



FÓRUM BRASILEIRO DE  
MUDANÇAS CLIMÁTICAS



UNIVERSITY OF  
CAMBRIDGE | Electricity Policy  
Research Group



## *International Support for Domestic Action*



Brazil case study:

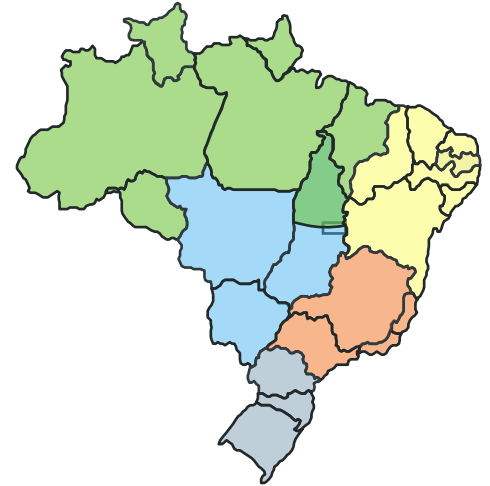
*Transportation System*

**Márcia Valle Real**

*Policies implementation for low carbon freight and  
international support options*

**Bonn, 5th June 2009**

# Transport Brazilian Context



-Total energy consumption (2007) 57.6 Mtoe;

❖ **52.8 Mtoe Road Transportation (91.8%);**



▪ **25.1 Mtoe (47.6%) passenger cars;**



▪ **10.8 Mtoe (43.2% ) Alternative fuels => NGV and Ethanol**

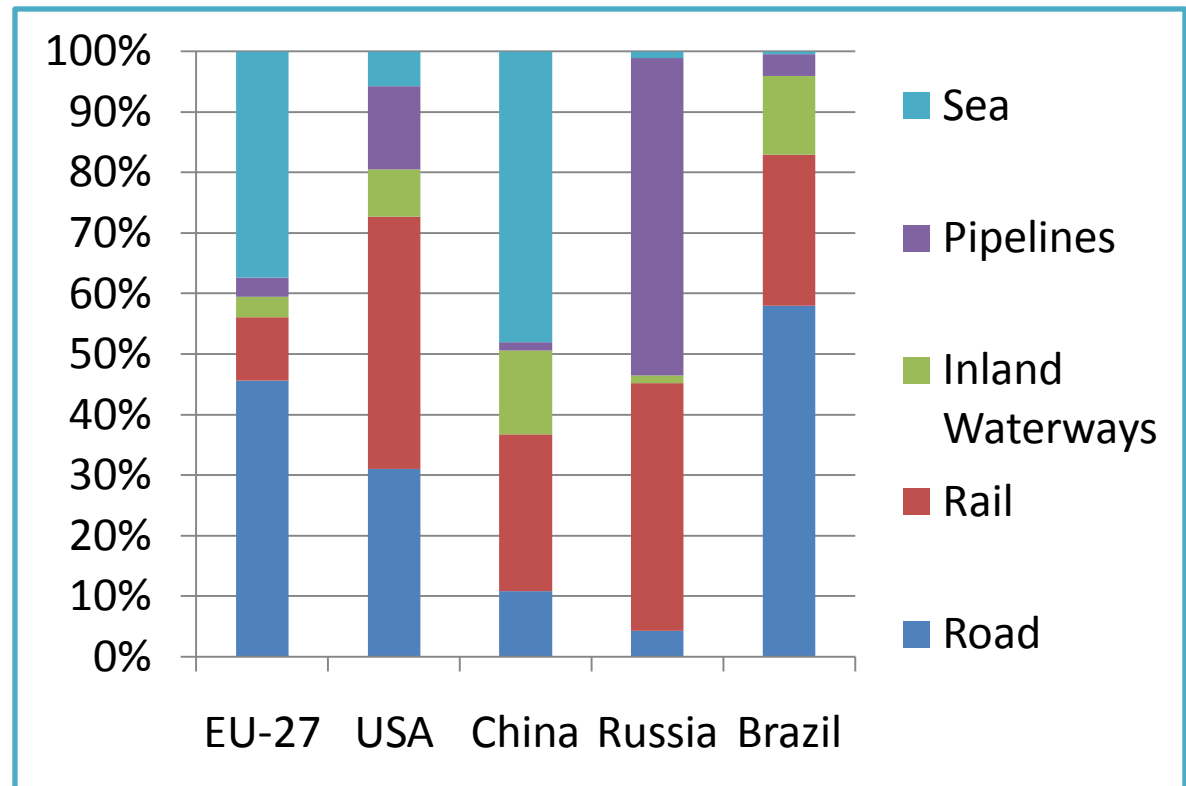
✓ **8.6 Mtoe (34.2%) Renewable fuels => Ethanol**

Alternative Fuels	10.8 Mtoe	Renewable Fuels	8.6 Mtoe
Total	19.1%	Total	14.9%
Road	20.5%	Road	16.3%
Cars	43.2%	Cars	34.2%

# Brazilian biggest problem: Intensive use of Road Transport

- Energo-intensive mode;
- High costs for commodities transport;
- Infrastructure in bad conditions;
- Low safety traffic;

## Freight Transport (tkm)

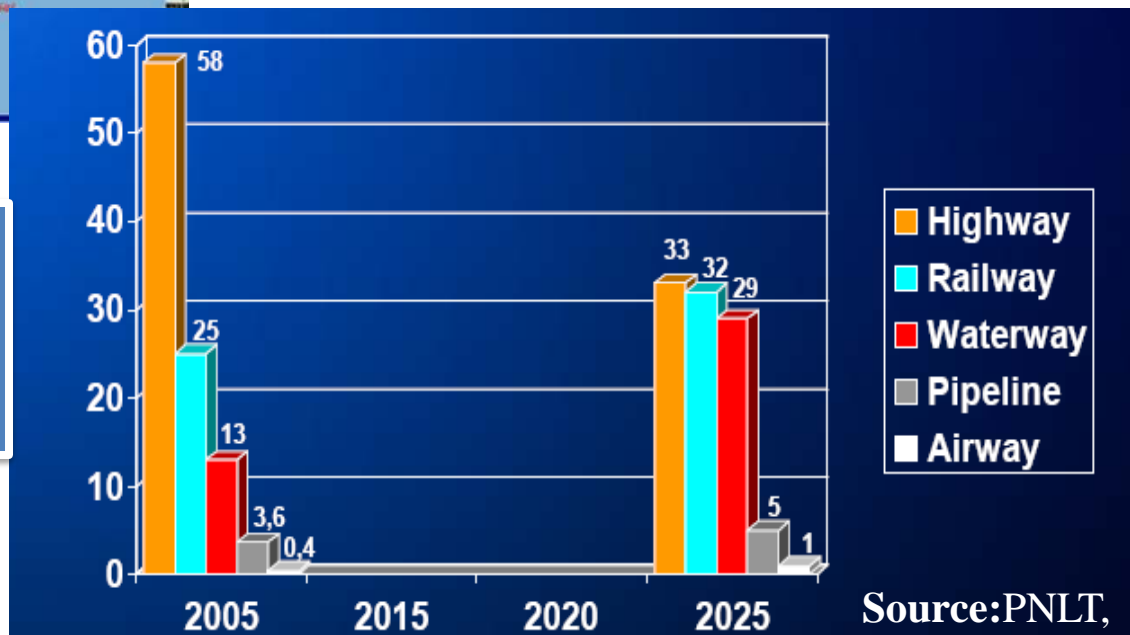


# Federal Government Solution



“The National Plan on Logistics and Transport: a policy that can promote a significant change in the modal split in the country”

The reduction of freight by road has potential to mitigate GHG emissions!



Source:PNLT,

# The Transport Emissions

	CO2 Emissions (Gt)	%CO2 (energy related)	Source
World	6.3	23%	IPCC, 2007
Brazil	0.137 (2.2% WE)	13.5%	WRI, 2009

## Mitigation potential due to changes in the modal split on freight

(variations due to efficiency vehicles & systems)

**11% a 24%**

**15 a 30 Mt CO2/year**

**How to achieve that?**

**That was our question!**

## Workshop Objective

### **Identify what is necessary for change modal split in brazilian freight**

- How can we implement this transfer?
- What are the push factors and barriers?
- What measures and solutions are required for its viability?
- How to measure the carbon emissions reduced resulting from this transfer?
- What kind of international support can encourage / help that actually occurs?

# Methodology applied during the workshop

- **Discussion between 2 heterogeneous groups** (6 persons/ group);

## 1 – **“Organized” brainstorm:**

**SWOT analysis** (*Strength, Weakness, Opportunities, Threats*)

- *Identifying strengths and weakness;*
- *Identifying strategies for viability*

## 2 – **Identification and ranking process:**

Looking for the best kind or categories of measures or actions that should be used

**AHP methodology** (*Analytic Hierarchy Process*)

- *Ranking categories of actions;*
- *Ranking measures by categories;*
- *Identify and ranking international support options;*

## 3 - **Indicators research**

- *Questionnaire*

## Ranking of categories of domestic measures

	<b>Group 1</b>	<b>Group 2</b>	<b>Total</b>
<b>1- Political</b>	50.4%	38.9%	45.1%
<b>2 -Legal/ Regulation</b>	21.1%	25.0%	22.9%
<b>3 - Investment</b>	23.7%	11.1%	17.9%
<b>4 - Technological</b>	4.7%	25.0%	14.1%

## **Ranking of domestic measures**

<b>Category</b>	<b>Measures</b>
<b>Political</b>	Creation of group for integrate ministerial actions related to climate change and transport
<b>Legal/ Regulation</b>	Tax incentives for use of more efficient transport modes Tax incentive for the intermodal operation
<b>Investment</b>	Intensification of the public-private partnership
<b>Technological</b>	Investment in RDI Improve the systems of information management (ITS) Technological transfer



## Ranking of categories of international support

	Group 1	Group 2	Total
<b>Economic / Financing</b>	73.9%	47.6%	61.6%
<b>Technological</b>	21.5%	47.6%	33.8%
<b>Political</b>	4.6%	4.8%	4.7%

## Ranking of measures of international support

Category	Measures
<b>Economic / Financing</b>	<ul style="list-style-type: none"> <li>•Partnership for exploration and operation of infrastructure;</li> </ul>
<b>Technological</b>	<ul style="list-style-type: none"> <li>•Technological transfer for rail and waterways infrastructure;</li> <li>•T&amp;I systems for improve intermodal operation and for permit MRV (measuring, register and verifying)</li> </ul>
<b>Political</b>	<ul style="list-style-type: none"> <li>•There was no consensus among the groups.</li> </ul>

## Research related to Indicators

1. In Brazil it is not easy to obtain reliable data and information for designing indicators in transport;
2. Input indicators:  $\Rightarrow$  the most readily available in Brazil;
3. Project / Policy management indicators:
  - provide an early warning of problems or issues;
  - can significantly promote project / policy implementation;
  - and contribute to identifying the issues faced, but not by a specific form;
4. Success / Failure of the project / policy :
  - disagree that indicators offer a fair measure for success and that the focus on indicators distract them from long-term goals;
  - agree that indicators can inform decisions on continuation/expansion of a project or policy.
5. Learning for other projects / policies:
  - agree that indicators are important to translate experience to other contexts / countries, but not to identify the “best practices” for future projects.

## Final Questions

1 - Who are domestic supporters?

2 - What are domestic barriers?

3- What type of international support mechanisms can enhance scale, scope and speed of implementation?

4 - How can success be managed and measured?

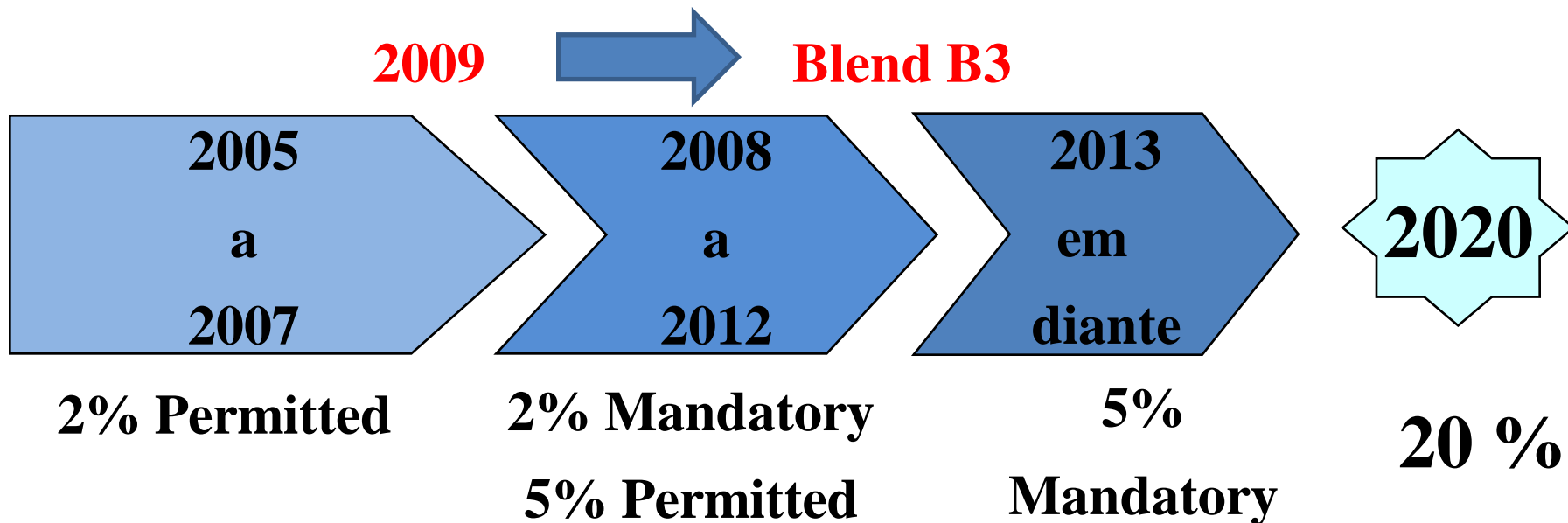
**Thank you for your attention!**

marcia.real@terra.com.br

# Brazilian Road Transport : Passenger and Freight

- 27.7 Mtoe (52.4%) => Public Transport & Freight
- ❖ Alternative fuels: Blends of Biodiesel

## Federal Government: The Biodiesel National Program



# Brazil - Indicators

**Proposal of best indicator for evaluates the policy sucess of  
changing modal split in Brazilian freight:**

**Financial resources government applied/ intermodal station**

**Number of intermodal stations installed**

**Cargo handled / intermodal station**

**Quantity of fuel sold in areas of intemodal stations**