

FINAL REPORT ON CONSULTANCY ASSISTANCE TO THE GENERAL SECRETARIAT RELATIVE TO REGARDING THE 8 API-COSIPLAN MULTILATERAL PROJECTS

(January 30, 2017, original in Portuguese)

1) INTRODUCTION

The objective of this report is to present to the member countries of UNASUR, in an integrated and objective manner, the results of the work undertaken by the Consultant on Infrastructure, in support of the General Secretariat of the Union. The analysis included the preparation of a diagnosis of the eight Projects of Infrastructure selected from the Portfolio of Priority Projects (API) of COSIPLAN, as well as the formulation of driving actions.

The 8 projects, that involve 3 or more countries, are the following:

API 3 – NORTHEASTERN ACCESS TO THE AMAZON RIVER, which foresees investment in up to USD 52,759,000 and involves Brazil, Colombia, Ecuador, and Peru.

API 4 – ROADWAY CORRIDOR CARACAS - BOGOTÁ - BUAVENTURA/QUITO; which foresees investment up to USD 3,350,000,000 and involves Venezuela, Colombia, and Ecuador.

API 11 - BIOCEANIC RAILROAD CORRIDOR PARANAGUÁ – ANTOFAGASTA, which foresees investment up to USD 5,102,177,392 and involves Brazil, Paraguay, Argentina, and Chile.

API 12 – FOZ ROAD CONNECTION - CIUDAD DEL ESTE - ASUNCION - CLORINDA, which foresees investment up to USD 774,206,392 and involves Brazil, Paraguay, and Argentina.



API 16 – CONNECTING ROUTES BETWEEN VENEZUELA (CIUDAD GUAYANA) - GUYANA (GEORGETOWN) - SURINAME (SOUTH DRAIN - APURA - ZANDERIJ – MOENGO) -INCLUDING THE CONSTRUCTION OF THE BRIDGE OVER THE CORRENTINE RIVER-, which foresees investment up to USD 301,800,000 and involves Venezuela, Guyana, and Suriname.

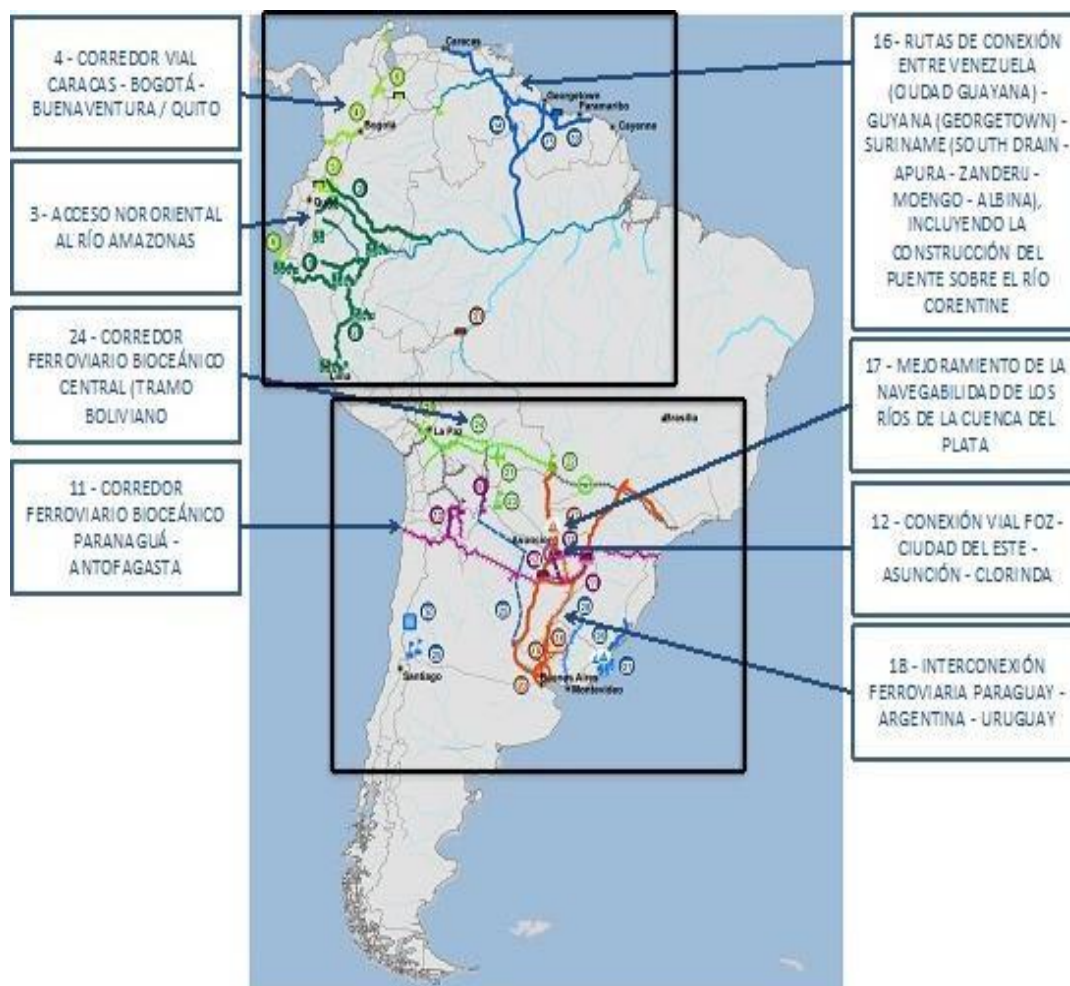
API 17 - IMPROVEMENT OF THE NAVIGABILITY IN DEL PLATA BASIN RIVERS, which foresees investment up to USD 1,169,998,216 and involves Argentina, Uruguay, Paraguay, Brazil, and Bolivia.

API 18 – RAILROAD INTERCONNECTION PARAGUAY - ARGENTINA – URUGUAY, which foresees investments up to USD 577,300,000 and involves Uruguay, Argentina, and Paraguay.

API 24 - CENTRAL BI-OCEAN RAILROAD CORRIDOR - CBFC (BOLIVIAN SECTION), which foresees investment up to USD 7,300,000,000 and involves Brazil, Bolivia, and Peru.

These 8 projects may be grouped into two sets that clearly address the regions and their economic and social interests, as depicted in Figure 1.

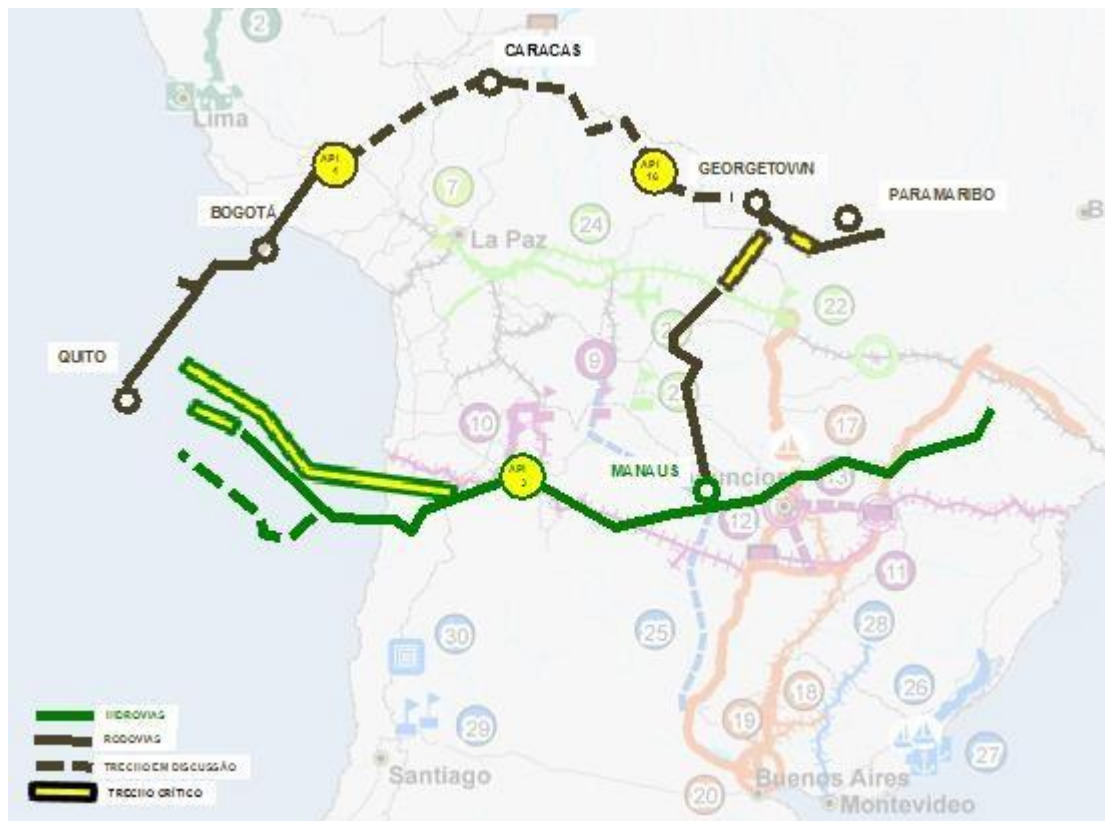
Figure 1



On the North, priority APIs comprise the areas of the Amazon, the Guyanese Shield, and the Andean region, which are presented in Figure 2. These API projects propose the establishment of essential infrastructure for the connectivity of the countries inside those areas, as well as the improvement of

accessibility of those regions currently isolated or imprisoned due to precarious geographic conditions.

Figure 2



To the South, the priority APIs cover the areas of Capricorn, the Paraguay-Paraná Waterway, and the Central Interoceanic region, as it appears in Figure 3. These API projects propose the establishment of railroads, roads, and waterway corridors that may create cheaper logistic options for the central region of South America aimed at gaining access to the ports of the Atlantic and the Pacific. This new access may in turn have positive impact on the systems for person and cargo movement, while increasing national and regional competitiveness.



Figure 3



2) EVALUATION OF PROJECTS

It is necessary to determine that the comments and evaluation here represented are the exclusive responsibility of the Consultant, and reflect his vision of the projects.

The analysis was undertaken based on the information collected from the authorities of the countries involved in the eight projects selected. In this regard, the main purpose was making a diagnosis and defining a set of driving actions that may

contribute to the dynamic nature of the selected infrastructure works.

➤ **API 3 – NORTHEASTERN ACCESS TO THE AMAZON RIVER**

The projects covered by API 3 are the following:

- Development of navigation in the Putumayo River.
- Development of navigation in the Morona River.
- Development of navigation in the Napo River.
- Construction of the Cargo Port in Morona.
- Construction of the Providencia Port.

Figure 4 shows the structure of the API 3.

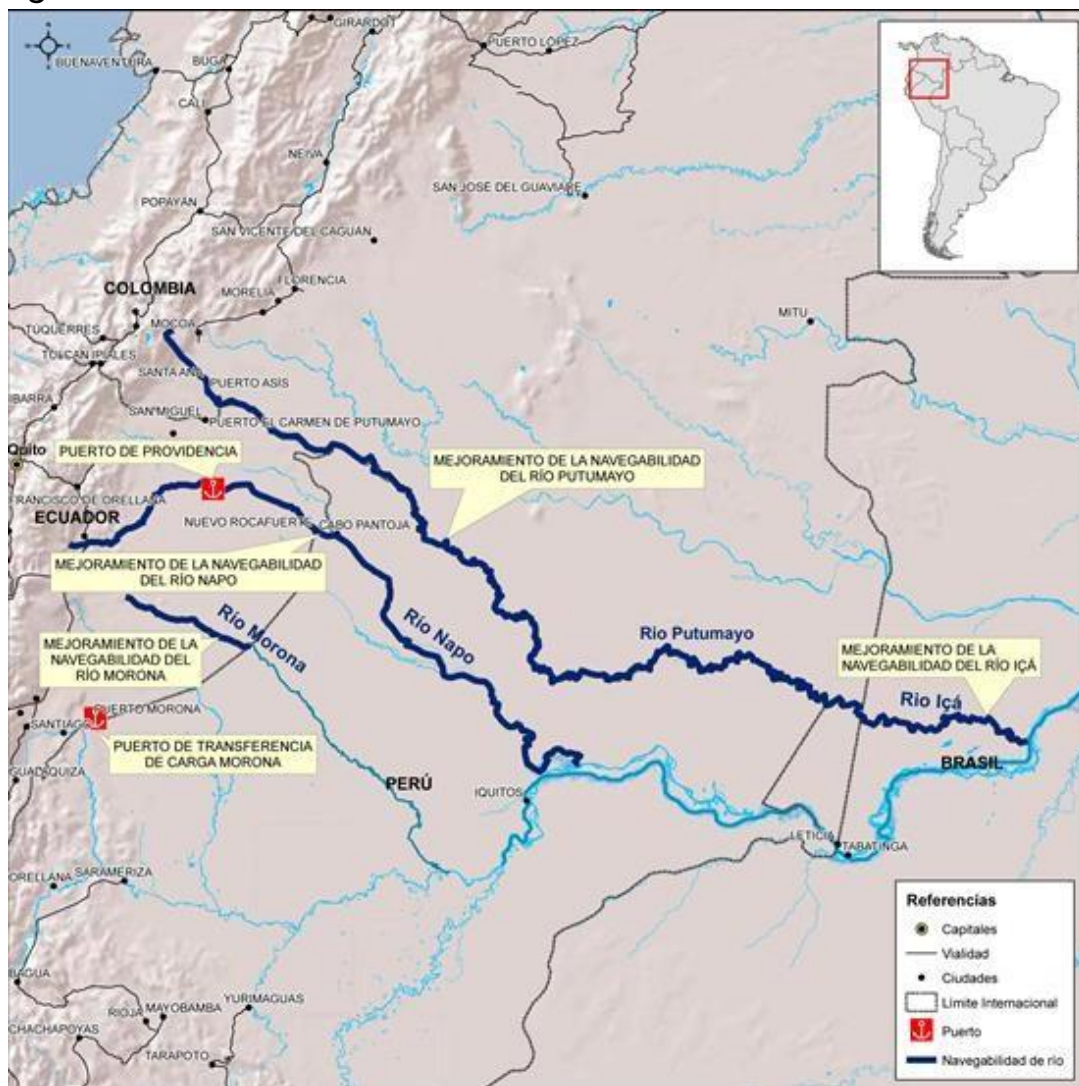
Based on the contacts made and comments collected from national senior officers, the conclusion points to a lack of consensus among the involved countries with respect to the priority of these projects.

Peru is giving priority to API-5, which proposes the development of the waterways to the Port of Yurimaguas (Hualiaga, Maranon, and Ucayali Rivers). This country considers that this alternative is the one that best addresses Peru's development strategy.

Apparently, navigation on the Napo, Morona, and Putumayo Rivers would be less interesting from the economic point of view for the Peruvian Government, although the country does recognize that the development of navigation on these rivers would bring social benefits for riparian populations.

Figure

4



Ecuador is undertaking deeper studies on the navigability of the Napo River, an initiative of increasing interest for the country.

Such studies, developed in cooperation with the Government of Peru, provide for a need of investment

amounting to between USD 10.3 to USD 12.7 million, depending on the scenario.

In addition to this investment, and according to the authorities consulted, Ecuador understands that it is required to negotiate and to implement a navigation and trade agreement between Ecuador, Peru and, Brazil, in order to allow for free navigation throughout the region and a better exploitation of commercial and investment opportunities.

According to the consultations held, Ecuador considers that navigation on the Morona River, since it covers but a short section of the Ecuadorian territory, it is not logistically relevant for the country. Meanwhile, navigation on the Putumayo River would imply, in a general manner, security risks, inasmuch as it constitutes an unstable area.

The most relevant project for Colombia, within this context, is precisely navigation on the Putumayo River, as it may be fundamental for logistical development in the country, as well as for fuel transportation.

Colombia coordinated the development of preliminary studies which suggest the need for deepen action. It is required to subsidize the evaluation of the environmental impact, as well as to support environmental licensing for the waterway.

As evidenced by the aforementioned situations, although the waterways under the API 3 have structural limitations that restrict their transportation capacity, they still may constitute an important vector for social development of the riparian communities, and for trade between Ecuador, Peru, Colombia and Brazil. The main requirement is that they function in market sections which are more fit to their operation conditions.

Additionally, the requested investments is relatively low, considering the impracticability of promoting deeper draught in these waterways. The aforementioned investment is capital in order to improve navigation conditions and to encourage the installation of navigation support equipment. Such actions may be carried out as navigation keeps intensifying.

The following are identified promotion actions that in the short term may further invigorate the API 3:

- Support of the negotiating process for a navigation agreement between BRAZIL, PERU, ECUADOR, and COLOMBIA that would allow for further intense exploitation of these waterways.
- Support of the Government of Ecuador in the project to establish an alliance with private initiative for the investment in and operation of the waterway in the Ecuadorian section of the Napo River.
- Support of the Government of Colombia in the identification of non-reimbursable resources to deepen the studies on the waterway of the Putumayo River.

➤ **API 4 – ROAD CORRIDOR CARACAS - BOGOTÁ - BUENAVENTURA / QUITO**

The projects under the API 4 are the following:

- Road Corridor Bogotá – Cucuta.
- Road Corridor Bogotá – Buenaventura.

Figure 5 shows the structure of API 4.

The project provides for investment aimed at paving and extending roads in about 1,126 km. All investments will be carried out in Colombian territory.

This investment is currently under way. Some sections are yet to be granted; the ones under the 4th round of licensing prepared by the National Agency for Infrastructure (ANI, in Spanish).

No actions to boost the API 4 as a whole were identified.

➤ **API 11 – BI-OCEAN RAILROAD CORRIDOR
PARANAGUÁ - ANTOFAGASTA**

The projects under the API 11 are the following:

- Construction of the Cascavel - Foz de Iguazu Railway.
- Optimization of the Ñeembucú-Bermejo River Connection.
- Construction of the railway Ciudad Del Este - Ñeembucú
- Rehabilitation of the Section Resistencia - Avía Terai - Pinedo Railway.
- Rehabilitation of the Avía Terai - Metan Railway Section.
- Rehabilitation of the Salta - Socompa Railway Section.
- Ciudad del Este - Foz de Iguazú Railway Bridge and Loading Yard.
- Construction of the Guarapuava - Eng. Bley Railway Bypass at the Paranagua - Cascavel connection.
- Socompa - Antofagasta Railroad Corridor.

Figure 6 shows the structure of the API 11.

The projects involve the construction of 1,224 kilometers of railways, as well as the construction of 2 railroad bridges, and the rehabilitation of 1,865 kilometers of railway.

The conclusion of observations is that this action is still in a very preliminary stage, and it might not have solid support from the countries involved, at least not with priority that this kind of investment requires.

The Government of Paraguay concluded the feasibility study for the construction of the Ciudad Del Este-Ñeembucú railroad connection, which would serve for cargo and passenger transportation.

Figure 5



The studies on the Paraguayan railway provide for the construction of an electrified railway with a strong emphasis on passengers transportation, a feature that is not compatible with the existing railway systems in Brazil and Argentina –where the other connecting systems would be located.

Investment is estimated at USD 669 million and, although the study includes a provisional schedule starting in July 2017 and concluding in December of 2019, it may seem that the railway is not of part of the strategic actions programmed by Paraguay. *Figure 6*



The actions under the API 11 are currently paralyzed in Brazil and in Argentina, with few advances attained, and they are not inserted in the priority investment programs of those countries.

In Brazil, the project is not included in any investment program of the Federal Government.



The State Government of Paraná has stopped the licensing process over the railway sections under the API 11, in spite of considering the project as a priority. The reason behind this is a lack of appropriate instruments for fostering the implementation, and the paralysis is a reality although the project has been positively received by investors and operators who are willing to participate in such investment for the implementation of the railway.

The estimated investment required for the implementation of the two railway sections - Foz de Iguazu to Ciudad del Este International Railway Bridge, Foz de Iguazu to Cascavel Railway, and Guarapuava to Eng. Bley Railway - is over USD 2 billion.

In Argentina, according to the representatives of the Government who were contacted, the investment in these railroad sections is not considered as a priority.

The Government of Chile and FERRONOR, concessionaire of the railway sections in Chile, are engaged in the exploitation of the connection with Argentina, and for such a purpose, they have signed an agreement with the Government of Argentina, aimed at the installation of a logistic platform in the region of Salta.

Additionally, FERRONOR understands that it is necessary to assess the possibility of recovering certain Argentinian railway sections, to allow for the exploitation of the railroad corridor from Antofagasta to Resistencia, in the border with Paraguay. The company also assumes that the connection with Bolivia through the presently abandoned railway is a possibility to be assessed, as well.

The existing studies on the PARANAGUÁ-ANTOFAGASTA Railway Corridor are completely out of date. In

order to implement the scheduled actions, it would be necessary to make new railway studies.

The following are identified actions that may be developed to foster the API 11:

- Collection of resources to further develop the studies on the Paranagua-Foz de Iguazu railway connection, taking advantage of the current strong interest by Brazilian railway operators and users to participate in the initiative to achieve the required investment for the project.
- Joint evaluation with the Government of Argentina of a proposal development of studies on the technical and economic feasibility of rehabilitating the Resistencia (Argentina) to Socompa (Chile) railway connection, to tie in with the connection of FERRONOR up to Antofagasta.

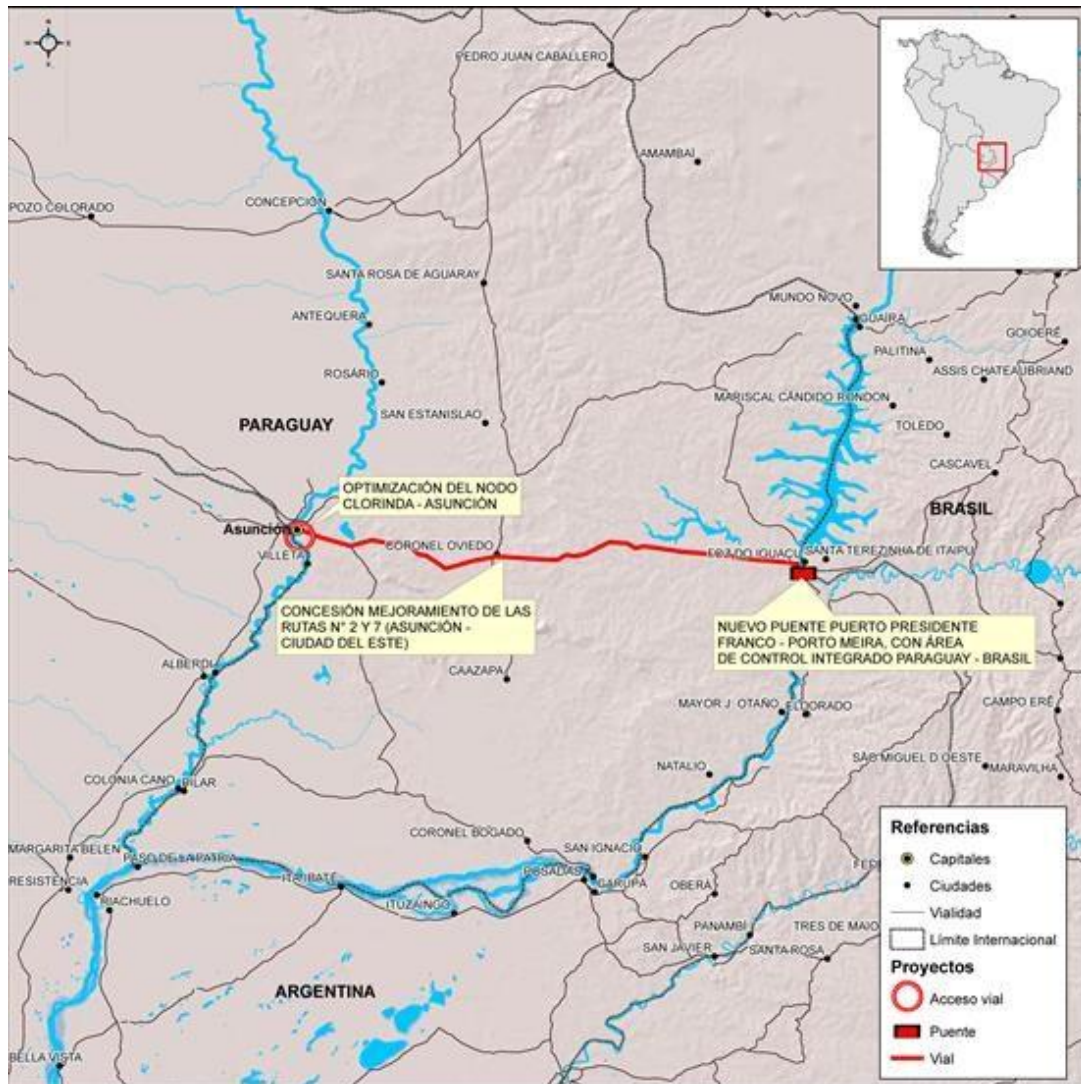
➤ **12 - FOZ - CIUDAD DEL ESTE - ASUNCION - CLORINDA CONNECTION VIAL**

The projects under the API 12 are the following:

- Optimization of the Clorinda – Asunción connection.
- Construction of the Presidente Franco - Puerto Meira road bridge, with the Integrated Border Control between Paraguay and Brazil.
- Licensing and improvement of 2 and 7 Routes between Asunción - Ciudad Del Este.

Figure 7 shows the structure of the API 12.

Figure 7



API 12 involves the improvement of 297 kilometers of roads, the construction of two road bridges, between Brazil and Paraguay and between Paraguay and Argentina, in addition to two Integrated Border Control Centers, between Brazil and Paraguay and Paraguay and Argentina.

The strategic projects program of the Government of Paraguay includes investment up to USD 600 million in actions under the API-12, as follows:



- Investment at USD 400 million for the Ciudad Del Este-Asunción connection (2 and 7 Routes), through a public-private association already contracted in 2016; a 143 kilometers extension is proposed.
- Investment at USD 200 million for access to the second Brazil/Paraguay bridge (Puerto Franco - Foz de Iguazu), to be contracted in 2016 -private financing for project and works. The construction of 40 kilometers of railways and two bridges is proposed, within a period of two years.

The studies regarding the Clorinda-Asunción connection were concluded with indication of investment from USD 242 million to USD 251 million, depending on the solution for border control, that is, a single integrated control or double control center. The two options include a second bridge on the Paraguay River.

API 12 has priority treatment by the Government of Paraguay, holder of most of the shares of the project. The preparation for the execution of complementary actions is in an advanced stage.

The Asunción-Ciudad Del Este route is under licensing contract awarding by the Government of Paraguay, and the technical studies related to the Clorinda-Asunción connection have already been concluded.

In Brazil, the construction of the bridge over the Paraná River, connecting Foz de Iguazu to Ciudad del Este, is in environmental licensing stage, and investment are assured within the Government Budget.



The measure identified as the required action to enhance API 12 is the promotion of consensus between the Governments of Argentina and Paraguay, based on the proposals for settlement as includes in the study carried out under the coordination of the Government of Paraguay.

➤ **API 16 - CONNECTION ROUTES BETWEEN VENEZUELA (CIUDAD GUAYANA) - GUYANA (GEORGETOWN) - SURINAME (SOUTH DRAIN - APURA - ZANDERIJ - MOENGO**

The projects under the API 16 are the following:

- Connection routes between Venezuela (Ciudad Guayana) - Guyana (Georgetown) - Surinam (Apura - Zandrij - Paramaribo).
- Construction of the bridge over the Corentine River.

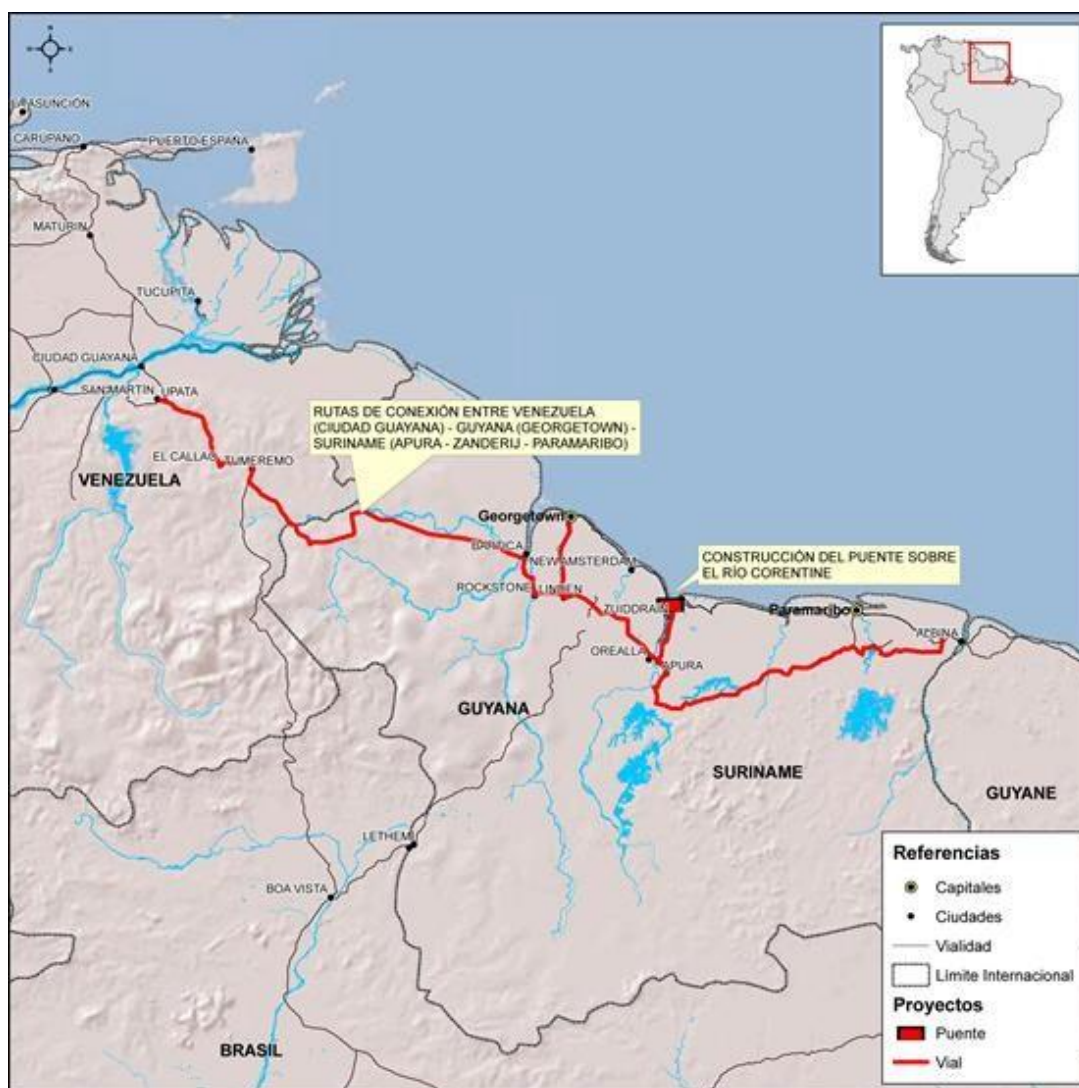
Figure 8 shows the structure of API 16.

API 16 is virtually paralyzed, although it is considered as a project with high priority by the Governments of Guyana and Suriname.

Currently, the political differences between Venezuela and Guyana make it impossible to continue with the project of the road corridor between the two countries.

The representatives of the Government of Guyana suggest the inclusion of the construction of the road between Linden and Lethem, which would complete road connection between Georgetown and Boa Vista and Manaus in Brazil, a project with strong support by Brazil.

Figure 8



The Governments of Guyana and Suriname prepared the Terms of Reference aimed at ensuring the contracts to develop the feasibility studies on the engineering project of the Bridge over the Corentine River and its road accesses.

The following are actions that may foster API 16:

- Identification of non-reimbursable resources aimed at further development of studies on the Bridge over the Corentine River and the connections in Suriname and Guyana; as well as on the financial restructuring of the construction project for the Linden to Lethem section and a deep-water port to complement the road connection with Brazil.
- Evaluation of the possibility of favoring financing of these projects, considering the economic restrictions of Guyana and Suriname to take charge of this kind of costs. This evaluation includes the possibility of including the project into the planned construction of hydroelectric plants in the region, either as compensatory actions of these undertakings, or through accounts receivable from energy generation projects.

➤ **API 17 – IMPROVEMENT OF NAVIGABILITY IN DEL PLATA BASIN RIVERS**

The projects under the API 17 are the following:

- Improvement of navigability in the Paraguay River, between Apa and Corumba.
- Improvement of navigability in the Paraguay River, between Asunción and Apa.
- River forecast system in the Paraguay River (Apa-Asunción).
- Improvement of navigability in the Alto Paraná River (upstream in Saltos del Guaira).
- Rehabilitation and maintenance of the Tamengo Canal.

- Improvement of navigability in the Tietê River.
- Improvement of navigability in the Paraguay River, at Asuncion confluence.
- Deepening of the Paraná River at the confluence of La Plata River.
- Improvement of navigability in the Alto Paraná River.
- Improvement of navigability in the Uruguay River.

Figure 9 shows the structure of API 17.

API 17, covering waterways on the Paraguay, Paraná, and Uruguay Rivers, is particularly relevant for cargo logistics in the iron mineral industry from the region of Corumbá (Brazil), and for soy transportation through the Paraguay River.

Navigation in the Alto Paraná River is hampered by the Hydroelectric Plant of Itaipu, a fact that compromises the integration with the Brazilian section and that of the Tietê River.

In addition, navigation in this section is severely restricted due to capacity limitations at gate of the Hydroelectric Plant of Itacereta.

In spite of budgetary limitations and environmental difficulties experienced by the countries when undertaking the required interventions, and with a view to correcting the restrictions upon navigability in certain sections, we suggest as a capital action to contribute to the development of navigation in the Del Plata River Basin, consensus decisions among the countries to stimulate better exploitation of the economic advantages offered by navigation in the rivers of the basin.

Figure 9



API 17 has proper institutional structure, bringing together all of the countries involved and acting upon the solution of the obstacles that hinder the development of the waterway (CIH-Intergovernmental Committee of the Waterway Paraguay-Paraná).



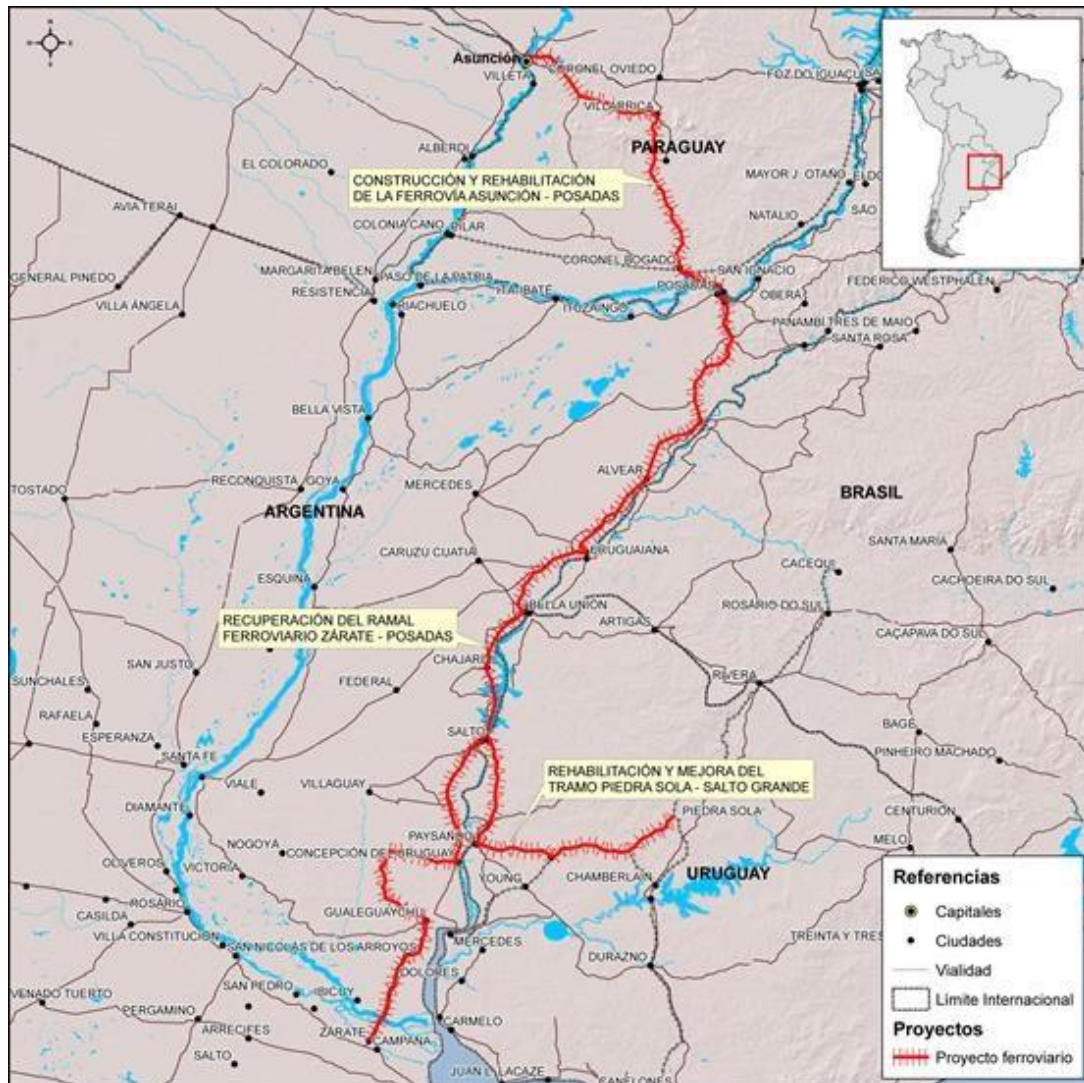
➤ **API 18 – PARAGUAY - ARGENTINA - URUGUAY RAILROAD INTERCONNECTION**

The projects under the API 18 are the following:

- Construction and rehabilitation of the Asunción – Artigas Railway.
- Rehabilitation and modernization of the Piedra Sola - Salto Grande railway section.
- Construction and rehabilitation of the Artigas – Posadas Railway.
- Rehabilitation of the Zarate – Posadas Railway.

Figure 10 shows the structure of API 18.

Figure 10



API 18 is developed through the Uruguay railway section, but does not show progress with respect to the Argentina and Paraguay railway sections.

The Government of Uruguay is carrying out an investment program for railway infrastructure for an amount of USD 200 million. Part of this investment includes railway sections under API 18 in Uruguayan territory.

This investment is financed with resources from the Mercosur Structural Convergence Fund (FOCEM, in Spanish) and is distributed between two projects:

- Focem I, Pintado - Rivera section, with a total extension of 422 km and investment at USD 75 million. The investment in this section is aimed at the modernization of the railway, and the projects is expected to conclude by August 2017. A part of the section is covered by API 18, and it is aimed at improving access conditions to Montevideo Port.
- Focem II - Piedra Sola - Salto Grande section, with a total extension of 327 kilometers and investment at USD 125 million. The investment in this section are oriented towards modernization of the railway, and it is expected to start by February 2016 and to end in 36 months. The investment in this section are under API 18, and it is aimed at improving the condition of the railway that connects Argentina with the railway section with access to Montevideo Port.

With these investment, Uruguayan railways will have uniformed technical and operation characteristics in all their sections:

- Class III Route, according to ALAF 5-026 standard.
- Cargo capacity: 18 tons/axis.
- Circulation speed: 40 km/h.

The project for the railway connection from Posadas, in Argentina, to Asuncion (with an extension of 330 kilometers) is at assessment stage by the Government of Paraguay. The



existing railway is deteriorated and its layout is not adequate for the present territorial configuration of Paraguay.

For the Ministry of Public Works and Communications of Paraguay, the priority action would be the reconstruction of the Posadas-Artigas section, with 60 kilometers of extension, as it would allow for capture of the demand for transportation in the southeast region of Paraguay. The critical aspect of this section is the crossing of the Hydroelectric Dam of Yacyreta.

There is still no clear definition of the design of the railway between Artigas and Asuncion, inasmuch as the present layout is not appropriate to serve as a basis.

Paraguay indicates that the priority requiring assessment is the connection from Posadas (Argentina) to Fran (Paraguay) (of approximately 60 kilometers), where a logistic platform would be installed to serve both this corridor and the Paranagua-Antofagasta railway corridor.

As informed to the Consultant, the railway project in Paraguay is not a part of the strategic actions programmed by the present Government, and up to the present, no implementation model has been considered.

The officers from the Government of Argentina informed the Consultant that investment in the railroad section of Argentina is not a priority for that country, at least not on a short-term basis.

It is necessary to evaluate real competitiveness of this railroad corridor, given the existence of a road corridor that provides the same services (Parana - Paraguay Waterway).

The following actions are suggested in order to boost API
18:



- Promotion of understanding between the Governments of Argentina and Uruguay regarding the investment required for recovering the Salto - Posadas section.
- Establishment of a traffic agreement between Argentina and Uruguay to share the railways between the two countries.
- Acceleration in the definition of the project for the construction of the railway on Paraguayan territory.

➤ **API 24 – CENTRAL BI-OCEAN RAILROAD CORRIDOR (CFBC)**

The projects under the API 24 are the following:

- Construction of the Red Andina-Red Oriental interconnection railway in Bolivia.
- Rehabilitation and modernization of Red Andina and Red Oriental railways in Bolivia.
- Rehabilitation de NOVOESTE railway in Brazil (Santos - Corumba).
- Construction of the Hito IV – Puerto de Ilo railway.

Figure 11 shows the structure of API 24.

Bolivia has given high priority and strategic relevance to API 24; it is not the case in Brazil. In addition, the project still depends on pending negotiations with Peru.



The Government of Bolivia concluded the feasibility studies on the railroad sections in Bolivian territory, as part of the so designated Central Bi-ocean Railroad Corridor.

The studies suggest the need for investment at USD 7.3 billion, where USD 6 billion would be allocated to infrastructure and USD 1.3 to rolling stock.

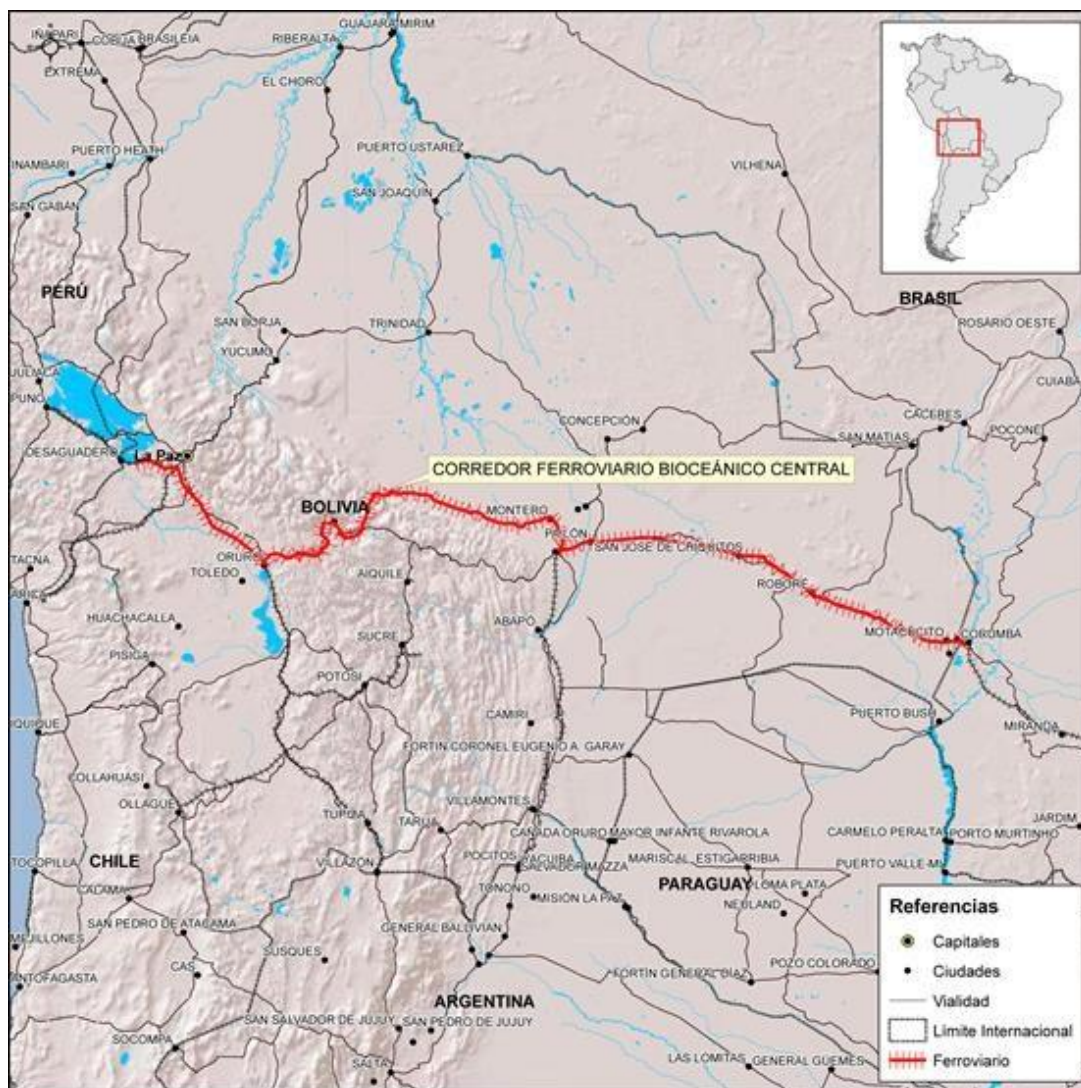
No project for a railway connecting Bolivia to Puerto de Ilo has been proposed.

As informed to the Consultant, Peru considers that in general terms, the railroad connection with Porto de Ilo would not bring economic benefits for the country. Additionally, there are important questions to be assessed with respect to the involvement of a private railway company, as well as to the capacity limitations of Porto de Ilo.

We were informed that it would be required to assess the possibility of a railroad connection with the Port of Matarani, using the existing Peruvian railway. However, the difficulty represented by the difference in the width of the tracks with respect to the railway of Bolivia (1,435 m in Peru and 1 m in Bolivia) is also recognized.

In Brazil, the railway has been awarded on a licensing process, and due to a lack of investment by the concessionaire, it has been abandoned. Therefore, this section would not be a priority for the Government within its entire railway system.

Figure 11



Currently, using the existing railroad sections in Brazil and Bolivia is not considered as a priority. However, on a short-term basis, these sections may create conditions for Bolivia's access to the Atlantic Ocean, through the Santos Port, as such actions demands modest investment.

The main actions to boost API 24 are the following:

- Definition of the executing model to be adopted for the implementation of the project in Bolivia (Public Works and/or Public-Private Alliance).
- Confirmation of the need to carry out complementary studies aimed at preparing the project for contracting, especially with respect to contract model and financial structuring.
- Verification of the possibility of getting the Government of Bolivia to offer financial contributions, Government assets, or guarantees to obtain direct financing -in the event the project is based on public works or license financing, in the case of a Public-Private Alliance (PPA).
- Agreement with the Government of Peru on the layout of the railway and the maritime port to be used by the CFBC. The Government of Peru has also considered the option of the Port of Matarani, using the existing railroad system, and in spite of the existing incompatibility between the tracks (CFBC is 1 m wide and the Peruvian railway is 1.435 m wide).
- Support of the Government of Brazil for the negotiation oriented towards the inclusion of investment in the recovery of operational conditions of NOVOESTE, which represents 47% of the CFBC extension.
- Definition, by means of an agreement between Brazil and Bolivia, of the rules to stimulate and guarantee the right to circulation of the trains through the railways of each country, regardless of their origin and destination.



3) PROPOSALS FOR SHORT-TERM ACTIONS

Following the contact established with national officers, it was possible to identify several possibilities that may boost those projects without development restrictions and which have political support by the countries involved.

The following projects were selected in a joint manner with the countries:

- (API 3) – North-Eastern Access to the Amazon River, Napo River section, Ecuador.
- (API 12) Road Connection between Foz – Ciudad del Este – Asuncion, and Clorinda, in Paraguay.
- (API 16) - Connection routes between Venezuela – Guyana and Suriname, section of the Bridge over the Corentine River, between Guyana and Suriname.
- (API 24) - Central Bi-ocean Railway Corridor, of Bolivia.

Figure 12 shows the projects selected, on the northern area.

Figure 12



Two actions are suggested for API 3, which could contribute to the promotion of the projects:

- Support of Ecuador in the financial structuring of the proposal to improve navigability conditions in the NAPO River, Ecuador.
- Support of Colombia in identifying non-reimbursable resources aimed at enhancing the studies on the improvement of navigability in the PUTUMAYO River.

Two actions aimed at supporting the Governments of Guyana and Suriname are suggested for API 16, which may boost

projects and contribute to their implementation, thus reducing the relative isolation exhibited by these countries:

- Support of identification of non-reimbursable resources aimed at undertaking more comprehensive studies for the construction of the bridge over the CORENTINE RIVER, as well as road accesses in both countries.
- Support of financial structuring of the project for the LINDEN to LETHEM road connection, which has a feasibility study. This project demands a financial structuring that considers the economic conditions of the countries, as well as the fact that this infrastructure is aimed at improvement of the social and economic development of the region.

Figure 13 shows the projects that may be boosted in the south area, on a short-term basis.

Figure 13



As per API 24, considering that the railroad connection with the Port of Ilo still depends on the arrangements agreed upon by the Governments of Peru and Bolivia, the suggested actions on a short term basis, which may promote the project, and which are backed by the firm decision of the Government of Bolivia (Figure 8), are the following:

- Support of the Government of Bolivia in the financial structuring of the project for INTERCONNECTION (construction of 729 km of railway).
- Support of the Government of Bolivia in the financial structuring of the projects for the recovery and



modernization of the existing railroad sections (Red Oriental and Red Andina).

- Support of the Government of Bolivia for the legal process with the Government of Brazil, so that the investment in the Brazilian railroad section (NOVOESTE) are included in the process under way for re-negotiation of the license.
- Request to the Government of Brazil to give priority to the process of license re-negotiation with NOVOESTE, aimed at promoting rehabilitation of the Santos-Corumba section.

In API 12, the Governments of Argentina and Paraguay have jointly developed a proposal for the settlement of the Asuncion-Clorinda connection. A short-term action that may foster the implementation of this measure would be to support the Government of Paraguay, the coordinator of the project, in its efforts identify resources to improve the projects and to formulate their financial structuring.

The principal driving action would be economic and financial structuring of the projects within the profile of the existing investors and financiers.

Within this context, the General Secretariat of UNASUR has achieved preliminary arrangements with the China-Latin America Investment Fund (CLAIFUND), which has expressed its interest in receiving information and assessing the feasibility of participating in the investment for the projects under the API portfolio.

CLAIFUND has proved being an interesting alternative to support projects with minimum conditions for promotion, as long as they are high priorities for the relevant countries. In this sense, two possibilities for cooperation were identified:

- Financial support to undertake detailed or complementary studies necessary for the contracting of the project.
- Financing of the investment, when sufficient technical and economic-financial information is available.

Under the coordination of the General Secretariat of UNASUR, a working meeting was held with representatives of Bolivia, Ecuador, Guyana, Paraguay, and Suriname, aimed at discussing interest and possible strategy to launch the selected projects which are interesting for the mentioned countries.

Following this meeting, the following information and guidelines may be listed:

(API 3) – Northeastern Access to the Amazon River, Napo River section, Ecuador

- This project is given high priority by the Government of Ecuador and may be structured in the modality established in the Law for Public-Private Alliances of Ecuador.
- The investment is not oriented towards river dredging, but to the improvement of the navigable section of the waterway (50 m.).
- It is required to consider maintenance costs of the waterway, including exploitation cost of the Port of Providencia.



- It is necessary to define economic-financial structuring of the project and to carry out the relevant Environmental Impact Study.
- It is required to establish a navigation agreement among the countries involved (Brazil, Peru, and Ecuador), allowing for free navigation on the waterway.
- It is necessary to define the conditions of financing and guarantees for the project, upon the conclusion of the structuring of the project and its framework, in line with the priorities of the country.
- It is required to have support for the identification of non-reimbursable resources, with the goal of making feasible the undertaking of the necessary complementary studies.

(API 12) - Connection Vial Foz – Ciudad del Este - Asuncion – Clorinda, in Paraguay

- The works for the improvement of the Ciudad del Este-Asuncion section have already been contracted and are about to start.
- The Asuncion-Clorinda section has concluded the improvement studies, which have been approved by the Governments of Paraguay and Argentina.
- A proposal for non-reimbursable resources has been mentioned, aimed at detailing the project for the second bridge over the Paraguay River; this may allow for the continuation of the contracting process for the works.

(API 16) – Routes for Connection between Venezuela – Guyana and Suriname, section of the Bridge over the Corentine River between Guyana and Suriname.

- Suriname and Guyana agreed upon the Terms of Reference for the feasibility study and the detailed project on the Bridge over the Corentine River.
- Suriname has a Memorandum of Understanding (MoU) signed with the Bank of China for the financing of the construction of the bridge.
- A request must be presented to CLAIFUND for non-reimbursable resources to undertake the studies and the project.

(API 24) - Central Bi-ocean Railroad Corridor of Bolivia

- Bolivia is interested in presenting to the CLAIFUND the proposal for the financing of these works.
- There is no restriction for the provision of sovereign guarantees by the country over the financing operation.
- The Government has an agreement with private companies, holders of railroad concessions in Bolivia, so that the Bolivian Railroad Infrastructure Company (EBIF, in Spanish) can carry out the investment in the sections under concession, both in the urban and rural sections.
- Private companies would be in charge of the operation of trains.
- The resources required to undertake this investment amount to USD 7.3 billion, including the rolling stock -or USD 6 billion only for infrastructure.

It is clear that projects under API 3, 12, and 16 need resources for pre-investment aimed at deepening studies, thus defining the financing model.

The only project that offers objective conditions to be presented as an opportunity for the contracting of investment or financing, would be the Central Bi-ocean Railroad Corridor project, in those sections under the responsibility of the Government of Bolivia.

The General Secretariat of UNASUR has promoted arrangements with the Government of China to mobilize financing mechanisms and to verify the possibility of obtaining the required financial support to promote the selected projects.

With this purpose, the China-Latin America Investment Fund (CLAIFUND) and the EXIMBANK of China were contacted.

A videoconference with the executives of CLAIFUND and EXIMBANK was held, where the details of the projects were presented.

From the videoconference held with the executives of CLAIFUND, it became clear that the nearly USD 30 billion fund does not carry out financing operations. It is oriented towards direct investments with ventures carrying out projects in Latin America, as long as they are incorporated in association with Chinese companies.

The fund may hold up to a 40% of the required capital, and projects should be presented to the fund by Chinese investors.

EXIMBANK is a mere financier and does not carry out direct investments.

EXIMBANK only evaluates projects by Chinese companies and in projects involving Chinese companies for implementation.

The following are observations regarding the presented projects:

- China cannot invest in or finance projects with Paraguay since the countries do not have diplomatic relations.
- EXIMBANK may provide financial support for the projects requiring complementary studies, particularly the project of the Bridge over the Corentine River (API 16), inasmuch as both Guyana, as well as Suriname have cooperation agreements with Chinese companies.
- EXIMBANK will study an option to provide support to the waterway project of the Napo River in Ecuador.
- EXIMBANK explained that Chinese companies already know about the project on the Bolivian railroad section of API 24, and that it is considered as a strategic project.
- EXIMBANK was informed that the Central Bi-ocean Railroad Corridor (CFBC) does not compete with the Brazil/Peru Railway, under study by the Government of China. These corridors provide service to specific regions and markets, and above all, they are different in nature.
- EXIMBANK was also informed that more than half of the CBRC is comprised by existing railroad sections that will be refurbished and modernized, thus demanding lower investment.

4) PROPOSAL FOR STRUCTURAL ACTIONS

Infrastructure projects demand strong implementation of public resources. This is particularly true for those projects aimed at leveraging economic and social development in regions where productive chains are restrained due to a lack of infrastructure, and where such infrastructure would make feasible competitive insertion in the international market.

The fundamental issue hampering adequate advance of projects is the difficulty for structuring financing, in an environment where investment capacity of Governments is limited and the demand for investment by the State is enormous.

In this context, the projects aimed at meeting the internal needs of the countries, take over the dispute for resources face to projects aimed at meeting regional objectives.

Thus, based on the consultations and comments by high officers of the countries of UNASUR, it was possible to initially determine that the priority given by the countries to the selected projects, although validated by the National Coordinators, does not necessarily correspond to the expectations regarding execution. The exception to this occurs when the actions under the integration projects also correspond to initiatives that take into consideration local priorities.

In addition, it was possible to observe that the efforts launched with non-reimbursable resources, made available for the development of the required studies for project implementation, do not translate into products with the minimum requirements for implementation, by instance:

- Detailed engineering studies showing the environmental impact of interventions and the costs for project implementation.
- Market studies identifying the benefits created by the project and the possibility of capturing those benefits for investment return.
- Structuring of the project as a model of sustainable entrepreneurship, which identifies the sources of resources for implementation and that ensures return within compatible terms.

At the same time, it would be possible to implement actions that do not require representative investments and that could stimulate the integration of the countries and improve the use of existing installed infrastructure.

The following are some of such actions:

- Adoption of measures to facilitate intraregional trade, which accelerates customs transit of products.
- Establishment of rules that stimulate trade and integration, by means of fluvial and railroad transport.

There is strong evidence on the need to establish dynamic mechanisms for the validation of priorities. These could be reviewed and tailored based on the political dynamics of the countries and of the objective conditions for the implementation of projects.

Another finding is the need to review instruments used for the preparation and support of projects, aimed at advancing the creation of a structure for the management of projects that could be instrumented by means of:



- Installation of more effective processes in the planning of actions, allowing for proper control of project progress, impacts estimation, and identification of corrective measures, aimed at reaching the defined goals.
- Implementation of formal commitments by the countries for the development of the planned actions so that these do not hinder the results of the project as a whole.

The creation of an Office for the Management of Projects is suggested (OGP-UNASUR, in Spanish), within the scope of the General Secretariat of UNASUR, with a technical structure that would provide support to COSIPLAN in the management of priority projects.

This office could have the support of the banks for development that operate within the region (BID/CAF/BIRD), which are the most interested entities in achieving greater efficiency in the implementation of the projects.

The scope of this office would be technical coordination of the process for the reevaluation and redesign of priority actions in support of COSIPLAN, through the Working Group on Financing and Guarantees.

The reevaluation would initially involve the redesign of priority actions based on the guidelines defined by COSIPLAN, for example:

- Privileging investment in projects that promote the optimization of the existing infrastructure over the construction of new infrastructures.

- Adopting the concept of articulated infrastructure network in replacement of the concept of isolated corridors.
- Operating an implementation logic with investment stages and shorter execution horizons, in order to allow for adequate performance of actions in line with the political dynamics of the countries.
- Monitoring the adherence of actions to the strategy of development of social and productive chains in each country and of the growth of intraregional trade.
- Offering logistic alternatives that lead to healthy competition, avoiding the construction of logistic solutions promoted through obstacles to alternative solutions; and observing the recommendations offered by the Working Group of Transportation and Logistics of COSIPLAN - Red Log.

Based on this new institutional design, it is possible to develop validation processes for priority actions, which may contribute to avoiding those problems that currently hinder the implementation of these actions, such as:

- Lack of commitment in the relevant areas in the countries, which are responsible for the execution of investments, to the actions defined within the scope of COSIPLAN.
- Lack of coordination between priority actions of investment as defined by COSIPLAN and the priorities defined in the programs of action of each country.
- Lack of adherence of priority actions to the budget and operational possibilities in each country.



Once that these priority actions are defined, the OGP-UNASUR will carry out the planning for the implementation of projects, observing the following:

- Clear definition of the stages to be implemented under the project.
- Definition of the goals to be reached at each stage.
- Definition of a feasible schedule, validated with the responsible entities for each stage.
- Definition of the responsible bodies in each country for the implementation of each stage.

It is recommended that the planning of actions be validated through a formal term of commitment by each country involved, in order to guarantee the absence of continuity solutions.

OGP-UNASUR would carry out the control of the execution of the plan for implementation in support of COSIPLAN, pointing out any deviations, risks as well as the results achieved by each action.

In addition to the structuring of the OGP-UNASUR, and with the purpose of improving the management of priority actions, it is necessary to create objective conditions for the expansion of investment capacities on infrastructure in the countries, leading to the creation of financing mechanisms that, as an example may resolve fiscal limitations, such as:

- Creation of mechanisms to capture value generated by the project (added value of real assets, increase in tax collection, reduction of logistic costs, etc.).

- Creation of guarantee funds over financing with the purpose of minimizing the fiscal effects of indebtedness.
- Development of models for public-private alliances that are attractive for private investments and that will complement public investments.

COSIPLAN may develop this work through the Working Group on Financing and Guarantees, coordinated by Brazil.

At the same time, in order to improve the conditions for financial structuring of the projects, it is fundamental to improve project preparation aimed at implementation.

For such a purpose, a fund of non-reimbursable resources is suggested to facilitate contracting for the required studies aimed at preparing the projects to be implemented, particularly, in countries with relatively slow economic development.

Development banks, which are the main stakeholders in the financing of projects, could be consulted to promote a mechanism for the establishment of such a fund.

OGP-UNASUR may be the manager in obtaining these resources, which may guarantee efficiency in their assignment and achievement of high-level quality in the preparation of projects.

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BERNARDO FIGUEIREDO
Consultant

TO THE
SECRETARY GENERAL OF UNASUR
QUITO, ECUADOR