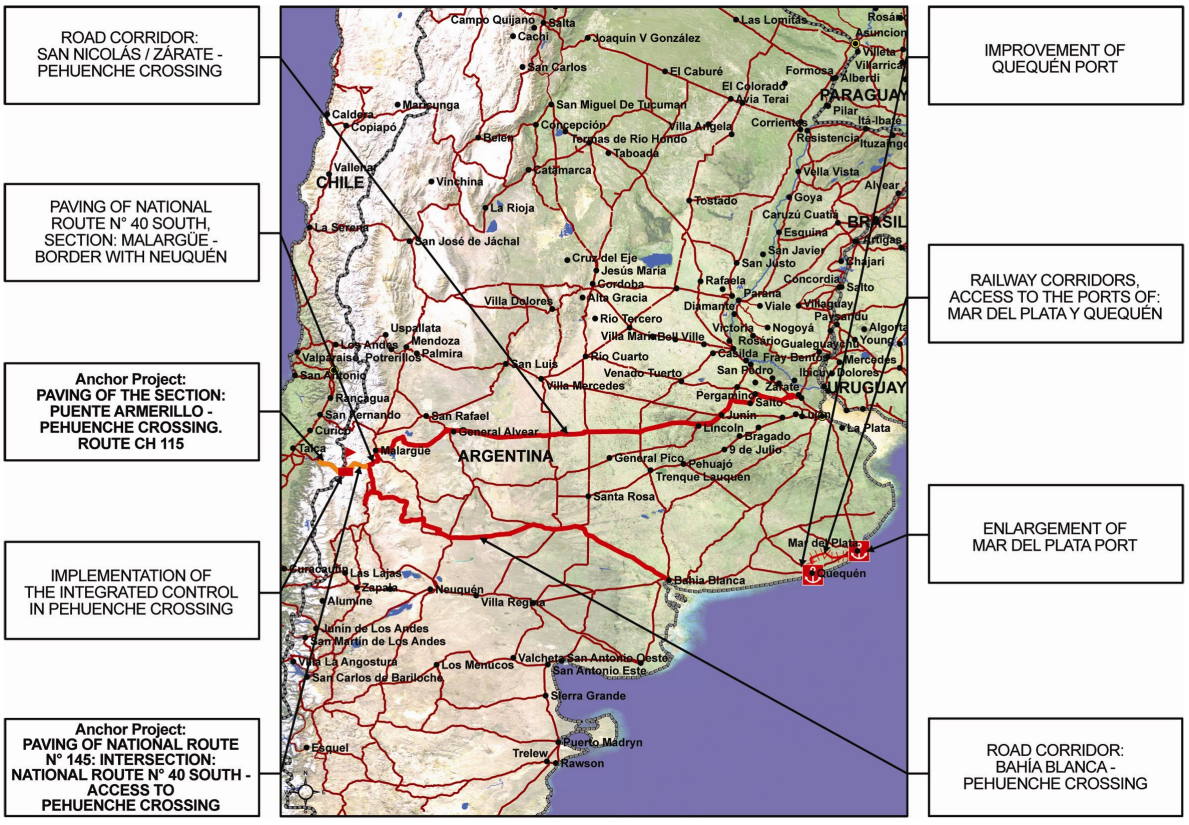


Table 140 - MERCOSUR - Chile Hub - Group 6: Related Investments

MERCOSUR - Chile Hub: Group 6	Estimated Investment (US$ million)
Paving of National Route No 145: Intersection: National Route No 40 South - Access to Pehuenche Crossing	35.0
Paving of the Section: Puente Armerillo - Pehuenche Crossing. Route CH 115	60.0
Road Corridor: Bahía Blanca - Pehuenche Crossing	0.0
Implementation of the Integrated Control in Pehuenche Crossing	2.0
Paving of National Route No 40 South, Section: Malargüe - Border with Neuquén	16.0
Road Corridor: San Nicolás/Zárate - Pehuenche Crossing	0.0
Railway Corridors, Access to the Ports of: Mar del Plata and Quequén	0.0
Enlargement of Mar del Plata Port	0.0
Improvement of Quequén Port	40.0
TOTAL	153.0

III.8.6. The MERCOSUR - Chile Hub's Project Portfolio

General Aspects

The countries have agreed to include one hundred and five projects in the MERCOSUR - Chile Hub, accounting for an estimated investment of US$ 29,399 million, as summarized below:

Table 141 - General Aspects of the MERCOSUR - Chile Hub's Portfolio

MERCOSUR - Chile Hub	Name	Number of Projects	Estimated Investment (US$ million)
Group 1	Belo Horizonte - Argentina/Brazil Border - Buenos Aires	21	8,319.5
Group 2	Porto Alegre - Argentina/Uruguay Border - Buenos Aires	27	1,992.6
Group 3	Valparaíso - Buenos Aires	18	5,899.0
Group 4	Coquimbo - Central Argentinean Region - Paysandú	18	1,755.8
Group 5	Energy Group	12	11,279.1
Group 6	Pehuenche	9	153.0
	TOTAL	105	29,399.0

Sector-based Breakdown

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

Table 142 – Sector-based Breakdown of the MERCOSUR - Chile Hub's Portfolio

Sector/Subsector	Transport		Energy	
	Number of Projects	Estimated Investment (US$ million)	Number of Projects	Estimated Investment (US$ million)
Road	48	9,305.7		
Maritime	10	1,092.5		
Railway	13	5,377.8		
River	3	56.0		
Multimodal	4	70.0		
Air	7	1,982.5		
Border Crossing	7	65.3		
Energy generation			9	9,640.0
Energy interconnection			4	1,809.1
TOTAL	92	17,949.8	13	11,449.1

Project Typology

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

Table 143 - Road Transport Project Typology in the MERCOSUR - Chile Hub

Project Typology	Number of Projects	Estimated Investment (US$ million)
Expansion of road capacity	16	5,021.0
Paving (new works)	7	655.0
Rehabilitation of roads and structures	15	722.7
Bypasses and city accesses	3	1,965.0
Bridges (new and rehabilitation)	4	535.0
Tunnels (new and rehabilitation)	1	400.0
Road maintenance	2	7.0
TOTAL	48	9,305.0

Table 144 - Railway Transport Project Typology in the MERCOSUR - Chile Hub

Project Typology	Number of Projects	Estimated Investment (US$ million)
Railway belt	1	0.0
Building of new railway lines	1	247.0
Refitting of railway lines	11	5,130.8
TOTAL	13	5,377.8

Table 145 - Maritime Transport Project Typology in the MERCOSUR - Chile Hub

Project Typology	Number of Projects	Estimated Investment (US$ million)
Refitting of sea ports	1	375.0
Expansion of land infrastructure in sea ports	8	682.5
New sea ports	1	35.0
TOTAL	10	1,092.5

Table 146 - River Transport Project Typology in the MERCOSUR - Chile Hub

Project Typology	Number of Projects	Estimated Investment (US$ million)
Refitting of existing river ports	2	56.0
Building of new river ports	1	0.0
TOTAL	3	56.0

Table 147 - Air Transport Project Typology in the MERCOSUR - Chile Hub

Project Typology	Number of Projects	Estimated Investment (US$ million)
Refitting of airports	1	0.0
New airports	1	25.0
Enlargement of airports	5	1,957.5
TOTAL	7	1,982.5

Table 148 - Energy Project Typology in the MERCOSUR - Chile Hub

Project Typology	Number of Projects	Estimated Investment (US$ million)
Energy generation	9	9,640.0
Energy interconnection	4	1,809.1
TOTAL	6	11,449.1

Table 149 - Border Crossing Project Typology in the MERCOSUR - Chile Hub

Project Typology	Number of Projects	Estimated Investment (US$ million)
Infrastructure for new border control centers	4	45.0
Enlargement of infrastructure/capacity in border control centers	2	19.5
Reconditioning of existing infrastructure in border control centers	1	0.8
TOTAL	7	65.3

Table 150 - Multimodal Transport Project Typology in the MERCOSUR - Chile Hub

Project Typology	Number of Projects	Estimated Investment (US$ million)
Transfer stations	4	70.0
TOTAL	4	70.0

Anchor Projects

The countries identified seven anchor projects in the Hub, totaling an estimated investment of US$ 5,965.7 million, according to the following detail:

Table 151 - MERCOSUR - Chile Hub's Anchor Projects

Group	Anchor Projects	Estimated Investment (US$ million)	Financing Source	Scope	Project Stage
1	Duplication of the Route No 14, between Paso de Los Libres and Gualeguaychú	780.0	Public	National	Execution
2	Adaptation of the Corridor: Río Branco - Montevideo - Colonia - Nueva Palmira: Routes No 1, 11, 8, 17, 18 and 26, Routes 23 and 12	246.7	Public/ Private	National	Execution
3	Railway Project: Los Andes (Chile) - Mendoza (Argentina) (Central Trans-Andean Railway)	4,800.0	Private	National	Pre-execution
4	Rebuilding and Enlargement of the National Route No 168: Sub-fluvial Tunnel between Paraná and Santa Fe	44.0	Public	National	Execution
5	Itaipú System (Existing) (*)	16,000.0	Public	Binational	Completed
6	Paving National Route No 145: Intersection: National Route No 40 South - Access to Pehuenche Crossing	35.0	Public	National	Execution
	Paving of the Section: Puente Armerillo - Pehuenche Crossing. Route CH 115	60.0	Public	National	Execution
	TOTAL	5,965.7			

Note: (*) As this existing project's investments were mostly made before the creation of IIRSA, they are not included in the total amount.