

**WATERWAY PROSPECT**  
*Agência Nacional de Transportes Aquaviários - ANTAQ*

Volume 2 - January 2008

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# INTRODUCTION

# Panoramic evaluation of the waterways transport

Fernando Fialho  
Executive Director

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On behalf of the management and technical staff of *Agência Nacional de Transportes Aquaviários*, I am honored to introduce and recommend the reading of this publication, *Panorama Aquaviário* Volume II, a technical paper published by ANTAQ aiming to make relevant data and information on the Country's ports, sea navigation and fluvial navigation available.

This second edition of *Panorama Aquaviário* presents six chapters with data allowing evaluating the Brazilian waterways transport development. On its onset, the paper shows the information about the works and projects under development in the Agency, actions aiming to stimulate the transport by the inland waterways and by coastal navigation and the improvement of the port management.

With data from the Port Development System, Agency's experts worked out a sequence of charts and tables showing the cargo distribution and its movement in the Brazilian ports, also presenting the share percentages of the ports in the total amount moved of each type of carried cargo.

The demonstrations show that currently the Country conditions 64% of its general cargo in containers and that the privately used terminals account for moving 19% of this type of cargo. It is also seen that the exports performed by means of the ports has grown more than 90% since 1994 and has reached 413 million tons in 2006. The reader may also compare herein the prices practiced by the Brazilian ports for moving goods such as soy-bean, wheat and containerized cargo.

Another set of charts and tables shows the evolution of the cargo movement by the Brazilian ports since the implantation of the ports modernization Law. The review is made from the volumes carried in the main ports and their share in the regions where they are located, also comparing the Brazilian regions South, Southeast, North and Northeast in the total transported by the Country.

In the year 2007, ANTAQ's management implemented its technical and institutional visitations plan. Besides participating in debates in the permanent committees of the Brazilian House of Representatives and of the Federal Senate, the directors integrated missions of the Federal Government abroad, having visited official agencies and ports in Singapore, China, Hamburg, Germany, France, Morocco and United States. The agency also received visits from delegations of Kenya, China and Holland. In partnership with the authorities from Belgium/ Flandres and from the United States (Mississippi), ANTAQ held two international seminars on waterways, aiming to promote the exchange of experiences among the sector's experts.

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Also in this context ANTAQ acted on an integrated basis with the Federal Government, states and municipalities' agencies seeking to develop the waterways transport, especially the waterways, and the waters multiple use. The directors visited sea ports and terminals. Aiming to know very closely the projects and the operations they accomplish. During the visitations, important themes such as the environmental issue were given special attention since the implantation of the new ANTAQ's structure, in October 2006. Since then, ANTAQ has been following up and assessed the environmental issue in the ports, producing a complete report on the situation in each organized port. A summary of this report may also be found herein.

The experts of the sea navigation sector have prepared a complete survey on the expenditures with the chartering of vessels. In 2006, US\$2.3 billion were spent in charters for the long cruise transport and in the coastal navigation and for the sea support services, port support and port support for dredging. The survey shows also the sea navigation inspection procedures and the situation of the Brazilian fleet.

The inland navigation was responsible for holding 11 seminars on waterways, being two international ones, aiming to identify the bottlenecks and catalyze actions which promote the growth of the fluvial transport. The actions of ANTAQ's inland navigation sector, including inspection and grants, integrate the final chapter of this publication.

From this issue on, ANTAQ's experts may update the comparative indexes of the Brazilian port performance and navigation. Thus, ANTAQ's technical paper becomes personalized in a publication allowing a panoramic view of the sectors regulated and inspected by the Agency. All data disclosed herein can be found in more details in the internet site [www.antaq.gov.br](http://www.antaq.gov.br), offering to those concerned a possibility of deepening in the information on the waterways transport.

# **CONSOLIDATED PROJECTS**

# ANTAQ consolidates projects in the inland and coastal navigation areas and implements the Annual Inspection Plan (PAF)

Launched by the Agency in 2006 the final projects created to stimulate the inland navigation and the coastal navigation and promote the valorization of the Port Authority Councils (CAPs) are being intensified.

Starting with a series of seminars being held and the participation in theme work groups, ANTAQ seeks to contribute so that the projects favoring the waterways transport effectively become true. Companies, governments and the society are more and more becoming aware of the economic and environmental advantages of the waterway modal, especially for the long distances transport and low valued added cargo transportation, enabling new investments in the sector.

All along the year 2007 ANTAQ held nine more seminars to discuss the waterways transport problems, focusing on the themes “multiple waters use” and “multimode”. Up to now, the Agency has already held 11 seminars on the sector, nine of them national and two international ones (Belgium and USA). In 2008 the goal is to hold two more international meetings, focusing on the waterways in Holland and in Germany.

The Agency also completed the formation process of the Port Authority Councils’ presidents, qualifying them for the more efficient direction of the port issues, by means of improvement courses and acquisition of new information. ANTAQ is accountable for the nomination of the professionals (titleholders and substitutes) occupying the position in the 29 CAPs which represent 34 organized ports in Brazil.

In 2007 ANTAQ also started the implementation of the Annual Inspection Plan (PAF) the purpose of which is to improve the inspection in the sea and inland navigation companies, in the ports and in the private terminals. The accomplishment of the PAF is made by the Inspectorate managements of the Ports, Inland Navigation and Sea Navigation Superintendence, and by the seven Regional Administrative Units of the Agency - Belém, Florianópolis, Manaus, Porto Velho, Recife, Rio de Janeiro and São Paulo.

## WATERWAYS

The series of seminars ANTAQ has been holding on the Brazilian waterways has demonstrated how the inland navigation share may contribute to the efficiency of the Country’s transports logistics, with economic and environmental earnings. Recent studies have evidenced that with a 30% increase in the cargo transportation by the waterways, the emission of carbon dioxide drops by 5.6 million tons.

When the waterways system is used, the emission of carbon monoxide is smaller than when trucks and trains are used. 254g of carbon monoxide are emitted in the waterway every thousand TKUs, whole in the railway and highway system, such number may be 831g and 4,617g respectively. In order to carry one thousand TKUs, 96 liters of fuel oil are required in the highways, ten liters in the railways, and only five liters in the waterways.

In terms of freight, a cost reduction above 20% in the waterways is estimated, as compared to the highways. The average investment per km required by the waterways system is also much smaller, US\$ 34 thousand against US\$ 1.4 million of the railway transport and US\$ 440 thousand of the highway transport.

In several forums ANTAQ has been defending the multiple uses of waters, as a form to assure the rivers’ navigability. In the middle of 2007, the Agency created the Technical Advisement Group (GTA) aiming to set operation conditions of the navigable ways assuring their use for the waterways transport in the rivers where dams were built.

ANTAQ’s proposes the construction of sluices simultaneously to the hydroelectric power stations and dams. The count is simple: when the sluice is built along with the hydroelectric power station the works becomes only 5% more expensive and when the sluice is built after the hydroelectric power station is ready, the enterprise becomes 30% more expensive.

The Agency also defends the utilization of the multimode system in a more integrated scale. In spite of the production cost much lower than the American cost, the Brazilian agribusiness goes on

## Waterway Prospect

losing competitiveness for lack of logistics. With the multimode system, such cost is decreased thus favoring both the farmer and the final consumer. This is evidenced by a company acting in the cargo carriage in River Madeira. The carrier succeeded in decreasing its costs by 40% after it started to use the waterway combined with the highway.

The Brazilian fluvial system counts on 42 thousand kilometers of navigable rivers. Approximately 30,000km are deemed waterways, but only 10 thousand kilometers are used in commercial scale. Currently, approximately 45 million tons of cargo/year is transported by the Brazilian waterways. However, the cargo potential that could be carried is estimated in 160 million tons, if all waterways in the Country were already fully implanted.

## COASTAL NAVIGATION

The Brazilian coastal navigation is growing and the perspectives are promising, as the volume of resources for refitting the sector's fleet grows. Besides the investments for building Transpetro/Petrobras' vessels and the sea support navigation vessels meeting the oil prospection and exploitation rigs, new resources are being made available to recover the Brazilian coastal navigation fleet as well in the containers' area.

During the second semester of 2007 the Merchant Marine Fund Board of Directors approved investments in the order of US\$450 million for building the vessels, to meet the sector. In the same period, an agreement was made with BNDES with the purpose of supplying the needs of the Merchant Fund, also assuring that other Fund resources were made available to the companies for the payment of the funding installments to that development bank and to Banco do Brasil.

ANTAQ has been very strict in supporting the Brazilian navigation company and is taking a series of steps to overcome the bottlenecks existing in the financing and guarantees portion and to accelerate the process of refitting the sector's fleet.

The fleet size has dropped in spite of the increase in the demand which has been met by the chartering of vessels. Therefore, the Agency defends the revision of the chartering policy which in 2006 only, has consumed more than US\$ billion in foreign currency sent abroad (more than US\$ 1 billion in the first semester of 2007) with negative impacts on the creation of new jobs in Brazil.

Having a coast of approximately 8.5 thousand kilometers except for Mercosul, Brazil cannot do without the coastal navigation as a strategic logistics instrument, especially for the transportation of agribusiness goods in long distances. This very day, Brazil carries rice from Rio Grande do Sul to its Northeastern region in carts, putting aside a more efficient and safe transport mode, with less accidents risk and less pollution.

## CAP PROJECT

In a little more than ten months from the implantation start, ANTAQ completed the training of the professionals nominated by the Agency to occupy the presidencies of the Port Authority Councils, changing the procedures set forth by the autarchy into routine to valorize the CAPs actuation, an instrument created by Law no. 8.630 to subsidize the port authority in the management of ports.

Besides the workshops on basic port legislation, the project contemplated the accomplishment of speech courses, meetings' holding, negotiation and leadership techniques and lectures on the competition defense, biddings and contracts, environmental licensing, operation and port public safety. The project also resulted in the creation of an internet portal dedicated to the Councils' rendering of accounts to society.

The Port Authority Council, which is a kind of port legislative power, plays a major part in the harmonization of the natural conflicts existing among users, service providers, workers and public administrators interacting in the port environment and who have seats in the Councils. The agency also has the function of proposing surveys signaling which are the port growth vectors, by becoming proactive in the action planning.

The competences of the Port Authority Councils include, among others, reviewing the appeal pleaded by the concerned party in the leasing of the port areas and facilities, approving the port operator's prequalification rule, setting and determining the accomplishment of the exploitation regulation, issuing an understanding on the port budget proposal and on works schedules, acquisitions and improvements of the port infrastructure, issuing laws referring to operating procedures, and stimulate actions to attract clients and investors.

## Waterway Prospect

The following actions were accomplished as the project was executed, among others: working out the “CAP Presidents’ Procedures Manual” and setting new criteria for the nomination of occupants of the position, instituting the coordination and follow-up of the professionals’ activities in their position, holding the seminar “The Participation of the Port Authority Council in the Port Management”, launching, feeding and monitoring of the internet site, motivation of all the other entities with representation in the Councils, accomplishing the qualification program of the CAPs’ presidents (titleholders and substitutes) and holding meetings to assess the project.

## INSPECTION

The first year of ANTAQ’s Annual Inspection Plan (PAF) implementation resulted in the inspection of 227 inland and sea support navigation service providers (from January to October) and 140 ports and privately used terminals (from January to November). In the fluvial navigation field, 90% of the rivers and lakes crossings under the influence of the Agency were inspected, and the operation of 175 service providers was recorded. Furthermore, almost 75% of the passengers’ longitudinal transport companies have gone through the inspection.

The Agency also inspected 25% of the cargo longitudinal transport companies. The relatively low number is due to the utilization of an old listing which is being updated in the inspection process. PAF’s implementation also assures to end the actuation of irregular companies.

Among the main aspects inspected in the sector, we can mention the fulfillment of travel schedules, the situation of regularity of the companies and the updating of records, by which it shall be possible to know where the inland navigation service providers are, who and how many they are.

During the inspection, the company’s data are surveyed such as, fleet, type and amount of carried merchandise, besides the owner’s name, telephone number and address, among others.

In the Sea and Support Navigation field, 82 companies were inspected up to October from the 105 foreseen in the Plan’s goal for 2007. The number represents 68% of a total of 156 companies authorized by ANTAQ until the end of 2006 in the long cruise, coastal, port support and sea support navigations.

PAF’s goal in the sea transport in 2007 covered companies from 11 states of the Country: Amazonas, with seven companies; Bahia (8), Ceará (1), Maranhão (3), Paraná (10), Pernambuco (5), Rio Grande do Sul (9), Rio de Janeiro (44), Santa Catarina (3), São Paulo (12) and Sergipe (3).

With the issuing of *Medida Provisória* nº 393/2007, which removed ANTAQ’s competence on the dredging service rendering, 15 companies rendering that service were not inspected anymore.

41 sea and waterway ports and 99 privately used terminals (TUPs) located in 20 states, namely Alagoas, Amazonas (Western Amazon), Bahia, Ceará, Espírito Santo, Maranhão, Mato Grosso, Mato Grosso do Sul, Minas Gerais, Pará (Eastern Amazon), Paraíba, Paraná, Pernambuco, Piauí, Rio Grande do Norte, Rio Grande do Sul, Rio de Janeiro, Rondônia, Santa Catarina and São Paulo were inspected in the port area.

The ports of Santos, Rio de Janeiro, Itaguaí, Rio Grande, Itaquí, Suape, Itajaí and Paranaguá, and the waterways of River Madeira, Tietê-Paraná and Araguaia- Tocantins are among those visited by ANTAQ’s inspection teams in 2007.

# **RANKING OF THE BRAZILIAN PORTS - COMPARISON 2006 - 2007**

## General cargo distribution per port in 2007

The port of Santos (SP) has led the ranking of the ten ports which most moved general cargo in Brazil in 2007 when it reached a 32.01% share (more than 35 million tons) upon the total number, which is equivalent to more than one third of the national movement, which was 111,431,448 tons. The data are from the Port Performance System directly fed in ANTAQ's site by the port administrations.

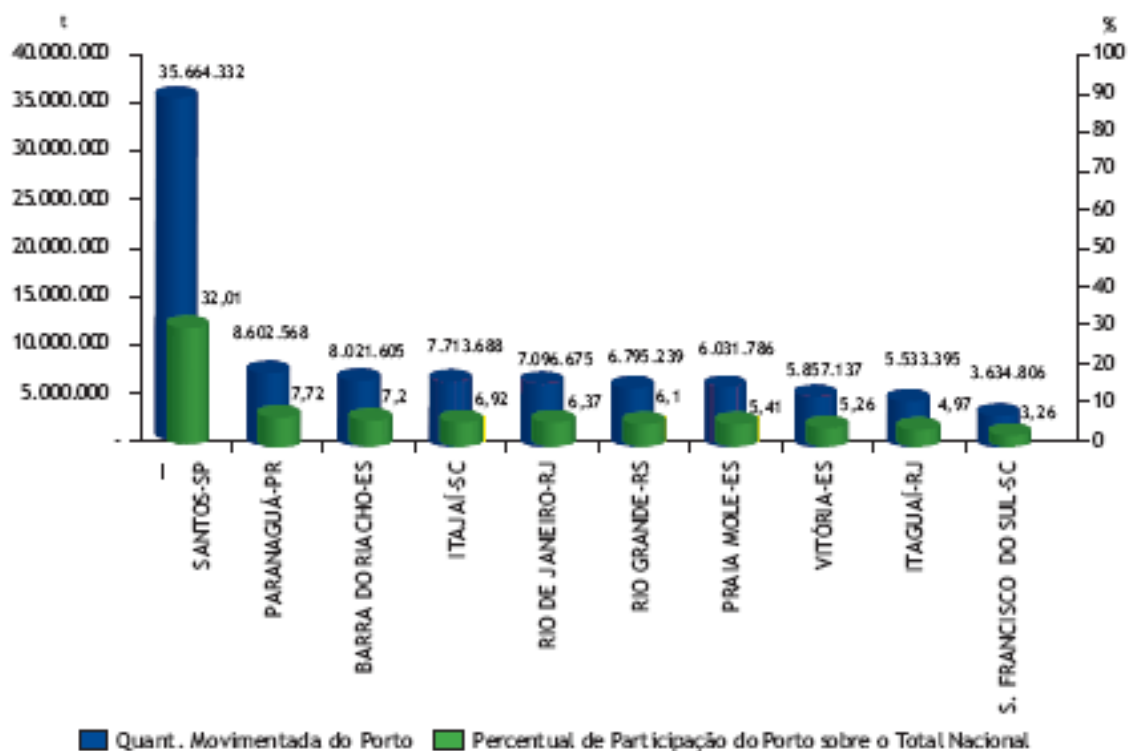
After Santos, the 4 ports which most moved general cargo in 2007 do not reach altogether, the percentage of the port of Santos upon the national total number: Paranaguá (PR), Barra do Riacho (ES), Itajaí (SC) and Rio de Janeiro moved that year 31.4 million tons (28%).

Ranking last was the port of São Francisco do Sul in Santa Catarina state, which moved 3.6 million tons or 3.26% a little more than one tenth of the total number moved in Santos.

As to the relative share of the organized ports and privately used terminals in the movement of general cargo in 2007, the first ones accounted for 80.87% of the total number and, therefore, the privately used terminals moved the remaining 19.13%.

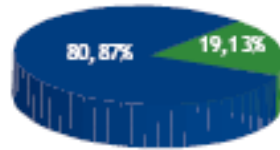
### SPACE DISTRIBUTION OF GENERAL CARGO PER PORT - 2007

Quantity Moved and Share Percentage on the National Total Number



Captions: Qty. moved in the Port / Share percentage of the port on the national total number

Movement Share - General Cargo



Terminal de Uso Privativo Porto Organizado

Captions: Privately used terminal / Organized Port

## LIQUID BULK MATERIAL

In the movement of liquid bulk material, the leadership was achieved by the port of São Sebastião in São Paulo state, which moved alone more than one fourth of the total number (26.89%) 26.44% of the 177,342,609 tons moved in the Country's ports and terminals, that is, more than one fourth of the total national number, reaching 46.8 million tons. Ranking second was the port of Aratu in the state of Bahia, with 15.09% or 26.7 million tons and ranking third, the port of Angra dos Reis, with 11% or 19.5 million tons.

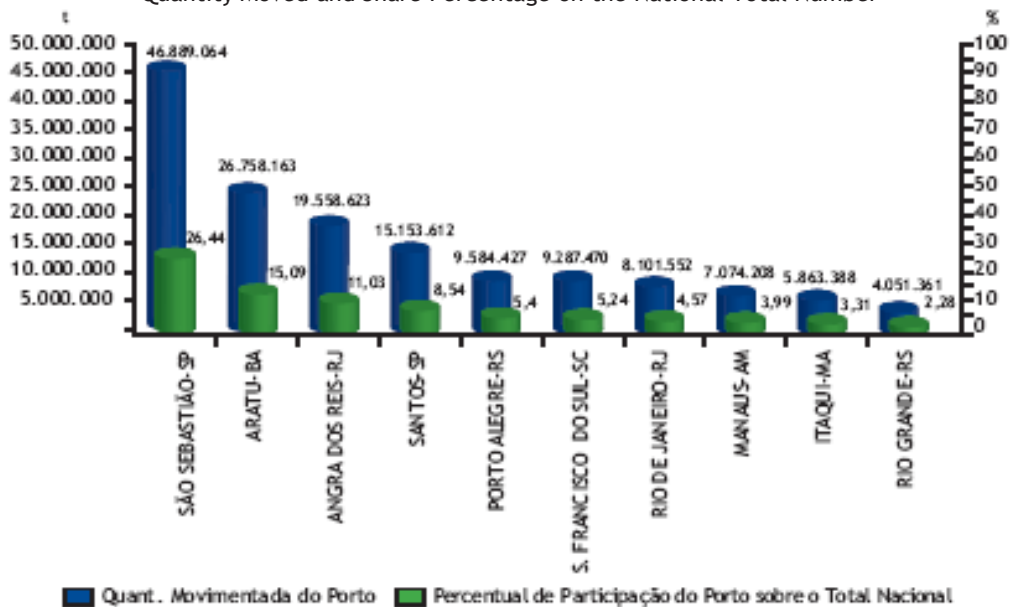
Santos ranked four in the ranking of the ten ports which most moved liquid bulk materials in 2007, when it had an 8.54% share upon the total number, or 15.1 million tons.

The port of Rio Grande in Rio Grande do Sul state ranked last, moving 4 million tons of liquid bulk material or 2.28% of the total number moved in 2007. That share is equivalent to less than one tenth of the total number moved by São Sebastião, leader of the ranking.

On the contrary to what happened in the general cargo movement, the privately used terminals accounted for the highest part of the liquid bulk material movement in 2007, more than three fourths of the total number (76.70%) and, therefore, more than the triple moved by the organized ports (23.3%).

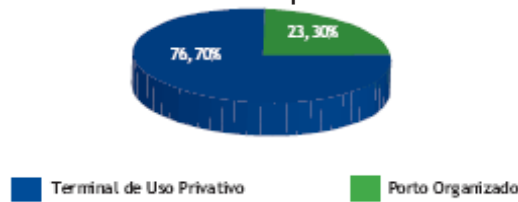
### SPACE DISTRIBUTION OF LIQUID BULK MATERIAL PER PORT - 2007

Quantity Moved and Share Percentage on the National Total Number



Captions: Qty. moved in the Port / Share percentage of the port on the national total number

Movement Share - Liquid Bulk Material



Captions: Privately used terminal / Organized Port

**SOLID BULK MATERIAL MOVEMENT - 2007**

In 2007 the Brazilian ports and terminals moved 442,635,919 tons of solid bulk materials. Three ports were distinguished and lead the ranking way ahead of all the others: Tubarão (ES), Itaqui (MA) and Itaguaí (RJ).

The port of Espírito Santo state moved in 2007 more than 99 million tons of solid bulk material, which is equivalent to 22.4% of the total number.

The port of Maranhão state comes somewhat behind the ranking leader with 93.9 million tons moved or 21.2% of the total number.

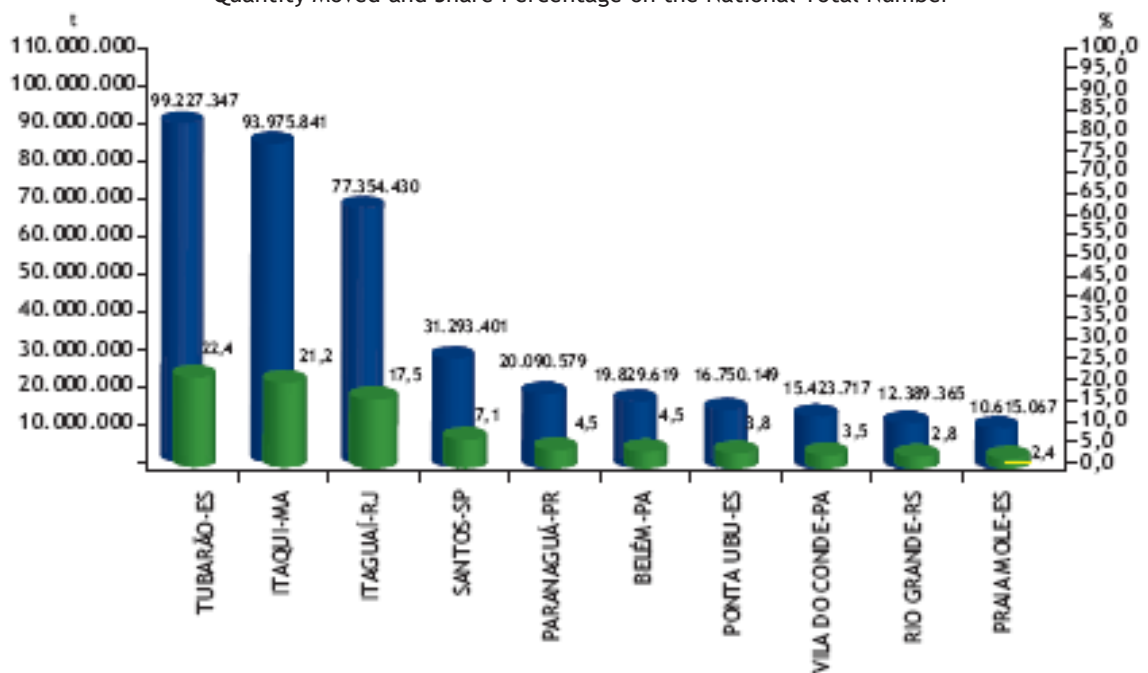
As to the percentage difference between the second and third ranks is higher: the port of Rio de Janeiro state moved 17.5% of the total number or 77.3 million tons.

The port of Praia Mole (ES) ranks last in the ranking of the ten ports which most moved solid bulk material in 2007, when it moved almost 10.6 million tons or 2.4% of the total national number.

The privately used terminals had the highest share upon the total in the movement of solid bulk materials, with 68.66% against 31.34% of the organized ports.

SPACE DISTRIBUTION OF SOLID BULK MATERIAL PER PORT - 2007

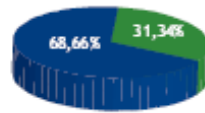
Quantity Moved and Share Percentage on the National Total Number



Quant. Movimentada do Porto / Percentual de Participação do Porto sobre o Total Nacional

Captions: Qty. moved in the Port / Share percentage of the port on the national total number

Movement Share - Solid Bulk Material



Terminal de Uso Privativo      Porto Organizado

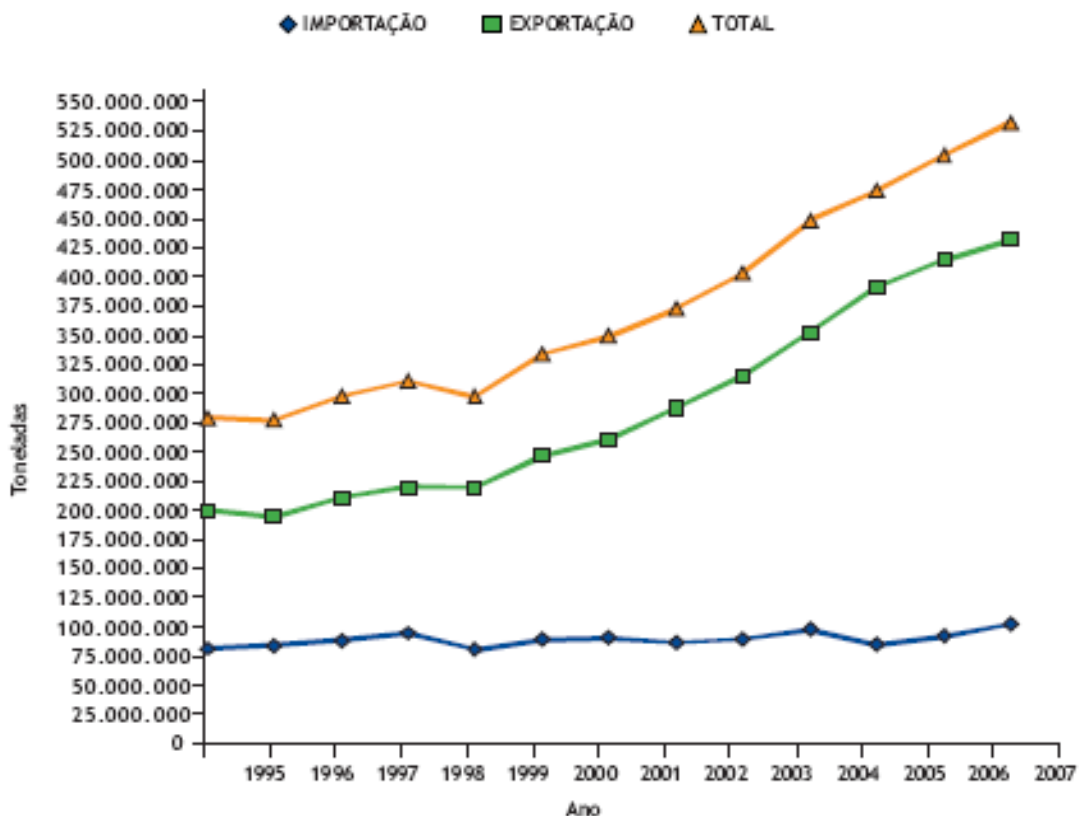
Captions: Privately used terminal / Organized Port

**EXPORTS INCREASE BY 5.5%**

The total number moved (exports plus imports) increased from 503 million in 2006 to 531 million tons in 2007, a 5.5% increase in the period.

The exports went from 413 million tons in 2006 to 430 million in 2007, a 4% increase, while the imports increased from 90 million to 100 million tons, an 11% increase in the period.

The total number went from 1995 to 2007 increased from 277 million to 531 million tons, a 91% increase. The exports had the highest share in that growth, raising more than 117% in the period, when they moved from 198 million to 430 million. As to the imports, they raised much less: a raise of only 26%.



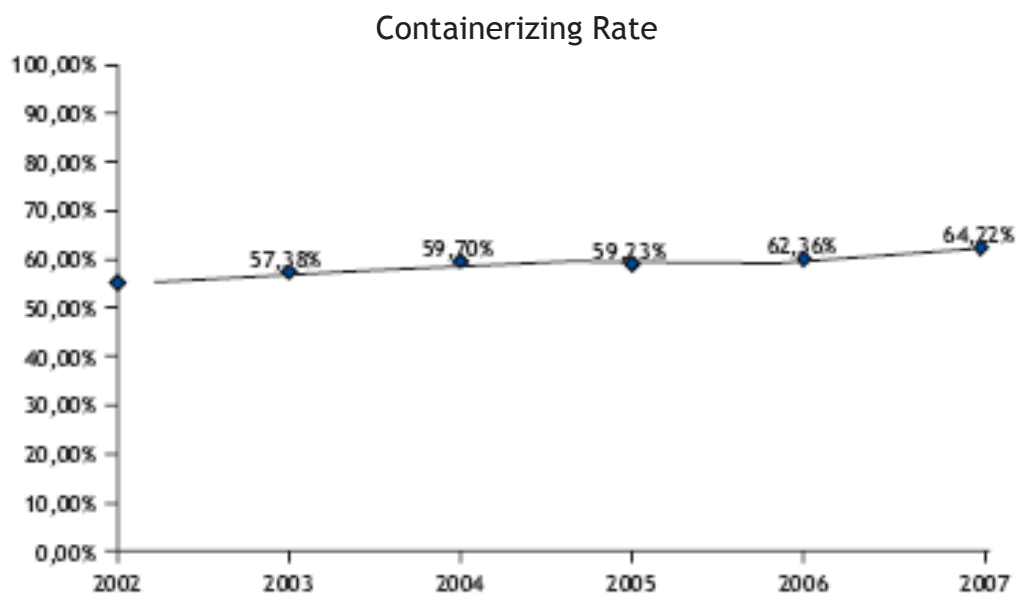
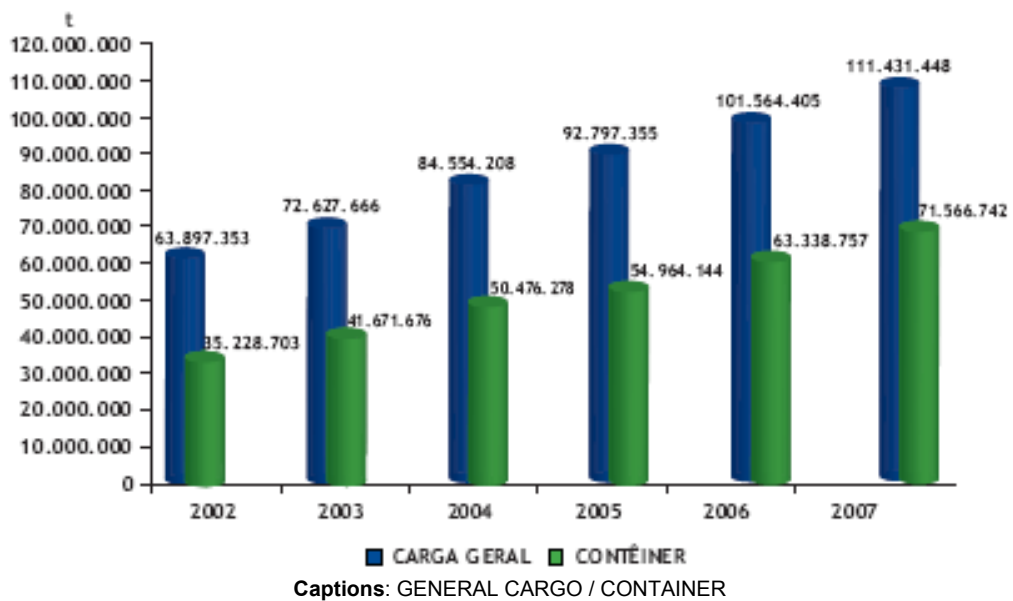
Captions: IMPORTS / EXPORTS / TOTAL / Tons / Year

## MORE THAN 64% OF THE GENERAL CARGO IS CARRIED IN CONTAINERS

The cargo containerizing rate has risen systematically since 2002. That year, from approximately 64 million tons of general cargo, more than 35 million were carried in containers, which is equivalent to more than 55% of the total number.

The rate went up to 64.22% in 2007 when from a total of 111.4 million tons of general cargo, more than 71.6 million were carried in containers.

Therefore, the general cargo containerizing rate ranged 9 percentage points in the period from 2002 to 2007. As to the carried volume, it increased 103% since 2002, going up from 35 million to 71 million tons.



## MOVEMENT OF CONTAINERS 2006-2007

The Port of Santos has lead from January to June 2007 the moving of containers in Brazil. In its public wharf the port moved 159,899 units. That represented 6% increase regarding 2006. Last year in the same period, 149,773 containers were moved.

São Francisco do Sul (SC) appeared in the first months of the year ranking second, with 66,235 containers moved in its public wharf. In 2006, that number decreased to 61,507 units. In Itajaí (SC), in the first semester almost 51 thousand containers were moved. In 2006 the port had reached a little more than 35 thousand moved units. Those numbers assured that the Port of Itajaí continued ranking third in container movement.

Regarding the leased terminals, Tecon in the state of São Paulo has leaded the numbers from January to June 2007. The terminal moved almost containers against 296,628 units in the same period in 2006, a 20% increase.

In the first six months of 2007, the TCP of Paranaguá (PR) ranked second, moving 163,209 containers. Tecon of Rio Grande moved 159,827 containers. In the same period last year, that Tecon terminal ranked third, with 165,293 units. Terminal T-37 of Santos ranked second with 180,162 moved containers. There is no data of Paranaguá in 2006 in the Port Performance System directly fed by the Port Administrations, which prevent us from comparing the TCP movement.

Regarding the average load/unload rate, which sets the number of containers moved per hour, the Port of Itajaí ranked first from January to June 2007 with 22 units in its public pier. Last year comparing to the same period, that number was 16. The ort of São Francisco do Sul, in the first months of the year moved 19 containers per hour. In the first semester of 2006 that number reached 15.

Reviewing the leased terminals, Tecon of Santos led in the first semester with 37 containers moved per hour. In the same period in 2006 that terminal ranked second with 34 containers. Terminal T-37 ranked second in the first semester of 2007 with 32 containers moved per hour. In 2006, T-37 ranked first from January to June with 37 units.

Regarding the average waiting time, reviewing data from January to June 2007, the vessels arriving to the Ports of Belém, Vila do Conde (PA), Manaus and Natal moored immediately. In the same period in 2006, Manaus, Belém and Vila do Conde presented the same performance.

Reviewing the leased terminals, Tecon of Suape (PE) presented the best performance regarding the average waiting time: four hours per vessel in the first semester of 2007. Tecondi of Santos ranked second. In the terminal of Santos, the average waiting time was six hours per vessel.

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### PUBLIC PIER - CONTAINER - QUANTITY (JANUARY TO JUNE - 2006)

Port	Terminal	Quantity (unit)
Santos	Public Pier	149.773
São Francisco do Sul	Public Pier	61.507
Itajaí	Public Pier	35.124
Manaus	Public Pier	19.017
Fortaleza	Public Pier	17.681
Belém	Public Pier	7.704
Imbituba	Public Pier	6.931
Rio Grande	Public Pier	3.921
Vila do Conde	Public Pier	3,485
Salvador	Public Pier	470
Suape	Public Pier	397

### PUBLIC PIER - CONTAINER - QUANTITY (JANUARY TO JUNE - 2007)

Port	Terminal	Quantity (unit)
Santos	Public Pier	159.899
São Francisco do Sul	Public Pier	66.235
Itajaí	Public Pier	50.574
Fortaleza	Public Pier	16.829
Rio Grande	Public Pier	8.892
Imbituba	Public Pier	7.061
Manaus	Public Pier	6.022
Belém	Public Pier	5.543
Suape	Public Pier	3.741
Vila do Conde	Public Pier	2.316
Natal	Public Pier	1.667
Salvador	Public Pier	327

### LEASED /PRIVATELY USED TERMINALS - CONTAINER – QUANTITY (JANUARY TO JUNE - 2006)

Port	Terminal	Quantity (unit)
Santos	TECON	296.628
Santos	T-37	180.162
Rio Grande	TECON	165.293
Itajaí	TECONVI	141.207
Santos	T-35	111.583
Vitória	TVV	82.517
Salvador	TECON	55.723
Suape	TECON	55.602
Santos	TECONDI	40.044
São Francisco do Sul	TESC	3.267

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### LEASED /PRIVATELY USED TERMINALS - CONTAINER – QUANTITY (JANUARY TO JUNE - 2007)

Port	Terminal	Quantity (unit)
Santos	TECON	355.491
Rio Grande	TECON	159.827
Santos	T-35	139.783
Itajaí	TECONVI	134.192
Santos	T-37	108.212
Vitória	TCP	84.804
Paranaguá	TVV	74.204
Salvador	TECON	61.147
Santos	TECONDI	44.921
Suape	TECON	42.042
São Francisco do Sul	TESC	2.465

### PUBLIC PIER - CONTAINER - AVERAGE LOAD/UNLOAD RATE (JANUARY TO JUNE - 2006)

Port	Terminal	Average Load/Unload Rate (u/h)
Itajaí	Public Pier	16
São Francisco do Sul	Public Pier	15
Suape	Public Pier	13
Santos	Public Pier	13
Imbituba	Public Pier	10
Rio Grande	Public Pier	10
Fortaleza	Public Pier	9
Manaus	Public Pier	8
Belém	Public Pier	5
Salvador	Public Pier	4
Vila do Conde	Public Pier	4

### PUBLIC PIER - CONTAINER - AVERAGE LOAD/UNLOAD RATE (JANUARY TO JUNE - 2007)

Port	Terminal	Average Load/Unload Rate (u/h)
Itajaí	Public Pier	22
São Francisco do Sul	Public Pier	19
Santos	Public Pier	16
Imbituba	Public Pier	15
Manaus	Public Pier	10
Rio Grande	Public Pier	9
Fortaleza	Public Pier	8
Suape	Public Pier	6
Vila do Conde	Public Pier	6
Belém	Public Pier	5
Natal	Public Pier	2
Salvador	Public Pier	2

## Waterway Prospect

### LEASED/PRIVATELY USED TERMINALS – CONTAINER - AVERAGE LOAD/UNLOAD RATE (JANUARY TO JUNE - 2006)

Port	Terminal	Average Load/Unload Rate (u/h)
Santos	T-37	37
Santos	TECON	34
Santos	T-35	28
Rio Grande	TECON	25
Itajaí	TECONVI	21
Santos	TECONDI	20
Salvador	TECON	19
Vitória	TVV	18
Suape	TECON	18
São Francisco do Sul	TESC	10

### LEASED/PRIVATELY USED TERMINALS – CONTAINER - AVERAGE LOAD/UNLOAD RATE (JANUARY TO JUNE - 2007)

Port	Terminal	Average Load/Unload Rate (u/h)
Santos	TECON	37
Santos	T-37	32
Vitória	TVV	28
Rio Grande	TECON	26
Santos	TECONDI	25
Santos	T-35	24
Suape	TECON	21
Itajaí	TECONVI	21
Salvador	TECON	19
Paranaguá	TCP	14
São Francisco do Sul	TESC	5

### LEASED/PRIVATELY USED TERMINALS - CONTAINER – AVERAGE LOAD/UNLOAD RATE (JANUARY TO JUNE-2006)

Port	Terminal	Average Waiting Time (h/n)
Suape	TECON	4
Salvador	TECON	5
Santos	TECONDI	9
Santos	TECON	10
Rio Grande	TECON	13
São Francisco do Sul	TESC	16
Itajaí	TECONVI	18
Santos	T-35	18
Santos	T-35	18
Vitória	TVV	62

## Waterway Prospect

### LEASED/PRIVATELY USED TERMINALS - CONTAINER – WAITING TIME (JANUARY TO JUNE-2007)

Port	Terminal	Average Waiting Time (h/n)
Suape	TECON	4
Santos	TECONDI	6
Salvador	TECON	7
Rio Grande	TECON	10
Santos	T-37	12
Santos	TECON	13
São Francisco do Sul	TESC	14
Santos	T-35	15
Paranaguá	TCP	16
Itajaí	TECONVI	18
Vitória	TVV	21

### PUBLIC PIER - CONTAINER - WAITING TIME (JANUARY TO JUNE - 2006)

Port	Terminal	Average Waiting Time (h/n)
Manaus	Public Pier	0
Belem	Public Pier	0
Vila do Conde	Public Pier	0
Imbituba	Public Pier	3
Salvador	Public Pier	5
Fortaleza	Public Pier	6
Rio Grande	Public Pier	9
Santos	Public Pier	9
Itajaí	Public Pier	19
São Francisco do Sul	Public Pier	22
Suape	Public Pier	26

### PUBLIC PIER - CONTAINER - WAITING TIME (JANUARY TO JUNE - 2007)

Port	Terminal	Average Waiting Time (h/n)
Belém	Public Pier	0
Vila do Conde	Public Pier	0
Manaus	Public Pier	0
Natal	Public Pier	0
Suape	Public Pier	3
Fortaleza	Public Pier	4
Rio Grande	Public Pier	5
Imbituba	Public Pier	5
Santos	Public Pier	9
Salvador	Public Pier	13
Itajaí	Public Pier	13
São Francisco do Sul	Public Pier	26

## AVERAGE PRICES - CONTAINERS

The Containers Terminal (Tecon) in the port of Santos (SP) has led the general ranking of prices per container moved in 2006, by charging the lowest price per unit: R\$ 189,45 or 24.9% less than that ranking second and 13.3% less than what was charged by Tecon itself in 2005 (R\$ 218,51). That year, the Tecon of Santos ranked third.

Terminal T37 of Libra in Santos, which was ranking 12 fell to the second order in 2006, when it charged R\$ 252,11 per container, a 13.74% decrease regarding 2005.

The public pier of the port de Manaus, ranking third, charged R\$ 281,06 in 2006, a 13% raise comparing to the previous year, when the movement cost R\$ 248,79 per container and the port de Manaus ranked seven.

One of the terminals which most raised leading positions in the ranking was Tecon of Rio Grande (RS), which was ranking 17 and then ranked four, upon charging R\$ 297,21 in 2006, approximately 8.5% less than in 2005, when the price was R\$ 324,65.

Tecon of Salvador dropped from the 2nd to the 5th position when charging R\$ 300,20 in 2006 approximately 53.5% more than in 2005 when it charged R\$ 195,57.

As to the public pier of Salvador, it dropped from the 6th position to the last position in the ranking of 9 public ports and 14 leased terminals. The price per moved container more than tripled in the public pier of Salvador, rising from R\$ 235,93 in 2005 to R\$ 694,64 in 2006.

## Waterway Prospect

	Port	Terminal	2006 (per container)	
			R\$	US\$
Public	MANAUS	SNPH	281,06	131,46
	ITAJAÍ	Commercial Pier	307,62	143,88
	SÃO FRANCISCO DO SUL	Public Pier	329,43	154,08
	FORTALEZA	Public Pier	375,21	175,50
	BELÉM	Public Pier	387,92	181,44
Ports	SANTOS	Margem Direita	433,23	207,31
	VILA DO CONDE	Public Pier	497,51	232,70
	IMBITUBA	Public Pier	557,74	260,87
	SALVADOR	Public Pier	694,64	324,90
Landed	SANTOS	Tecon	189,45	88,61
	SANTOS	Libra (T37)	252,11	117,92
	RIO GRANDE	Tecon	297,21	139,01
	SALVADOR	Tecon	300,20	140,41
	RIO DE JANEIRO	Libra	309,03	144,54
	ITAJAÍ	Teconvi	330,21	154,46
	SANTOS	Libra (T35)	331,77	155,18
	RIO DE JANEIRO	MultiRio	341,94	159,93
	VITÓRIA	TVV	366,57	171,45
	SÃO FRANCISCO DO SUL	Tesc	426,74	199,60
	SANTOS	Tecondi	446,42	208,80
	MANAUS	Super Terminais	512,82	239,86
	PARANAGUÁ	TCP	514,34	240,57
SUAPE	Tecon	515,14	240,94	

Dollar exchange rate: 12/31/2006 US\$1.00 = R\$ 2,1380

## SOY-BEAN AND BRAN

The Port of Paranaguá ranked first in the movement of soy-bean and bran in the first semester of 2007, reaching 5,693,541 tons. São Francisco do Sul and Porto Velho were also distinguished regarding the carriage of soy-bean and bran from January to June 2007. The port of Santa Catarina state moved 1,433,416 tons. 948,313 tons were moved in the capital of Rondônia state. In the same period in 2006, São Francisco do Sul moved 1,971,900 tons. As to Porto Velho, it reported a movement of 1,171,502 tons.

There is no data of Paranaguá in 2006 in ANTAQ's Port Performance System, directly fed by the Port Administrations.

Reviewing the leased terminals from January to June 2007, Terminal Corex (ADM) of Santos led the ranking in the quantity of carried soy-bean and bran: 2,373,749 tons. In the same period in 2006 that terminal also was leading with 3,420,961 tons. Taking into account the two periods, there was a decrease of more than 30%.

Regarding the average load/unload rate, the Port of São Francisco do Sul was the fastest, and it moved 21,353 tons a day in the first semester of 2007. In the same period in 2006 that number reached 18,735 tons, a 14% raise. Paranaguá ranked second in the first semester of 2007 having moved 13,240 tons a day. Velho moved, from January to June 2007, 3.833 tons. In the same period in 2006 the port had moved 3,918 tons.

Taking into account the average load/unload rate of the leased terminals, Terminal of Tubarão in the Port of Tubarão ranked first with 19,904 tons a day in the first semester of 2007. After that, Teaçú 3 in the Port of Santos ranked second with 17,972 tons. In the same period in 2006, Teaçú 3 ranked first with 15,718 tons. Comparing the numbers of 2007 and 2006 there was a 14% raise.

Reviewing the waiting time, the vessels arriving in Porto Velho in the first semester of 2006 and 2007 moored immediately. In São Francisco do Sul, from January to June 2007, the average waiting time was 53 hours. In the same period in 2006, it was 98 hours.

Regarding the leased terminals from January to June 2007, Bianchini, in Rio Grande, Cotegipe, in the Port of Cotegipe, and Tergrasa, also in Rio Grande, were the most distinguished. The first one with an average waiting time of 19 hours; the other two reported 20 hours of average waiting time. In 2006 in the same period, Teaçú 3, in Santos was distinguished with 2 hours, Tergrasa in Rio Grande with 6 hours and Bunge also in Rio Grande, with 11 hours.

PUBLIC PIER - SOY-BEAN AND BRAN QUANTITY (JANUARY TO JUNE - 2006)

Port	Terminal	Quantity (t)
São Francisco do Sul	Public Pier	1.971.900
Porto Velho	Public Pier	1.171.502

PUBLIC PIER - SOY-BEAN AND BRAN QUANTITY (JANUARY TO JUNE - 2007)

Port	Terminal	Soy-bean and Bran Quantity (t)
Paranaguá	Public Pier	5.693.541
São Francisco do Sul	Public Pier	1.433.416
Porto Velho	Public Pier	948.313

LEASED/PRIVATELY USED TERMINALS - SOY-BEAN AND BRAN – QUANTITY (JANUARY TO JUNE-2006)

Port	Terminal	Quantity (t)
Santos	COREX (ADM)	3.420.961
Santos	CARGILL	1.894.581
Rio Grande	TERGRASA	1.223.009
Rio Grande	BIANCHINI	937.706
Rio Grande	TERMINAL BUNGE	324.022
Rio Grande	TERMASA	317.546
Santos	TEAÇU 2	241.297
Santos	TEAÇU 3	173.092

## Waterway Prospect

### LEASED/PRIVATELY USED TERMINALS - SOY-BEAN AND BRAN – QUANTITY (JANUARY TO JUNE - 2007)

Port	Terminal	Soy-bean and Bran Quantity (t)
Santos	COREX (ADM)	2.373.749
Santos	CARGILL	1.319.408
Rio Grande	BIANCHINI	1.241.295
Rio Grande	TERGRASA	1.078.394
Tubarão	TUBARÃO	981.437
Santos	TGG	896.235
Rio Grande	TERMASA	484.892
Rio Grande	TERMINAL BUNGE	467.071
Cotegipe	COTEGIPE	318.454
Santos	TEAÇU 3	180.696
Rio Grande	TEAÇU 2	78.197

### PUBLIC PIER - SOY-BEAN AND BRAN - AVERAGE LOAD/UNLOAD RATE (JANUARY TO JUNE - 2006)

Port	Terminal	Quantity (t)
São Francisco do Sul	Public Pier	18.735
Porto Velho	Public Pier	3.918

### PUBLIC PIER - SOY-BEAN AND BRAN - AVERAGE LOAD/UNLOAD RATE (JANUARY TO JUNE - 2007)

Port	Terminal	Average Load/Unload Rate (t/d)
São Francisco do Sul	Public Pier	21.353
Paranaguá	Public Pier	13.240
Porto Velho	Public Pier	3.833

### LEASED/PRIVATELY USED TERMINALS SOY-BEAN AND BRAN - AVERAGE LOAD/UNLOAD RATE (JANUARY TO JUNE - 2006)

Port	Terminal	Average Load/Unload Rate (t/d)
Santos	TEAÇU 3	15.718
Santos	COREX (ADM)	13.716
Rio Grande	TERMAS A	11.008
Rio Grande	TERMINAL BUNGE	9.885
Santos	CARGILL	9.730
Santos	TEAÇU 2	8.053
Rio Grande	BIANCHINI	7.543
Rio Grande	TERRASA	6.895

### LEASED/PRIVATELY USED TERMINALS SOY-BEAN AND BRAN - AVERAGE LOAD/UNLOAD RATE (JANUARY TO JUNE - 2007)

## Waterway Prospect

Port	Terminal	Average Load/ Unload Rate (t/d)
Tubarão	TUBARÃO	19.904
Santos	TEAÇU 3	17.972
Rio Grande	TERMASA	12.501
Santos	COREX (ADM)	12.190
Cotegipe	COTEGIP E	11.979
Rio Grande	TERMINAL BUNGE	9.993
Santos	TGG	9.266
Santos	CARGILL	8.315
Rio Grande	BIANCHINI	7.818
Santos	TEAÇU 2	6.783
Rio Grande	TERGRASA	5.820

### PUBLIC PIER - SOY-BEAN AND BRAN - WAITING TIME (JANUARY TO JUNE - 2006)

Port	Terminal	Average Waiting Time (h)
Porto Velho	Public Pier	0
São Francisco do Sul	Public Pier	98

### PUBLIC PIER - SOY-BEAN AND BRAN - WAITING TIME (JANUARY TO JUNE - 2007)

Port	Terminal	Average Waiting Time (h)
São Francisco do Sul	Public Pier	0
Porto Velho	Public Pier	53
Paranaguá	Public Pier	159

### LEASED/PRIVATELY USED TERMINALS SOY-BEAN AND BRAN - WAITING TIME (JANUARY TO JUNE - 2006)

Port	Terminal	Average Waiting Time (h)
Santos	TEAÇU 3	2
Rio Grande	TERGRAS A	6
Rio Grande	TERMINAL BUNGE	11
Rio Grande	TERMAS A	14
Rio Grande	BIANCHINI	18
Santos	TEAÇU 2	57
Santos	CARGILL	66
Santos	CORE X (ADM)	99

### LEASED/PRIVATELY USED TERMINALS SOY-BEAN AND BRAN - WAITING TIME (JANUARY TO JUNE - 2007)

## Waterway Prospect

Port	Terminal	Average Waiting Time (h)
Rio Grande	BIANCHINI	19
Cotegipe	COTE GIPE	20
Rio Grande	TERGRASA	20
Santos	TEAÇU 3	22
Santos	TGG	27
Rio Grande	TERMINAL BUNGE	30
Santos	CARGILL	31
Santos	TEAÇU 2	45
Rio Grande	TERMASA	45
Tubarão	TUBARÃO	67
Santos	COREX (ADM)	72

## AVERAGE PRICES - SOY-BEAN AND BRAN

Bianchini's terminal in Rio Grande charged R\$ 4,16 per ton of moved soy-bean, jumping from the 4th rank in 2005 when it charged R\$ 9,83, to the 1<sup>st</sup> position in 2006. The annual variation was 57.7%.

Cargill's terminal in Santos ranked second, charging R\$ 5,41 per ton of soy-bean in 2006, a 16% decrease regarding 2005, when the terminal also occupied the second position.

The Corex terminal, which is a public pier specializing in solid bulk materials in the port of Paranaguá (PR), ranked third, charging R\$ 5,94 per ton of soy-bean in 2006, a 32.2% increase upon 2005, when Corex charged R\$ 4,49 leading the ranking that year.

The Múltiplo Uso Terminal (public) also in Paranaguá ranked four in 2006, when it charged R\$ 7,05 (did not enter the 2005 ranking) followed by terminal Teaçu 2 (leased) in Santos, which charged R\$ 9,31 in the same year (9.3% drop regarding 2005).

Tergrasa's Terminal in Rio Grande ranked last in a ranking of 3 public ports and 5 leased terminals, charging R\$ 11,02 per ton of soy-bean moved in 2006.

Public Pier	Port	Terminal	2006 (percontainer)	
			R\$	US\$
Public Pier	PARANAGUÁ	Corex	5,94	2,78
	PARANAGUÁ	Múltiple Uso	7,05	3,30
	SÃO FRANCISCO DO SUL	Muelle Público	9,68	4,53
Leased Terminals	RÍO GRANDE	Bianchini	4,16	1,95
	SANTOS	Cargil	5,41	2,53
	SANTOS	Teaçu 2	9,31	4,35
	RÍO GRANDE	Termasa	9,80	4,58
	RÍO GRANDE	Tergrasa	11,02	5,15

Dollar exchange rate: 12/31/2006 US \$1.00 = R\$ 2,1380

## WHEAT

The Port of Fortaleza led the ranking among the public piers in the movement of wheat from January to June 2007: 419,931 tons. In the same period in 2006 the Port of Fortaleza ranked second after the Port of Santos, with 380,344 tons. Comparing the two periods the growth of the port of Ceará state was 10%.

In the first semester of 2007, the Port of Santos ranked second with 282,148 tons of wheat moved. In the same period in 2006, Santos appeared ahead of Fortaleza with 504,586 tons.

Regarding the leased terminals, Termasa of Rio Grande (RS) ranked first in the period from January to June 2007, with 331.981 tons. In the same period in 2006, that number was 372,256 tons. Taking into account the two periods, there was a loss of almost 12%. Corex (ADM) of Santos ranked second in 2006 (164,513 tons) and in 2007 (203,261). Therefore, there was a 24% raise.

Taking into account the average load/unload rate the Port of Fortaleza moved 7,754 tons a day and led the ranking from January to June 2007. In the same period in 2006, the Port of Fortaleza also ranked first, moving 6,727 tons a day. Therefore, a 15% raise was reported.

Regarding the leased terminals, Tesc of São Francisco do Sul moved 4,897 tons of wheat a day, and that number is enough for the terminal to lead the ranking in the period. In the first semester of 2006, Tergrasa of Rio Grande (RS) was the leader, with 11,479 tons/day.

Reviewing the waiting time, the Port of Natal was the only one in which the vessels moored immediately in the first semesters of 2006 and 2007. Regarding the leased terminals in the first months of 2007, the terminals Cesa and Serra Morena, both in Porto Alegre, presented the best performance: the average waiting time for mooring the vessel was one hour. In the same period in 2006, the two terminals were also ahead, except that the vessels were moored immediately.

PUBLIC PIERS - WHEAT – QUANTITY (JANUARY TO JUNE - 2006)

## Waterway Prospect

Port	Terminal	Quantity (t)
Santos	Public Pier	504.586
Fortaleza	Public Pier	380.344
Recife	Public Pier	243.514
Santos	Public Pier (Moinho Santista)	220.058
Vitória	Public Pier (Capuaba)	218.801
Salvador	Public Pier	142.125
Imbituba	Public Pier	75.671
Sao Francisco do Sul	Public Pier	67.685
Natal	Public Pier	45.831
Itaqui	Public Pier	44.785

### PUBLIC PIERS - WHEAT – QUANTITY (JANUARY TO JUNE - 2007)

Port	Terminal	Quantity (t)
Fortaleza	Public Pier	419.931
Santos	Public Pier	282.148
Recife	Public Pier	265.136
Vitória	Public Pier (Capuaba)	246.545
Santos	Public Pier (Moinho Santista)	228.122
Salvador	Public Pier	164.126
Paranaguá	Public Pier	156.485
Imbituba	Public Pier	98.790
São Francisco do Sul	Public Pier	51.291
Natal	Public Pier	43.344
Itaqui	Public Pier	40.548
Cabedelo	Public Pier	35.253
Maceió	Public Pier	26.241

### LEASED/PRIVATELY USED TERMINALS - WHEAT – QUANTITY (JANUARY TO JUNE - 2006)

Port	Terminal	Quantity (t)
Rio Grande	TERMASA	372.256
Santos	COREX (ADM)	164.513
São Francisco do Sul	TESC	116.293
Rio Grande	BIANCHINI	93.642
Rio Grande	TERGRASA	81.500
Porto Alegre	SERRA MORENA	53.886
Porto Alegre	CESA	26.328

## Waterway Prospect

### LEASED/PRIVATELY USED TERMINALS - WHEAT – QUANTITY (JANUARY TO JUNE - 2007)

Port	Terminal	Quantity (t)
Rio Grande	TERMASA	331.981
Santos	COREX (ADM)	203.261
São Francisco do Sul	TESC	155.837
Cotegipe	COTEGIPE	125.038
Porto Alegre	SERRA MORENA	66.884
Rio Grande	BIANCHINI	53.917
Rio Grande	TERGRASA	7.200
Porto Alegre	CESA	5.276

### PUBLIC PIERS - WHEAT - AVERAGE LOAD/UNLOAD RATE (JANUARY TO JUNE - 2006)

Port	Terminal	Average Load/Unload Rate (t/d)
Fortaleza	Public Pier	6.727
Imbituba	Public Pier	3.989
São Francisco do Sul	Public Pier	3.575
Santos	Public Pier	3.397
Natal	Public Pier	3.221
Vitória	Public Pier (Capuaba)	2.486
Santos	Public Pier (Moinho Santista)	2.441
Recife	Public Pier	2.241
Salvador	Public Pier	1.734
Itaqui	Public Pier	1.315

### PUBLIC PIERS - WHEAT - AVERAGE LOAD/UNLOAD RATE (JANUARY TO JUNE - 2007)

Port	Terminal	Average Load/Unload Rate (t/d)
Fortaleza	Public Pier	7.754
Santos	Public Pier	6.095
São Francisco do Sul	Public Pier	4.827
Maceió	Public Pier	4.728
Imbituba	Public Pier	3.708
Natal	Public Pier	3.645
Paranaguá	Public Pier	3.021
Cabedelo	Public Pier	2.692
Vitória	Public Pier (Capuaba)	2.406
Salvador	Public Pier	2.290
Santos	Public Pier (Moinho Santista)	2.248
Recife	Public Pier	1.897
Itaqui	Public Pier	1.493

### LEASED/PRIVATELY USED TERMINALS - WHEAT – AVERAGE LOAD/UNLOAD RATE (JANUARY TO JUNE – 2006)

## Waterway Prospect

Port	Terminal	Average Load/Unload Rate (t/d)
Rio Grande	TERGRASA	11.479
Rio Grande	TERMASA	5.499
Santos	COREX (ADM)	4.865
São Francisco do Sul	TESC	4.741
Rio Grande	BIANCHINI	3.911
Porto Alegre	SERRA MORENA	1.687
Porto Alegre	CESA	1.107

### LEASED/PRIVATELY USED TERMINALS - WHEAT - AVERAGE LOAD/UNLOAD RATE (JANUARY TO JUNE - 2007)

Port	Terminal	Average Load/Unload Rate (t/d)
São Francisco do Sul	TESC	4.897
Cotegipe	COTEGIPE	4.321
Santos	COREX (ADM)	4.138
Rio Grande	BIANCHINI	3.163
Rio Grande	TERMASA	2.729
Rio Grande	TERGRASA	2.213
Porto Alegre	SERRA MORENA	842
Porto Alegre	CESA	543

### PUBLIC PIER WHEAT - WAITING TIME (JANUARY TO JUNE - 2006)

Port	Terminal	Average Waiting Time (h)
Natal	Public Pier	0
Salvador	Public Pier	3
Santos	Public Pier (Moinho Santista)	8
Recife	Public Pier	13
Fortaleza	Public Pier	17
Itaqui	Public Pier	24
Imbituba	Public Pier	32
Santos	Public Pier	33
São Francisco do Sul	Public Pier	45
Vitória	Public Pier (Capuaba)	125

### PUBLIC PIER WHEAT - WAITING TIME (JANUARY TO JUNE - 2007)

## Waterway Prospect

Port	Terminal	Average Waiting Time (h)
Natal	Public Pier	0
Cabedelo	Public Pier	5
Santos	Public Pier	8
Fortaleza	Public Pier	12
Recife	Public Pier	13
Imbituba	Public Pier	13
Salvador	Public Pier	15
Santos	Public Pier (Moinho Santista)	21
Vitória	Public Pier (Capuaba)	46
São Francisco do Sul	Public Pier	48
Maceió	Public Pier	51
Itaqui	Public Pier	57
Paranaguá	Public Pier	90

### LEASED/PRIVATELY USED TERMINALS - WHEAT - WAITING TIME (JANUARY TO JUNE - 2006)

Port	Terminal	Average Waiting Time (h)
Porto Alegre	SERRA MORENA	0
Porto Alegre	CESA	0
Rio Grande	TERGRASA	8
Rio Grande	BIANCHINI	33
Rio Grande	TERMASA	35
São Francisco do Sul	TESC	70
Santos	COREX (ADM)	98

### LEASED/PRIVATELY USED TERMINALS - WHEAT - WAITING TIME (JANUARY TO JUNE - 2007)

Port	Terminal	Average Waiting Time (h)
Porto Alegre	CESA	1
Porto Alegre	SERRA MORENA	1
Cotegipe	COTEGIPE	7
Rio Grande	BIANCHINI	42
Rio Grande	TERMASA	58
São Francisco do Sul	TESC	66
Santos	COREX (ADM)	75
Santos	TERGRASA	76

## AVERAGE PRICES - WHEAT

Waterway transport

## Waterway Prospect

Bianchini's terminal in Rio Grande went from the 6th position in 2005 to the price ranking leadership for wheat in 2006: it charged R\$ 3,86 per ton of wheat moved, a drop of almost 40% in comparison with 2005 when the charged price was R\$ 6,42.

Ranking second, the public pier of port de Fortaleza charged R\$ 5,41 per ton in 2006 almost 15% less in comparison with 2005, when it ranked fifth.

Corex, the public pier specialized in solid bulk materials in the port de Paranaguá ranked third. It charged R\$ 6,35 per ton of soy-bean in 2006, an 84.6% raise compared to 2005 when it charged R\$ 3,44 per ton, ranking first that year.

Ranking four, the Corex terminal (leased) in Santos charged R\$ 6,74 per ton in 2006, approximately 9% more than the price charged in 2005 (R\$ 6,19), when the terminal also ranked four.

Capuaba's terminal (public) in the port de Vitória ranked fifth, charging R\$ 6,85 per ton in 2006. Capuaba did not go into the ranking in 2005.

Ranking last among the 14 public ports and 5 leased terminals, we find Moinho Santista (public terminal) in the port do Rio de Janeiro, charging R\$ 37,22 per ton of soy-bean.

The price is twice that charged by the next to last, the public pier in the port de Recife (R\$ 18,57) and 235,3% above the amount reported in 2005 (R\$ 11,10), when Moinho Santista ranked 14<sup>th</sup>.

Public Ports	Port	Terminal	2006 (per ton)	
			R\$	US\$
	FORTALEZA	Public Pier	5,41	2,53
	PARANAGUÁ	Corex	6,35	2,97
	VITÓRIA	Capuaba	6,85	3,20
	NATAL	Public Pier	6,93	3,24
	SÃO FRANCISCO DO SUL	Public Pier	9,19	4,30
	SANTOS	Margem Direita	9,60	4,49
	RIO DE JANEIRO	Moinho Cruzeiro do Sul	10,14	4,74
	SALVADOR	Moinho Salvador	10,17	4,76
	IMBITUBA	Public Pier	10,28	4,81
	ITAQUI	Public Pier	15,95	7,46
	SANTOS	Moinho Santista	16,09	7,53
	BELÉM	Public Pier	17,66	8,26
	RECIFE	Public Pier	18,57	8,69
	RIO DE JANEIRO	Moinho Santista	37,22	17,41
Leased Terminals	RIO GRANDE	Bianchini	3,86	1,81
	SANTOS	Corex (ADM)	6,74	3,15
	SÃO FRANCISCO DO SUL	Terban	7,59	3,55
	RIO GRANDE	Termasa	12,01	5,62
	RIO GRANDE	Tergrasa	12,58	5,88

Dollar exchange rate: 12/31/2006 US \$1.00 = R\$ 2,1380

## FERTILIZERS

The Port of Paranaguá led the movement of fertilizers in the period from January to June 2007, with 2,173,816 tons. The Port Performance System did not receive the data from that port to compare with 2006.

The Port of Rio Grande ranked second in the movement of fertilizers, in the first semester of 2007, reaching 411,453 tons. In the same period in 2006, Rio Grande moved 246,771 tons. Comparing both periods, there was a 67% raise.

Porto Alegre is another port distinguishing in the carriage of fertilizers. In 2006 Porto Alegre moved 121,373 tons. In 2007 that number soared to 191,914: a 58% increase.

Regarding the leased terminals, Yara Fertilizantes of Rio Grande led in the first months of 2007, with 1,266,406 tons. In the same period in 2006, that number was decreased to 719.783 tons. Therefore, there was a 76% increase.

Taking into account the average load/unload rate, the Port of São Francisco do Sul (SC) presented the best performance in the first semester of 2007, with 11,034 tons carried a day. Porto

## Waterway Prospect

Velho ranked second with 8,573 tons. Among the terminals, Ultrafértil, in Santos, led that requisite in the first semester of 2007, with 7,168 tons moved per day.

Reviewing the waiting time, the vessels carrying fertilizers moored immediately in the public piers Navegantes, of Porto Alegre, and Comercial, of Pelotas (RS), in the six first months of 2007. Regarding the leased terminals, Tesc in São Francisco do Sul, was distinguished with the vessels being immediately moored.

### PUBLIC PIERS – FERTILIZERS - QUANTITY (JANUARY TO JUNE - 2006)

Port	Terminal	Quantity (t)
Rio Grande	Public Pier	246.771
Porto Alegre	Public Pier (Navegantes)	121.373
Recife	Public Pier	100.795
Itaqui	Public Pier	74.948
Imbituba	Public Pier	67.486
Santos	Public Pier	43.806
Fortaleza	Public Pier	10.058
Santos	Public Pier (Moinho Santista)	5.716
Pelotas	Public Pier (Comercial)	3.020
Porto Velho	Public Pier	1.115

### PUBLIC PIERS – FERTILIZERS - QUANTITY (JANUARY TO JUNE - 2007)

Port	Terminal	Quantity (t)
Paranaguá	Public Pier	2.173.816
Rio Grande	Public Pier	411.453
Porto Alegre	Public Pier (Navegantes)	191.914
Itaqui	Public Pier	184.714
Recife	Public Pier	182.277
Santos	Public Pier	155.930
Imbituba	Public Pier	39.131
Porto Velho	Public Pier	37.828
Santos	Public Pier (Moinho Santista)	15.044
São Francisco do Sul	Public Pier	12.000
Salvador	Public Pier	11.591
Fortaleza	Public Pier	11.485
Pelotas	Public Pier (Comercial)	3.276

### LEASED/PRIVATELY USED TERMINALS FERTILIZERS - QUANTITY (JANUARY TO JUNE - 2006)

Port	Terminal	Quantity (t)
Rio Grande	YARA FERTILIZANTES	719.783
Santos	ULTRAFERTIL	356.662
Santos	TMG	84.869

## Waterway Prospect

### LEASED/PRIVATELY USED TERMINALS FERTILIZERS - QUANTITY (JANUARY TO JUNE - 2007)

Port	Terminal	Quantity (t)
Rio Grande	YARA FERTILIZANTES	1.266.406
Santos	TMG	565.688
Santos	ULTRAFERTIL	491.783
Tubarão	TUBARÃO	427.642
São Francisco do Sul	TESC	12.000
Rio Grande	BIANCHINI	1.088
Itajaí	TECONVI	84

### PUBLIC PIER - FERTILIZERS - AVERAGE LOAD/UNLOAD RATE (JANUARY TO JUNE - 2006)

Port	Terminal	Average Load/ Unload Rate (t/d)
Imbituba	Public Pier	4.974
Porto Velho	Public Pier	2.942
Porto Alegre	Public Pier (Navegantes)	2.888
Itaquí	Public Pier	2.860
Rio Grande	Public Pier	2.585
Recife	Public Pier	2.504
Santos	Public Pier	2.024
Pelotas	Public Pier (Comercial)	1.644
Fortaleza	Public Pier	1.489
Santos	Public Pier (Moinho Santista)	1.157

### PUBLIC PIER - FERTILIZERS - AVERAGE LOAD/UNLOAD RATE (JANUARY TO JUNE - 2007)

Port	Terminal	Average Load/ Unload Rate (t/d)
São Francisco do Sul	Public Pier	11.034
Porto Velho	Public Pier	8.573
Paranaguá	Public Pier	5.425
Santos	Public Pier (Moinho Santista)	4.052
Imbituba	Public Pier	3.337
Santos	Public Pier	3.194
Itaquí	Public Pier	2.518
Rio Grande	Public Pier	2.334
Porto Alegre	Public Pier (Navegantes)	2.319
Recife	Public Pier	2.170
Fortaleza	Public Pier	2.071
Salvador	Public Pier	1.095
Pelotas	Public Pier (Comercial)	818

## Waterway Prospect

### LEASED/PRIVATELY USED TERMINALS - FERTILIZERS - AVERAGE LOAD/UNLOAD RATE (JANUARY TO JUNE - 2006)

Port	Terminal	Average Load/Unload Rate (t/d)
Santos	ULTRAFÉRTIL	7.834
Santos	TMG	4.077
Rio Grande	YARA FERTILIZANTES	3.444

### LEASED/PRIVATELY USED TERMINALS - FERTILIZERS - AVERAGE LOAD/UNLOAD RATE (JANUARY TO JUNE - 2007)

Port	Terminal	Average Load/Unload Rate (t/d)
Santos	ULTRAFÉRTIL	7.168
Tubarão	TUBARÃO	5.223
São Francisco do Sul	TESC	4.792
Santos	TMG	4.635
Rio Grande	YARA FERTILIZANTES	2.225
Rio Grande	BIANCHINI	434
Itajai	TECONVI	182

### PUBLIC PIER - FERTILIZERS - WAITING TIME (JANUARY TO JUNE - 2006)

Port	Terminal	Average Waiting Time (h)
Santos	Public Pier (Moinho Santista)	0
Porto Velho	Public Pier	0
Porto Alegre	Public Pier (Navegantes)	0
Pelotas	Public Pier (Comercial)	1
Imbituba	Public Pier	8
Recife	Public Pier	9
Itaqui	Public Pier	14
Rio Grande	Public Pier	28
Fortaleza	Public Pier	53
Santos	Public Pier	71

PUBLIC PIER - FERTILIZERS - WAITING TIME (JANUARY TO JUNE - 2007)

Port	Terminal	Average Waiting Time (h)
Porto Alegre	Public Pier (Navegantes)	0
Pelotas	Public Pier (Comercial)	0
Salvador	Public Pier	1
Porto Velho	Public Pier	2
Santos	Public Pier (Moinho Santista)	21
Fortaleza	Public Pier	21
Santos	Public Pier	23
Recife	Public Pier	23
Imbituba	Public Pier	26
Rio Grande	Public Pier	57
Itaqui	Public Pier	68
São Francisco do Sul	Public Pier	69
Paranaguá	Public Pier	142

LEASED/PRIVATELY USED TERMINALS - FERTILIZERS - WAITING TIME (JANUARY TO JUNE - 2006)

Port	Terminal	Average Waiting Time (h)
Santos	TMG	32
Rio Grande	YARA FERTILIZANTES	34
Santos	ULTRAFERTIL	60

LEASED/PRIVATELY USED TERMINALS - FERTILIZERS - WAITING TIME (JANUARY TO JUNE - 2007)

Port	Terminal	Average Waiting Time (h)
São Francisco do Sul	TESC	0
Rio Grande	BIANCHINI	1
Itajaí	TECONVI	1
Rio Grande	YARA FERTILIZANTES	50
Santos	ULTRAFERTIL	169
Tubarão	TUBARÃO	170
Santos	TMG	275

## AVERAGE PRICES - FERTILIZERS

Fospar's public terminal in the port of Paranaguá ranked first upon charging \$ 5,50 per ton of fertilizers moved in 2006. Trevo's leased terminal in the port of Rio Grande ranked second, charging R\$ 8,20 per ton.

The Múltiplo Uso Terminal in the port of Paranaguá ranked third by charging R\$ 9,67, followed by the public pier of Rio Grande, with R\$ 12,12 and by the public pier of Imbituba, which charged R\$ 13,88 per ton of soy-bean in 2006.

The public pier Navegantes ranked last in the price ranking for fertilizers, which included 7 public ports and 3 leased terminals, an amount almost 400% above the price charged by Fospar' terminal.

There was no price ranking for fertilizers in 2005.

## Waterway Prospect

Public Ports	Port	Terminal	2006 (per ton.)	
			R\$	US\$
	PARANAGUÁ	Fospar	5,50	2,57
	PARANAGUÁ	Múltiplo Uso	9,67	4,52
	RIO GRANDE	Public Pier	12,12	5,67
	IMBITUBA	Public Pier	13,88	6,49
	ITAQUI	Public Pier	15,55	7,27
	RECIFE	Public Pier	24,39	11,41
	PELOTAS	Public Pier	25,07	11,73
	PORT ALEGRE	Navegantes Pier	27,40	12,82
Leased Terminals	RIO GRANDE	Trevo	8,20	3,84
	SANTOS	Ultrafertil	8,21	3,84
	SANTOS	Tefer	19,19	8,98

Dollar exchange rate: 12/31/2006 US \$1.00 = R\$ 2,1380

## ATTRACTIVENESS INDEXES

This index comprises four variables, namely: total quantity moved, mooring vessels' average waiting time, average load/unload rate during the first semester of 2007 and average movement prices per unit (containers) or ton (bulk materials) during the year 2006.

Grades from five to ten were assigned to each variable, multiplied by weights showing the relative importance of each index as a function of the cargo moved. The final grade of each port or terminal was the arithmetic mean of the four grades.

The weight three was assigned to the indexes "quantity moved" and "average price" for the containers movement, and the weights 2.5 (two point five) and 1.5 (one point five) were assigned to the indexes "waiting time" and "average load/unload rate", respectively.

For the movement of soy-bean and bran, wheat and fertilizers, the weights four, for "quantity moved", three for "average price", one, for "waiting time" and two for "average load/unload rate".

The indexes measure the attractiveness that each port or terminal exerts on the users. The general ranking for each index referring to the movement of containers, soy-bean and bran, wheat and fertilizers is presented below. Only the ports and terminals fully integrated to the Port Performance System were taken into account to prepare this ranking.

In most of the surveyed ports and terminals, substantial increases were seen mainly in the piloting, and tugboats' prices (Manaus, Belém, Vitória, Santos, and Suape).

Public Ports - Container	Port	Terminal	Final Grade
	Santos	Public Pier	8,76
	Itajaí	Public Pier	8,25
	Manaus	Public Pier	8,11
	Fortaleza	Public Pier	7,63
	São Francisco do Sul	Public Pier	7,60
	Belém	Public Pier	7,53
	Vila do Conde	Public Pier	7,12
	Imbituba	Public Pier	7,08
	Rio Grande	Public Pier	5,75
	Suape	Public Pier	5,69
	Natal	Public Pier	5,66
	Salvador	Public Pier	5,65

## Waterway Prospect

Leased Terminals Container	Port	Terminal	Final Grade
	Santos	TECON	9,34
	Santos	T-37	7,97
	Rio Grande	TECON	7,96
	Salvador	TECON	7,60
	Santos	T-35	7,35
	Santos	TECONDI	7,06
	Itajaí	TECONVI	7,04
	Suape	TECON	6,80
	Vitória	TVV	6,53
São Francisco do Sul	TESC	5,92	

Public Ports	Port	Terminal	Final Grade
	São Francisco do Sul	Public Pier	8,04
	Paranaguá	Public Pier	7,54
Porto Velho*	Public Pier	4,90	

Leased Terminals/Privately Used Terminals	Port	Terminal	Final Grade
	Rio Grande	TERGRASA	7,86
	Rio Grande	TERMASA	7,31
	Santos	CARGIL	6,93
	Santos	COREX (ADM)	6,85
	Rio Grande	BIANCHINI	6,66
	Santos	TEAÇU 2	6,45
	Tubarão	TUBARÃO	6,23
	Santos	TEAÇU 3	5,83
	Santos	TGG	5,78
	Cotegipe	COTEGIPE	5,54
Rio Grande	BUNGE TERMINAL	5,43	

	Port	Terminal	Final Grade
Public Ports Wheat	Fortaleza	Public Pier	8,39
	Recife	Public Pier	8,16
	Santos	Public Pier	7,94
	Santos	Public Pier (Moinho Santista)	7,68
	Salvador	Public Pier	6,74
	Imbituba	Public Pier	6,66
	Vitória	Public Pier (Capuaba)	6,53
	Itaqui	Public Pier	6,27
	São Francisco do Sul	Public Pier	6,17
	Natal	Public Pier	6,10
	Cabedelo	Public Pier	5,09
	Maceió	Public Pier	4,97

	Port	Terminal	Final Grade
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## Waterway Prospect

Leased / Privately Used Terminals Wheat	Santos	COREX (ADM)	8,05
	São Francisco do Sul	TESC	7,85
	Rio Grande	TERMASA	7,72
	Rio Grande	BIANCHINI	7,63
	Cotegipe	COTEGIPE	6,46
	Rio Grande	TERGRASA	5,40
	Porto Alegre	SERRA MORENA	5,35
	Porto Alegre	CESA	4,90

	Port	Terminal	Final Grade
Public Ports Fertilizers	Rio Grande	Public Pier	8,74
	Itaqui	Public Pier	7,23
	Imbituba	Public Pier	7,06
	Recife	Public Pier	6,64
	Porto Alegre	Public Pier (Navegantes)	6,57
	Porto Velho*	Public Pier	5,81
	Pelotas	Public Pier (Comercial)	5,73
	Santos	Public Pier	5,71
	São Francisco do Sul	Public Pier	5,44
	Santos	Public Pier (Moinho Santista)	5,12
	Salvador	Public Pier	4,96
	Fortaleza	Public Pier	4,91

\*Movement performed in barges.

	Port	Terminal	Final Grade
Leased/ Privately Used Terminals Fertilizers	Rio Grande	YARA FERTILIZANTES	9,20
	Santos	ULTRAFERTIL	8,47
	Santos	TMG	6,53
	Tubarão	TUBARÃO	5,99
	São Francisco do Sul	TESC	5,58
	Rio Grande	BIANCHINI	4,94
	Itajaí	TECONVI	4,90

# **CARGO MOVEMENT IN THE PORTS 1994 - 2006**

## Container movement grows 77% in five years

The volume of cargo carried in containers grew 77.3% in the Brazilian ports from 2002 to 2006, rising from 3,492,340 to 6,195,119 TEUs. In an appraisal made since 1994 the growth reaches 342%, which means an average increase of 13.18% a year.

The movement of general cargo in the Brazilian ports grew at an annual rate of 8.56%. In 2006 102,026,027 tons were carried, 59.6% more than the 63,897,353 tons moved in 2002. Considering the period from 1994 to 2006 the growth reached 167.8%.

Year	Brazil			
	Solid Bulk Material	Liquid Bulk Material	General Cargo	Container (TEUs)
1994	204.626.109	117.706.425	38.085.566	1.401.546
1995	222.541.904	122.657.844	42.491.240	1.714.529
1996	221.089.725	124.509.678	40.784.628	1.779.436
1997	241.121.714	130.878.306	42.239.745	1.925.970
1998	250.469.331	148.010.962	44.524.301	2.029.371
1999	242.505.100	145.254.561	47.950.236	2.166.344
2000	281.292.315	154.555.572	48.812.755	2.469.650
2001	289.265.117	163.986.765	52.955.002	2.924.839
2002	301.972.374	163.135.324	63.897.353	3.492.340
2003	336.276.308	161.886.081	72.627.666	4.170.469
2004	369.611.250	166.555.087	84.554.208	4.999.000
2005	392.903.932	163.717.494	92.797.355	5.658.326
2006	415.727.739	175.541.324	102.026.027	6.195.119
Annual Growth Average	1994 - 2006 6,09 %	1994 - 2006 3,39 %	1994 - 2006 8,56 %	1994 - 2006 13,18 %

## Waterway Prospect

The growth of solid bulk materials movement in the Country's ports was also quite expressive. The annual growth rate was 6.09%. In 2006, 414,727,739 tons were carried, 37.6% more than the movement of 2002 which was 301,972,374 tons. If the period since 1994 is taken into account, when 204,626,109 tons of solid bulk materials were carried, the growth was 103%.

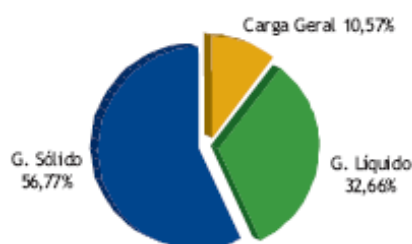
The smallest growth rate was 3.39%, the annual average reported for the liquid bulk materials. In 2006, the Brazilian ports moved 175,541,335 tons of liquid cargo, 49% more than the 117,706,425 tons reported in 1994. The difference between the volume carried in 2006 and the volume carried in 2002 corresponds to only 7.6%. It is seen that in 2004 166,555,087 tons were moved, which is a volume higher than that reported in 2005. The volumes carried in 2001 and 2002 were also higher than those of 2003.

## DISTRIBUTION

The charts on the distribution of cargo carried in the Brazilian ports show the growth of the solid bulk materials and general cargo volumes with the matching decrease in the liquid bulk materials volume.

In 1994 56.77% of the cargo carried in the Brazilian ports was comprised of solid bulk materials, and in 2006 the rate for this type of cargo goes up to 59.96%. General cargo corresponded to 10.57% and was increased to 14.72%, while the liquid bulk materials represented 32.66% in 1994 and dropped to 25.32% in 2006.

Movement Distribution - 1994



Captions: Solid Bulk Material / General Cargo / Liquid Bulk Material

Movement Distribution - 2000



Captions: Solid Bulk Material / General Cargo / Liquid Bulk Material

Movement Distribution - 2006



Captions: Solid Bulk Material / General Cargo / Liquid Bulk Material

## SOUTHEASTERN BRAZIL MOVES ONE HALF OF THE COUNTRY'S CARGO

The ports located in Southeastern Brazil are responsible for the movement of more than one half of the total cargo passing through the country's port sector. In the case of solid bulk materials and general cargo, the rates are even higher.

In 2006 Southeastern Brazil ports moved 227,577,132 tons of solid bulk materials which means 54.7% of the total carried by the country's ports. The annual average growth was 5.4%.

The general cargo movement increased in average by 8% a year. In 2006 the carried volume was 62,377,065 tons, representing 61/5 of the total national number.

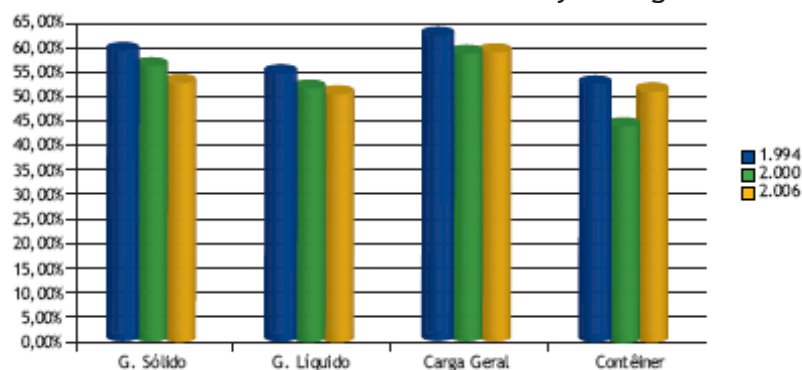
The annual growth reached 12.94%.

Southeastern Brazil also moved 3,290,811 TEUs (containerized cargo), approximately 53% of the total country's ports number.

In terms of liquid bulk materials, the annual growth average reported in the Southeast ports was below the national performance and it was not higher than 2.69%. In 2006 the region moved 91,876,077 tons of liquid bulk materials, which represents 52.3% of what was moved in all Brazilian ports.

Year	Southeastern Brazil			
	Solid Bulk Material	Liquid Bulk Material	General Cargo	Container (TEUs)
1994	126.113.746	66.847.859	24.679.006	764.434
1995	127.176.679	72.267.735	26.364.750	984.553
1996	128.473.591	67.761.263	25.791.682	1.013.480
1997	141.017.800	73.595.678	25.594.278	1.095.267
1998	143.036.399	82.459.790	27.715.944	1.107.126
1999	142.136.846	80.442.486	30.456.391	1.094.349
2000	164.247.060	82.728.994	29.660.384	1.128.556
2001	156.766.633	88.628.882	31.664.017	1.435.131
2002	173.269.513	88.446.917	37.988.343	1.672.872
2003	185.992.677	89.258.650	42.926.974	2.070.177
2004	205.299.878	90.355.920	49.501.574	2.550.096
2005	225.822.417	84.346.019	54.878.872	3.002.261
2006	227.577.132	91.876.077	62.377.065	3.290.811
Annual Growth Average	1994 - 2006 5,04 %	1994 - 2006 2,69 %	1994 - 2006 8,03 %	1994 - 2006 12,94 %

### Southeastern Brazil's Share in the Country's Cargo Movement



Captions: Solid Bulk Material / Liquid Bulk Material / General Cargo / Container

## SANTOS CENTRALIZES 74% OF THE CONTAINERS CIRCULATING IN THE SOUTHEAST REGION

The movement of containers in the Port of Santos in 2006, which totalized 2,445,941 TEUs, was equivalent to 74.3% of the total containerized cargo carried by the Southeastern Region in the same period. In 1994 the rate was even higher, reaching 80%. The annual growth average of containers movement in Santos from 1994 to 2006, it was 12.21%.

Port of Santos				
Year	Solid Bulk Material	Liquid Bulk Material	General Cargo	Container (TEUs)
1994	16.107.701	7.253.131	10.760.529	614.168
1995	14.940.694	7.595.585	12.575.088	817.848
1996	16.678.102	7.821.486	11.839.772	772.313
1997	18.053.696	9.078.159	11.340.275	829.486
1998	17.640.615	9.368.274	12.931.497	799.476
1999	19.146.958	9.625.782	13.902.767	774.959
2000	19.204.220	10.663.778	13.216.385	800.898
2001	22.248.446	11.138.073	14.775.074	892.802
2002	23.979.655	11.335.349	18.159.264	1.068.606
2003	26.299.235	12.976.191	20.801.647	1.385.421
2004	27.898.592	13.508.837	26.202.324	1.749.539
2005	29.661.014	13.036.187	29.205.293	2.236.580
2006	29.696.696	14.510.791	32.089.706	2.445.941
Annual Growth Average	1994 - 2006 5,23 %	1995 - 2006 5,95 %	1996 - 2006 9,53 %	1997 - 2006 12,21 %

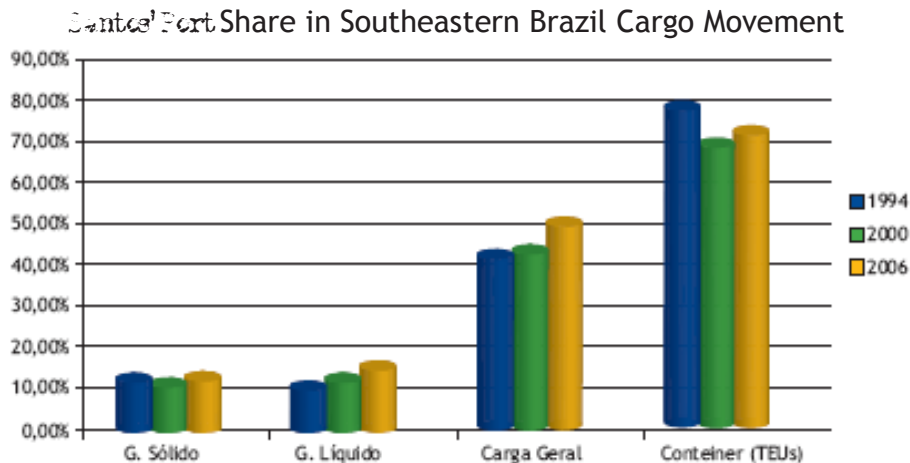
## Waterway Prospect

Regarding the general cargo, the port of Santos accounts for more than one half of what is carried in Southeastern Brazil. In 2006 32,089,706 tons were moved, 76.7% more than the 18,159,264 tons carried in 2002. From 1994 to 2006 the general cargo movement in Santos grew 198.2%.

The 14,150,791 tons of liquid bulk materials passing through the port of Santos in 2006 are equivalent to 17.3% of the total carried in Southeastern Brazil. That year, the port of Santos moved 28% more than the 11,335,349 tons of liquid bulk materials carried in 2002.

From 1994 to 2006, the movement of liquid cargo in Santos grew 100%. The annual growth average of the solid bulk materials movement in the Port of Santos was 5.23%. In 2006, Santos carried 29,696,696 tons of solid bulk materials, 23.8% more than the 23,979,655 tons carried in 2002.

From 1994 to 2006, the growth was 84.3%. Currently, the port of Santos represents approximately 13% of the total number of solid bulk materials moved in Southeastern Brazil.



Captions: Solid Bulk Material / Liquid Bulk Material / General Cargo / Container

## MOVEMENT OF CONTAINERS GROW 23% IN FIVE YEARS IN THE PORT OF RIO

In 2006 the Port of Rio de Janeiro moved 335,145 TEUs, 23.4% more than the 271,589 moved in 2002. The average annual growth of the container movement in the Port of Rio was 10% since 1994. However, the port of Rio de Janeiro accounts for 10% of the total number of containers moved in the Southeast region, way below the 19% which it moved in the year 2000.

The general cargo growth in Rio's Port, from 2002 to 2006 was 42.7%. But in percentage terms, comparing to the Southeast region, the port lost cargo. In 1994 it moved 16% of the general cargo passing through the Southeastern ports, dropping to 13% in 2000 and then to 10% in 2006.

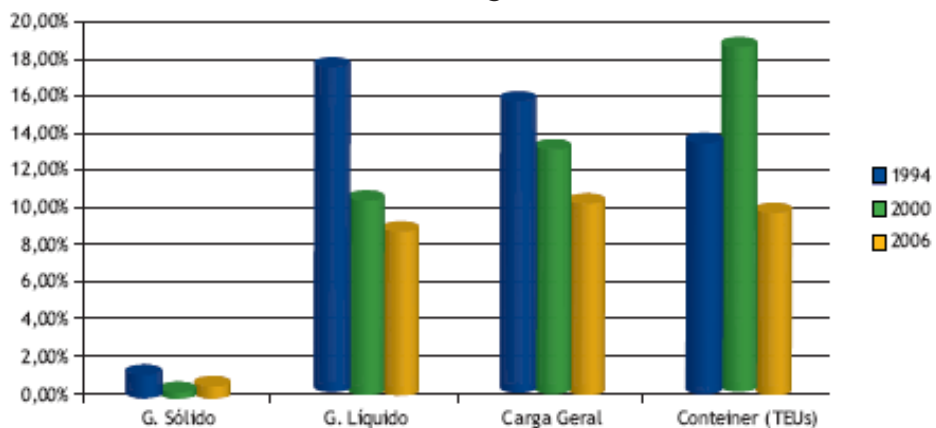
The same happened to the liquid bulk materials. In 1994 Rio's port used to move 18% of the liquid cargo in the Southeast region, dropping to 11% in 2000 and to 9% in 2006. In 2006, Rio's port carried 8,427,326 tons of liquid bulk materials, 30% less than the 12,120,602 tons moved in 1994.

The movement of solid bulk materials in Rio's port grew at an annual average of 1.87% but it is still low regarding what is carried in the Southeast region, representing 0.7% of the total number.

## Waterway Prospect

Rio de Janeiro				
Year	Solid Bulk Material	Liquid Bulk Material	General Cargo	Container (TEUs)
1994	1.210.354	12.120.602	4.010.501	106.764
1995	1.137.404	13.525.283	4.100.133	163.209
1996	868.699	9.320.707	3.297.903	172.863
1997	584.658	8.376.718	3.847.592	202.763
1998	646.742	7.753.556	3.692.608	198.197
1999	712.461	9.303.849	4.561.605	204.289
2000	655.003	8.942.182	4.041.534	217.333
2001	632.946	10.699.925	4.185.500	252.071
2002	705.897	8.043.379	4.645.086	271.589
2003	673.245	8.425.668	5.368.740	325.222
2004	828.897	8.080.432	5.626.336	344.439
2005	1.671.713	8.145.428	5.937.311	326.177
2006	1.511.628	8.427.326	6.629.421	335.145
Annual Growth Average	1994 - 2006 1,87%	1994 - 2006 -2,98 %	1994 - 2006 4,28 %	1994 - 2006 10,00 %

### Rio de Janeiro's Port Share in the Cargo Movement of Southeastern Brazil



Captions: Solid Bulk Material / Liquid Bulk Material / General Cargo / Container

## SOUTHERN BRAZIL CARRIES MORE THAN 13% OF THE COUNTRY'S CARGO

The ports located in southern Brazil moved 13.5% of the total cargo passing through the Country's port sector in 2006. All in all, southern Brazil moved 93,685,172 tons among solid bulk materials, liquid bulk materials and general cargo.

The ports in southern Brazil moved 40,589,550 of solid bulk materials. That represented approximately 10% regarding the national numbers. Regarding the liquid bulk materials southern Brazil moved 26,972,528 tons, which represented 15% of the Country's movement.

Taking into account the general cargo, southern Brazil moved 26,123,094 tons. That represented more than 25% of the Brazilian ports movement. Such numbers refer to 2006.

In the container requisite also in 2006, southern Brazil moved 2,074,069 TEUs. 6,195,119 TEUs were moved in Brazil as a whole. Therefore, southern Brazil moved almost 35% of the total number regarding the Country's ports.

Southern Brazil reported a growth in the movement of solid bulk material, liquid bulk material, general cargo and container (TEUs). Regarding the solid bulk materials, from 2002 to 2006 the quantity moved went from 33,934,804 tons to 40,589,550 tons, a 20% raise. In 2006 that number jumped to 26,972,528 tons, a 1% increase.

Year	Southern Brazil			
	Solid Bulk Material	Liquid Bulk Material	General Cargo	Container (TEUs)
1994	24.823.047	22.249.908	6.956.771	432.113
1995	22.683.719	18.226.140	7.454.107	477.227
1996	21.996.353	19.259.029	7.607.845	471.668
1997	24.383.957	18.496.673	8.708.906	556.831
1998	27.927.103	20.065.847	8.886.023	638.052
1999	24.740.327	21.286.095	9.786.152	748.946
2000	27.234.953	26.828.830	10.959.681	918.261
2001	37.673.265	25.381.814	12.638.248	1.048.088
2002	33.934.804	26.683.195	15.921.991	1.303.750
2003	43.151.998	25.699.245	19.176.677	1.570.859
2004	40.767.384	24.281.744	22.936.162	1.845.476
2005	33.874.360	25.233.465	25.486.497	2.046.218
2006	40.589.550	26.972.528	26.123.094	2.074.069
Annual Growth Average	1994 - 2006 4,18 %	1994 - 2006 1,62 %	1994 - 2006 11,66 %	1994 - 2006 13,96 %

Regarding the general cargo, Southern Brazil moved 15,921,991 tons in 2002. In 2006 that number was 26,123,094 tons, representing a 34% increase. In the containers 1,303,750 TEUs were moved by Southern Brazil in 2002. That number was 2,074,069 in 2006, a 59% increase.

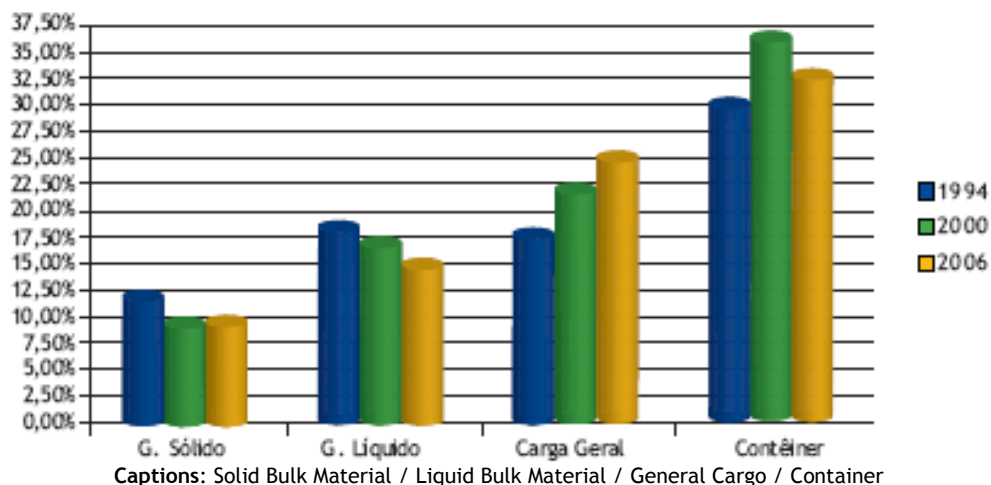
There was an annual average growth in Southern Brazil in all types of cargo from the years of 1994 to 2006: solid bulk material (4.18%), liquid bulk material (1.62%), general cargo (11.66%) and container (13.96%).

Distributing the non-containerized cargo movement, it may be seen that in 2006 approximately 44% of them were solid bulk materials; almost 29% were liquid bulk materials; and approximately 28%

## Waterway Prospect

were general cargo. In 2000 those numbers were: 41.88% (solid bulk materials), 41.26% (liquid bulk materials) and 16.85% (general cargo).

The Share of Southern Brazil in the Country's Cargo Movement



## PORT OF PARANAGUÁ

In 2006 the Port of Paranaguá moved 20,316,486 tons of solid bulk materials. That represented 50% of the quantity carried by Southern Brazil. In 2002 that number was 19,233,400. Comparing both years, there was a 5.5% increase. From 1994 to 2006 an annual average growth of 5.40% was reported.

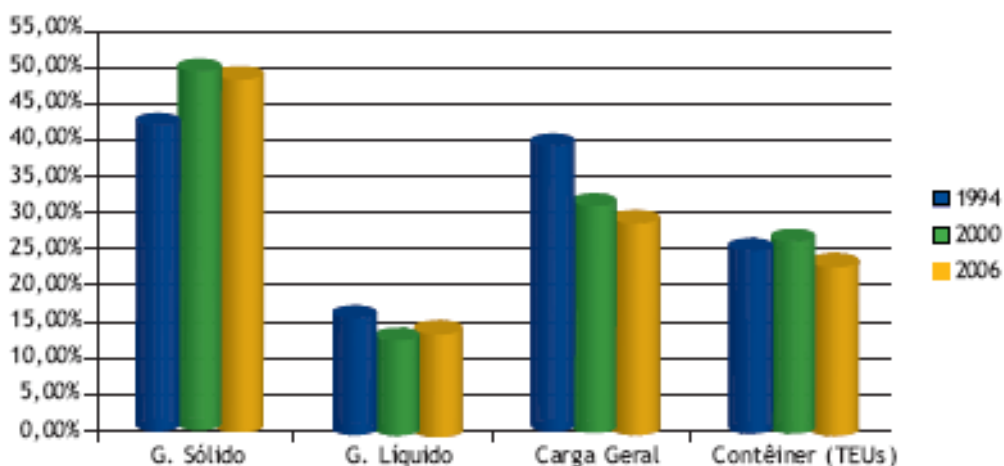
Regarding the liquid bulk materials the Port of Paranaguá moved 3,861,061 tons in 2006, or 14% of the quantity carried by Southern Brazil. Comparing the amount of 2006 with the number of the year 2002 the result kept almost stable. From 1994 to 2006 there was a slight annual average increase of 0.29%.

Taking into account the general cargo, the Port of Paranaguá moved 7,808,084 tons in 2006. In 2002, that number was 4,650,883 tons. There was, therefore, a 68% increase. From 1994 to 2006 an annual average growth of 8.82% was reported. Regarding Southern Brazil, the port moved 30% of the total cargo carried in 2006.

Regarding the containers (TEUs) the Port of Paranaguá moved 493,787 in 2006. In 2002, that number remained in 269,882. Therefore, from 2002 to 2006 there was a 13.07% increase. From 1994 to 2006 there was an annual average growth of 13.07%. Regarding Southern Brazil, the port moved 24% of total cargo carried in 2006.

Port of Paranaguá				
Year	Solid Bulk Material	Liquid Bulk Material	General Cargo	Container (TEUs)
1994	10.810.053	3.731.289	2.830.831	113.037
1995	10.693.774	3.510.031	2.952.942	134.345
1996	11.475.591	3.172.875	2.986.689	115.291
1997	12.909.300	2.770.402	3.255.235	139.141
1998	13.542.247	2.959.821	3.069.538	161.569
1999	12.566.709	3.532.969	3.165.477	194.939
2000	13.933.381	3.619.776	3.554.361	252.879
2001	20.767.383	3.351.943	4.142.893	281.891
2002	19.233.400	3.975.596	4.650.883	269.882
2003	22.563.975	4.325.989	5.609.989	309.924
2004	21.085.082	3.783.474	6.612.633	378.834
2005	17.842.274	3.954.547	7.476.998	420.318
2006	20.316.486	3.861.061	7.808.084	493.787
Annual Growth Average	1994 - 2006 5,40 %	1994 - 2006 0,29 %	1994 - 2006 8,82 %	1994 - 2006 13,07 %

Port of Paranaguá Share in Southern Brazil Cargo Moving



Captions: Solid Bulk Material / Liquid Bulk Material / General Cargo / Container

## PORT OF RIO GRANDE

In 2006 the Port of Rio Grande moved 12,249,670 tons of solid bulk materials. In 2002 that number was 8,913,872. Comparing the two years, there was a 37.5% increase. From 1994 to 2006 an annual average growth of 4.27% was reported. Regarding Southern Brazil, the port moved 30% of the quantity carried in 2006.

## Waterway Prospect

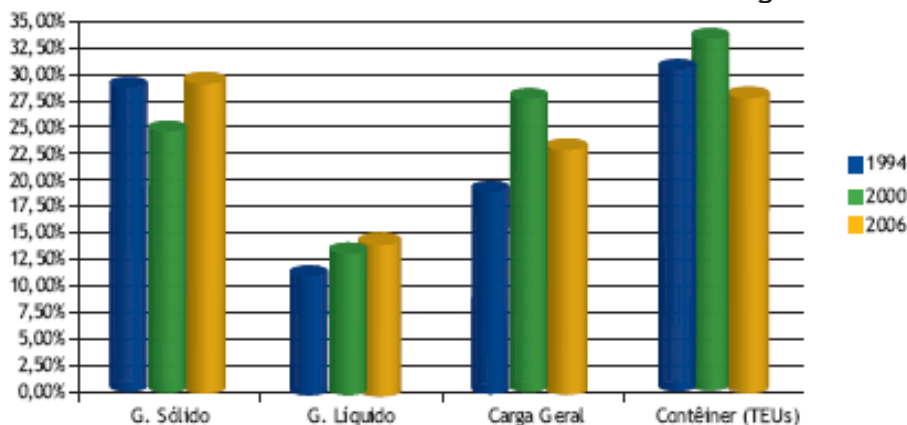
Regarding the liquid bulk materials the Port of Rio Grande moved 3,966,775 tons in 2006, which represented 15% of the total quantity carried by Southern Brazil. Comparing that number to the year 2002, when 3,527,558 tons were moved, there was a 12.5% growth. From 1994 to 2006 there was a slight annual average increase of 3.58%.

Taking into account the general cargo, the Port of Rio Grande moved 6,212,519 tons in 2006 or 24% of the total cargo carried by Southern Brazil. In 2002, that number was 4,312,532 tons. There was, therefore, a 44% increase. From 1994 to 2006 an annual average growth of 13.34% was reported.

Regarding the containers the Port of Rio Grande moved 595,802 TEUs in 2006. In 2002, that number remained in 438,196. Therefore, from 2002 to 2006 there was a 36% increase. From 1994 to 2006 there was an annual average growth of 13.07%. Comparing to the movement of Southern Brazil in 2006, the port of Rio Grande moved 29% of total cargo.

Port of Rio Grande				
Year	Solid Bulk Material	Liquid Bulk Material	General Cargo	Container (TEUs)
1994	7.414.918	2.600.310	1.381.910	136.540
1995	6.709.729	2.893.555	1.428.845	124.124
1996	5.564.863	2.440.663	1.677.965	170.267
1997	6.712.384	2.578.973	2.144.111	194.963
1998	8.541.562	3.032.370	2.300.759	224.577
1999	6.263.601	3.153.177	2.667.389	261.929
2000	6.980.374	3.737.237	3.154.863	316.972
2001	10.722.517	3.294.648	3.551.724	346.321
2002	8.913.872	3.527.558	4.312.532	438.196
2003	13.124.713	3.712.272	5.193.520	522.980
2004	12.291.273	3.918.099	6.038.162	572.326
2005	8.276.203	3.325.571	6.394.728	666.834
2006	12.249.670	3.966.775	6.212.519	595.802
Annual Growth Average	1994 - 2006 4,27 %	1994 - 2006 3,58 %	1994 - 2006 13,34 %	1994 - 2006 13,06 %

The Share of Port of Rio Grande in Southern Brazil Cargo Movement



Captions: Solid Bulk Material / Liquid Bulk Material / General Cargo / Container

## NORTHEASTERN BRAZIL MOVE ONE FOURTH OF THE COUNTRY'S SOLID AND LIQUID BULK MATERIALS

In 2006 Northeastern Brazil ports moved 102,626,924 tons of solid bulk material and 44,926,330 tons of liquid bulk material. The numbers represent one fourth of the national movement of those two types of cargo which was respectively 415,727,739 tons and 175,541,335 tons.

The region's ports presented an annual average growth in the movement of solid bulk material of 5.11% and 4.54% of liquid bulk material in the period from 1994 to 2006. The movement of all Brazilian ports for those two types of cargo in the same period increased 6.09% e 3.39% respectively.

The movement of containers through the ports of Northeastern Brazil presented an annual average increase of 1r.27% in the period 1994/2006, totalizing 581,411 TEUs in 2006. The expansion was above the annual average growth of the country's containers movement which was 13.18% in the same period.

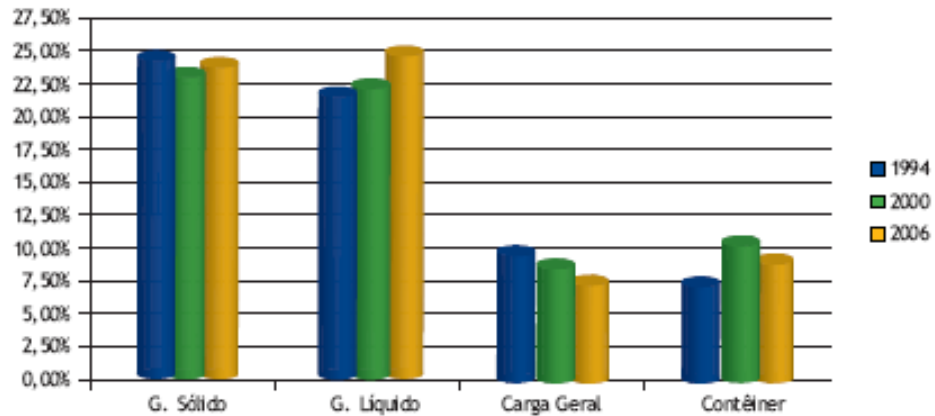
Regarding general cargo, while the country's movement reported an annual average growth of 8.56% in the period 1994/2006, while the general cargo movement increase in Northeastern Brazil ports had an expansion of 6.18%. In 2006 Northeastern Brazil ports moved 7,814,360 tons, or 7.6% of the 102,026,027 tons of general cargo moved in the country's ports.



## Waterway Prospect

Northeastern Brazil				
Year	Solid Bulk Material	Liquid Bulk Material	General Cargo	Container (TEUs)
1994	51.457.792	26.378.861	3.806.768	105.644
1995	59.810.472	27.793.184	4.511.399	114.771
1996	55.803.321	31.981.324	3.331.020	139.536
1997	57.481.407	33.041.628	4.263.496	166.599
1998	58.841.722	36.403.191	4.308.283	186.892
1999	54.216.276	36.051.667	3.651.495	208.573
2000	67.089.702	35.509.120	4.400.199	266.029
2001	70.827.888	38.311.026	4.815.752	270.675
2002	71.921.491	37.452.468	6.018.975	330.278
2003	76.543.614	36.292.240	6.398.870	370.481
2004	87.035.906	40.461.485	6.964.775	425.202
2005	95.371.684	43.038.867	7.614.748	456.517
2006	102.626.924	44.926.330	7.814.360	581.411
Annual Growth Average	1994 - 2006 5,925 %	1994 - 2006 4,54 %	1994 - 2006 6,18 %	1994 - 2006 15,27 %

The Share of Northern Brazil in the Country's Cargo Movement



Captions: Solid Bulk Material / Liquid Bulk Material / General Cargo / Container

## SALVADOR ACCOUNTS FOR APPROXIMATELY 50% OF THE CONTAINERS PASSING THROUGH NORTHEASTERN BRAZIL PORTS

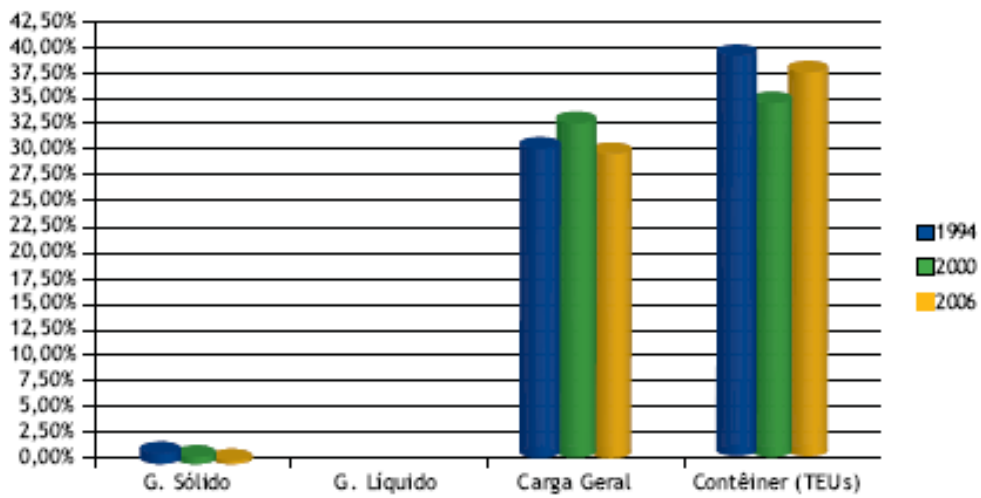
The Port of Salvador moved 225.682 TEUs in 2006, accounting for almost one half of the containers circulation of northeastern Brazil ports that year. From 1994 to 2006 the movement of containers in Salvador had an annual average growth of 14.86%, a little below 15.27% reported by that region.

Regarding the general cargo the Port of Salvador moved 2,411,120 tons of the 7,814,360 tons circulating in Northeastern Brazil ports in 2006. From 1994 to 2006 the circulation of general cargo through Salvador presented an annual average growth of 6.02%, while the growth in the region was 6.18%.

In 2006 Salvador moved 388,251 tons of the 102,626,924 tons of solid bulk material circulating through the region's ports. The movement of that cargo type in Salvador dropped regarding 2005 when the movement reached 552,671 tons.

Year	Solid Bulk Material	Salvador Liquid Bulk Material	General Cargo	Container (TEUs)
1994	506.566	0	1.194.911	42.810
1995	434.598	0	1.168.848	48.126
1996	477.747	0	1.156.765	57.548
1997	416.887	0	1.155.622	52.496
1998	412.963	6.426	982.638	51.375
1999	473.236	0	1.315.785	79.116
2000	495.613	10.054	1.486.579	95.307
2001	396.409	120	1.542.854	106.761
2002	404.751	0	1.930.241	134.664
2003	460.502	0	2.156.609	169.092
2004	697.146	0	2.255.947	191.834
2005	552.671	0	2.483.151	208.029
2006	388.251	0	2.411.120	225.682
Annual Growth Average	1994 - 2006 -2,19 %	-	1994 - 2006 6,02 %	1994 - 2006 14,86 %

Port of Salvador Share in Northeastern Brazil Cargo Movement



Captions: Solid Bulk Material / Liquid Bulk Material / General Cargo / Container

## SUAPE REPORTS EXPRESSIVE GROWTH OF GENERAL CARGO AND CONTAINERS MOVEMENT

The Port of Suape presented an annual average growth of 30.94% in general cargo movement and 27.45% in the containers movement from 1994 to 2006. Regarding the region’s movement the growth is five times higher for general cargo and almost twice for containers.

The circulation of general cargo in the port which in 1994 was 91,249 tons, soared to 647,195 tons in 2000, and reached 2,317,603 tons in 2006. Regarding containers, the movement increased from 10,036 TEUs in 1994, to 682,822 TEUs in 2000 reaching 184,428 TEUs in 2006.

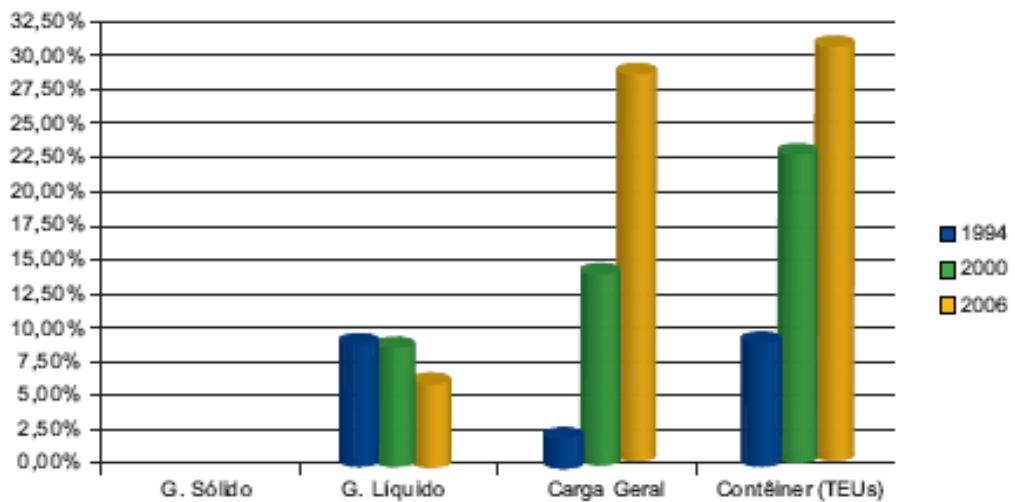
With the circulation of 25,131 tons in 2006, Suape resumed the movement of solid bulk material stopped since 1996. Regarding liquid bulk material, the port moved 2,874,275 tons in 2006, reporting an annual average growth of 1.30% from 1994 to 2006.



## Waterway Prospect

Port of Suape				
Year	Solid Bulk Material	Liquid Bulk Material	General Cargo	Container (TEUs)
1994	0	2.462.818	91.249	10.036
1995	9.835	2.969.041	160.277	14.969
1996	2.498	3.040.382	180.952	19.676
1997	0	3.459.692	313.692	30.642
1998	0	3.605.386	469.120	48.953
1999	0	3.322.223	400.902	39.142
2000	0	3.252.952	647.195	62.822
2001	0	4.062.563	854.959	75.816
2002	0	2.986.668	1.239.695	108.958
2003	0	2.265.452	859.201	60.721
2004	0	2.273.041	1.643.946	133.882
2005	0	2.256.013	2.057.655	171.409
2006	25.131	2.874.275	2.317.603	184.428
Annual Growth Average	1994 - 2006	1994 - 2006 1,30 %	1994 - 2006 30,94 %	1994 - 2006 27,45 %

Port of Suape's Share in Northeastern Brazil Cargo Movement



Captions: Solid Bulk Material / Liquid Bulk Material / General Cargo / Container

## ITAQUI MOVES 85% OF NORTHEASTERN BRAZIL SOLID BULK MATERIAL CARGO

In 2006 the port moved 87,640,508 of the 102,626, 924 tons of solid bulk material circulating in the region that year, representing more than 85% of the total number. From 1994 to 2006 the annual average growth of the movement of that type of cargo in Itaquí was 6.46% duplicating the volume moved in 1994 when it reached 41,355,267 tons.

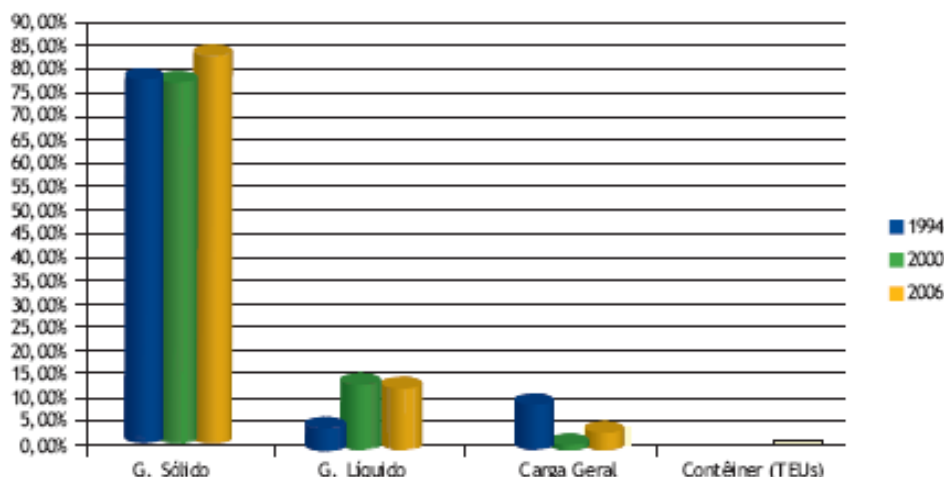
The port in the state of Maranhão moved 5,885,871 tons of liquid bulk material in 2006. The annual average growth of the liquid bulk material movement in Itaquí was 14.26%, from 1994 to 2006, a number three times as much the number reported by the region (4.54%).

Regarding the general cargo Itaquí moved in 2006 307,350 tons, against 226,730 tons in 2005. However, the port reported an annual average growth of -1.70% in the movement of that type of cargo from 1994 to 2006.

In 2006 Itaquí started the circulation of containerized cargo moving 3,749 TEUs.

Year	Port of Itaquí			
	Solid Bulk Material	Liquid Bulk Material	General Cargo	Container (TEUs)
1994	41.355.267	1.188.183	377.475	0
1995	48.444.883	2.037.180	360.599	0
1996	45.298.052	3.830.902	339.835	0
1997	46.631.669	4.303.334	335.819	0
1998	46.930.152	5.134.382	238.899	0
1999	42.906.631	4.064.113	25.595	0
2000	53.568.258	4.939.655	43.759	0
2001	57.418.534	6.088.461	92.162	0
2002	59.508.538	5.370.706	62.445	0
2003	63.393.390	4.853.013	229.196	0
2004	72.082.886	4.633.120	242.186	0
2005	80.154.304	5.519.355	226.730	0
2006	87.640.508	5.885.871	307.350	3.749
Annual Average Growth	1994 - 2006 6,46 %	1994 - 2006 14,26 %	1994 - 2006 -1,70 %	-

Port of Itaqui Share in Northeastern Brazil Cargo Movement



Captions: Solid Bulk Material / Liquid Bulk Material / General Cargo / Container

## SOLID BULK MATERIALS MOVEMENT IN NORTHERN BRAZIL GROWS ABOVE THE NATIONAL AVERAGE

In 2006 Northern Brazil ports moved 41,558,600 tons of solid bulk materials, which is equivalent to 10% of the total number carried by the Brazilian ports. The result presents a 17.64% increase comparing to 2005 while the total national number only raised 5.8% in the same period.

The difference is even higher for the period from 1994 to 2006 when the movement of solid bulk materials in Northern Brazil ports grew 2.465% against a national growth of 103%. In the same period, the regional annual average growth was 31% against a national average of 6% a year.

Northern Brazil ports accounted for 6.7% of the total movement of de liquid bulk materials in the country's ports in 2006, when they moved 11,766,389 tons, a 6% increase regarding 2005. In the comparison with 1994 there was a 427% increase against a national growth of 49%. The annual growth rate in the region was 14.87% against a national average of 3.39% a year from 1994 to 2006.

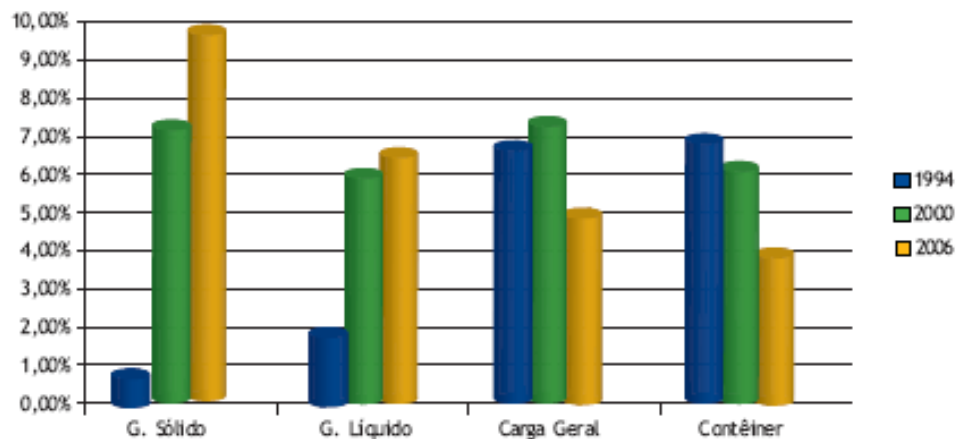
Northern Brazil moved 5,198,431 tons of general cargo, only 5% of the total national number. Regarding 2005, the result presents a 9.37% growth against a national rate of 9.74%. From 1994 to 2006 while the national movement of general cargo increased 167.88%, there was a smaller high in Northern Brazil ports of 97.86%. The national annual average growth from 1994-2006 was 8.56% against 5.85% in Northern Brazil.

The movement of containers in Northern Brazil ports represented 4% of the total national number. In 2006 the region ports moved 248,828 TEUs, a 62.3% increase regarding 2005, way above the national growth of 9.5%. However from 1994 to 2006 while the movement grew 342%, at an annual rate of 13.18%, Northern Brazil increased 150% which is equivalent to a 7.95% growth per year.

## Waterway Prospect

Northern Brazil				
Year	Solid Bulk Material	Liquid Bulk Material	General Cargo	Container (TEUs)
1994	1.620.002	2.229.797	2.627.326	99.355
1995	11.623.989	4.369.067	4.154.956	137.978
1996	13.400.372	5.508.062	4.036.499	154.752
1997	16.337.020	5.744.327	3.589.883	107.273
1998	18.623.598	9.082.134	3.498.992	97.301
1999	19.522.793	7.435.943	3.929.928	114.476
2000	20.921.192	9.488.628	3.678.756	156.804
2001	22.474.568	11.665.043	3.727.685	170.945
2002	20.735.803	10.552.744	3.900.065	185.440
2003	28.044.137	10.635.946	3.937.728	158.952
2004	34.012.641	11.399.655	4.973.110	178.226
2005	35.324.423	11.099.143	4.752.924	153.330
2006	41.558.600	11.766.389	5.198.595	248.828
Annual Average Growth	1994 - 2006 31,05 %	1994 - 2006 14,87 %	1994 - 2006 5,85 %	1994 - 2006 7,95 %

Northern Brazil Share in the Country's Cargo Movement



Captions: Solid Bulk Material / Liquid Bulk Material / General Cargo / Container

## THE CITY OF BELÉM MOVES 45.2% OF THE SOLID BULK MATERIALS IN NORTHERN BRAZIL

The port of Belém moved 45.2% of the total solid bulk materials moved in the region in 2006, which is equivalent to 18,809,436 tons. 15.6% of the total liquid bulk materials or 1,837,341 tons also passed through Belém; 23.2% of the total general cargo circulating in Northern Brazil or 1,209,129 tons and also 51,225 TEUs of containers, which is equivalent to 20.6% of the containers total, moved in Northern Brazil.

In 2006 the movement of containers in the port of Belém raised 2.44% in the comparison with the previous year and 13.321% from 1994 to 2006 when the average growth was 6.8% a year.

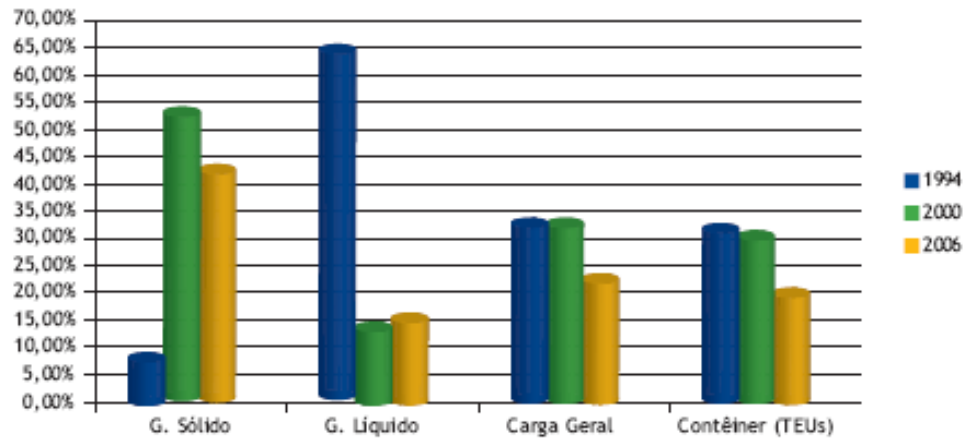
The movement of liquid bulk materials increased 5.83% from 2005-2006 and 24.81% from 1994 to 2006, which is equivalent to an average growth of 1.86% a year.

The movement of general cargo in the port de Belém increased 3.22% in 2006 upon 2005 and almost 37% from 1994 to 2006, when the annual average growth was 2.66%.

Regarding the movement of containers, there was a high of 8.3% from 2005 to 2006 and 58.7% from 1994 to 2006, a period in which the annual average growth was 3.92%.

Port of Belém				
Year	Solid Bulk Material	Liquid Bulk Material	General Cargo	Container (TEUs)
1994	134.785	1.472.066	882.868	32.281
1995	8.771.587	1.500.728	1.878.642	39.130
1996	9.500.389	1.513.066	1.206.426	40.207
1997	9.891.511	1.523.120	998.576	26.982
1998	10.623.533	1.573.599	1.111.006	29.843
1999	11.275.129	1.390.636	1.230.966	47.283
2000	11.382.126	1.343.180	1.231.359	49.108
2001	10.693.063	1.357.641	1.313.238	48.420
2002	10.659.986	1.418.564	1.240.307	52.527
2003	14.029.941	1.405.691	1.337.059	46.369
2004	16.960.556	1.728.503	1.370.798	55.270
2005	17.657.961	1.736.028	1.171.412	47.300
2006	18.089.436	1.837.341	1.209.129	51.225
Annual Average Growth	1994 - 2006 6,80 %	1994 - 2006 1,86 %	1994 - 2006 2,66 %	1994 - 2006 3,92 %

Port of Belém Share in Northern Brazil Cargo Moving



Captions: Solid Bulk Material / Liquid Bulk Material / General Cargo / Container

## MANAUS MOVES 58.5% OF THE LIQUID BULK MATERIALS IN NORTHERN BRAZIL

The port of Manaus moved 58.5% of the total liquid bulk materials circulating in the region in 2006, which is equivalent to 6,885,477 tons. 9.1% of the total solid bulk materials or 3,807,491 tons also passed through Manaus; 43,8% of the total general cargo or 1,209,129 tons and also 2,278,102 tons and 21.5% of the containers moved in Northern Brazil ports, which is equivalent to 53,532 TEUs.

In 2006 the movement of containers in the port of Manaus dropped 28% in the comparison with the previous year and increased less 1% from 1994 to 2006 when the average growth was 0.08% a year. The volume moved in 2006 is 58.4% smaller than the number reported for 2002 when it reached 128,688 TEUs.

The movement of liquid bulk materials dropped 9.1% from 2005-2006 and increased 983.5% from 1994 to 2006, which is equivalent to an average growth of 8.97% a year.

The movement of general cargo in the port de Manaus increased 26.1% in 2006 upon 2005 and more than 455% from 1994 to 2006, when the annual average growth was 15.35%.

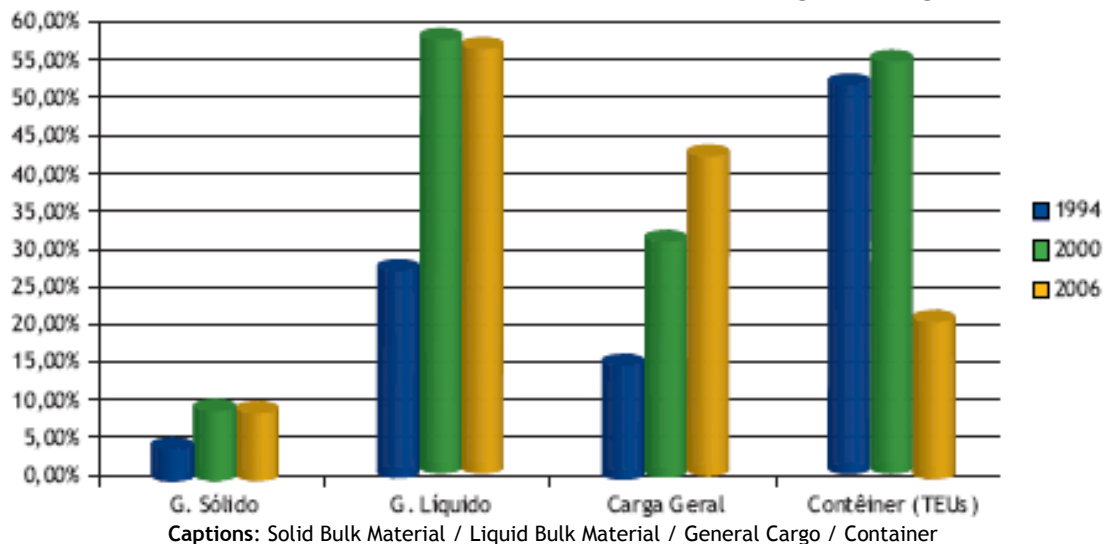
Regarding the movement of solid bulk materials, there was a high of 8.7% from 2005 to 2006 and 5.307% from 1994 to 2006, a period in which the annual average growth was 20.53%.



## Waterway Prospect

Port of Manaus				
Year	Solid Bulk Material	Liquid Bulk Material	General Cargo	Container (TEUs)
1994	70.412	635.483	410.384	53.024
1995	0	2.677.191	572.996	77.447
1996	0	3.487.709	876.921	90.360
1997	709.289	3.271.972	822.323	60.783
1998	1.307.950	6.226.538	690.718	44.076
1999	1.409.863	4.409.810	1.046.277	48.553
2000	1.967.415	5.656.713	1.186.146	88.807
2001	2.314.260	5.970.060	1.149.542	102.448
2002	2.346.674	7.006.100	1.493.203	128.688
2003	2.605.267	7.132.417	1.499.486	109.230
2004	3.376.903	7.440.022	2.118.272	108.167
2005	3.502.607	7.579.729	1.805.696	75.030
2006	3.807.491	6.885.477	2.278.102	53.532
Annual Average Growth	1994 - 2006 20,53 %	1994 - 2006 8,97 %	1994 - 2006 15,35 %	1994 - 2006 0,08 %

Port of Manaus Share in Northern Brazil Cargo Moving



# ENVIRONMENT

### Evaluation of the environmental management in the organized ports

The Environment Management of the Ports Superintendence held a series of visits to the organized ports, along with ANTAQ's Regional Administrative Units to evaluate the environmental management by the Port Administrations. Such evaluation completed in September 2007 was intended to produce a picture of the current stage of the environmental management, and also outline the ways to go further in the port management, considering three important aspects:

- The management instruments that are implanted and those that are not.
- How these instruments should have been operated.
- The way to reach a better result of the environmental management.

The gathering of data in the ports, which served for building an environmental information base, was possible from the application of the SIGA - Integrated Environmental Management System form comprising a checklist of the environmental conformities that is being updated for some years now in this process of evaluating the environmental management. That data gathering was followed by the application of software for the accountability of such data, in the form of the compliance level of the ports to those conformities.

The second stage of the work consists in examining again with each Port Administration the results achieved and discuss the actions required to improve the management. Therefore, this is about an iterative process, when one expects to obtain an improvement of the environmental management process in each port.

### CONTEXTUALIZATION

The environmental management system is an essential instrument to treat the relationship of the port with its environment, and is focused on the environmental quality. Its action does not end with its implantation, but it extends for an undetermined time, in a continuing improvement process.

Since this is an integrated environmental management system, it includes necessarily the worker's health and safety, that is, it should consider each and every threat to the natural resources, as well as to the work environment welfare, including in that case the dealing-with the hazardous cargoes and the institutional security of the port facilities.

### PROACTIVE VIEW

It was seen during this evaluation that the port administrators understand the importance of the relationship of their activity with the physical and social-economic space it is integrated to, considering a component to be dealt with within the managerial, operational and commercial strategy of the port organization, including therein the environmental marketing. Therefore, the understanding that there are no gains in the activity if there are no embedded environmental gains should be consolidated.

### INTERNATIONAL CONVENTIONS

The port activity has as the source of its main environmental rules the Conventions of the International Maritime Organization, from which Brazil is a signatory. These are rules that should be complied with both by the navigation and by the organized port or facility of the same kind. The main Conventions are as follows:

- Prevention, Response and Cooperation in Case of Oil Pollution - OPRC/1990
- Marine Pollution by Jettisoning of Wastes and Other Material - London/1972
- Vessel Pollution Protection - MARPOL- 1973/1978
- Safeguarding the Human Life at Sea - SOLAS/1974
- Vessels' Ballast Water and Sediments - 2004

IMO'S Conventions draw general regulation lines so that its country members may institute rules to internalize the environmental protection in its territories, according to their principles and

## Waterway Prospect

directives. As a function of the intrinsic relationship between the sea and port activities to better reach their goals of environmental protection, IMO's Conventions also incorporate the port-vessel interface. It was within that context that SOLAS brought the safety code to the port activity (ISPS) for terrorism acts and others to the port facilities.

One of the most recent Conventions to fight the environmental pollution is the Convention of Vessels Ballast Water and Sediments Management, which sets a control on this introduction vehicle of non-native species in foreign aquatic environments. While a formula to treat that ballast water by the vessels is not found, IMO recommends the oceanic exchange of the ballast water (from the 200 nautical miles on), a procedure that has been instituted in Brazil by the Navy by means of NORMAM 20.

## ENVIRONMENTAL CONFORMITIES

Some organized ports have already regularized their situation of environmental qualification. However, important ports such as the Ports of Santos, Rio de Janeiro and Salvador are still seeking that regularization. Some regularization acts require more detailed studies of the environmental impacts resulting from the port activity, due to the complexity of the environmental quality aspects involved, directly entailed to the activity expression (quantity and diversity) and sensitivity of their environments.

## ENVIRONMENTAL LICENSING

The Brazilian environmental licensing system is a suitable system, since it contemplates the interaction (complementariness) between the local agencies (OEMA) and Federal agencies (IBAMA). In that context, some were licensed by IBAMA such as those of Rio Grande and São Francisco do Sul, while others were licensed by the local environmental agencies, such as the Ports of Recife and Itaqui, just to mention a few. Whatever the licensing agency may be, its requirements must be complied with, and its conformities should not be taken only as a formal act, but rather the start of the environmental management process, which has as its goal a higher eco-social-economic value activity.

## ENVIRONMENTAL NUCLEUS

The environmental nucleus of the port organization is essential for its environmental management. The process of constituting an environmental nucleus in the organized ports has started right after the proclamation of the Port Environmental Agenda in 1998 but it is not yet a fully met conformity, since it does not exist formally in some ports.

In most ports where it exists, the nucleus is below the desired level, since there is little diversity and number of higher education professionals required for the environmental management. A set of professionals for a minimum setup of that nucleus and for other situations of better compliance is presented in Appendix II.

In support to the actuation of the environmental nuclei, the ports are making agreements with local Universities to accomplish several environmental works, supporting the environmental management.

## INSTITUTIONAL ENVIRONMENTAL AGENDA

The performed evaluation revealed that in most port organizations, the environmental issue is still restricted to a set of professionals working in the environmental nucleus, and that situation must be changed immediately. Whatever the port organization may be, the obligations related to the environmental subjects exceed the attributions of its environmental nucleus, since they involve actions of inspection, preparation of environmental management budgets, institutional communication in that field, of legal subject, just to mention a few, which are within the scope of other organization units. In that aspect, a shared action is indispensable.

Such reality imposes us to diagnose that there is a transversality deficiency in dealing with environmental issues in the port organizations. It is a deficiency that should have been cured by now, due to the time those environmental nuclei exist and to the awareness degree existing in the organized ports as to the environmental demands.

## Waterway Prospect

One of the forms to change that situation in force is to implant an Institutional Environmental Agenda. That Agenda formalizes an environmental commitment of the port organization assumed by its whole organizational corps.

No institutional environmental agenda has been found in any visited port, either worked out or being accomplished. For internalizing the environmental issues all over the corporation, an Agenda of that kind gives an environmental awareness and identity to the Port Administration.

The subjects of an Institutional Environmental Agenda are as follows:

- To create the institution's own environmental mission;
- To comply with the environmental policies arising from its top managers;
- To institute the institution's environmental policy;
- To formulate and complete environmental plans and programs in the organization;
- To set targets and goals to be reached by the organization;
- To improve the port environmental agents' qualification.

Since they do not exist yet, the Port Administrations are in charge of creating their own agendas, in order to involve their organizational units with the environmental issues and thus, act in an integrated form, focusing on the accomplishment of goals or targets of environmental quality. Dealing with the environment should be deemed an end-activity of any port institution.

## LOCAL ENVIRONMENTAL AGENDA

The newly-built evaluation has shown that opposite to the still nonexistent Institutional Environmental Agenda, local environmental agendas start to be built by the organized ports such as those in the Ports of Rio Grande and Santos, the latter most recently made.

Such agendas celebrate commitments of the local port agents in the areas of health, environment, work safety and institutional, with the gains of environmental quality.

Their force is based on the understanding of the need to share the environmental responsibilities among all the authorities present in the port. Their preparation has been commanded by the Port Administration, which is a significant sign of a suitable environmental awareness by that Administration.

They admit actions for a better environmental performance, they set the parts that each port agent should play, they institute goals, they set terms to be complied with and they designate a coordinator for each one of the actions contained therein, which their accomplishment (the action) is subordinated to.

## ENVIRONMENTAL PLANNING

The environmental planning consists of previously appraising the intervention before accomplishing it, selecting the best option, resulting in an action with a higher social-economic and ecologic efficiency. For such instrument to be present in the activity development, the Port Administrations should incorporate environmental studies to their Development and Zoning Plans - PDZ. Such studies refer to the use of the natural resources (form and number). A few Administrations are doing environmental planning today.

The environmental planning required the availability to the environmental managers of inventories of the natural resources and of the eco-social-economic factors added to them, data required for the decisions about the future interventions. Such inventories should contain the characteristic of the natural resources and all the other environmental factors to be met by the future port activity, within the organized port and regarding its surroundings. It should be mentioned that many port devices are located in urban areas, which requires the harmonization of that activity with those of the urban space.

That is a work that should be started. The Port Administrations should hire those studies (inventories) before starting the revision of their PDZs. That was not a routine seen in the port environments.

## ENVIRONMENTAL AUDIT

The audit is the essence of the management process, its dynamics.

## Waterway Prospect

There are ports without environmental audit, which means that an effective management process does not exist, because without it, there is no management in the technical sense proper. The SIGA form is in fact, a part of auditing, whereas it assesses the compliance to the environmental conformities, pointing flaws in that process.

Complying with the environmental conformity is not enough. During the visits to the ports, it was seen that certain management instruments, such as the Solid Wastes Management Plan - PGRS and the Individual Emergency Plan - PEI, just to mention a few, are merely formal documents, and the Port Administration has not given any treatment or utilization to them, since they are management instruments.

## INDIVIDUAL EMERGENCY PLAN – PEI

It should be pointed out that the situations of full compliance with that conformity were few, with their approval by the state or federal environmental agency and their implantation by the Port Administration.

A diversity of situations was found as to the PEI's approval and implantation. Some ports have not obtained the PEI's approval yet. Others have obtained it, but they have not implanted it. There is also a group of ports that in order to protect themselves in case some oil spill occurs, implanted the Plan even without its approval by the competent environmental agency. It is an improper situation, but it is better to have an implanted and non-approved plan than an approved and non-implanted plan.

In general, to implant that Plan material and personnel resources should be obtained. The Port Subsector has opted for making agreements with companies rendering those services, instead of the purchase by the port of equipment to fight the oil emergencies, such as absorbent blankets, containment barriers, oil separators among other equipment, requiring specialization in their handling. Resolution CONAMA 293 states that the port should be provided with self-owned or third-parties' resources to meet an oil spill of up to 8m<sup>3</sup>.

It was also evidenced, for example, in most of the organized ports, the existence of an agreement with Petrobras having a big structure to meet such cases, the so-called Environmental Defense Centers (CDAs) having the proper specialization, both in number of material resources and in skilled personnel.

## PROCEDURES MANUAL

The Internal Procedures Manual for Managing Pollution Risks is provided for in Law 9966/00, also called Oil Law and in the International Convention for Vessel Pollution Prevention - MARPOL 73/78.

Those instruments are intended to subsidize the pollution risks management by the proper management of the multiple wastes generated or coming from the activities of oil moving and storing and hazardous or dangerous chemicals in the ports.

Those manuals should be prepared by the ports and approved by the competent environmental agency. However, a few ports have prepared those manuals. When they exist, they are standardized and required by means of internal rules or Work Orders (Oss), to be complied with by port operators and leased terminals. The adoption of procedures of that kind should be stimulated and their coverage area should be expanded to others pollution risk situations, as well as for minimizing the existing pollution.

Among those rules, the most complied with were those disciplining activities related to the moving of hydrocarbons for supplying, painting and servicing the vessels' hulls. Some of those precautions were found in organized ports, but more ports with those conformities were expected.

The pollution risks management procedures should be based on the assessment of the risks that the activity imposes to the environment which it fits in, including therein the worker's health and safety.

Some risk assessment elements are shown below:

- the effective or potential pollution or environmental degradation levels caused by activities of natural persons or legal entities;
- the operation and maintenance conditions of the equipment and pollution control systems;
- the qualification of those in charge for the operation and maintenance of the environment protection and worker's health systems, routines and facilities;
- the quality of the environmental management functions performance;

## Waterway transport

## Waterway Prospect

- the direction given to the policies and to the port or port terminal standards, aiming to preserve the environment and life;
- the solutions allowing to minimize the likeliness of exposing operators and the public to risks coming from theoretical but likely accidents, and from continuing emissions which may directly or indirectly affect their health or safety.

## ENVIRONMENTAL LIABILITIES

Environmental liabilities are the damages caused to the environment by eventual accidents or by continuing degradation, which remain without having been treated. Most of the times, they are the result of years of negligence as to the environmental protection.

The environmental survey made in the public ports revealed that there are liabilities to be corrected, such as the oil accumulated in the soil or underground, coming from fuel tanks disabled years ago and from port equipment maintenance workshops.

Other liabilities also were found, such as the garbage landfills located in the port area. The proper arrangement of the wastes is an action that should be a part of the Local Environmental Agenda, since it requires the participation of other agencies intervening in this process, such as ANVISA, City Hall, the State and Municipal Healthcare Departments, among others. This is an action that should be taken immediately. Other examples of environmental liabilities are those resulting from transformers in transit by the port, using Ascarel and coal.

In general the environmental liabilities are located in the environmental audits. The action required is the mitigation of the liability up to its full eradication, with the follow-up of the relevant environmental agency. A few ports are performing the proper mitigation of those liabilities.

Also referring to the prevention of environmental liabilities, the existence of improper procedures were seen in the handling, carriage and storage of hazardous cargoes, lacking a signaled segregation area and a proper drainage system for leaks, besides the lack of training and technical qualification.

## SOLID WASTES

Under IMO's MARPOL Convention the organized ports should serve the vessels as to the removal of their wastes. Law 9966/00 sets the obligatoriness of removal by the ports of such wastes by their own facilities or by third-parties'. The situation found in the ports was that those services were outsourced, but still without the proper control by the port authorities. The lack of a better control by the Port Authority is one of the main problems found in that environmental conformity, but it is not the only one.

Under ANVISA's Resolution RDC nº 217, every organized port and all the other port facilities of the same kind are required to have their own Solid Wastes Management Plan - PGRS, approved by ANVISA itself and by the relevant environmental agency, the port authority being responsible for the integrated management of those wastes, which includes their collection and final disposal. It should be remembered that the mentioned ANVISA Resolution forbids in its Art. 35 the removal of solid wastes from vessels in Sanitary Control Stations that are not provided with the Solid Wastes Management Plan - PGRS.

It was also seen that a significant part of those Plans was prepared by companies hired by the port authorities. Those contracts occur because the ports are not provided with technical teams to perform the Plans. There are also difficulties in their implantation and maintenance. The main problem is not having, in certain port localities, suitable facilities to dispose the wastes, such as landfills, indispensable for the hospital wastes on board.

The management of solid and liquid wastes by the port authorities was presented in most different forms. Some ports follow that process of removing the solid wastes, performing their management in the proper form, even without having their PGRS approved. Others, mistakenly condition their implantation to the approval of such Plan by the relevant agencies. As to the follow-up of the wastes management by the port tenants and operators, a few Port Administrations exert their authority role, inspecting, issuing rules and charging proper procedures.

The lack of a proper port wastes management should require from the ports, mitigating actions towards the treatment of the environmental liabilities, such as for example, Alamoá's landfill in the Port of Santos, the soil of which is contaminated, and those of in the Ports of Maceió/AL, Aratu/BA and

## Waterway Prospect

of the Miramar Terminal in Belém/PA. Also regarding the wastes management, some good actions were identified in the ports, and we point out Companhia Docas do Pará - CDP, which develops the project "Environmental Education for All - PEAT" and "CDP at School", the latter a project of the port of Santarém.

One of the major role-players in that context of wastes is the port operator. Therefore, he should be the object of a special assessment as to his actuation, because there is no regulation for the activity he performs. The Port Authority by means of its "Prequalification Rules" (operator's), has set part of the actuation rules in them, but there are still flaws in that process, related to the handling of wastes, atmospheric emissions, worker's health, etc. Intended to disseminate the good environmental practices and discuss relevant issues, the PNCAP - National Program of Port Environmental Qualification applied Environmental Management courses to the ports of Rio Grande, Paranaguá, Itajaí, São Francisco do Sul, Imbituba, Laguna, Vitória, Salvador, Aratu, Ilhéus, Fortaleza and Pecém.

One of the actuation lines of PNCAP was to work the difficulties of the port authorities in complying with the environmental conformities, such as for example, those set forth in ANVISA'S RDC no. 217 about solid wastes.

Concluding, the ports management regarding the compliance with the conformity of wastes requires the following actions:

- To stimulate the relations existing in the federal, state and municipal scope, with the return of the PROHAGE - Harmonization Program of the Authority Agents in the Ports activities or something similar, especially now when the ports are working in the implantation of preventive actions of the bird flu pandemics contingency.
- The implementation of the federal Port Environmental Agenda which currently is under revision, dealing with among others, the Institutional Environmental Agenda (of each port authority) and of the Local Environmental Agenda (the port and its role-players). The result expected with the implantation of the agendas which shall work the institutional and inter-institutional issues, which shall impact the activities of the port authorities and in the privately used facilities.
- The disclosure of the operating and managerial procedures deemed environmentally suitable, meeting the existing conformities, so that they can be implanted properly.
- In order to better visualize the presented issues, a simplified diagram (appendix II) was prepared allowing a better understanding of the institutional relations existing regarding the role-players involved with the wastes management.

## BIRD FLU

Right now, 10 organized ports are implanting a plan of actions to prepare for facing possible pandemic bird flu. Presently, Brazil is under the stage of pandemic alert equivalent to stage 3, the prescription of which is to go forward in the preparation or revision process of the Brazilian Preparation Plan for a Pandemics of Bird Influenza and keep the surveillance system in alert for the timely detection, notification and investigation of severe forms of the respiratory disease in persons coming from endemic regions.

The threat of the bird flu requires from the port authorities a suitable management of their wastes and a good articulation with the different role-players involved in that Plan. ANTAQ shall participate in that preparation process to face a pandemic of bird flu complying with the provision in the so-called "General Plan" approved on October 8, 2006, starting in October 2007 the qualification of the port authorities in the prevention of a possible pandemic of bird flu, the wastes management being one of its most important aspects.

## CONCLUSION

The port activity goes on seeking an activity with environmental quality by means of the environmental qualification and management. Considering the Port Environmental Agenda proclaimed in 1998 the initial milestone of that process, one may see that there was an evolution in that process.

In that process of improving an activity with environmental attributes, the ports should accelerate the implantation of their management instruments, such as Solid Wastes Management Plan - PGRS and Individual Emergency Plan - PEI of the Environmental Audit and in special, of a Planning of its interventions in the environment by means of a PDZA - environmentally guided Development and Zoning Plan including a good basis of environmental data, such as an inventory of environmental goods

## Waterway Prospect

available to the Port Authority, environmental performance indicators, plans and control programs in that area, just to mention a few elements pertinent to that PDZA.

A special precaution in that planning should be given to the deepening projects (dredging and demolishing) of accesses and mooring areas in the ports, contemplating besides the strategic dredging project for the port as well as the likely eviction areas for the referred project. Such planning process is due to the fact that this intervention is subject to a strict licensing process. Resolution CONAMA no. 344 dealt with the contaminated sediments from the dredging, which requires from the Port Administrator environmental planning actions, in order to give continuity to such services, paramount for the ports evolution and safety. This is a Resolution that must be improved aiming to reach its best in terms of eco-social-economic regulation.

In order to collaborate with this improvement the ports should constitute a good base of ecologic and social-economic data. Thus, the ports shall be complementing the management with a little more construction of an environmental awareness in the different plans of that management, such as the physical and institutional one.

Two efficient and effective instruments in their results are also important in that environmental organization process of the Port Subsector: they are the Local and Institutional Environmental Agendas. They should be born from the Port Administration's initiative and involve as many port environmental agents as possible in the first case, and of the organized port organization units, in the second case.

The Port Administrations should constitute or expand covenants with technical and scientific institutions aiming to support its management process, in special for the formulation of the eco-social-economic data base required for the management, in order to support the actuation of the environmental nuclei. This is a very hard to be accomplished task by the environmental nuclei, because for the information it requires, it would require resources that are not still fully available to the Port Administrations. In that context, the partnership with the environmental agencies for improving the quality of the port environments should be also sought in the Local Environmental Agenda.

The environmental nuclei must be properly constituted with suitable diversity and number of professionals. This is the main sustaining point of the management. A minimum staff of professionals should be implanted.

The Port Authority is in charge of exerting its role of coordinator and assurer of the commitments of all with the environment, in particular of performing the environmental management of its space. ANTAQ is in charge of producing the main formatting parameters of the "environmental quality" of the port environments, such as procedure manuals of the activity with the environmental bias, adding to the conformities existing by law. Besides, ANTAQ should inspect the formatting of the port environments according to environmental quality standards.

## Summary of the actions to be taken by the organized ports to upgrade their environmental management

Short term	Medium term	Long term
<p>Conclusion of the environmental licensing by the ports without that qualification;</p> <p>Implementation of the environmental nuclei, expanding and diversifying its staff with experts from the natural sciences areas;</p> <p>Conclusion of the risks analyses - Preliminary Risk Analysis (APR) and Environmental Risks Prevention Program (PPRA);</p> <p>Termination of the emergency conformities, such as the Individual Emergency Plan (PEI) and the Emergency Control Plan (PCE);</p> <p>Systematic accomplishment of the environmental audits according to the legal provisions;</p> <p>Preparation and expansion of the managerial and operational procedures for the pollution risks control, such as the Pollution Risks Management Procedures Manual and in special, handling of hazardous cargo;</p> <p>Creation of local and institutional environmental agendas.</p>	<p>Making contracts with technical and scientific institutions for the formation of a eco-social-economic data base referring to the port activity;</p> <p>Execution of the local and institutional environmental agendas referring to the Development and Zoning Plan;</p> <p>Preparation of the environmental studies;</p> <p>Institution of environmental quality indexes, sustained by monitoring programs;</p> <p>Decrease in the environmental liabilities;</p> <p>Strengthening of the port agents' environmental awareness;</p> <p>Accomplishment of environmental studies for planning the activity in the Development and Zoning Plan.</p>	<p>Valorization of the port environments;</p> <p>Adoption of the strategic environmental assessment as an instrument of environmental planning.</p>

## Waterway Prospect

PORT	ENVIRONMENTAL NUCLEUS	ENVIRONMENTAL NUCLEUS QUALIFICATION	LICENSING	PEI	PGRS	ENVIRONMENTAL AUDIT	PROCEDURES MANUAL FOR RISK MANAGEMENT	SESSTP	PPRA	PCE	HAZARDOUS CARGO	SAFETY NUCLEUS (SPS)	CERTIFICATION ISPS
Port of Angra dos Reis - RJ	Blue	Green	Blue	Green	Yellow	Blue	Green	Yellow	Blue	Yellow	Blue	Blue	Green
Port of Antonina - PR	Blue	Green	Yellow	Green	Green	Green	Blue	Blue	Yellow	Blue	Blue	Blue	Blue
Port of Aratu - BA	Blue	Green	Yellow	Green	Yellow	Blue	Green	Blue	Yellow	Blue	Blue	Blue	Yellow
Port of Belem - PA	Yellow	Yellow	Blue	Yellow	Yellow	Blue	Green	Green	Blue	Yellow	Yellow	Yellow	Yellow
Port of Cabedelo - PB	Green	Green	Blue	Green	Yellow	Blue	Green	Blue	Yellow	Blue	Blue	Blue	Blue
Port of Forno - RJ	Yellow	Green	Green	Green	Green	Green	Yellow	Yellow	Blue	Yellow	Blue	Blue	Blue
Port of Fortaleza - CE	Blue	Yellow	Blue	Yellow	Yellow	Blue	Green	Blue	Yellow	Yellow	Yellow	Blue	Blue
Port of Imbituba - SC	Blue	Yellow	Blue	Green	Green	Green	Green	Blue	Yellow	Blue	Blue	Blue	Blue
Port of Itaguaí - RJ	Blue	Yellow	Blue	Blue	Yellow	Green	Blue	Blue	Yellow	Blue	Blue	Blue	Yellow
Port of Itajaí - SC	Blue	Yellow	Blue	Blue	Yellow	Blue	Blue	Yellow	Blue	Yellow	Blue	Blue	Blue
Port of Itaqui - MA	Blue	Blue	Blue	Green	Yellow	Blue	Green	Blue	Yellow	Yellow	Blue	Blue	Blue
Port of Imacapá - AP	Green	Green	Blue	Yellow	Yellow	Green	Green	Green	Yellow	Blue	Blue	Blue	Blue
Port of Maceió - AL	Green	Green	Yellow	Green	Yellow	Blue	Green	Green	Blue	Yellow	Yellow	Yellow	Yellow
Port of Manaus - AM	Green	Green	Green	Green	Yellow	Green	Green	Blue	Green	Green	Blue	Yellow	Green
Port of Natal - RN	Green	Green	Green	Yellow	Yellow	Green	Green	Blue	Yellow	Yellow	Blue	Blue	Blue
Port of Niterói - RJ	Blue	Green	Blue	Green	Yellow	Green	Green	Green	Yellow	Yellow	Yellow	Green	Green
Port of Paranaguá - PR	Blue	Yellow	Yellow	Green	Yellow	Green	Green	Green	Blue	Yellow	Green	Blue	Blue
Port of Porto Alegre - RS	Yellow	Yellow	Green	Green	Yellow	Green	Green	Blue	Yellow	Green	Blue	Blue	Yellow
Port of Porto Velho - RO	Green	Green	Blue	Green	Yellow	Green	Green	Green	Green	Green	Blue	Blue	Green
Port of Port Recife - PE	Blue	Blue	Blue	Blue	Yellow	Blue	Green	Green	Blue	Yellow	Yellow	Blue	Yellow
Port of Rio de Janeiro - RJ	Blue	Yellow	Yellow	Green	Yellow	Green	Green	Blue	Blue	Yellow	Blue	Blue	Yellow
Port of Rio Grande - RS	Blue	Yellow	Blue	Green	Yellow	Green	Green	Blue	Blue	Yellow	Yellow	Blue	Yellow
Port of Salvador - BA	Blue	Green	Yellow	Green	Yellow	Blue	Green	Blue	Green	Yellow	Blue	Blue	Yellow

## Waterway transport

Port of Satarém - PA	Blue	Yellow	Yellow	Green	Yellow	Green	Blue	Blue	Yellow	Yellow	Yellow	Blue	Blue
Port of Santos - SP	Blue	Green	Yellow	Blue	Yellow	Blue	Green	Blue	Blue	Yellow	Yellow	Blue	Yellow
Port of São Francisco do Sul - SC	Blue	Green	Blue	Green	Yellow	Blue	Green	Blue	Green	Green	Yellow	Blue	Blue
Port of São Sebastião - SP	Green	Green	Green	Green	Yellow	Blue	Green	Blue	Yellow	Yellow	Blue	Blue	Yellow
Port of Suape - PE	Blue	Yellow	Blue	Yellow	Blue	Blue	Green	Yellow	Blue	Blue	Blue	Blue	Blue
Port of Vila do Conde - PA	Yellow	Yellow	Green	Green	Yellow	Blue	Green	Green	Blue	Yellow	Yellow	Yellow	Yellow
Port of Vitória - ES	Blue	Yellow	Yellow	Green	Yellow	Blue	Green	Blue	Yellow	Yellow	Green	Blue	Yellow
	Complies												
	Complies partly												
	Does not comply												

# SEA NAVIGATION

## Freight expenses in 2006

The freight expenses in 2006 totalized US\$ 2.3 billion, a high of 27.7% regarding 2005 when the total was US\$1 billion. The long cruise navigation - made among Brazilian and foreign ports - accounted for 77.6% of the total in 2006 or almost US\$1.8 billion. That amount represents a high of 46.3% upon the amount reported in 2005 for the long cruise: US\$1.23 billion.

The second highest share in the freight expenses in 2006 was on account of the sea support navigation - made in national territorial waters and in the Economic Zone for the logistic support to vessels and facilities involved in the research and mining of minerals and hydrocarbons. The freight expenses of the sea support in 2006 reached almost US\$ 400 million or 17.4% of the total number. A 30.7% increase comparing to 2005, when the total number was US\$306.2 million.

The expenses with coastal navigation - navigation between ports or points in the Brazilian territory - totalized US\$ 79.2 million or 3.44% of the total in 2006. The result presents a 69.8% drop in the freight expenses of the coastal navigation regarding 2005, when the total number almost reached US\$262 million.

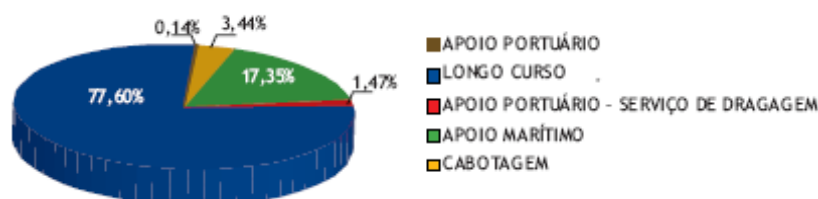
The port support - navigation solely performed in the ports and terminals, to meet port vessels and facilities - was equivalent to the 5% remaining of the total in 2006 or US\$110 million. A 64.4% drop regarding 2005 when the total amount spent with freights in the port support reached more than US\$9 million.

### FREIGHT EXPENSES - 2006

NAVIGATION	AMOUNT US\$ 2006
PORT SUPPORT	3.232.500,00
LONG CRUISE	1.787.125.249,85
PORT SUPPORT - DREDGING SERVICE	33.746.002,17
SEA SUPPORT	399.552.360,25
COASTAL NAVIGATION	79.268.588,23
TOTAL	2.302.924.700,50

Source: ANTAQ

## FREIGHT EXPENSES - 2006



**Captions:** PORT SUPPORT / LONG CRUISE / PORT SUPPORT – DREDGING SERVICE / SEA SUPPORT / COASTAL NAVIGATION

## LONG CRUISE

Of the total US\$1.8 billion spent with long cruise freights, US\$1.22 billion or 68.5% paid charters per time - a mode by which a vessel already rigged and manned is freighted for a certain period. Regarding 2005 the long cruise charters per time increased by 69.4%.

Other US\$369 million or 20.6% were spent with freights per travel - chartering of a vessel already manned for the carriage of cargo in one travel. 1.2% decrease in the amount spent with charters per travel in the long cruise mode regarding 2005.

The charters per space - when a certain space in a vessel is freighted - totalized 8.7% or US\$156 million. A 46.8% increase regarding 2005.

The 2.2% remaining or US\$36.4 million were on account of the bareboat charters - a mode by which a vessel is chartered for a certain time, with the right to designate the master and the crew. Such expenses were kept firm regarding 2005.

Petrobras accomplished the highest individual expense with charters in the long cruise mode, 68.5% of the total number or US\$1.22 billion (a high of 54.5% upon 2005), followed aloof by the companies Aliança, with 8.9% or US\$157.8 million ( a high of 13.5% on 2005), Libra, with 8.4% or US \$149.2 million (drop of 13.9% regarding 2005) and Flumar, with 7% or US\$125.3 million (a high of 795% on 2005). Nine other companies accounted for the remaining 7.2% or almost US\$150 million.

In the items with charter per conditioning types, the liquid bulk material accounted for 78.6% of the total amount or US\$1.4 billion (high of 64.9% regarding 2005) which, largely reflects the isolated leadership of Petrobras in the freight expenses in the long cruise mode.

The containers accounted for 15.5% or US\$277 million (a drop lower than 1% regarding 2005), followed by the solid bulk materials, which are equivalent to 4.4% or US\$78.7 million (a high of 7.7% on 2005) per general cargo, with 1.3% or US\$22.7 million (a 21.5% drop regarding 2005) and by the automobiles, with only 0.2% of the total number or US\$3.2 million (a high of 13% comparing to 2005).

In the items expenses with charters per vessel type, the oil tankers had the highest share in the total amount, almost 63.8% or US\$1.14 billion (a high of 56.4% upon 2005), which also reflects Petrobras' leadership.

The second highest share was of the container-holders, with 14.9% or US\$266.8 million (a 1.5% drop regarding 2005) followed by the chemicals, with 8.7% or US\$154.8 million (a high of 292.6% upon 2005) and by the gas tankers with 6.1% or US\$110 million (a high of 37.4% upon 2005). A large share of the two last percentages may also be attributed to the large share of Petrobras in the total freight expense in the long cruise mode.

The bulk carriers also have an expressive share in the freight expenses in the long cruise mode, of almost 4.4% of the total number or US\$77.8 million (fixed regarding 2005). The soy-bean exports are among the main factors comprising that amount.

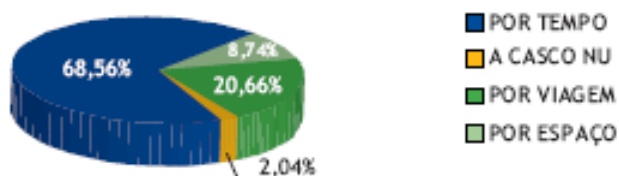
The remaining 2.1% or US\$37.6 million accounted for the sum of the amounts referring to heavy cargo, multipurpose, cargo and roll on-roll off type vessels.

LONG CRUISE NAVIGATION - FREIGHT EXPENSES - 2006

MODE	AMOUNT US\$ 2006
PER TIME	1.225.285.559,99
BAREBOAT	36.437.220,00
PER TRAVEL	369.161.535,15
PER SPACE	156.240.934,71
TOTAL	1.787.125.249,85

Source: ANTAQ

LONG CRUISE NAVIGATION - FREIGHT EXPENSES - 2006



Captions: PER TIME / BAREBOAT / PER TRAVEL / PER SPACE

LONG CRUISE NAVIGATION - FREIGHT EXPENSES - 2006

CONDITIONINGS	FREIGHT MODE				TOTAL US\$
	PER TIME US\$	PER TRAVEL US\$	PER SPACE US \$	BAREBOAT US\$	
AUTOMOBILES	0,00	1.365.360,00	1.836.165,59	0,00	3.201.525,59
GENERAL CARGO	10.108.300,00	6.336.140,00	0,00	6.278.000,00	22.722.440,00
DRY CONTAINER	234.561.443,00	600.000,00	34.894.133,74	7.117.500,00	277.173.076,74
LIQUID BULK	910.824.220,88		119.510.635,38	23.041.720,00	1.405.268.761,41
SOLID BULK	69.791.596,11	8.967.850,00	0,00	0,00	78.759.446,11
TOTAL			156.240.934,71	36.437.220,00	1.787.125.249,85

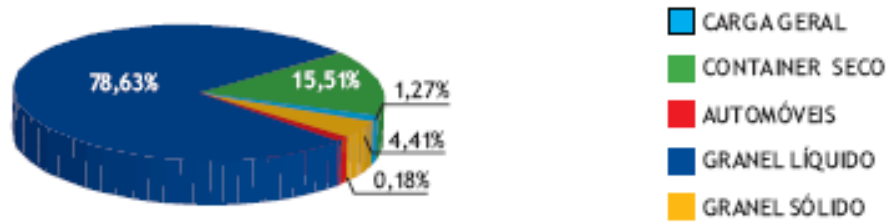
Source: ANTAQ

LONG CRUISE NAVIGATION - FREIGHT EXPENSES - 2006

CONDITIONINGS	TOTAL US\$
GENERAL CARGO	22.722.440,00
DRY CONTAINER	277.173.076,74
AUTOMOBILES	3.201.525,59
LIQUID BULK	1.405.268.761,41
SOLID BULK	78.759.446,11
TOTAL	1.787.125.249,85

Source: ANTAQ  
NOTE: THIS TABLE WAS USED TO PREPARE THE CHART BELOW

LONG CRUISE NAVIGATION - FREIGHT EXPENSES PER CONDITIONING TYPE - 2006



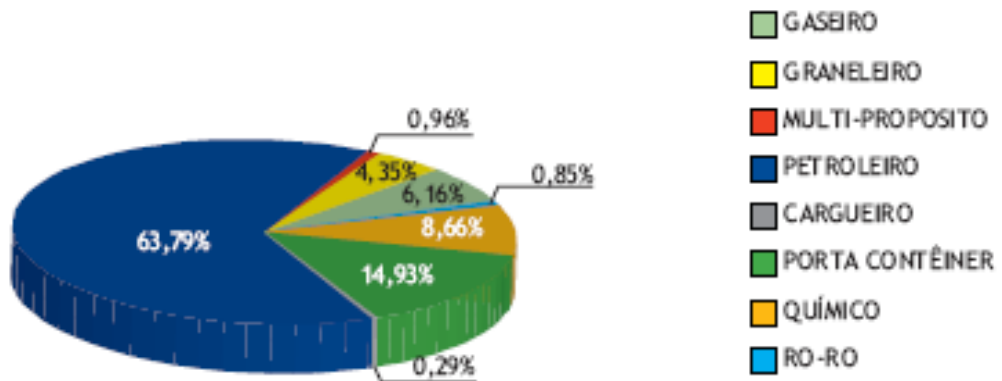
Captions: GENERAL CARGO / DRY CONTAINER / AUTOMOBILES / LIQUID BULK / SOLID BULK

LONG CRUISE NAVIGATION - FREIGHT EXPENSES PER TYPE VESSEL TYPE - 2006

VESSEL TYPES	2006
HEAVY CARGO	190.000,00
GAS TANKER	110.006.407,38
BULK CARRIER	77.726.596,11
MULTIPURPOSE	17.147.246,84
OIL TANKER	1.139.899.831,65
CARGO VESSEL	5.262.800,00
CONTAINER HOLDER	266.812.332,90
CHEMICALS	154.814.522,37
ROLL-ON - ROLL-OFF	15.265.512,59
TOTAL	1.787.127.255,84

Source: ANTAQ

LONG CRUISE NAVIGATION - FREIGHT EXPENSES - MAIN VESSEL TYPES - 2006



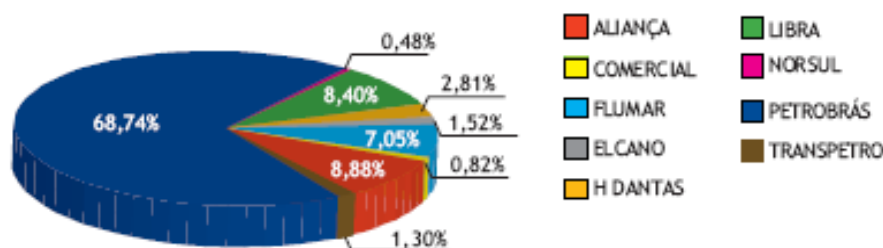
Captions: GAS TANKER / BULK CARRIER / MULTIPURPOSE / OIL TANKER / CARGO VESSEL / CONTAINER HOLDER / CHEMICALS / ROLL-ON-ROLL-OFF

LONG CRUISE NAVIGATION - FREIGHT EXPENSES PER COMPANY - 2006

COMPANIES	AMOUNT US\$
ALIANÇA	157.779.345,11
COMERCIAL	14.525.125,62
FLUMAR	125.362.637,46
ELCANO	27.082.239,55
H DANTAS	49.979.950,00
LIBRA	149.207.283,90
NORSUL	8.562.300,00
PETROBRÁS	1.221.635.951,79
TRANSPETRO	23.041.720,00
GLOBAL	3.194.236,41
GUARITA	3.253.644,00
CHAVAL	1.145.000,00
METALNAVE	2.355.816,00
TOTAL	1.787.125.249,84

Source: ANTAQ

LONG CRUISE NAVIGATION - FREIGHT EXPENSES MAIN COMPANIES - 2006



SEA SUPPORT

The freights per time accounted for 98% of the total freights in the sea support navigation mode, which is equivalent to US\$391 million (a high of 30.6% on 2005). The bareboat freights totalized the 2% remaining or almost US\$8 million (a high of 26% regarding 2005).

Petrobras is distinguished again in the item freight expenses per companies, now in the sea support navigation mode, accounting for 85.8% or US\$338.6 million (a high of 37.4% regarding 2005) of the almost US\$400 million spent with freights in the sea support. The second highest amount was of the company Subsea 7, which spent 10.5% of the total number or US\$41.5 million (a high of 10.8% regarding 2005). Eight other companies spent the remaining 3.7% or US\$61 million.

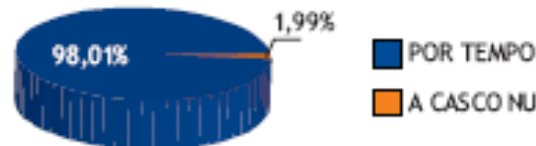
Petrobras' leadership also appears in the two main types of vessel used in the sea support navigation in Brazil: AHTS (Anchor Handling Tug Supply), whose function is to install and service oil platforms and PSV (Platform Support Vessel), a vessel rendering support services to the platforms. The two companies totalized almost 79% of the total spent with freights in the sea support navigation or US \$317 million (a high of almost 30% regarding 2005). Twelve other types of vessels accounted for the 21% remaining or US\$83 million.

SEA SUPPORT NAVIGATION - FREIGHT EXPENSES - 2006

MODE	AMOUNT US\$ 2006
POR TEMPO	391.611.584,25
A CASCO NU	7.940.722,00
TOTAL	399.552.306,25

Source: ANTAQ

SEA SUPPORT NAVIGATION - FREIGHT EXPENSES- 2006



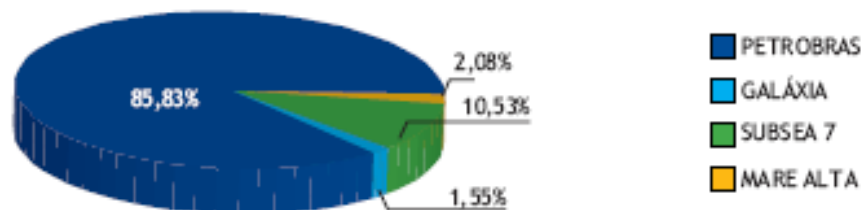
Captions: PER TIME / BAREBOAT

SEA SUPPORT NAVIGATION - FREIGHT EXPENSES - PER COMPANY - 2006

COMPANIES	AMOUNT US\$
PETROBRAS	338.591.879,43
GALÁXIA	6.119.945,82
SUBSEA 7	41.543.000,00
MARE ALTA	8.217.400,00
MAERSK	1.943.913,00
ALFANAVE	1.480.000,00
TRICO	812.322,00
SÃO MIGUEL	209.000,00
DELBA	234.900,00
ASTROMARÍTIMA	400.000,00
TOTAL	399.552.360,25

Source: ANTAQ

SEA SUPPORT NAVIGATION - FREIGHT EXPENSES - MAIN COMPANIES - 2006

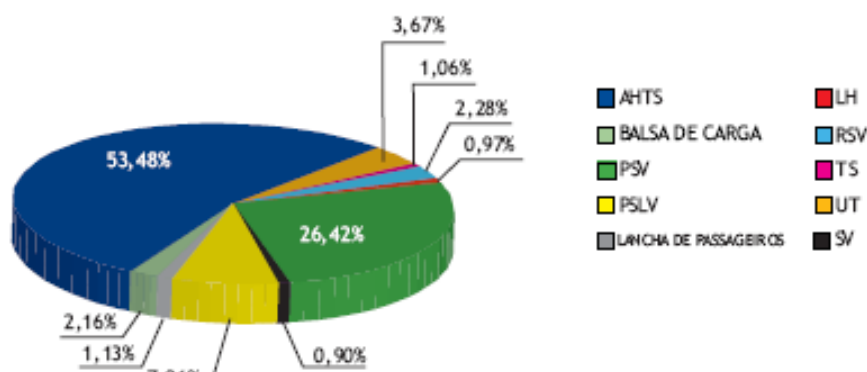


SEA SUPPORT NAVIGATION - FREIGHT EXPENSES

VESSEL TYPES	2006
AHTS	212.157.473,00
CARGO RAFT	8.580.032,40
PASSENGER MOTOR BOAT	4.500.340,90
PSLV	31.360.000,00
SV	3.552.784,00
PSV	104.813.07,38
LH	4.220.385,75
RSV	9.063.000,00
TS	3.861.950,00
UT	14.564.818,82
MSV	1.120.000,00
MULTIPURPOSE	1.110.000,00
TUGBOAT	36.500,00
SEISMIC VESSEL SUPPORT	612.000,00
TOTAL	399.552.360,25

Source: ANTAQ

SEA SUPPORT NAVIGATION - FREIGHT EXPENSES  
MAIN VESSELS - 2006



Captions: CARGO RAFT / PASSENGER MOTOR BOAT

COASTAL NAVIGATION

Of the total US\$79.2 million spent with charters in the coastal navigation, the freights per travel accounted for 46.3% or US\$ 36.7 million (an 11.3% drop). Charters per space totalized 37.2% or US\$ 29.5 million (a raise of almost 10% regarding 2005) and per time, 16,5% of the total number or US \$13 million (a 94.3% drop comparing to 2005). Therefore, the main responsible for the important drop in the total amount spent with freights in the coastal navigation was the decrease by 93.2% of the charters per time.

In the coastal navigation as well, Petrobras accomplished the highest individual expenditure with freights: it accounted for 29.6% of the total number or US\$23.4 million. An 88.4% drop regarding 2005 when the company spent as much as US\$202.6 million. Therefore, Petrobras was the main responsible for the drop of almost 70% in the expenses with coastal navigation freights.

The company Aliança had the second highest expense with 21% or US\$166 million (10.2% drop regarding 2005) followed by the companies Norsul, with almost 15% or US\$12 million (46.4% raise regarding 2005), Flumar with 11% or US\$8.8 million (raise of 197% regarding 2005) and H. Dantas, with 9% of the total amount or US\$7.17 million or 14.1%.

## Waterway Prospect

In the items with charters per conditioning type, the liquid bulk was equivalent to 43.8% of the total amount or US\$34.74 million (83.4 drop regarding 2005), followed by containers with 26.7% or US\$21.17 million (fixed regarding 2005), general cargo, with 5.7% or US\$4.52 million (raise of 373% regarding 2005) and automobiles with only 0.1% of the total number or US\$31.500.

The amounts above show the percentage share of each cargo type in the total carried by the coastal navigation: 84% of liquid bulk, 12% of solid bulk and 4% of general cargo.

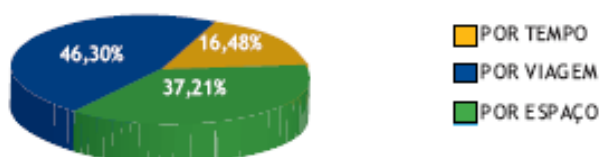
The main type of vessel used in the coastal navigation was the container holder, which totaled 24.6% of the amount spent with freights or US\$19.5 million (2% drop comparing to 2005). The bulk carriers ranked second, with 21.8% of the total number or US\$17.3 million (43.7% drop regarding 2005) and the oil tankers ranked third with 19% of the total number or US\$15.1 million (91.4% drop regarding 2005). Vessels of the chemical type totaled almost 11.4% or US\$9 million (a high of 44.4% regarding 2005) and gas tankers, 9.8% or US\$7.8 million (59% drop regarding 2005). All the other 13.4% or US\$10.7 million were split among four other vessel types.

### COASTAL NAVIGATION - FREIGHT EXPENSES - 2006

MODE	AMOUNT US\$ 2006
PER TIME	13.065.440,00
PER TRAVEL	36.703.962,75
PER SPACE	29.499.185,48
TOTAL	79.268.588,23

Source: ANTAQ

### COASTAL NAVIGATION - FREIGHT EXPENSES - 2006



Captions: PER TIME / PER TRAVEL / PER SPACE

### COASTAL NAVIGATION - FREIGHT EXPENSES

CONDITIONINGS	FREIGHT MODE			TOTAL US\$
	PER TIME US\$	PER TRAVEL US\$	PER SPACE US\$	
AUTOMOBILES	0,00	0,00	31,500,00	31,500,00
GENERAL CARGO	0,00	3.016.797,82	1.509.209,22	4.526.007,04
DRY CONTAINER	0,00	961.000,00	20.216.196,11	21.177.196,11
LIQUID BULK	13.065.440,00	14.853.440,08	6.826.280,15	34.745.160,23
SOLID BULK	0,00	17.872.724,85	916.000,00	18.788.724,85

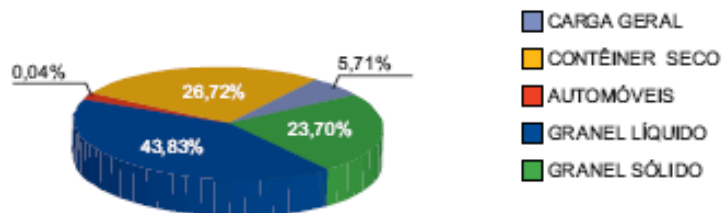
Source: ANTAQ

COASTAL NAVIGATION - FREIGHT EXPENSES

CONDITIONINGS	TOTAL US\$
GENERAL CARGO	4.526.007,04
DRY CONTAINER	21.177.196,11
AUTOMOBILES	31.500,00
LIQUID BULK	34.745.160,23
SOLID BULK	18.788.724,85
TOTAL	79.268.588,23

Source: ANTAQ

COASTAL NAVIGATION - FREIGHT EXPENSES PER CONDITIONING TYPE - 2006



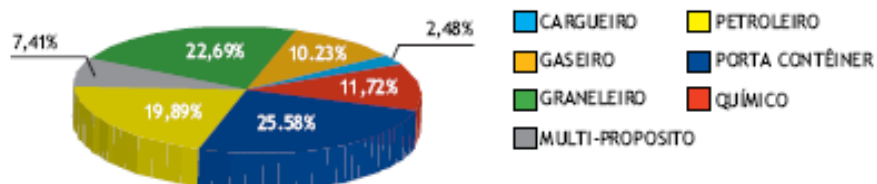
Captions: GENERAL CARGO / DRY CONTAINER / AUTOMOBILES / LIQUID BULK / SOLID BULK

COASTAL NAVIGATION - FREIGHT EXPENSES PER VESSEL TYPE - 2006

VESSEL TYPES	2006
PROPELLED BARGE	2.774.000,00
CARGO VESSEL	1.890.509,60
GAS TANKER	7.808.554,54
BULK CARRIER	17.317.096,38
MULTIPURPOSE	5.658.035,85
OIL TANKER	15.176.940,13
CONTAINER HOLDER	19.521.526,11
CHEMICALS	8.948.639,56
ROLL-ON -ROLL-OFF	173.286,06
TOTAL	79.268.588,23

Source: ANTAQ

COASTAL NAVIGATION - FREIGHT EXPENSES - MAIN VESSEL TYPES - 2006



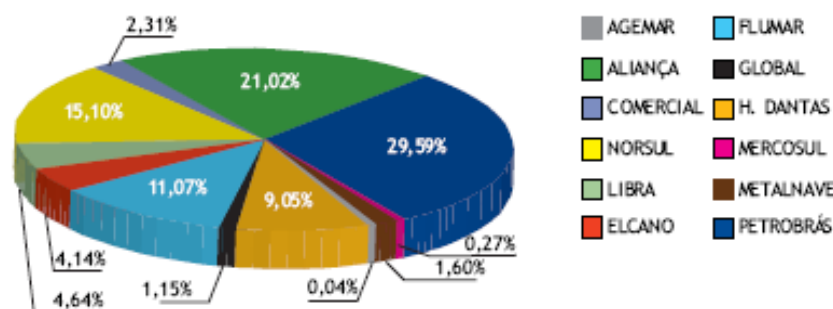
Captions: CARGO VESSEL / GAS TANKER / BULK CARRIER / MULTIPURPOSE / OIL TANKER / CONTAINER HOLDER / CHEMICAL

COASTAL NAVIGATION - FREIGHT EXPENSES PER COMPANY - 2006

COMPANIES	AMOUNT US\$
AGEMAR	37.026,00
ALIANÇA	16.662.545,00
COMERCIAL	1.827.525,00
NORSUL	11.969.811,73
LIBRA	3.681.565,00
ELCANO	3.285.084,85
FLUMAR	8.777.027,65
GLOBAL	912.235,71
H. DANTAS	7.172.694,25
MERCOSUL	217.935,00
METALNAVE	1.267.020,35
PETROBRÁS	23.458.117,69
TOTAL	79.268.588,23

Source: ANTAQ

COASTAL NAVIGATION - FREIGHT EXPENSES - MAIN COMPANIES - 2006



## PORT SUPPORT

The port support accounted for almost US\$37 million of the expenses with freights, 91% of which or US\$33.7 million were dedicated to the dredging services support navigation.

The freights per time accounted for 91.5% of the total of US\$ 33.7 million spent with freights in the port support to dredging, which is equivalent to almost US\$ 31 million. The 8.2% remaining or US\$ 2.85 million were spent with bareboat freights.

The freight expenses in the port support, excluding the freights in the support to dredging services, totalized almost US\$ 3.3 million and were split among the freights per time, equivalent to 83.2% of the total number or US\$ 2,7 million and the bareboat freights, totalizing the remaining 16.8% or US\$ 540 thousand.

Camargo Correia was the company with the highest freight expenses in the port support to dredging services, US\$ 16.8 million or 49.7% of the total US\$ 37 million. The company Somar ranked second, spending US\$ 16.5 million or 49%. Bandeirantes and Enterpa accounted for the 1.6% remaining or US\$ 440 thousand.

The most used vessel type was the drag, which accounted for 91% of the total number or US\$ 30.7 million. The support boats ranked second with US\$ 2.9 million or 8.5% and the bulk Carrier flatboat with US\$184 thousand or 0.5%.

In the item freight expenses in the port support (excluding the freight expenses in the port support to dredging), the company Superpesa had the highest expense of US\$1.95 million or 60.4% of the total number. Delba and São Miguel accounted for the 39.6% remaining or US\$ 1.28 million.

## Waterway Prospect

The main vessel type used was the hoist with US\$ 1.95 million or 60.4% of the total number, followed by the support boats with US\$ 731 thousand or 22.6% and by the oil tankers with the 17% remaining or US\$ 549 thousand.

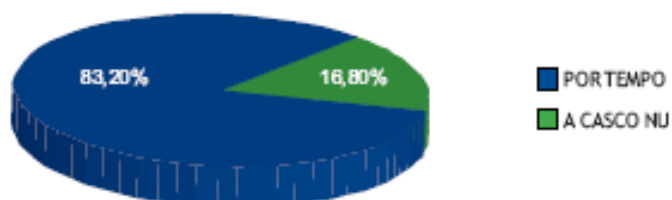
Until 2005 the freight expenses in the port support to dredging services were added to all the other freight expenses in the port support. Only after 2006 the two types of expenses were computed separately, and therefore, it is not possible to calculate the variation from 2005 to 2006 for each type individually.

### PORT SUPPORT NAVIGATION - FREIGHT EXPENSES - 2006

MODE	AMOUNT US\$ 2006
PER TIME	2.689.500,00
BAREBOAT	543.000,00
TOTAL	3.232.500,00

Source: ANTAQ

### PORT SUPPORT NAVIGATION - FREIGHT EXPENSES- 2006



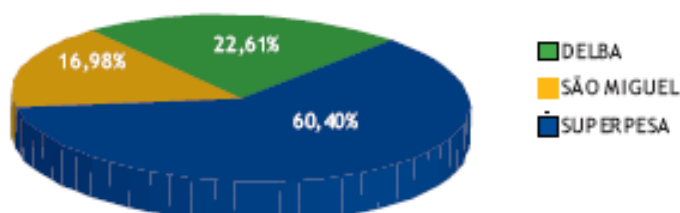
Captions: PER TIME / BAREBOAT

### PORT SUPPORT NAVIGATION - FREIGHT EXPENSES PER COMPANY - 2006

COMPANIES	AMOUNT US\$
DELBA	731.000,00
SÃO MIGUEL	549.000,00
SUPERPESA	1.952.500,00
TOTAL	3.232.500,00

Source: ANTAQ

### PORT SUPPORT NAVIGATION - FREIGHT EXPENSES - MAIN COMPANIES - 2006

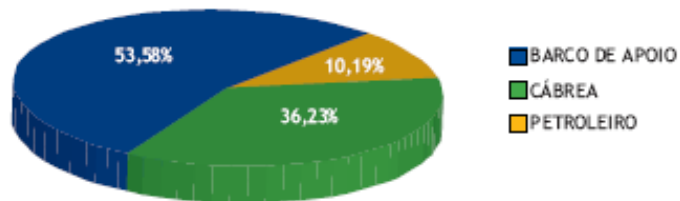


PORT SUPPORT NAVIGATION - FREIGHT EXPENSES PER VESSEL TYPE

VESSEL TYPES	2006
SUPPORT BOATS	2.887.257,60
HOIST	1.952.500,00
OIL TANKER	549.000,00
TOTAL	5.388.757,60

Source: ANTAQ

PORT SUPPORT NAVIGATION - FREIGHT EXPENSES - MAIN COMPANIES - 2006



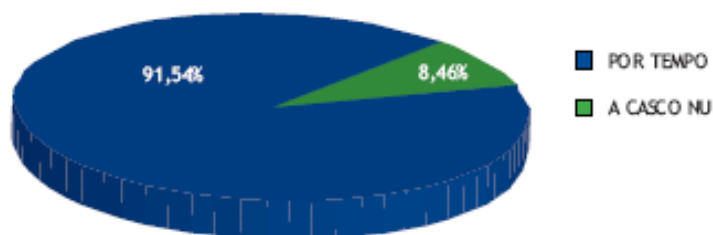
Captions: SUPPORT BOAT / HOIST / OIL TANKER

PORT SUPPORT NAVIGATION - DREDGING SERVICE - FREIGHT EXPENSES - PER FREIGHT MODES - 2006

MODE	AMOUNT US\$\$ 2006
PER TIME	30.891.748,67
BAREBOAT	2.854.253,50
TOTAL	33.746.002,17

Source: ANTAQ

NAVIGATION D E APOIO PORTUÁRIO - DREDGING SERVICE - FREIGHT EXPENSES - PER FREIGHT MODES - 2006



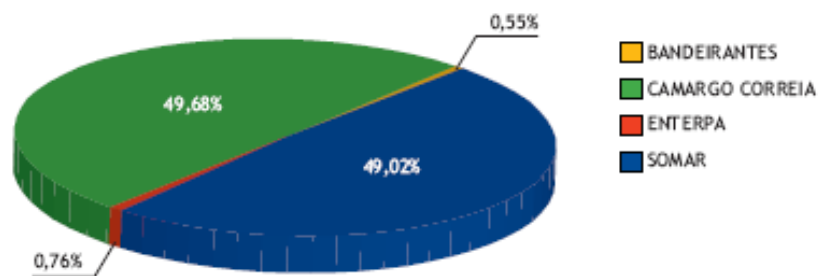
Captions: PER TIME / BAREBOAT

PORT SUPPORT NAVIGATION - DREDGING SERVICE - FREIGHT EXPENSES - PER COMPANY - 2006

COMPANIES	AMOUNT US\$
BANDEIRANTES	184.000,00
CAMARGO CORREIA	16.764.249,60
ENTERPA	255.231,00
SOMAR	16.542.521,57
TOTAL	33.746.002,17

Source: ANTAQ

PORT SUPPORT NAVIGATION - DREDGING SERVICE - FREIGHT EXPENSES - MAIN COMPANIES - 2006

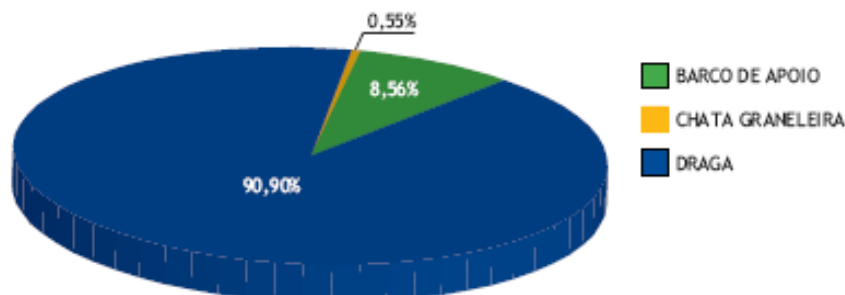


PORT SUPPORT NAVIGATION - DREDGING SERVICE - FREIGHT EXPENSES - PER VESSEL TYPE - 2006

VESSEL TYPES	2006
SUPPORT BOAT	2.887.257,60
BULK CARRIER FLATBOAT	184.000,00
DRAG	30.674.744,57
TOTAL	33.746.002,17

Source: ANTAQ

PORT SUPPORT NAVIGATION - DREDGING SERVICE - FREIGHT EXPENSES - MAIN VESSEL TYPES - 2006



Captions: SUPPORT BOAT / BULK CARRIER FLATBOAT / DRAG

## SELF-OWNED FLEET

The Brazilian sea and support navigation fleet comprises 996 vessels averaging 20 years old and total carriage capacity of 3,899,057 GDTs (gross deadweight tons). The oil tankers and the bulk carriers represent only 7.3% (73) of the vessel number, but they account for 66.1% of the total capacity (2,575,141.9 GDTs). On the other hand, the motor boats and the tugboats/pusher tugs totalize 51.2% (510) of the total number of vessels, but they account for only 1.2% of the total carriage capacity (44,158.1 GDTs).

Other vessel types that are worth mentioning for the cargo value are the container-holder vessels, of which there are six (0.6%) in Brazil, accounting for 3.7% (142,816 GDTs) of the total capacity; and the roll-on/roll-off vessels, used in the automobile carriage, which are six (0.6%) with 3% (117,567.6 GDTs) of the national fleet carriage capacity.

The five vessels with the highest GDT - the oil tankers, the bulk carriers, the rafts, the barges, supply boats and container-holders - represent when added 23.4% or 234 units comprising 78.4% of the Brazilian fleet carriage capacity.

BRAZILIAN SELF-OWNED FLEET - SEA AND SUPPORT NAVIGATION					
VESSEL TYPE	QTY.	%	TOTAL GDT	%	AVERAGE AGE
TUGBOAT/PUSHER TUG	325	32,6	42.043,8	1,1	21
MOTOR BOAT	185	18,6	2.114,3	0,1	21
RAFT	91	9,1	181.761,7	4,7	10
SUPPLY BOAT	64	6,4	151.058,7	3,9	9
FLATBOAT	55	5,5	20.911,0	0,5	34
DRAG	50	5,0	38.100,1	1,0	28
OIL TANKER	49	4,9	1.508.657,7	38,7	21
BARGE	45	4,5	339.034,1	8,7	20
OTHER VESSELS	38	3,8	3.022,6	0,1	17
BULK CARRIER	24	2,4	1.066.484,2	27,4	21
FLOATING BOARD	13	1,3	3.462,1	0,1	18
LPG	12	1,2	77.685,0	2,0	22
CARGO VESSEL	10	1,0	113.614,0	2,9	25
HOIST/CRANE	9	0,9	7.879,0	0,2	33
ROLL-ON/ROLL-OFF	6	0,6	117.567,6	3,0	15
CONTAINER HOLDER	6	0,6	142.816,0	3,7	17
CHEMICAL TANK	4	0,4	40.057,0	1,0	24
TWO-ROPE HANDLING	4	0,4	1.098,6	0,0	5
LIGHTER	3	0,3	1.614,8	0,0	48
FREEZER VESSEL	1	0,1	0,0	0,0	31
MULTIPURPOSE	1	0,1	11.274,0	0,3	8
WATER TANK VESSEL	1	0,1	28.801,0	0,7	32
TOTAL	996	100,0	3.899.057,3	100,0	20

Source: Sistema Corporativo/ANTAQ  
Updated on 07/30/2007

## INSPECTION PROCEDURES

From January 1st, 2003 to June 30, 2007 ANTAQ performed 117 inspections in the sea and support navigation area, an average of 23.4 procedures a year. Most of them (55.5% or 65 inspections, average of 13 a year) were motivated by the operation of navigation companies without the Agency's permit grant.

Four other reasons that most motivated inspection actions were as follows: regularity in the forwarding of the compulsory annual information for permit granting keeping; non-adequacy of the permit granting to Resolution N° 52/02; operating regularity for keeping the permit granting; prescribed cargo carriage performed by a foreign vessel without the due permit and operating situation of permit granting assuring vessel. All in all, those reasons represent 29% (34) of the total inspection actions.

### INSPECTION PROCEEDINGS INITIATED

REASON	N° of companies				
	2003	2004	2005	2006	June 2007
Non-adequacy of the permit granting to Resolution no. 52/02 - ANTAQ	-	6	1	-	1
Operation of navigation companies without ANTAQ's license granting.	2	25	14	13	11
Operating situation of ANTAQ's license granting guarantor vessel.	-	-	4	-	-
Denunciation by the Federal Income about fiscal and exchange frauds in the sea cargo carriage	1	-	-	-	-
Prescribed cargo carriage performed by a foreign vessel without the due ANTAQ permit.	1	-	2	1	-
Operation of third flag companies operating in a traffic covered by bilateral agreement.	1	-	1	1	-
Denunciation of flag coverage to benefit the cargo carriage performed by a foreign navigation company.	1	-	-	-	-
Irregular operation of a foreign vessel in the coastal navigation.	1	1	-	-	-
Irregular operation of a foreign company in the coastal navigation.	-	-	1	1	-
Irregularity in the circulation of charter request from a foreign vessel.	-	-	-	1	-
Foreign vessel operation without the due fulfillment of the REB - Special Brazilian Record in the Sea Court or without any other type of authorized charter.	-	-	3	-	-
Poor commercial practice of port towing service rendering companies	1	-	1	-	-
Inspection in shipyards to check the fulfillment of the legal conditions required for foreign vessel charter permit replacing the vessel under construction.	1	-	1	-	-
Regularity in the forwarding of the compulsory annual information to keep ANTAQ's permit granting.	-	-	2	-	8
Operating Regularity to keep ANTAQ's permit granting.	-	-	-	8	-
Denunciation of utilization of a vessel non-suitable to the port support navigation.	-	-	-	-	1
<b>Full Total</b>	<b>9</b>	<b>32</b>	<b>30</b>	<b>25</b>	<b>21*</b>

Source: ANTAQ - SNM - GFM

\* The Inspection Proceedings initiated by the Sea and Support Navigation Management and Regional Administrative Units were accounted for.

## LITIGIOUS ADMINISTRATIVE PROCEEDINGS

From January 1st, 2003 to June 30, 2007 ANTAQ initiated 55 litigious administrative proceedings, 11 per year in average, 58.1% (32) of which were initiated against navigation and support companies whose permit grants were improper regarding Resolution No.º 52 of 2002.

The second main reason was the operation of navigation companies without ANTAQ's permit Grant, which represented 31.2% (10) of the total number of litigious administrative proceedings resulting from violations evidenced during inspection actions.

### LITIGIOUS ADMINISTRATIVE PROCEEDINGS INITIATED

REASON	Nº of companies				
	2003	2004	2005	2006	June 2007
Non-adequacy of the permit granting to Resolution no. 52/02 - ANTAQ	-	20	7	3	2
Operation of navigation companies without ANTAQ's license granting.	-	1	3	5	1
Operating situation of ANTAQ's license granting guarantor vessel.	-	-	1	1	-
Prescribed cargo carriage performed by a foreign vessel without the due ANTAQ permit.	-	-	1	-	-
Operation of third flag companies operating in a traffic covered by bilateral agreement.	-	1	-	-	-
Irregular operation of a bareboat chartered vessel with flag suspension in the coastal navigation.	-	-	2	-	-
Improper operating conditions of a Brazilian vessel operating in international waters.	1	-	-	-	-
Incident related to a Brazilian vessel abroad.	-	1	-	-	-
Poor commercial practice and monopoly in the cargo carriage in the Amazon Basin.	1	-	-	-	-
Non-compliance to the requirements set by Resolution no. 52/02-ANTAQ to keep the permit granting.	-	-	-	-	3
Irregularity in the circulation of charter request from a foreign vessel.	-	-	-	1	-
<b>Full Total</b>	<b>2</b>	<b>23</b>	<b>14</b>	<b>10</b>	<b>6*</b>

Source: ANTAQ - SNM - GFM

\* The Litigious Administrative Proceedings initiated by SNM and Regional Administrative Units were accounted for.

# **INLAND NAVIGATION**

## Permit Grants 2002 - 2007

The companies operating in the inland navigation in the cargo, passengers and in crossings longitudinal carriage, in interstate and international routes, or requiring chartering a foreign vessel in such operations are subject to ANTAQ's permit granting.

To stimulate the regularization of the service providers, ANTAQ makes the information required to obtain a grant for each transport type available in its internet site ([www.antaq.gov.br](http://www.antaq.gov.br)), as per the specific rules listed below:

- ANTAQ Resolution no. 356/04, approving the rule for granting permits to exploit cargo carriage service in the longitudinal route inland navigation;
- ANTAQ Resolution no. 912/07, approving the rule for granting permits to exploit passengers and mixed transport service in the longitudinal route inland navigation;
- Decree no. 214/98 of the Ministry of Transports (MT), regulating the crossing transport; and
- Decree no. 412/96 of the Ministry of Transports (MT), regulating the foreign vessels chartering intended for inland navigation.

Currently there are approximately 300 companies authorized to operate in the inland navigation, of which only 88 grants were issued by this Agency, from 2002 to 2007, being 59 for companies operating in the longitudinal cargo transport, one for the longitudinal passengers and mixed transport and 28 for the crossings transport. In the same period 86 freight permits of foreign vessels were reported.

### AUTHORIZED COMPANIES

TRANSPORT TYPE	TOTAL	GRANTS ISSUED PER YEAR					
		2007	2006	2005	2004	2003	2002
LONGITUDINAL CARGO	59	17	17	11	7	5	2
LONGITUDINAL PASSENGERS AND CARGO (MIXED)	1	--	--	1	--	--	--
CROSSINGS	28	13	1	8	3	--	3
TOTAL	88	30	18	20	10	5	5

Source: SNI/ANTAQ

### FREIGHT PERMIT CERTIFICATES

TOTAL	PERMITS ISSUED PER YEAR					
	2007	2006	2005	2004	2003	2002
86	15	14	16	15	18	8

SOURCE: SNI/ANTAQ

## AUTHORIZED COMPANIES FLEET

The fleet of the 88 companies authorized by ANTAQ to operate in the inland navigation comprises 996 self-owned vessels. All in all, the total transport capacity of such vessels is 781,774.58 tons per gross deadweight (TGD). They average 18 years old according to data updated from 2007.

The prevailing vessels are the raft, barge and flatboat which together, comprise a fleet of 577 units with 662,591.88 TGDs and averaging 16 years old. The tugboat/pusher tug comes next, with 362 vessels, totalizing 12,191.04 tons and averaging 21 years old, also according to data available from 2007.

### AUTHORIZED COMPANIES - FLEET - SELF-OWNED VESSELS

TYPE	QUANTITY	TGD	AVERAGE AGE
Raft, Barge and Flatboat	577	662.591,88	16
Cargo vessel	1	133,30	11
Ferry-Boat	2	196,90	3
Freezer vessel	1	3.838,00	12
Liquefied gas	1	1.023,50	37
Bulk carrier	26	69.394,17	16
Motor boat	10	261,09	16
Research vessel	2	19,40	10
Tugboat/Pusher tug	362	12.191,04	21
Other vessels	2	270,00	56
Other liquid bulks	12	31.855,30	--
<b>TOTAL</b>	<b>996</b>	<b>781.774,58</b>	<b>18</b>

Source: SNI/ANTAQ

## 11 SEMINARS IN ONE YEAR

In one year, from October 2006 to October 2007 the Development and Regulation Management (GDI) held eleven seminars about Brazilian waterways, aiming to prepare ANTAQ's experts and at the same time, stimulate and foster the inland navigation, besides promoting the debate among government agencies, waterways administrators, carriers, users, specialists and representatives of the production sector.

In the seminars which were held, about the Brazilian waterways - Paraguai-Paraná, Parnaíba, São Francisco, Teles Pires-Tapajós, Tietê-Paraná, Araguaia and Tocantins and Southern Brazil Waterways - there was a deepening of the themes, also including the environmental issue.

The Agency also promoted in 2007, two international seminars: the International Seminar on Waterways Brazil/Flandres-Belgium, held in March, and the II International Seminar on Waterways, in partnership with the Mississippi Waterway Administration - USA in August. The Brazilians learned an important lesson from the seminar Brazil/Flandres-Belgium besides the experience exchange and the accomplishment of a round of businesses among entrepreneurs of both countries, regarding the environment. When the Belgian Government was questioned about what mitigations and compensations it makes when implanting a waterway, the answer was surprising: "to implant a waterway is to invest in environment".

The transport by rivers presents several economic and environmental advantages, regarding the other models. In average a barge carries 1,500 tons of cargo, equivalent to 15 "Jumbo Hopper" type wagons. Each one of those barges means that 60 trucks are withdrawn from the roads. Therewith, the emission of pollutant gases is quite lower. A barge pusher tug emits up to 20 times less gases than a truck.

When the waterway mode is used, the emission of carbon monoxide is smaller than when trucks and trains are used. 254g of carbon monoxide are emitted at every thousand tons of useful kilometers (TUKs) whereas in the railway and highway mode, that number reaches 831g and 4,617g, respectively. To carry one thousand TKUs in the highways, 96 liters of fuel oil are needed; in the railways, ten liters are enough, and in the waterways, only five liters suffice.

The seminar holding with the Belgians resulted in a partnership that made available, in October 2007 the visit of an ANTAQ committee to Northern Belgium to know Flandres waterway infrastructure. One of the important lessons learned and highlighted by the committee's members was the structural organization of that country's transports system. The non-conventional integration of the transport modes in Belgium is an important element for the sustainable development of all types of transport and in special, the use of waterways virtually crossing the whole Belgium territory.

The II International Seminar on Waterways in partnership with the Mississippi Waterway Administration - USA revealed that the United States has as its main characteristic the intensive use of the waterways, especially the Mississippi waterway for the flow of the grain crop through the Gulf of Mexico. Its importance goes beyond the economic aspects when it is known that 41 congressmen and 25 senators have their electoral bases existing in the large hydrographic basin of the Mississippi River. With its 3,225,000 km<sup>2</sup>, the basin formed by the Mississippi River and its tributaries is the world's third largest and is only smaller than the Amazon and Congo Rivers basins. 31 North-American states and two Canadian provinces are within that basin.

## TECHNICAL REPORTS

GDI has already published technical reports on the Parnaíba River Waterway, the Paraguai-Paraná Waterway, Tietê-Paraná Waterway and Southern Brazil Waterways with data on their characteristics, main deficiencies, potentialities and opportunities, and technical reports shall be published on the Tocantins e Araguaia, Parnaíba and Amazonas Solimões Waterways.

## BOTTLENECKS, INVESTMENT REQUIREMENT AND PROGRESSES

According to the representatives of the waterways administrations, and the public and private specialists who participated in the seminars held by ANTAQ, the main bottlenecks and the investment requirement of the large Brazilian waterways are as follows:

## Waterway Prospect

**Parnaíba River Waterway** – The waterway requires conclusion of the civil and electromechanic works of the sluice system for the transposition of Boa Esperança dam in Parnaíba River, and the conclusion of the fluvial-sea port civil works of Luís Correia, in Piauí state coast. The sluice works are interrupted since 1982.

However, specialists fear that the new hydroelectric projects foreseen for the region jeopardize the navigability of Parnaíba River, since they do not foresee the construction of sluices in the dams' works. Besides the new hydroelectric enterprises in the region, the improper operation of the reservoirs is an important factor of conflict in the Parnaíba river area, due to the river water level change, hampering and interrupting the navigation.

**São Francisco River Waterway** – The total investments in the Revitalization Program of São Francisco River Basin for the period 2007/2010 totalize R\$ 1.374 billion of which the waterway shall receive one hundred million Real; such funds shall come from the Development Acceleration Program (PAC).

The goal is to initially make the stretch currently in operation feasible, connecting Ibotirama to Petrolina/Juazeiro, 604km long. The unblocking of critical points in that stretch shall allow the carriage of five thousand tons per convoy, with a draft from 1.8m to 2m.

Being equivalent to the distance from Brasília to Salvador, the waterway is undoubtedly, the most economic form of connection between the Brazilian Mid-South and Northeast. With its extreme south located in the city of Pirapora (MG), São Francisco waterway is interconnected by railways and highways to the most important southeast economic centers, besides making part of the Mid-East Export Runner. To the north, in the neighboring cities of Juazeiro (BA) and Petrolina (PE), the waterway is connected to the main Brazilian Northeast capital cities, due to the geographic position of those two cities.

São Francisco River offers natural navigation conditions all year long, but its depth ranges according to the rainfall regime. Its most upstream port is in Pirapora (MG) and since there are sluices in Sobradinho Dam, it is interconnected to the fluvial ports of Petrolina (PE) and Juazeiro (BA) and to the sea ports of Vitória (ES), Rio de Janeiro (RJ), Santos (SP), Salvador (BA), Recife (PE) and Suape (PE), by means of railways and highways.

Largely in São Francisco River valley the most promising areas to the agricultural use are located by its banks. For that reason, the highest population number of the valley lives in the river surrounding areas.

**Paraguay-Paraná Rivers Waterway** – It is one of the longest and most important continental integration axles. It crosses half of South America and runs from Cáceres (MT) to Buenos Aires, in Argentina. It comprises 3,442km of free-running waters without dams or obstacles for navigation, connecting the continent's inland to the Atlantic Ocean.

Brazil, Bolivia, Paraguay and Argentina carry by the waterway more than 15 million tons of cargo a year. According to the statistics of 2006 made available by *Administração da Hidrovia do Paraguai* (AHIPAR), considering only the terminals under its administration, 3.4 million tons were moved. The main goods carried in that waterway are ore and grains.

Paraguai-Paraná Waterway is potentially noted as the main way for the carriage of the agricultural production of Mato Grosso state.

Paraguai River totalizes 2.621km having its spring in Chapada dos Parecis in the Brazilian Central Plateau, and its mouth in the meeting with Paraná River, close to the city of Corrientes, in Argentina.

The river runs in Brazilian territory for 1,270km, delimiting the border between Brazil and Bolivia for 58km, and the border between Brazil and Paraguay for 322km. After meeting river Apa, it enters Paraguay lands for 932km until it discharges into the Paraná River, in the border with Argentina.

In Argentina, after the confluence with the River Paraguay, River Paraná runs 1,103km more and meets River Uruguay in Nova Palmira, forming River de la Plata, by which one reaches directly the Atlantic Ocean.

**Tocantins and Araguaia Rivers Waterways** - Tocantins and Araguaia rivers cross the Brazilian Mid-West and Amazon regions running along lands provided with huge mineral wealth and with a natural talent for the agriculture. Once they are changed into large sized waterways, they may become determinant factors for the low-cost production carriage, due to the possibility of directing the Central Brazilian regional production from Barra do Garças (MT) to the fluvial-sea port of Vila do Conde, near Belém (PA), with its privileged location regarding the North-American, European and Middle-Eastern markets.

Those waterways rely on approximately 3,000km of potentially navigable ways. In the river Mortes, the stretch from Nova Xavantina (MT) to its mouth in Araguaia is 580km long. In the Araguaia

## Waterway Prospect

River, the stretch from Aruanã (GO) to Xambioá (TO) is 1,230km. In Tocantins, the stretch from Peixe (TO) to Estreito (MA) is 700km, from Estreito to Marabá (PA) is 321km and from Marabá to its mouth is 500km.

Waterways Tocantins and Araguaia alone with their navigable sections in deep waters, may have a major role in the Brazilian Mid-Northern Runner by allying to an intermodal transport system. That system shall integrate *Ferrovias Norte-Sul* [North-South Railway] in the stretch from Colinas do Tocantins - TO to Açailândia - MA, under conclusion, and *Estrada de Ferro Carajás* [Carajás Railroad] from Açailândia to the Port of Itaqui (MA). In its second stage, the waterway shall connect the municipality of Peixe (TO) to the Port of Vila do Conde (PA), with a full extension of approximately 1,521km.

Since February 2007, Companhia Siderúrgica do Pará - COSIPAR is carrying iron ore and pig iron in the stretch from Marabá to Belém. The carriage is made by fluvial way from Marabá (PA) to upstream Tucuruí Hydroelectric Power Station, where the transshipment of the ore is made to trucks which, after a course of approximately 4km, is shipped again downstream the dam to be carried to the port of Vila do Conde. In the year 2007 Cosipar moved approximately 350,000 tons of ore, a number that should have a significant increase when the sluices of Tucuruí are completed and the Tocantins river navigation canal is destroyed upstream the Hydroelectric Power Station.

The project of Tucuruí's Sluice had its construction started in 1981 and interrupted in 1989. Restarted in September 1998, it went through a new interruption of the works in December 2002. The last works recovery occurred in July 2004. Currently the works are at an accelerated pace and its conclusion is foreseen for two and a half years from now. The funds for those works are in the Development Acceleration Plan - PAC.

In the present stage of the enterprise more than 50% of the civil works have already been accomplished and 60% of the mechanic and electromechanic equipment are already manufactured and laid up in the work site.

The Government of the State of Tocantins is stimulating the carriage of grains. The operations in Tocantins shall start in March 2008 downstream Lajeado's dam, more precisely from Pedro Afonso (TO) to Arguanópolis (TO), in a stretch of 420km. Transshipment shall be made to North-South railway, following to the port of Itaqui (MA) by Carajás railway. That 420km navigation shall be even more advantageous since the highway course is 580km long.

There is a 950km straight stretch in the Araguaia River between Conceição do Araguaia and Aruanã, having typical characteristics of a plain river, having a longer channel where the floods pass through, and another smaller, winding its way within the first one, where the draught flows occur.

The Waterway Administration (AHITAR) has been working to provide River Araguaia with suitable conditions to perform the grain carriage in deep waters (a period in which no intervention is required in the river) in the stretch from Cocalinho (MT) and Couto Magalhães (TO).

River Araguaia is provided with signs, buoys all over its extension and ready for navigation. AHITAR is preparing the revision of the navigation canal project, with the adoption of a new water line having a permanence time of 75%, that is, nine months.

**Teles Pires-Tapajós Waterway** – The waterway is currently provided with only 343 navigable kilometers, and in order to make the navigation feasible along the 1,043km, which is the economically feasible extension, funds in the order of two hundred million Dollars would be required.

The alternative for the grain production carriage from the Brazilian Mid-Western/Northern regions is deemed the best in the country, and it should double in a short time with a significant increase of the depth per hectare. The waterway has the economic and environmental advantages required to move a large part of approximately 45 million tons of soy-bean leaving every year from Mato Grosso for export.

The waterway may be deemed an important option of the foreign trade implementation, with considerable impacts on the generation of jobs and on the outbreak of new enterprises. River Tapajós, which is a right bank tributary of the Amazon River, is 851km long up to the confluence of the rivers Teles Pires and Juruena. Its mouth, near the city of Santarém, is approximately 950km away from Belém and 750km from Manaus.

The influence area for grains is of the order of 800,000km<sup>2</sup>, covering in the state of Mato Grosso, the towns of Alta Floresta, Apiacás, Aripuanã, Cana Brava do Norte, Carlinda, Castanheira, Cláudia, Colíder, Cotiguaçu, Feliz Natal, Garantã do Norte, Itaúba, Juara, Juína, Lucas do Rio Verde, Marcelândia, Matupá, Nova Bandeirantes, Nova Canaã do Norte, Nova Guarita, Nova Monte Verde, Nova Mutum, Nova Ubiratan, Novo Horizonte do Norte, Novo Mundo, Paranaíta, Paranatinga, Peixoto de Azevedo, Porto dos Gaúchos, Santa Carmem, Sinop, Sorriso, Tabaporã, Terra Nova do Norte, Tapurá,

## Waterway transport

## Waterway Prospect

União do Sul and Vera. In Pará, the towns of Itaituba, Santarém, Juruti, Aveiro, Rurópolis, Uruará, Medicilândia and Altamira.

**Madeira River Waterway** - It is an essential outflow way of the Mid-West soy-bean production for the foreign consumer markets, as well as of the Amazon region itself.

The waterway, with its 1,056 navigable kilometers, is essentially important to the regional development due to its strategic position. It practically constitutes the only transport way for the population who lives in the towns by its banks, excluding only the town of Humaitá (AM).

Madeira River Waterway starts in Porto Velho (RO) and runs to its mouth in the confluence with the Amazon River, in the state of the same name. Several types of cargo are moved in that stretch and the main cargo are: soy-bean, fertilizers, oil byproducts, cement, fruits, electric-electronic appliances, vehicles, frozen goods, pebble, beverages and general cargo. The period of high waters is comprised between the months of March and May and the period of low waters in the months of August to October.

**Tietê-Paraná Waterway** - In the seminar on the Tietê-Paraná Waterway the formation of the group of the five states involved - São Paulo, Paraná, Minas Gerais, Mato Grosso do Sul e Goiás was suggested, supported by ANTAQ to set a common work agenda on the Tietê-Paraná Waterway. The proposal is to take the agenda for discussion in political and corporate forums, aiming the feasibility of expansion projects of the transport by the waterway.

The five states comprising a region concentrating more than 80% of the country's sugar and alcohol production is an economy twice as much as Chile's in size.

The agenda is intended to put an end to the isolated discussions and like in the experience of the Europeans and North-Americans, adopt a model contemplating several states and even several countries in the sector's projects.

Tietê-Paraná Waterway may also earn 250km more with the inclusion of stretches which are currently idle for the commercial navigation in the range of River Parnaíba, in the border of Minas Gerais and Goiás states. But for this to happen, three sluices must be built in the dams of São Simão, Cachoeira Dourada and Itumbiara.

**Brazilian South Waterways** - Differently from all the other Brazilian waterways, the South Waterways meeting the States of Santa Catarina and Rio Grande do Sul have as their main characteristics the movement of high value added cargo and the cheap carriage for small distances. However, like most of the fluvial ways in the country, the South Waterways also suffer with the decrease in movement due to the lack of investments.

But then how to recover the importance that the South Waterways had in the past for the Region's development? During the seminar on the waterway, held in October 2007, several proposals were presented, such as: putting into effect the waterway connection with the neighboring country Uruguay, through Patos Lagoon and Mirim Lagoon, following up the revisions of the hydroelectric exploitation proposals, aiming the construction of sluices to make the navigation feasible in new stretches, and identify and mobilize new possibilities of using the fluvial terminals existing today.

To *Superintendência de Portos e Hidrovias do Governo do Estado do Rio Grande do Sul*, the biggest challenge is to expand the share in the waterway modal in the State transports matrix, which is small, in spite of relying on a wide system of rivers and lagoons. While the share of the sector in the movement of cargo in Rio Grande do Sul is 3.7%, it reaches 13% in the country.

The Fluvial Terminal Santa Clara, operating in the waterway, for example, moved 21,440 TEUs in shoes, furniture, tobacco, frozen chicken, petrochemical resins, frozen meat and leather, but it has potential for much more. However, the movement growth relies, according to its administrators, in a bigger assurance of the exporters' volumes and in a more effective partnership with the long cruise shipbuilders, a crucial factor to make the transfer of containers to the Port of Rio Grande feasible.

The South Waterways are 1,300km long in the stretch formed by rivers Jacuí, Taquarí, Patos Lagoon, and Mirim Lagoon and by the São Gonçalo canal, interconnecting the two lagoons. The rivers Uruguai and Ibicuí have a potential of 1,200km of navigable ways. Currently, 2,4 million tons of cargo a year are moved through the region's waterways, especially agricultural bulk materials, soy-bean byproducts, fertilizers, coal and sand.

## STANDARDS ISSUING

The standard Authorization for Rendering the Service of Passenger Transportation and the Service of Mixed Transportation in the interstate and International Longitudinal Route Inland Navigation, and the standards on the Permit Granting for Transport Exploitation of Crossings in the Inland Navigation, Foreign Vessel Charter to Operate in the Inland Navigation, Construction and Exploitation of the Cargo Transshipment Station - ETC and Construction and Exploitation of the Small Sized Public Port Facility - IP4 are under study.

## INSPECTION ACTION IN THE INLAND NAVIGATION

Based on the Annual Inspection Plan - PAF the actions undertaken under the supervision of the Inland Navigation Inspection Management - GFI from January to November 2007 totalized 824 inspections, detailed in the table below.

The inspection actions reached 370 operators of the waterway transport in the inland navigation, and they resulted in checking the granting conditions, obtaining technical, operating and economic information, inspecting the operation, aiming to restrain irregular practices in the rendering of services and also to obtain the information for updating the registry of ANTAQ's operators.

## ADMINISTRATIVE PROCEEDINGS

Three litigious administrative proceedings were initiated in the year 2007, in the inland navigation, with the following directions:

- verification of the improper commercial practice and monopoly in the cargo carriage in the Amazon fluvial navigation is completed, with the application of an admonishment penalty to the company;
- verification of an irregular service rendering practice by Bolivian businessmen in Guajará-Mirim, Rondônia. ANTAQ applied a penalty of suspending the waterway cargo carriage service in Brazilian jurisdiction waters, for the term of 60 days;
- checking of the interruption of the passengers transport service rendering in Belém (PA) - Macapá (AP) line by an authorized company, without previous notification to ANTAQ, is under way.

### INSPECTION MADE PER TRANSPORT TYPE

CARRIAGE TYPE	TOTAL	UNIT						
		GFI	UARBL	UARMN	UARPV	UARRE	UARFL	UARSP
LONGITUDINAL CARGO	58	23	5	15	4	2	0	9
LONGITUDINAL PASSENGERS AND MIXED	421	0	167	163	91	0	0	0
CROSSINGS	345	88	29	8	23	126	47	24
TOTAL	824	111	201	186	118	128	47	33

Source: SNI/ANTAQ