INTERNATIONAL WORKSHOP ON GREEN CORRIDORS
European Experience and Brazilian Perspectives

Waterway Transportation in Brazil

ANTAQ
Agência Nacional de Transportes Aquaviários

Superintendent of Performance, Development and Sustainability – SDS

Rogério de Abreu Menescal

Topics:

- Overview
- Inland Navigation and Cabotage (SSS)
- Port facilities
- International Maritime Shipping (DSS)

Overview

Constitution of Brazil (1988) establishes:

- The environment as a common good and right for all
- The special responsibility of the Government on the protection of the environment and society
- The licensing process of potentially polluting activities and the requirement of the Environmental Impact Assessment - EIA
- Penal and administrative sanctions for conduct and activities harmful to the environment

Law 10.233 / 2001
Deals with the reorganization of the waterway and land transportation.

CHAPTER IV - Principles and Guidelines for Waterway and Land Transportation

Art. 11. The management of the infrastructure and operation of the waterway and land transportation shall be governed by the following general principles:

V - adjust the transport to preserve the environment by reducing the levels of noise pollution and contamination of air, soil and water resources;

VI - to promote energy conservation by reducing consumption of automotive fuels;

Law 10.233/01

Art. 12. The general guidelines of infrastructure management and operation of the waterway and land transportation:

II - leverage the comparative advantages of different modes of transport, promoting physical integration and the combination of their operations, for the most economical and secure intermodal movement of people and goods;

V - promote the adoption of good practices of conservation and rational use of fuel and environmental conservation;

Advantages of Navigation

MORE

+ Fuel efficiency
+ High capacity transport
+ Lifetime of infrastructure
+ Useful life of equipment and vehicles
+ Load security and tax control

LESS

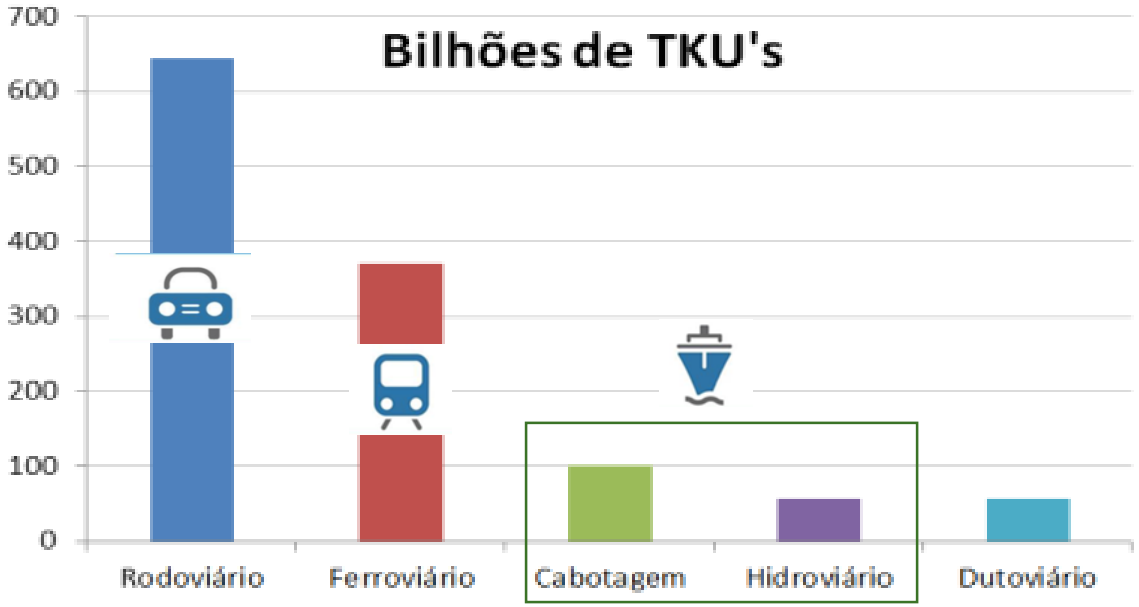
- Fuel consumption
- Pollutant emissions (climate change and greenhouse gases)
- Traffic
- Infrastructure Cost
- Number of accidents
- Operational cost
- Environmental impact
- Noise emission

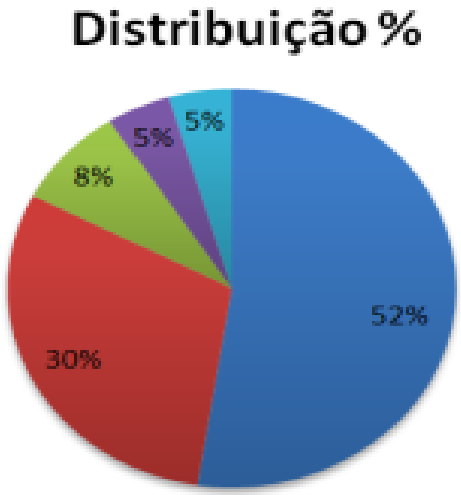
Plans related to waterway transportation

- National Plan for Transport Logistics – PNLT
- National Plan for Integrated Logistics - PNLI
- National Plan for Port Logistics – PNLP
- General concessions plan for waterway transportation– PGO
- Development Plan and Port Zoning - PDZ
- Inland Waterways National Integration Plan - PNIH
- Inland Waterways Strategic Plan - PHE
- Technical, economic and environmental Inland Waterway feasibility study - EVTEA

Multimodal Transport Distribution in Brazil in 2011

Source: Brazilian Ministry of Transportation (PNLT 2012)





± 170 Billion TKU (13%)

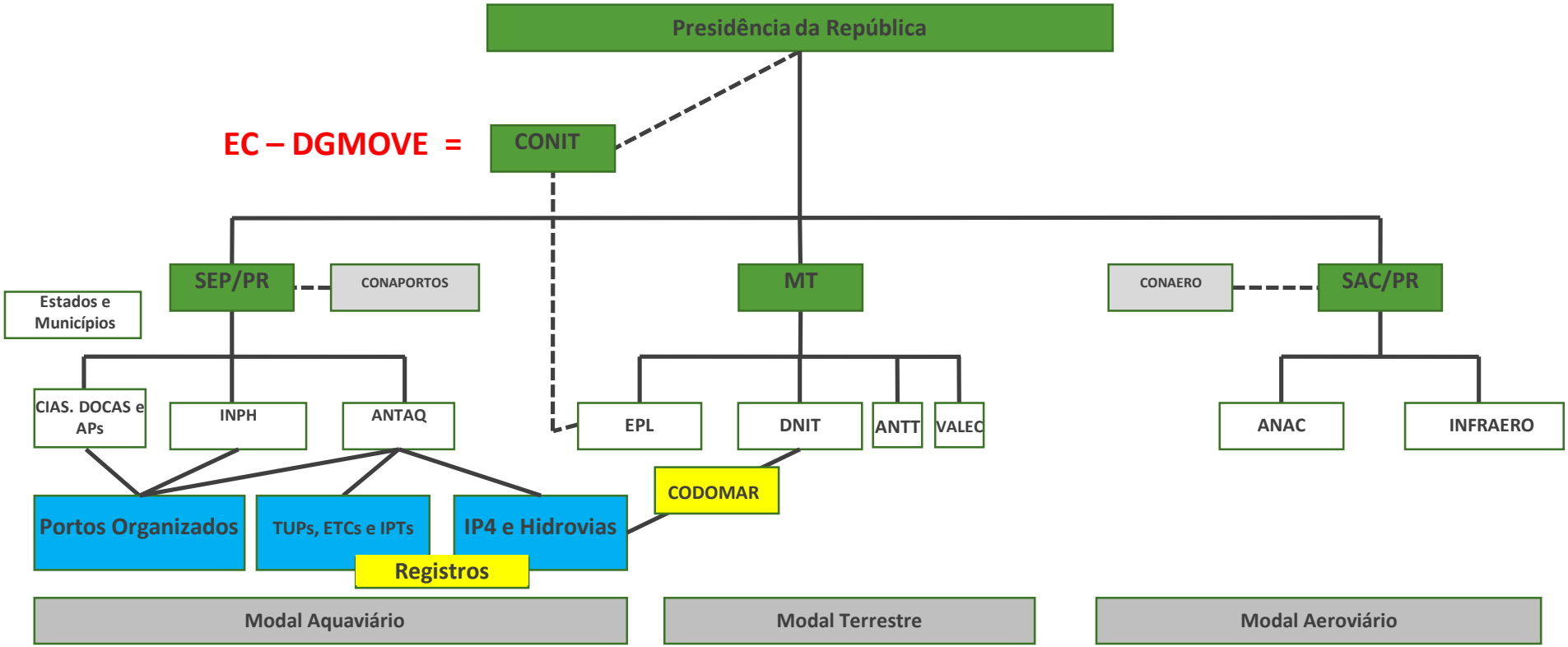
(43% of Railways)

Multimodal Transport Distribution in Brazil (2015 - 2031)
TKU (%)

Type of Transport	2015	2019	2023	2027	2031
Roads	44	40	39	38	38
Railways	36	36	42	43	43
Inland Waterways	6	6	6	6	6
Cabotage	7	7	9	9	9
Pipes	7	7	4	4	4

Source: Ministry of Transportation (PNLT, 2012)

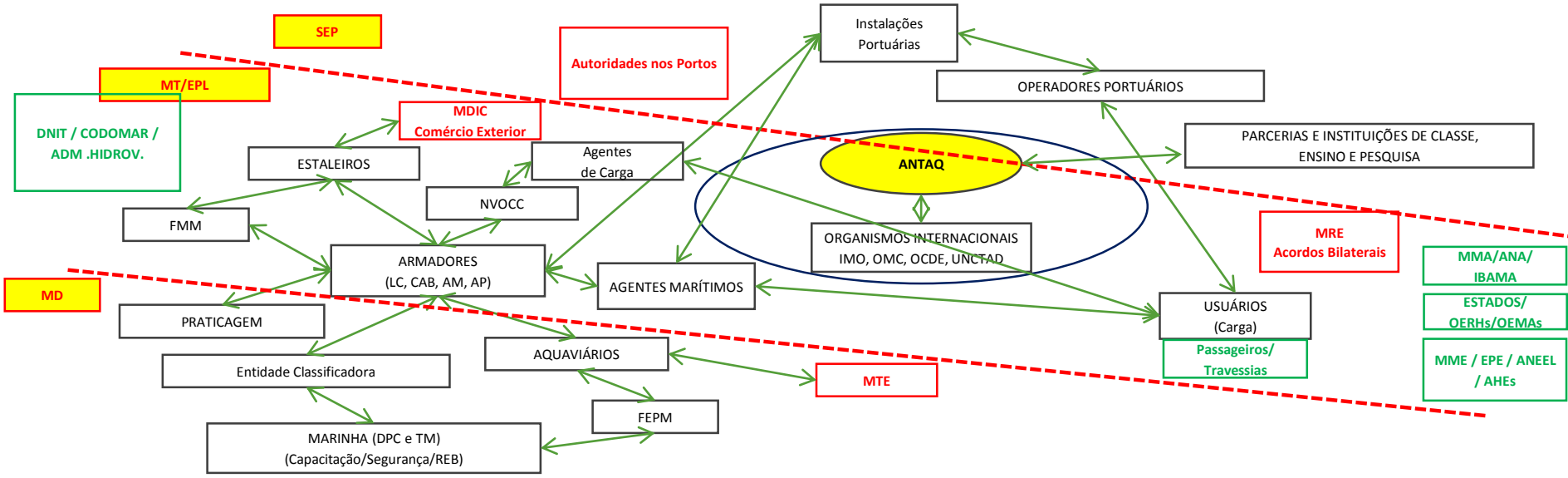
BRAZILIAN TRANSPORT SECTOR INSTITUTIONAL FRAMEWORK (Simplified)



MARITIME AND INLAND NAVIGATION

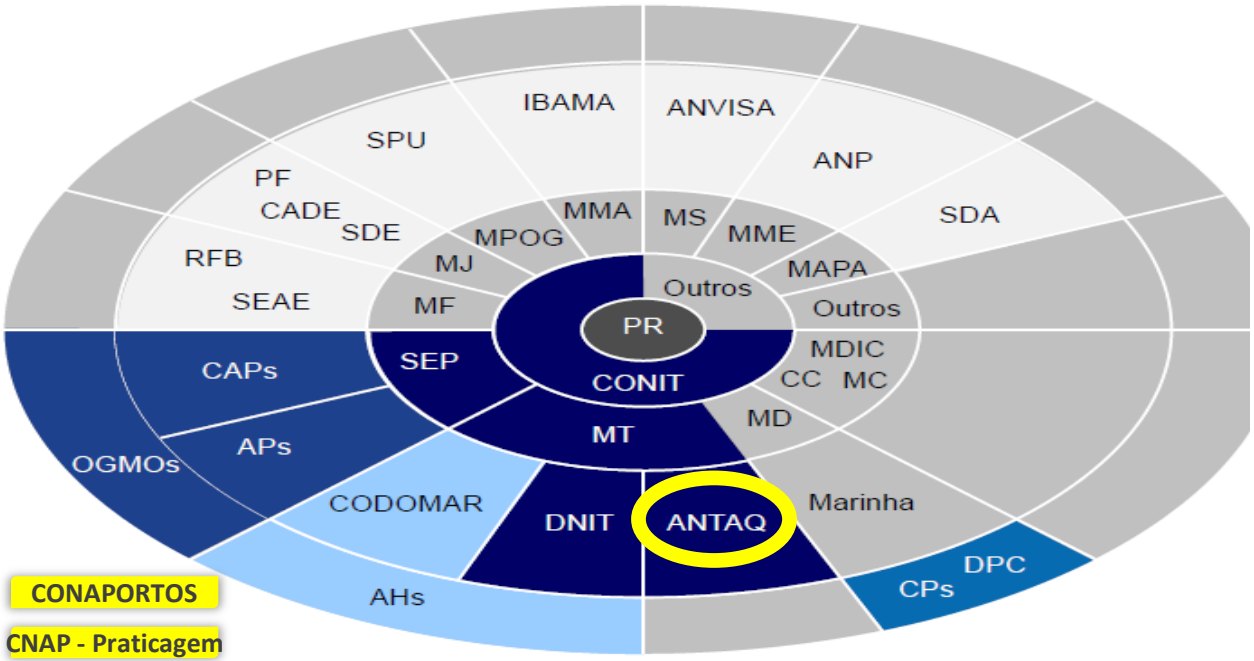
INSTITUTIONAL FRAMEWORK

(Simplified)



PORT SECTOR - INSTITUTIONAL FRAMEWORK

(Simplified)

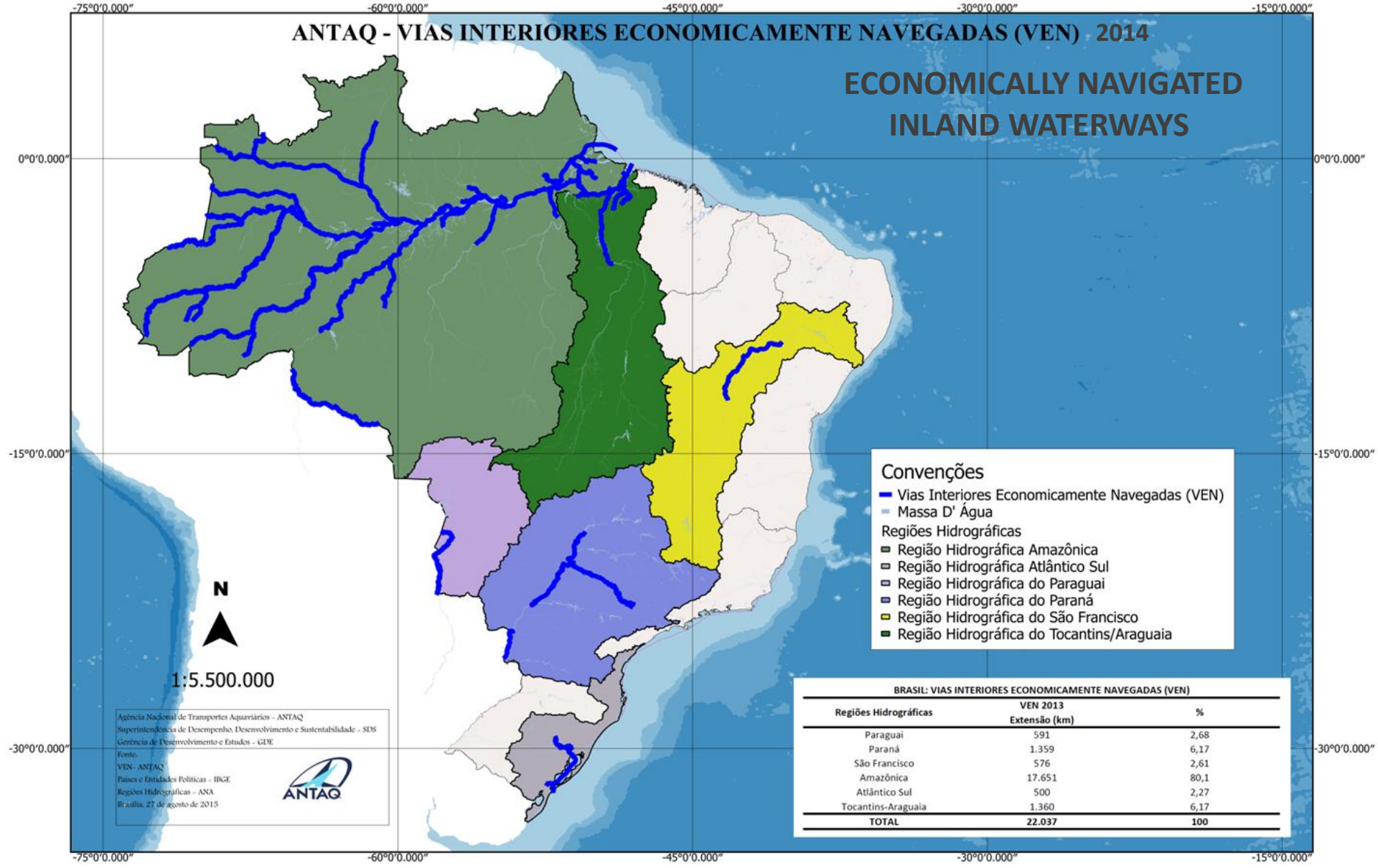


SIGLA	Órgão/Instituição
AHs	Administrações Hidroviárias
ANP	Agência Nacional do Petróleo, Gás Natural e Biocombustíveis
ANTAQ	Agência Nacional de Transportes Aquaviários
ANVISA	Agência Nacional de Vigilância Sanitária
APs	Autoridades Portuárias
CADE	Conselho Administrativo da Defesa Econômica
CAPs	Conselhos de Autoridades Portuárias
CC	Casa Civil
CGU	Controladoria Geral da União
CODOMAR	Companhia Docas do Maranhão
CONIT	Conselho Nacional de Integração de Políticas de Transporte
CPs	Capitanias dos Portos
DNIT	Departamento Nacional de Infraestrutura de Transportes
DPC	Diretoria de Portos e Costas
IBAMA	Instituto Brasileiro do Meio Ambiente e dos Recursos Naturais
MAPA	Ministério da Agricultura Pecuária e Abastecimento
Marinha	Marinha do Brasil
MC	Ministério das Cidades
MD	Ministério da Defesa
MDIC	Ministério do Desenvolvimento, Indústria e Comércio Exterior
MF	Ministério da Fazenda
MJ	Ministério da Justiça
MMA	Ministério do Meio Ambiente
MME	Ministério de Minas e Energia
MPF	Ministério Público Federal
MPOG	Ministério do Planejamento, Orçamento e Gestão
MPT	Ministério Público do Trabalho
MS	Ministério da Saúde
MT	Ministério dos Transportes
OGMOs	Órgãos Gestores de Mão de Obra
PF	Polícia Federal
PR	Presidência da República
RFB	Receita Federal do Brasil
DAS	Secretaria da Defesa Agropecuária
SDE	Secretaria de Direito Econômico
SEAE	Secretaria de Acompanhamento Econômico
SEP	Secretaria dos Portos
SPU	Secretaria do Patrimônio da União
TCU	Tribunal de Contas da União

“The devil is in the implementation”

Jerker Sjögren

Inland Navigation and Cabotage



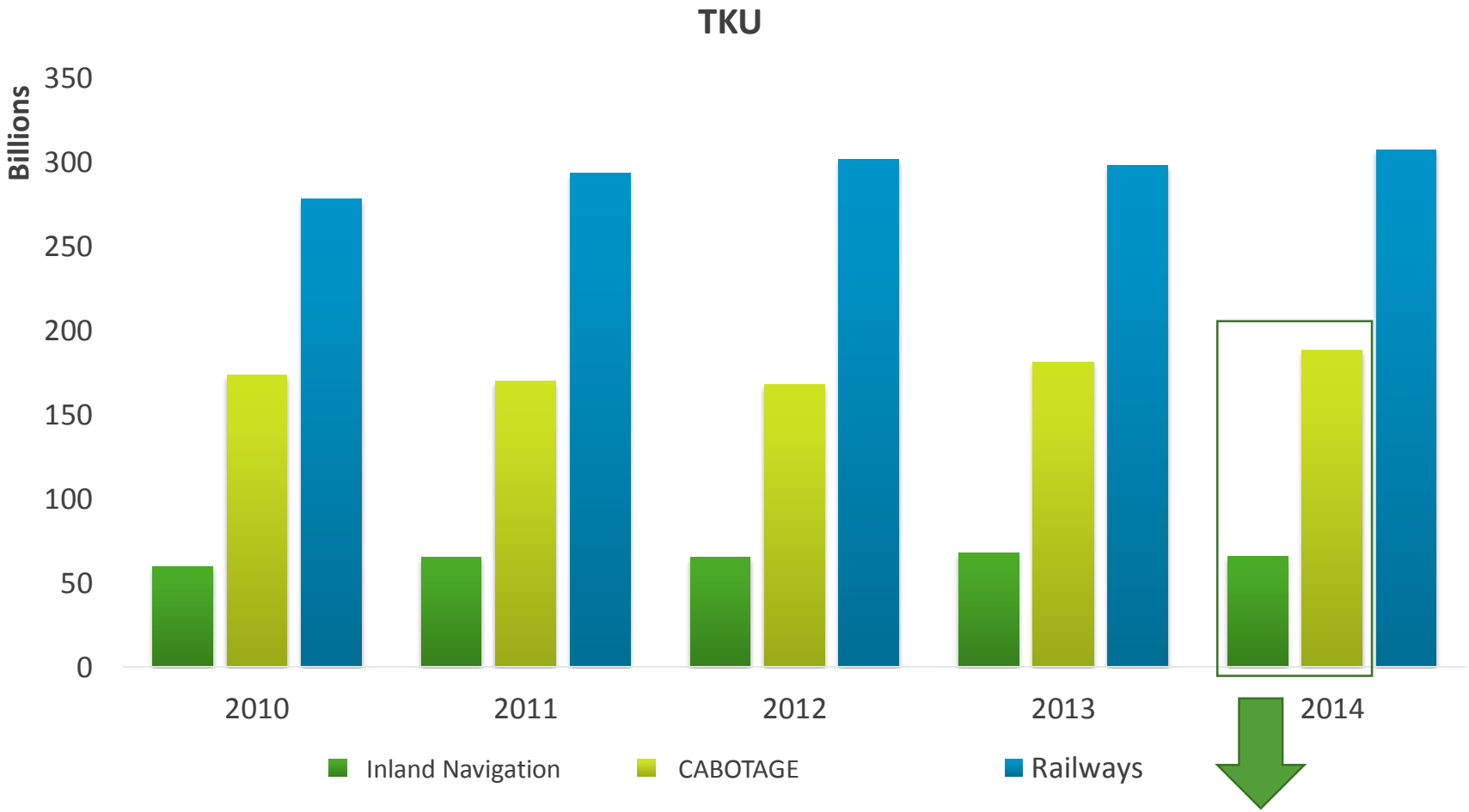
BRASIL: VIAS INTERIORES ECONOMICAMENTE NAVEGADAS (VEN)

Regiões Hidrográficas	VEN 2013 Extensão (km)	%
Paraguai	591	2,68
Paraná	1.359	6,17
São Francisco	576	2,61
Amazônica	17.651	80,1
Atlântico Sul	500	2,27
Tocantins-Araguaia	1.360	6,17
TOTAL	**22.037**	**100**


Fluxo no Transporte Aquaviário de Cabotagem em 2014
CABOTAGE
ANTAQ
75°0'0.000"W
65°0'0.000"W
55°0'0.000"W
45°0'0.000"W
35°0'0.000"W
25°0'0.000"W
0°0'0.000"N
15°0'0.000"S
30°0'0.000"S
N
1:5.242.711
Fluxo de Cabotagem em 2014
Instalações Portuárias
Plataformas de Petróleo
Centroide da Bacia Sedimentar
Fluxo Cabotagem 2014
230 - 2.500.000
2.500.001 - 5.000.000
5.000.001 - 7.500.000
7.500.001 - 10.000.000
10.000.001 - 15.000.000
15.000.001 - 25.000.000
25.000.001 - 50.000.000
50.000.001 - 94.062.539
Delimitação Marítima
Linha de Base Reta
Agência Nacional de Transportes Aquaviários - ANTAQ
Superintendência de Desempenho, Desenvolvimento e Sustentabilidade - SDS
Gerência de Desenvolvimento e Estudos - GDE
Fonte:
SDP/ANTAQ
Anuário Estatístico 2014/ANTAQ
Base de Dados Georreferenciada:
Transportes Aquaviários/ANTAQ
Instalações Portuárias/ANTAQ
Bacias Sedimentares/ANP
Divisão Política/IBGE
Observação: A referência geográfica para as Plataformas de Petróleo são centroides das Bacias Sedimentares Marítimas.
Brasília, 7 de abril de 2015


Fluxo no Transporte Aquaviário em Trechos Hidroviários em 2014
INLAND NAVIGATION
75°0'0.000"W
60°0'0.000"W
45°0'0.000"W
30°0'0.000"W
0°0'0.000"N
15°0'0.000"S
30°0'0.000"S
Fluxo de Transporte em Trechos de Hidrovias - 2014
Instalações Portuárias
Fluxo
781 - 250.000
250.001 - 500.000
500.001 - 1.000.000
1.000.001 - 2.500.000
2.500.001 - 5.000.000
5.000.001 - 10.000.000
10.000.001 - 20.000.000
20.000.001 - 38.652.324.0000
N
1:5.250.000
Agência Nacional de Transportes Aquaviários - ANTAQ
Superintendência de Desempenho, Desenvolvimento e Sustentabilidade - SDS
Gerência de Desenvolvimento e Estudos - GDE
Fonte:
SDP/ANTAQ
Anuário Estatístico 2014/ANTAQ
Base de Dados Georreferenciada:
Transportes Aquaviários/ANTAQ
Instalações Portuárias/ANTAQ
Bacias Sedimentares/ANP
Divisão Política/IBGE
Observações:
1. A referência geográfica para as Plataformas de Petróleo são centroides das Bacias Sedimentares Marítimas.
2. Os limites utilizados para delimitação de trechos hidroviários são determinados pela Linha de Base Reta, segundo a Lei nº 8.617, de 4 de janeiro de 1993.
Brasília, 6 de maio de 2015

Waterway vs Railway Transportation



188 Billions TKU or 67% Railways

Waterway Transportation Information: ANTAQ
Railways information: ANTT

Port facilities

Port facilities

More than 200 Ports in Brazil

- Changes in qualification (licensing) and environmental management in order to obtain environmental sustainability in the activity of these facilities
- New grants with environmental sustainability standards.

Environmental Performance Index - IDA

Is the evaluation of legal compliance and good practices in environmental management of port facilities:

- Public ports;
- Private port facilities;
- Navigation

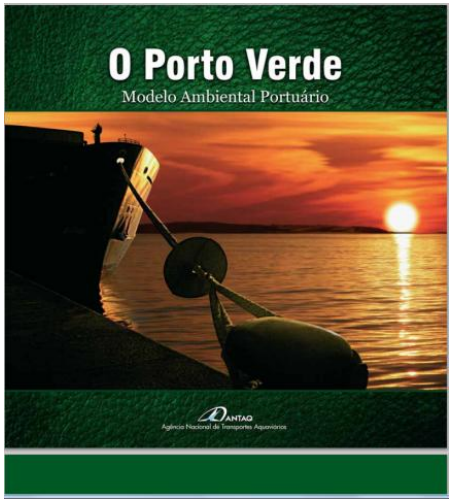
International Maritime Navigation

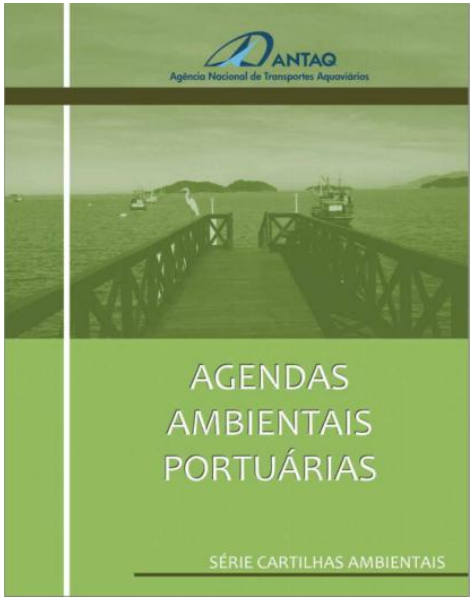
International Maritime Navigation

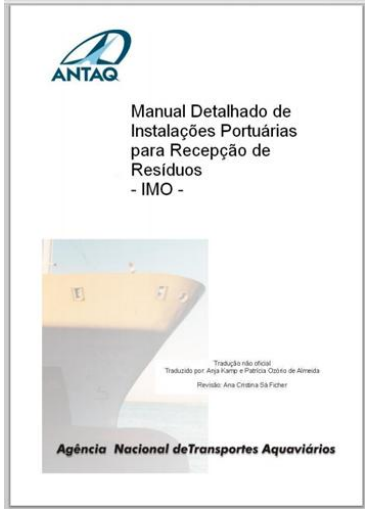
- Conventions of International Maritime Organization - IMO
- Changes in the profile of shipping to combat pollution caused by it, especially the emission of greenhouse gases

CABOTAGE

Publications (examples)







Some Key Challenges in waterway transportation development

- Infrastructure needed to promote inland navigation and cabotage
- Multiple water use conflicts
  - Ex.: Tietê-Paraná and São Francisco waterway
- Bureaucracy and disarticulation in ports and terminals
- Complex Institutional Framework
- Lack of an effective and sustained integrated planning across sectors and institutions

MANAGEMENT **CONECTIVITY**

CONTINUITY

We would like to invite you to submit your abstract for participating in **Ninth International Conference on Coastal and Port Engineering in Developing Countries (PIANC- COPEDEC IX)**.
The PIANC-COPEDEC IX will be held from October 16th to 21st, 2016 in Rio de Janeiro, Brazil, and will cover the following topics:

1. **Port Engineering**
2. **Port Planning and Management**
3. **Inland Navigation**
4. **Short Sea Shipping and Coastal Navigation**
5. **Coastal Engineering**
6. **Coastal Zone and Coastal Risk Management**
7. **Port and Coastal Environmental Issues and Climate Change**
8. **Port and Waterborne Transport Logistics and Multi Modal Transport**

Submission - 31/out/2015

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THANK YOU !

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