

INITIATIVE FOR THE INTEGRATION OF THE REGIONAL  
SOUTH AMERICAN INFRASTRUCTURE -  
IIRSA



## ANNEX 7

# Results of the GTEs of the Andean Hub and the Paraguay-Paraná Waterway Hub

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Minister of Public Works, Services and Housing  
Bolivia

IX Meeting of the Executive Steering Committee - IIRSA  
December 4th and 5th, 2007, Montevideo, Uruguay





REPUBLIC OF BOLIVIA  
MINISTRY OF PUBLIC WORKS, SERVICES AND HOUSING



**I.I.R.S.A**

**INITIATIVE FOR THE INTEGRATION OF THE REGIONAL SOUTH AMERICAN INFRASTRUCTURE**

Montevideo, December 4th, 2007



# ★ CONTENT ★



1 Report on the IIRSA meeting: Andean Hub.

2 Report on the Paraguay – Paraná Waterway Hub (HPP, in Spanish).



# Report on the IIRSA meeting: Andean Hub



On August 22nd and 23rd, 2007, the meeting of the Technical Executive Group (GTE, in Spanish) of the Andean Hub was held in the city of Santa Cruz de la Sierra (Bolivia). The updated Business Vision (VN, in Spanish) of the Hub was presented and the works of the groups were analyzed.

The *Technical Executive Groups (GTEs)* helped the countries involved in the Andean Hub to extend their common knowledge of each group of projects contribution, through physical integration, to the sustainable development of the Hub

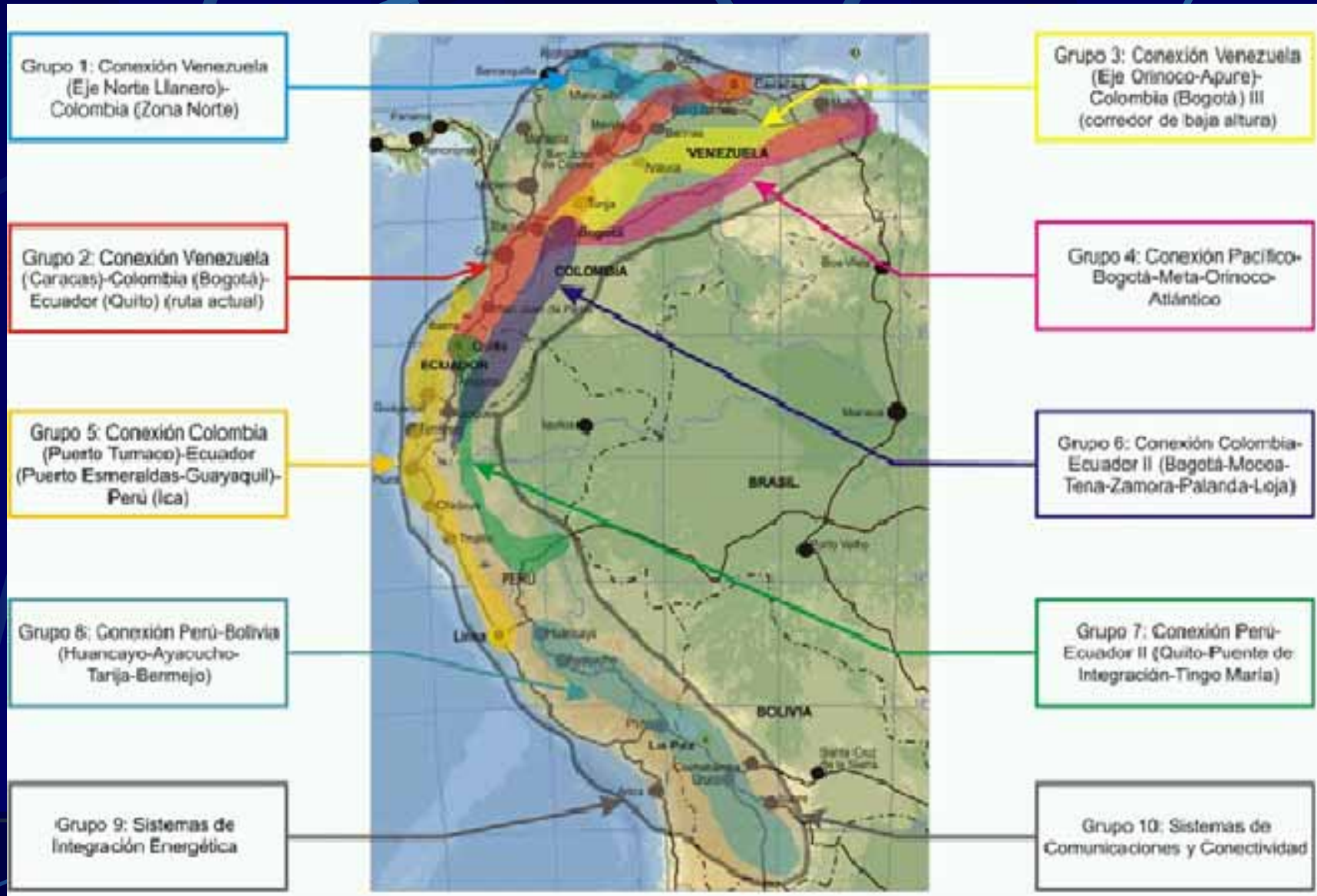
As regards the grouping of projects, the most important change in the Andean Hub was the elimination of Group 9 (Connection: Lima – Arequipa – Tacna; Arequipa – Juliaca; Ilo – Desaguadero – La Paz). In other Hubs, projects remained the same.



# Report on the IIRSA meeting: Andean Hub



## Grouping of the Andean Hub (modified)



# Report on the Paraguay – Paraná Waterway Hub



# Competitive Advantages of Water Transportation (HPP)



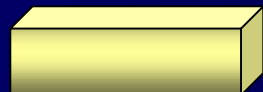
With 1 liter diesel fuel, 1 ton. is carried



29 km



101 km



251 km



Massive and homogeneous load

80 trucks of 20 ton.



40 wagons of 40 ton.



1 LIGHTER : 1,500 ton



1 Convoy = 15 Lighters (22,500 ton)



# Importance of the HPP in Bolivian exports



**TOTAL OF EXPORTS  
BOLIVIA (2006)**

**4,000 MM US\$  
(100%)**

## HIDROCARBONS

**2,000 MM US\$  
(50%)**

## MINING

**800 MM US\$  
(40%)**



**2,000 MM US\$  
(50%)**

## Non-traditional Products

**1,200 MM US\$  
(60%)**

**240 MM US\$  
(20%)**

**1,5 MM ton (2006)**

## HPP

**960 MM US\$  
(80%)**



Source: CADEX, 2007







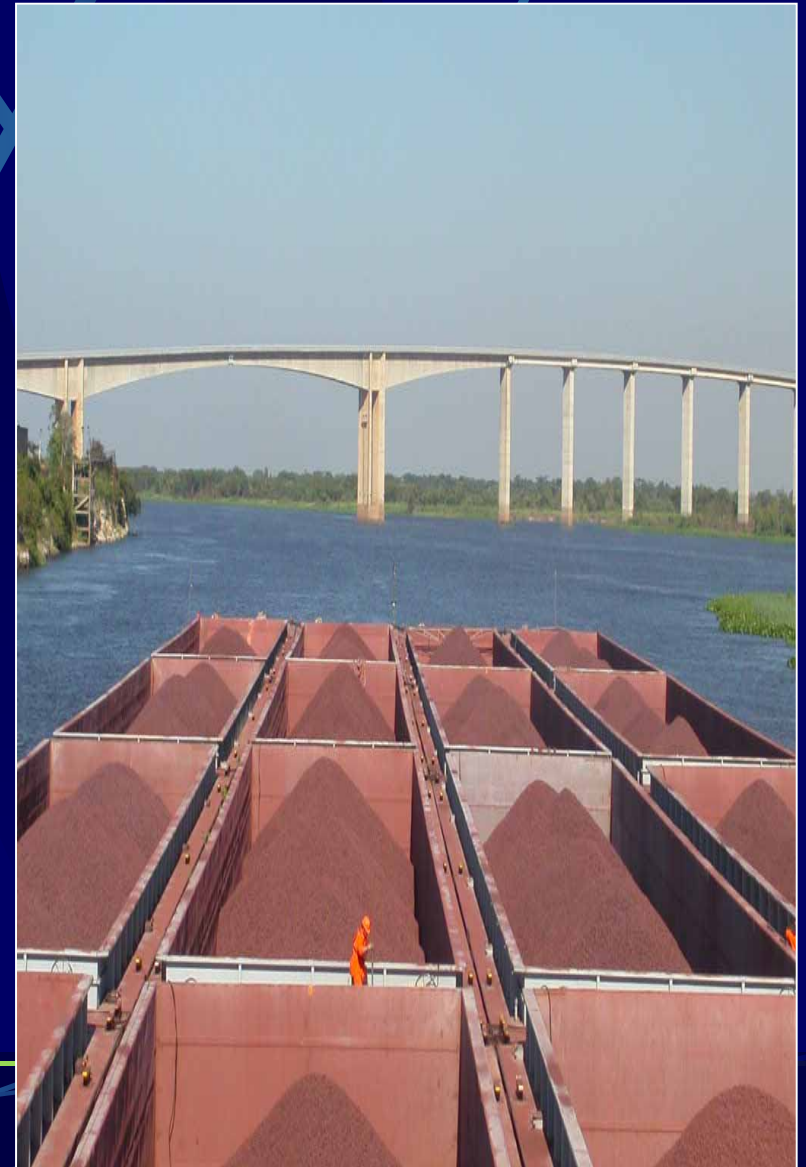
# Exports growth through the HPP



## A. Sustained growth of exports

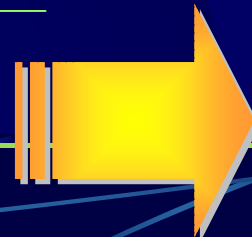
YEAR	EXPORTS VOLUME TAMENGO CANAL (TON)
1997	361,000
1999	270,180
2000	753,638
2002	900,892
2004	1,015,608
2005	1,302,000
2006	1,500,000

Source: CADEX, 2007



## B. Mineral products of Mutún → JSB

# 10,0 MM ton/year





## Report on the Paraguay – Paraná Waterway Hub



On August 21st and 22nd, 2007, the meeting of the Technical Executive Group (GTE, in Spanish) of the Paraguay – Paraná Waterway Hub was held in the city of Santa Cruz de la Sierra (Bolivia), with the purpose of starting the indicative territorial planning process of the IIRSA for the Hub.

It was completed the 1st Stage of the Planning process, in which the following projects were identified: transportation, energy and communication. Also, the Groups of Projects for each Hub were set with their respective Strategic Function and Anchor Project.

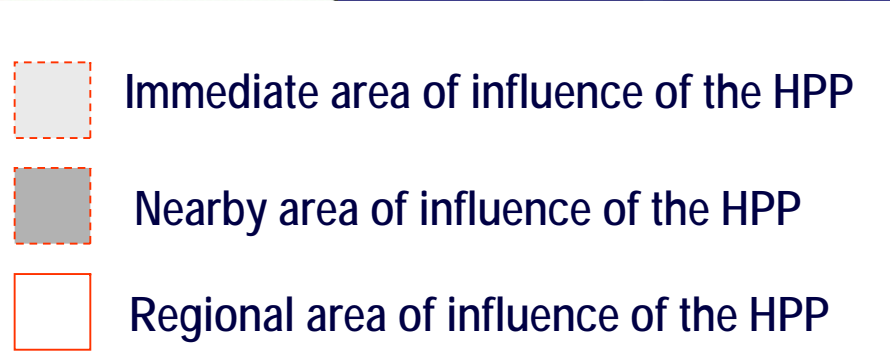
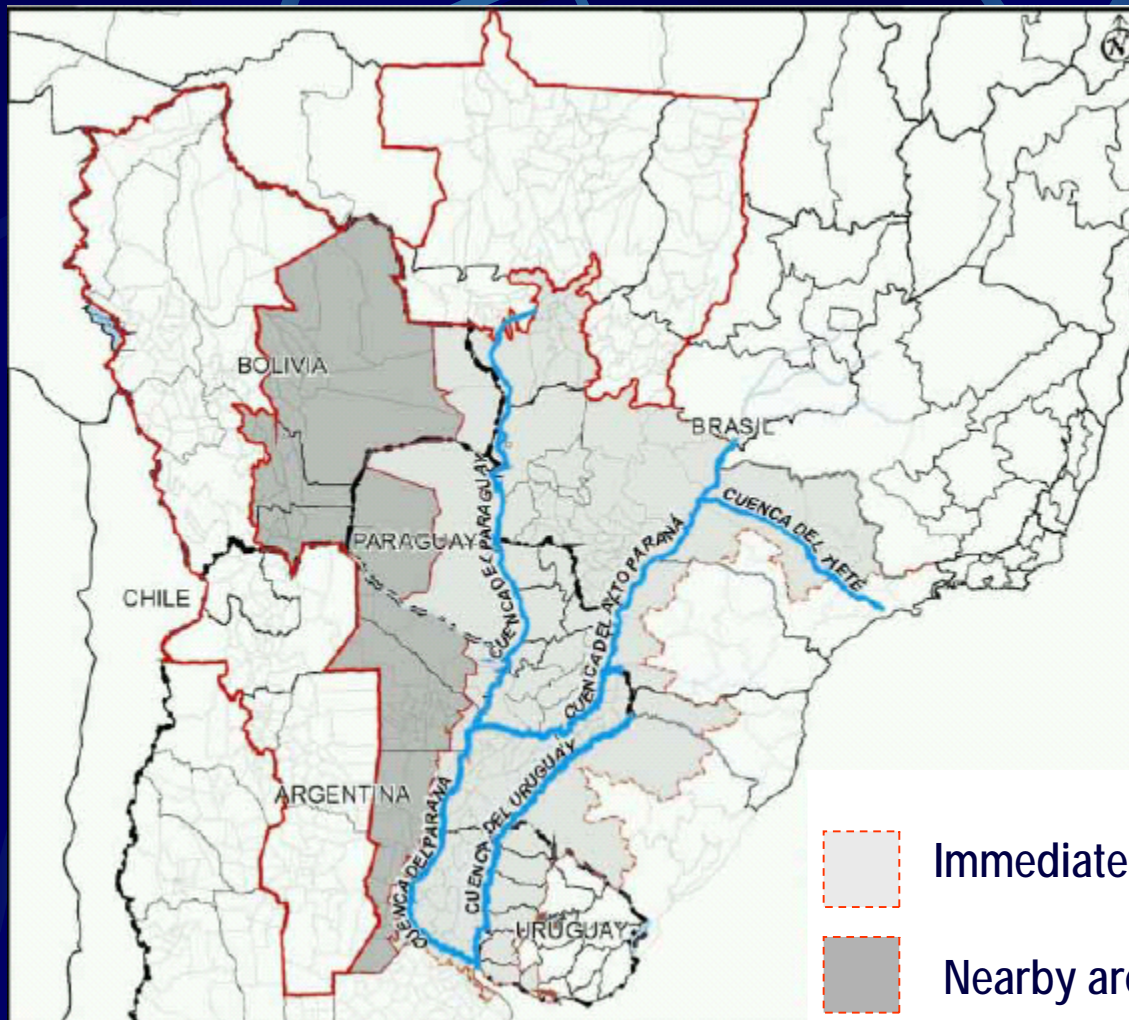
River transportation will increase in the area of influence of the Hub as long as the projects that allow the continuous development of the river ways in the HPP (dredging of critical crossings, etc.) are completed.



# Report on the Paraguay – Paraná Waterway Hub



## Area of influence





# Report on the Paraguay – Paraná Waterway Hub



The HPP is likely to become the North – South articulating Hub of the transverse Hubs (Central Inter-oceanic; Capricorn and MERCOSUR – Chile). The transfer nodes must be adapted to railways, roads and ports.

## Central Inter-oceanic Hub



## Capricorn Hub



## MERCOSUR – Chile Hub

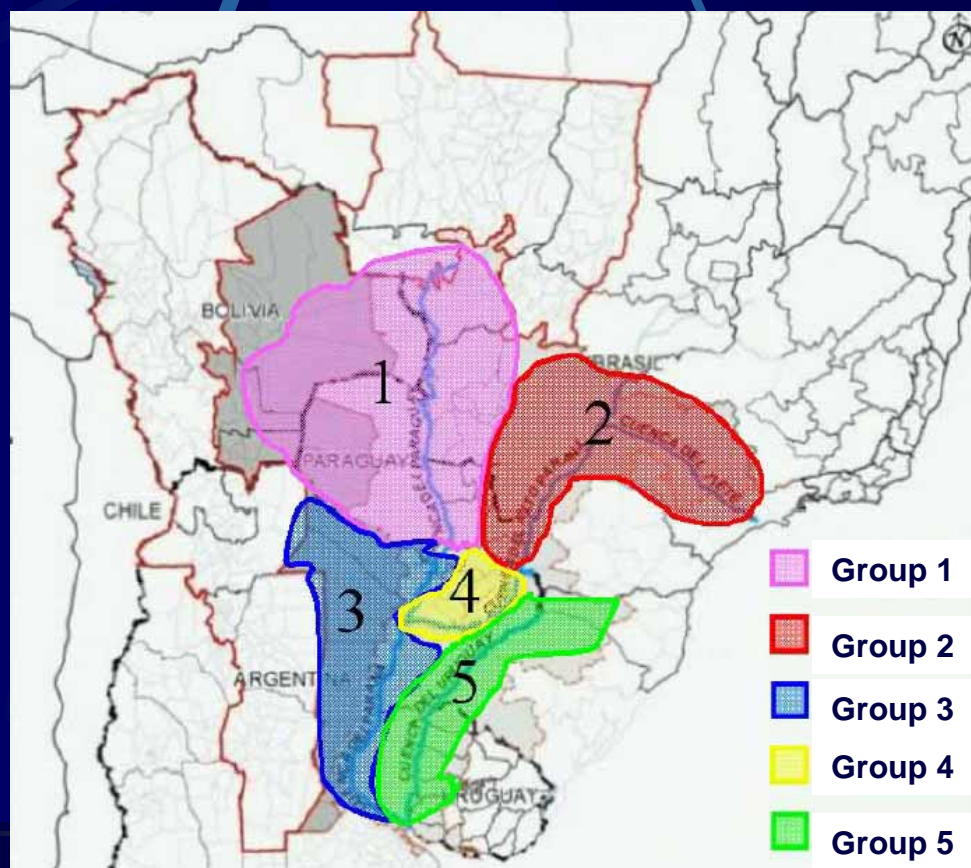


# Report on the Paraguay – Paraná Waterway Hub



## Territorial division of the HPP Hub

Five (5) groups of projects were set in relation to the basins of the following rivers: Uruguay, Tieté, Paraná and Paraguay. *Total of projects: 97.*



### Group 1:

Paraguay river, Asunción – Corumbá.

### Group 2:

Tieté – Paraná (Itaipú)

### Group 3:

Paraguay – Paraná rivers, Asunción – Paraná Delta

### Group 4:

Paraná river, Itaipú – Confluencia

### Group 5:

Uruguay river

# Report on the Paraguay – Paraná Waterway Hub



## Group 1: Paraguay river, Asunción - Corumbá

### Strategic Function:

- To improve the economic and social integration in the following regions: Paraguay, Bolivia and Brasil that share the basin.
- To strengthen and boost the integration of the pr
- To strengthen competitiveness of Mediterranean an efficient connection to the Atlantic.

### Anchor Project:

- “Binational Project: Improvement of navigability in Paraguay river, Asunción – Apa”.





# Report on the Paraguay – Paraná Waterway Hub



## NON-REFUNDABLE TECHNICAL COOPERATION FOR THE PREPARATION OF PROJECTS

During the last two years, new instruments were created for the support of the projects of the IIRSA Portfolio. The funds created allow to make non-refundable technical cooperations for the preparation of projects.

### Support to pre-investment through the fund: Pro – Infraestructura (CAF)

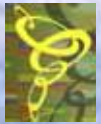
Nº	Approved and under preparation operations	Total investment (US\$, 000)
1	Pre-investment studies: Railway – Port Project: Motacucito – Mutún - Puerto Busch	1,300



# Tamengo System







PARAGUAY RIVER

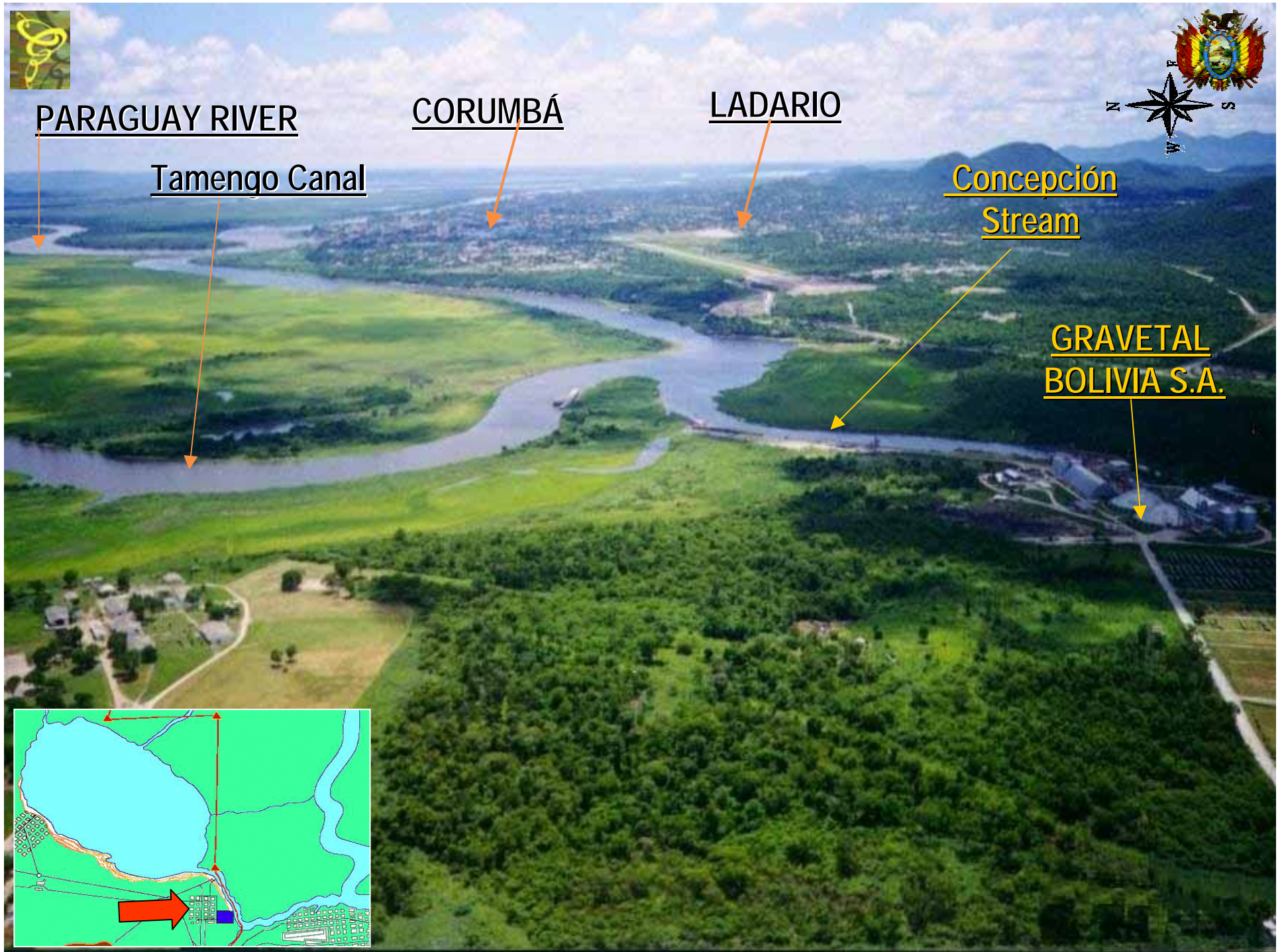
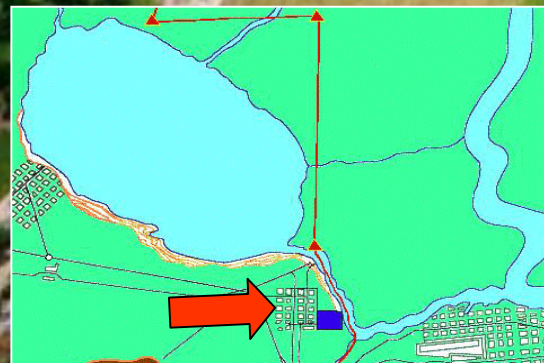
CORUMBÁ

LADARIO

Tamengo Canal

Concepción Stream

GRAVETAL BOLIVIA S.A.





# Port Services in the Tamengo Canal



**CAPSA**

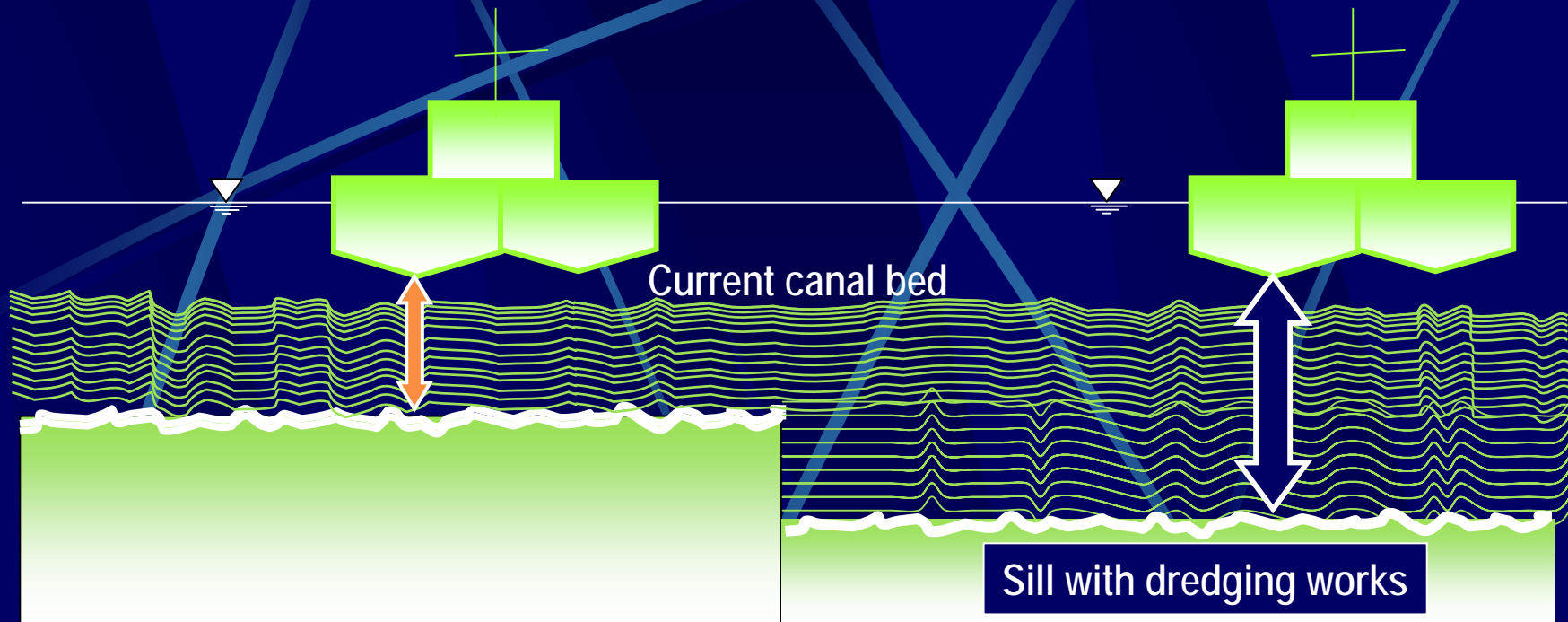


**GRAVETAL BOLIVIA S.A.**





# Improvement works needed in Tamengo Canal



Navigation in Tamengo Canal



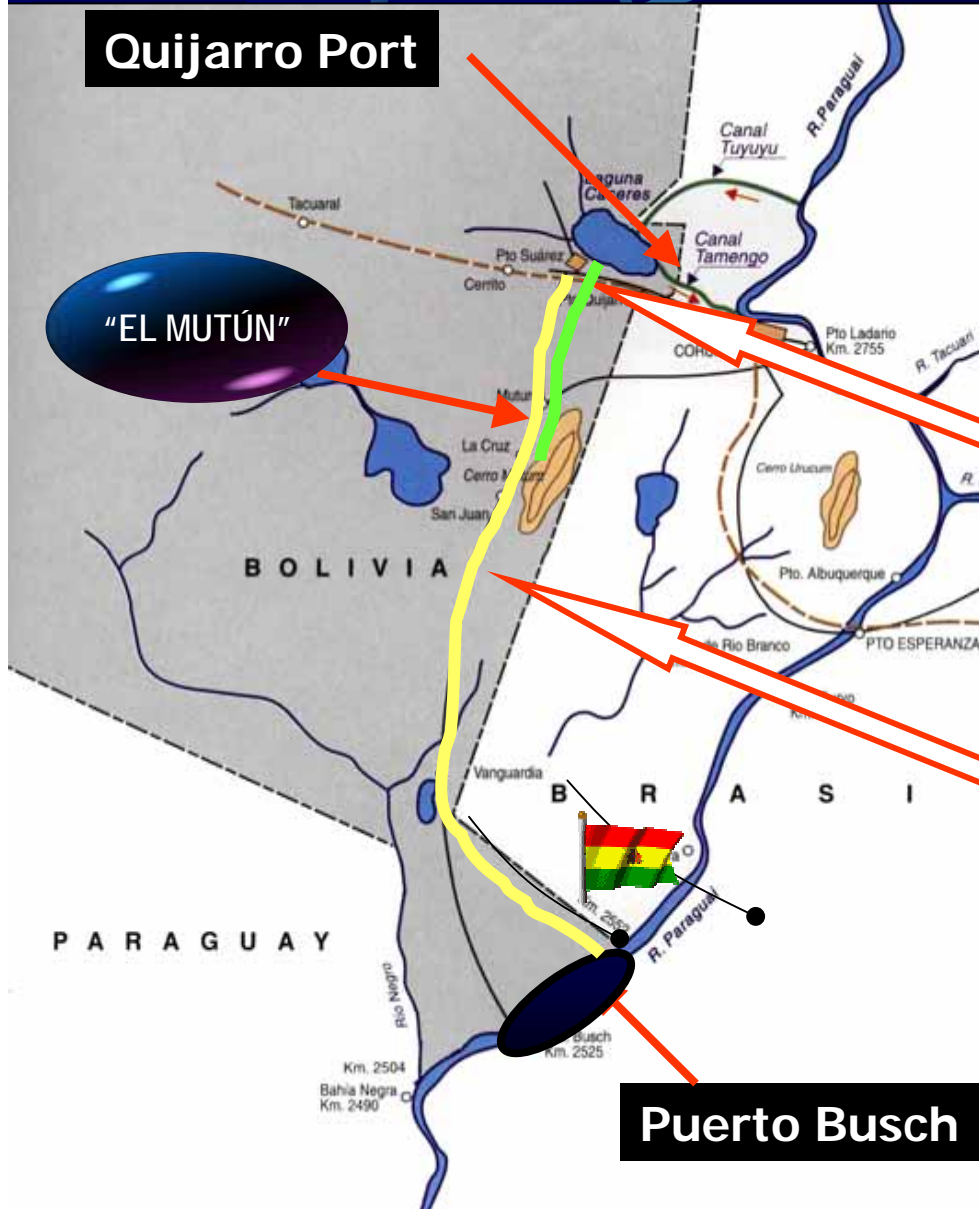
# Natural restriction in Tamengo Canal: Aquatic plants



# Report on the Paraguay – Paraná Waterway Hub



## Group 1 Projects (Bolivia)



**Paving:  
Puerto Suárez - Mutún**

**Railway-Port Project:  
Motacucito – Mutún – Puerto Busch**



# Report on the Paraguay – Paraná Waterway Hub



## Group 1 Projects (Bolivia)

Nº	Project	Total Investment (US\$ <i>millions</i> )
1	Building of the railway-port project: Motacucito – Mutún – Puerto Busch	138,0
2	Paving: Puerto Suárez – Mutún	18,8
3	Dredging and cleaning: Tamengo Canal	N/A
4	Development of the infrastructure of the future Bolivian Tax-Free Zone in Zárate (*)	N/A
5	<b>River Canal: Mutún – Puerto Busch</b>	<b>136,0</b>

(\*): The final inclusion of the Project will be subject to the results of the bilateral discussions → **Transfer proposal to Group of Projects N° 3.**