

# **A TRANSBOUNDARY STAKEHOLDERS ANALYSIS FOR DEVELOPMENT OF NAVIGATION SECTOR ON PARANA RIVER BASIN**

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## **1) Introduction**

Brazil has large natural resources, mainly in water resources (amount, quality and availability). This wealth, fustigated for intense economic exploitation in the last decades, is reason of great concern in some regions of the country. In some Brazilian regions, and mainly in those transboundary regions, with great water bodies, this phenomenon is less perceived. Signals of exhaustion and degradation already are perceivable, but not totally visible. Inland navigation in Brazil, although its extensive river meshes, has today a secondary paper in regions where this modality of transportation concurs with road and railroad transportation infrastructure. In Brazilian Amazon, for example, its use is massive due to local particular conditions. With the implantation of an eminently terrestrial transportation system from the decade of 60, and in special through highway, the sector faces a deep loss of identity. The South American partner-economic integration, due to Mercosur (Common Market of the South), could be a factor of development of this sector, for being a natural way to link the countries that share Parana Transboundary River Basin.

But some difficulties are present, for account of the unfamiliarity of national and international stakeholders of its paper in shared use of this transboundary water resource. Studies point that the navigation, when carried through correct and adjusted form, can be a valuable instrument of environmental conservation, considering that navigation implies constant presence along all water body, being possible to carry through monitoring programs, identifying immediately possible aggressions to environment. On this way, the initial work of survey of the involved stakeholders starts with joint international policies conception for water resource management, such occurs with the Guarani Aquifer System, a South-American underground transboundary water resource, in a initial phase of data-collection for knowledge of its characteristics, but already managed by Brazil, Paraguay, Argentina and Uruguay.

## **2) Objectives**

The proposal of this paper is to establish adjusted methodology quantitatively to evaluate the relations between the diverse stakeholders involved with this water resource, in order to know the importance of each one and the interactions of the same ones among themselves. With this, is expected to be able to determine the forces that act in the sector, identifying itself opportunities to improve Federal Government Organisations activities.

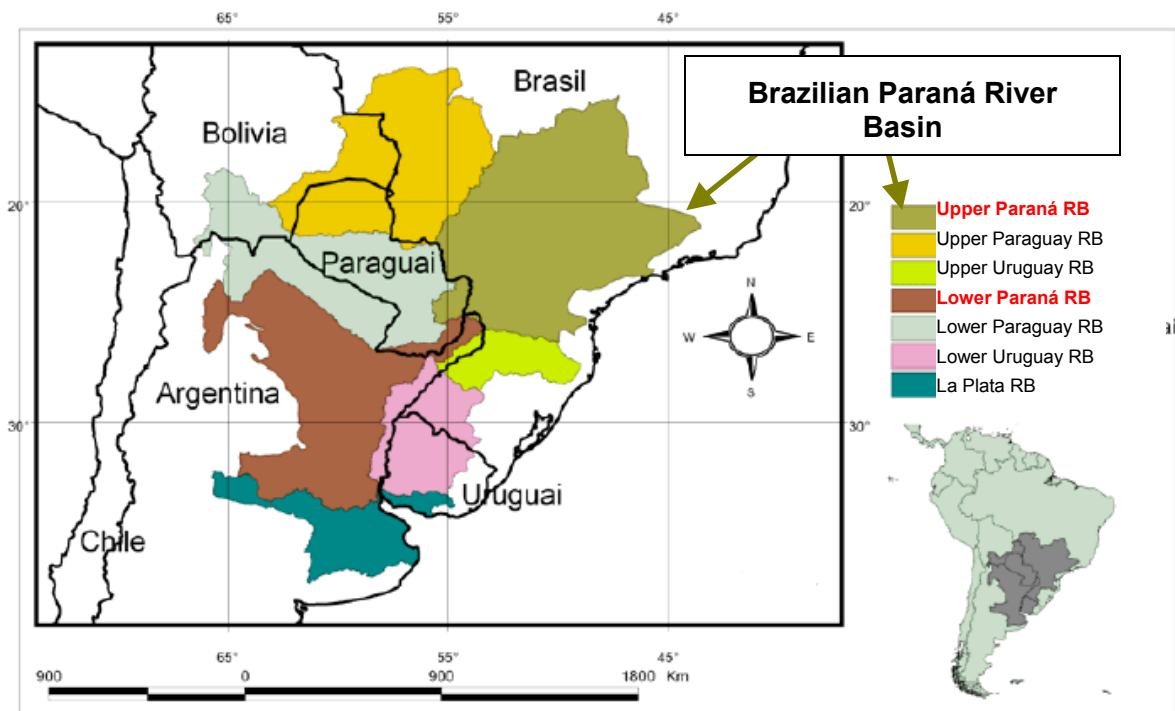
### **2.1) Home organisation**

Former regional offices of extinct National Department of Ports and Navigable Ways (DNPVN), had passed to be called Waterways Administrations, from the advent of the Company of Ports of Brazil S/A (Portobrás), constituted in 1975 by law. Portobrás was in charge of this responsibility up to 1990. In 1990, with the dissolution of Portobrás, its obligations and rights had started to be of Federal Government. With decentralization of ports administration, it originated the Agreements of Decentralization of Waterways Services, celebrated between the Federal Government, intermediary of the extinct National Department of Waterways Transports of the Ministry of the Infrastructure, and the Dock Company (port authority), with participation of Portobrás. This way, Dock Company had assumed the responsibility for the activities and installations of the object of the agreements and had

absorbed functional activities of the former Portobrás. National Department of Waterways Transportation (Ministry of Infrastructure) was in charge to coordinate, control and inspects agreement execution, especially those related to account rendering, as foreseen in the clause ninth of the agreement. With the advent of Law # 10,233/01, was created the National Department of Transport Infrastructure (DNIT), which is in charge, among other attributions, to manage the waterways programs.

## 2.2) The transboundary context

Parana River Basin Region (PRBR) presents exclusive characteristics. It is one of the 12 Brazilian river basins regions defined by Brazilian National Water Resources Council (CNRH). Parana River Basin Region understands the Brazilian stretch of one of river basin units of La Plata River Basin, the High Parana, which corresponds to Parana River Basin drainage area as far as the east estuary of Iguaçú River, in the triple border Brazil - Argentina - Paraguay. It approximately corresponds 59% of the transboundary basin of Parana River and 29% of La Plata River Basin as a whole (Figure 01)



**Figure 01 – Paraná RBR and sub-basins of La Plata RBR (Tucci, 2004).**

This large transboundary basin, however, is very little used as integration element among the countries that share it, for account of the Itaipu Hydropower Plant. This artificial barrier, constructed to supply with electric energy Brazil and Paraguay, does not have canal locks that allow its transposition. This interruption causes deep unfamiliarity of the characteristics that each country has of the set of the basin, developing actions only in the scope of its borders, not associated with the potential of conjugated use among countries that share it. Moreover, in the diverse rivers that form Parana River Basin, its exploration is preferential for electric energy generation. This creates a series of problems for navigation, therefore the necessity to remain appropriate levels in the dams of the hydropower plants; in general they compromise the depth of the ship canals, hindering navigation. This problem compromises confidence of the waterways transportation system, hindering its development.

Under the point of view of international navigation, much little is known by DNIT in relation to other stakeholders who have interests in the river. For involved entities, organisations and institutions that, at a first glance, may not look like to have no relation with the activities of the organisation, it will be possible to be difficult to develop strategic actions for the sector. To develop navigation in this context, recognizing that intense load movement already occurs, mainly for exportation to these same countries that share the basin, it is very important to know with more depth their importance in the decision process.

### **3) Key stakeholder analysis**

It was considered a proper methodology to analyze interested in the use of the water resource. Given the lack of familiarity of organisation activities, mainly by the new professionals that have assumed a few time ago the responsibility for the sector, stakeholders had been pointed who historically have interests in the water body, as well as that they have strong influence. It was immediately recognized a deep unfamiliarity of the international stakeholders, considering that the integration aspects with other countries never was object of consideration or direct activities of the organisation. This fact comes that for more than 40 years the organisation has been working eminently focused in national road transportation, and the waterways transportation sector responsibility started in 2001.

#### **3.1) Methodology**

For this analysis, three stages had been considered:

- 1) Identification of the considered stakeholders that are direct users and those with interests in the water resource;
- 2) Items to be evaluated;
- 3) Establishment of the weights and values of each item;
- 4) Graphical representation of stakeholders distribution and;
- 5) Relations analysis among them.

#### **3.2) Results**

After questionnaire application and answers got from study group, the results had been tabulated and the graphs were elaborated and showed the stakeholders relative positions, evaluated for its general interest versus influence and specific interest versus influence. Also individual evaluation of each component was compared.

Water resource general interest evaluation tends to show values for neighbouring countries interests (Argentina and Paraguay) that do not reflect the same way when looked under specific interest point of view.

This evaluation gives the perception that other uses, as electrical energy generation, have main attention. This is characterized by the high degree of general interest presented by stakeholders related to this activity, as Itaipu Dam Administration, regulatory agencies and others system operators. It still demonstrated that international stakeholders had been grouped generically as the governments of its respective countries, in a clear lack of knowledge of stakeholders who separately act in the same ones.

Under the point of view of transportation infrastructure, it has strong presence of stakeholders' sector, for account that waterways have a great importance as alternative of transportation for the region. Environmental concerns are present and evaluated organisations of the environmental sector have been increasing interest in the water resource. For account of this interest, the evaluation of the participants of this research is that environment protection agencies, as much as in federal or regional level, has raised influence in decision process of the actions carried through water resource. The regulatory agencies, as it could not be different, also had raised influence in the context. In such way, general interest of the neighboring countries does not reflect in its influence, considered below of that one presented by the internal stakeholders. It is recognized that local stakeholders, such as agricultural producers, indigenous groups and those with minor economical influence have a weak role in this scenario. It is distinguished small presence of Brazilian Ministry of Foreign Affairs, as much as in general interest, as influence and specific interest. In this aspects, had low evaluation.

This fact must be, probably, due to international relations stability obtained in the region, mainly in the aspects related to electrical energy generation. Such question was in the past object of intense quarrels, generating the presented international agreements. In present time, it does not cause great disputes for the water resource. Analyzing specific aspects issues, demand for transportation approaches stakeholders involved in, placing them in a very near level. Environmental organisations, regulatory agencies in diverse areas and electrical energy generation companies, are evaluated as having vested interest in and very near between themselves. Environmental organisations are concerned about harmful goods carried by ships and may put in risk the environment. This waterway is very dependent on the level of the dams, and as electrical power generation depends on it, their activities superimpose on transportation necessities. Those stakeholders who interact directly with the organisation are the ones that present higher values.

Comparing general interest and specific interest charts, there is a concentration trend of stakeholders in this last one, since specific interest of local stakeholders is more emphasized, keeping the superior limit in influence axle and developing superior limit in specific interest axle. Strengthen relations with regulatory stakeholders, as Brazilian Waterways Agency, Brazilian Electrical Energy Agency, and Brazilian Water Agency and more, environmental protection organisations, can be a positive strategy, because these stakeholders have the same common specific interests, with a high level of influence in this process. Waterways transportation companies and agricultural industry representatives must be stimulated to become strong, although they have high interests, they have low influence.

It would be beneficial to the organisation, since their better articulation with others stakeholders' sector would facilitate the development of organisation activities. Act in local level also can be a strategy to strengthen the organisation, looking for to know better these stakeholders considered as having low influence and to develop action towards improves their relative position, gaining itself with this, allies in the search of best conditions for the development of the activities. It was notice that, although Argentina and Paraguay governments' evaluation shows high general interest, it does not reflect however, in specific interests. This analysis may due to the fact that these two neighbouring countries have direct communication with maritime ports by Parana river at south, and the transport of merchandises produced by the same ones for Brazil is not of momentary interest, or still, it does not occur.

#### ***4) The way forward: suggested actions for improvements***

Considering the results of this research were established some recommendations, considering that for this they must be divided in two groups:

##### **National stakeholders**

- 1) Improve interaction with other stakeholders, establishing or initiating dialogues of approach with the same ones, for better knowledge of theirs performance and policies;
- 2) Send questionnaire research to stakeholders for reply themselves, in way to know their understanding on the questions under their point of view;
- 3) Improve relationship with Brazilian Ministry of Foreign Affairs, aiming to facilitate the relationship with international stakeholders;
- 4) Increase organisation participation in all international and national forums related to this water resource, not only in forums tied strictly to its main objectives, but also in those ones that can bring supplementary information that allow to deepen knowledge level of all kind of stakeholders.

##### **International stakeholders**

- 1) To know deeper the legal frame existing in Argentina and Paraguay;
- 2) Introduce the organisation to these countries;
- 3) To initiate dialogues with these stakeholders;
- 4) To participate, even though as observer, of similar committees and commissions which Brazil already participates, such as Paraguay Waterway Commission, that has already experience in international negotiations and agreements;
- 5) If possible, expanding the research to international stakeholders

#### ***5) References***

TUCCI, C.E.M. La Plata River Basin water resources review – a regional point of view - Vol. I. CIC – La Plata River Basin Intergovernmental Coordination Committee, August 2004.