

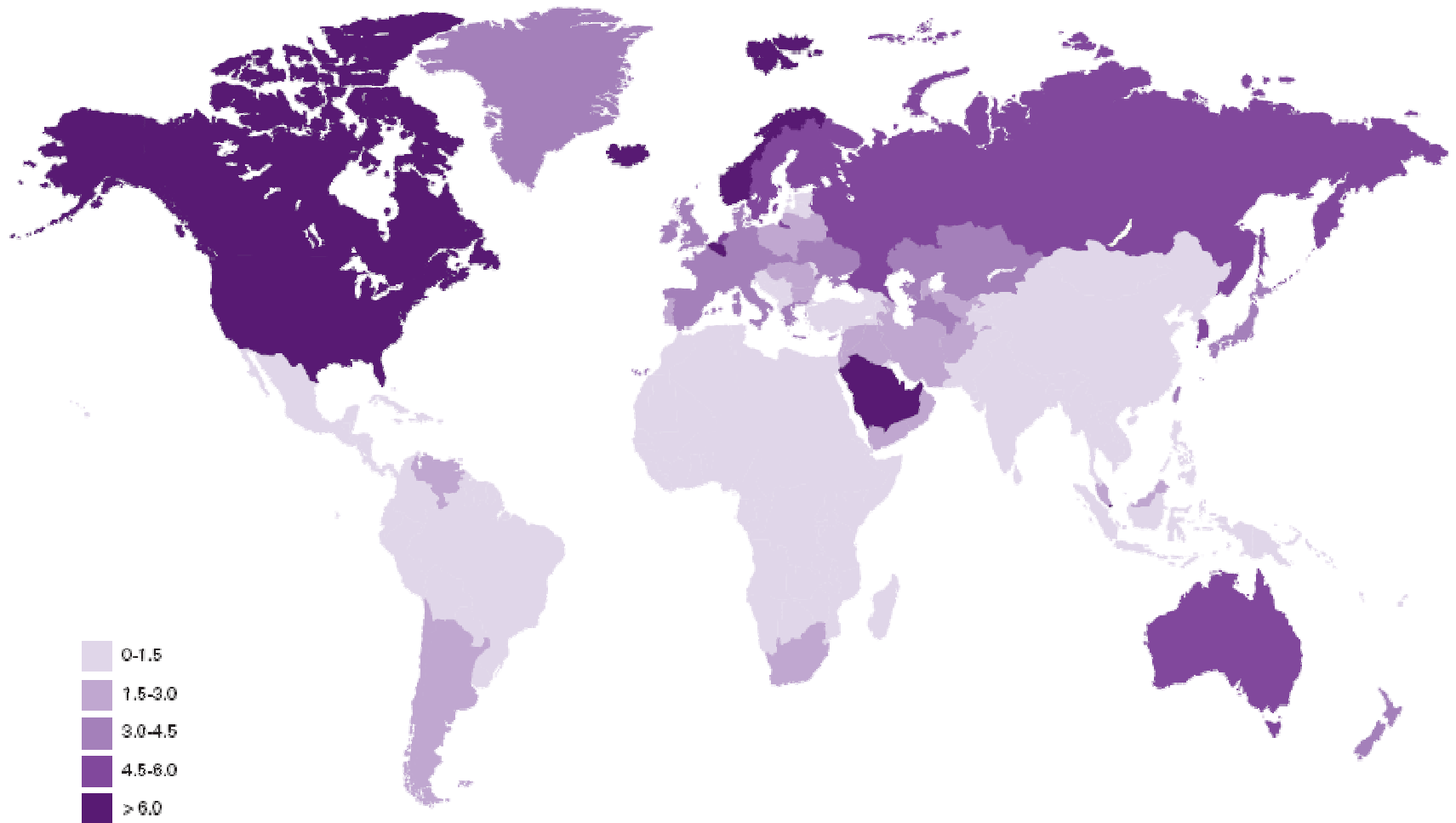
# **BRAZIL BIOFUELS EXPERIENCE**

**Luiz Alberto Figueiredo Machado**

**Beijing, 8<sup>th</sup> November 2008**

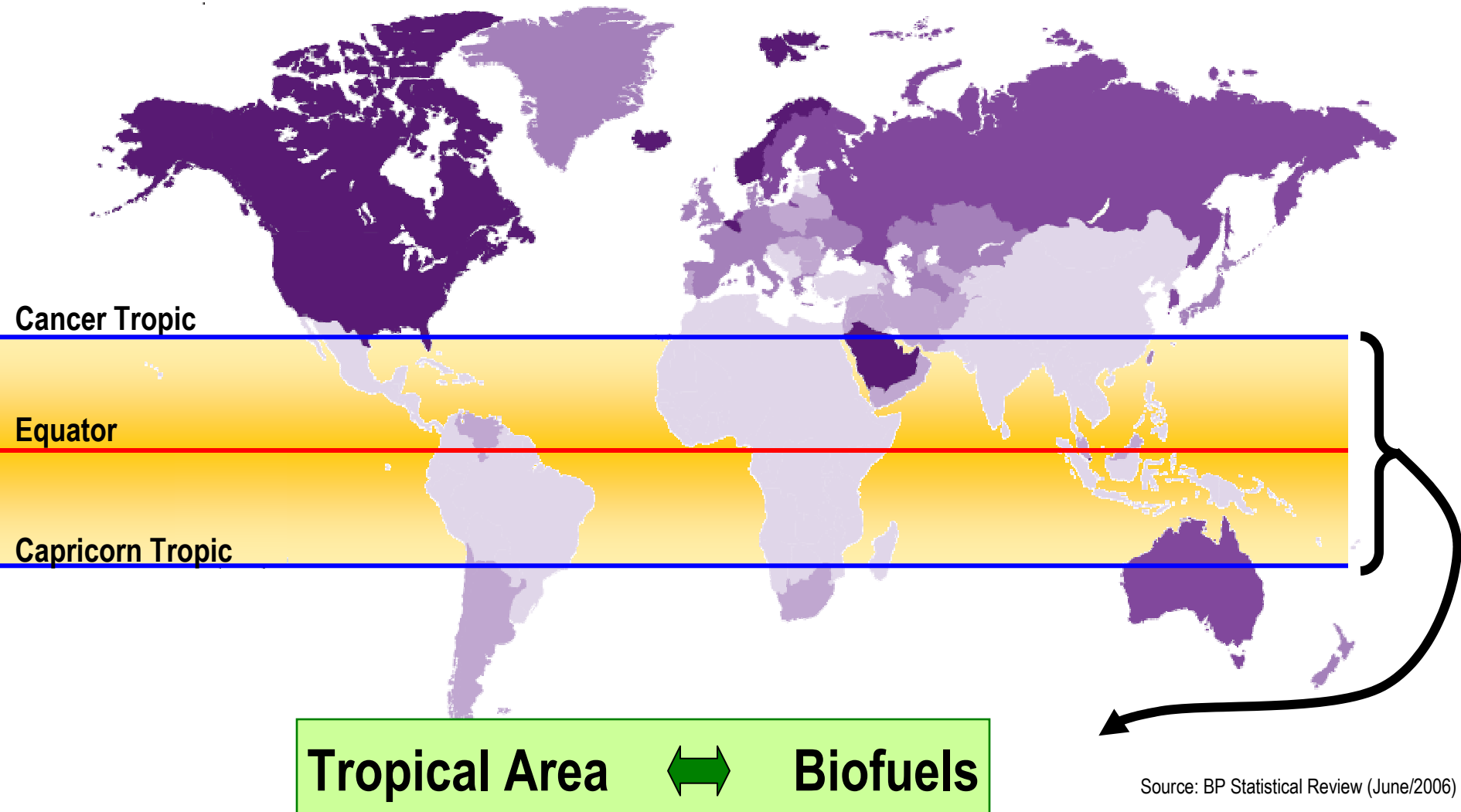
# WORLD ENERGY CONSUMPTION

Energy consumption - Per capita  
Tones oil equivalent (toe)

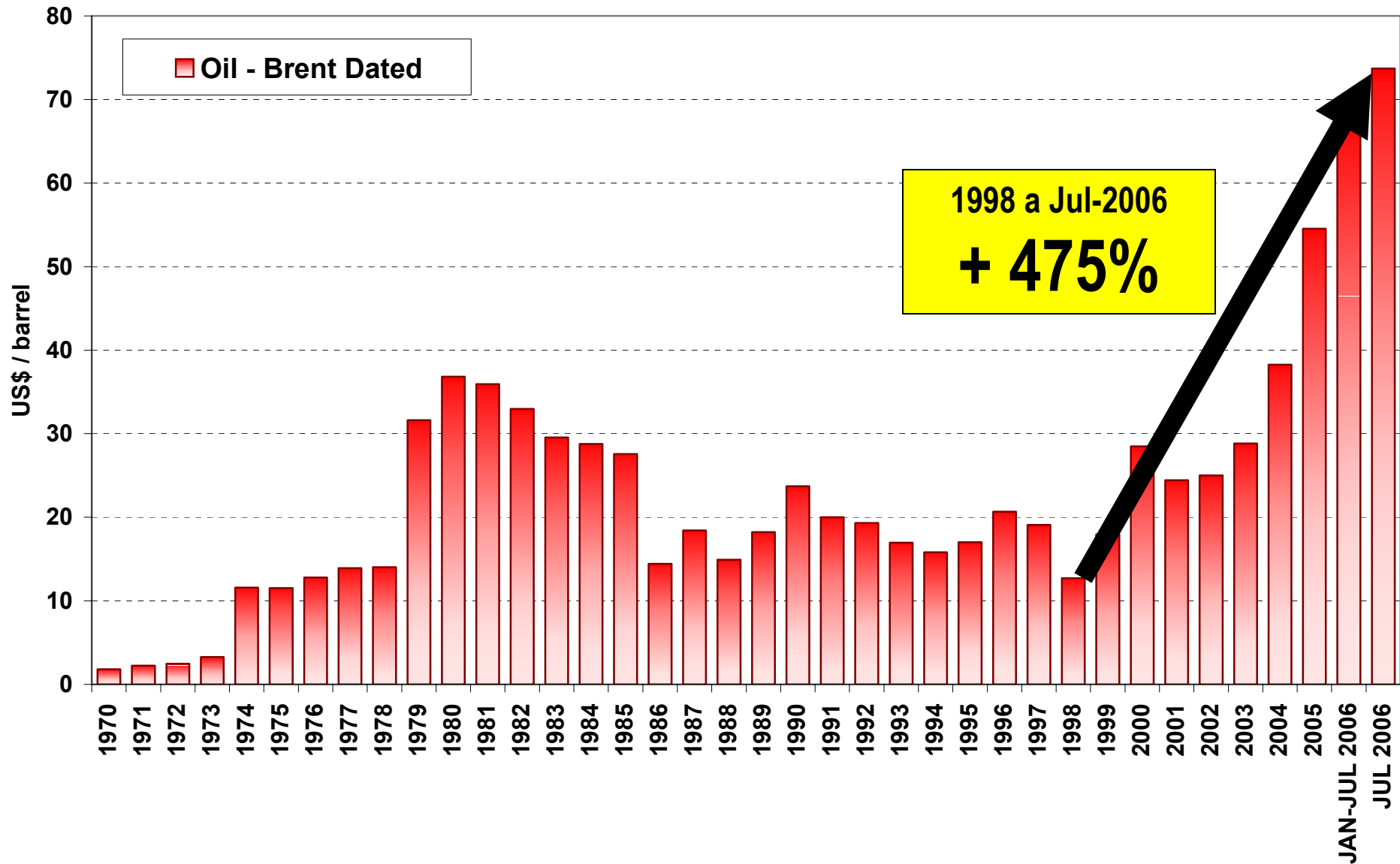


# WORLD ENERGY CONSUMPTION

The greater consumption per capita is outside the tropics!

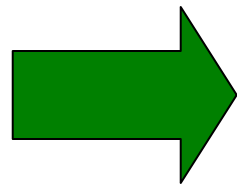


# CRUDE OIL PRICES



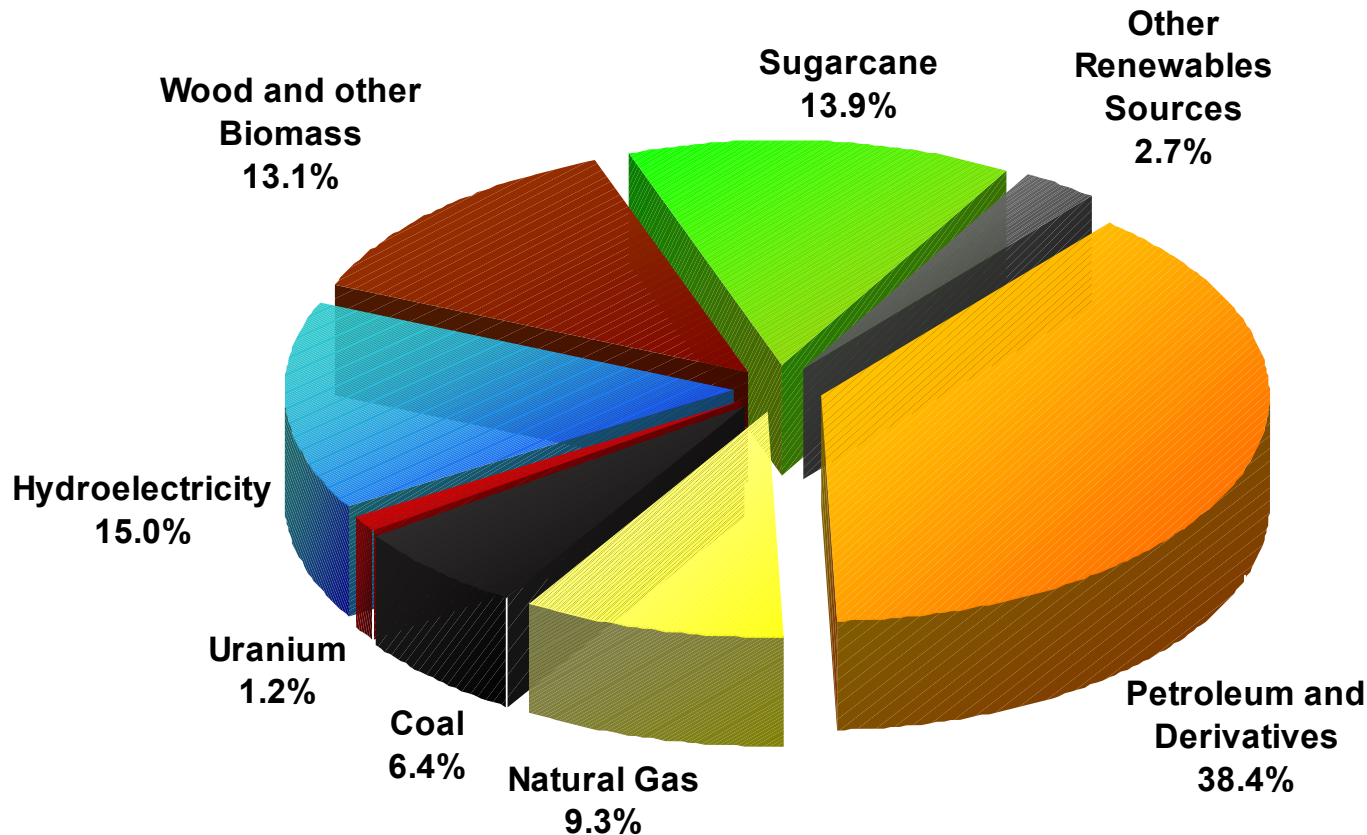
# THE CHALLENGE FOR ENERGY POLICY

- Long term energy supply security
- Cheaper prices for energy sources
- Keeping the local energy competitiveness
- Dealing with climate change and environment

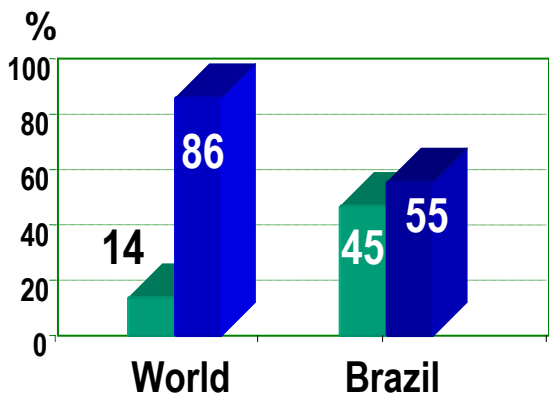


**BIOFUELS**

# BRAZILIAN ENERGY MATRIX - 2005



**RENEWABLE  
SOURCES  
44.7 %**



■ RENEWABLE  
■ NON-RENEWABLE

**218.6  
MILLIONS  
TOE**

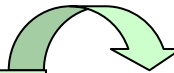
Source: Brazilian Energy Balance (2006)  
Ministry of Mines and Energy

# Ethanol in Brazil: 83 Years of Experience



**1925: First tests using ethanol blends with gasoline**

# Incentives established by the Pro-Alcohol in 1975

- ~~Ethanol price lower than gasoline price~~
- ~~Guaranteed payment to the producer~~
- **Tax reduction for hydrated ethanol cars**  The only remaining incentive nowadays
- ~~Loans for ethanol producers to increase their capacity~~
- ~~Gas stations ought to sell ethanol~~
- ~~Maintenance of strategic stocks~~



# Flex-Fuel Cars

- Launched in the Brazilian Market in 2003.
- Currently nine carmakers are producing and selling *Flex Fuel* vehicles (FFV) in Brazil.
- Current fleet FFV (2008): ~ 3,000,000 vehicles.

FIAT

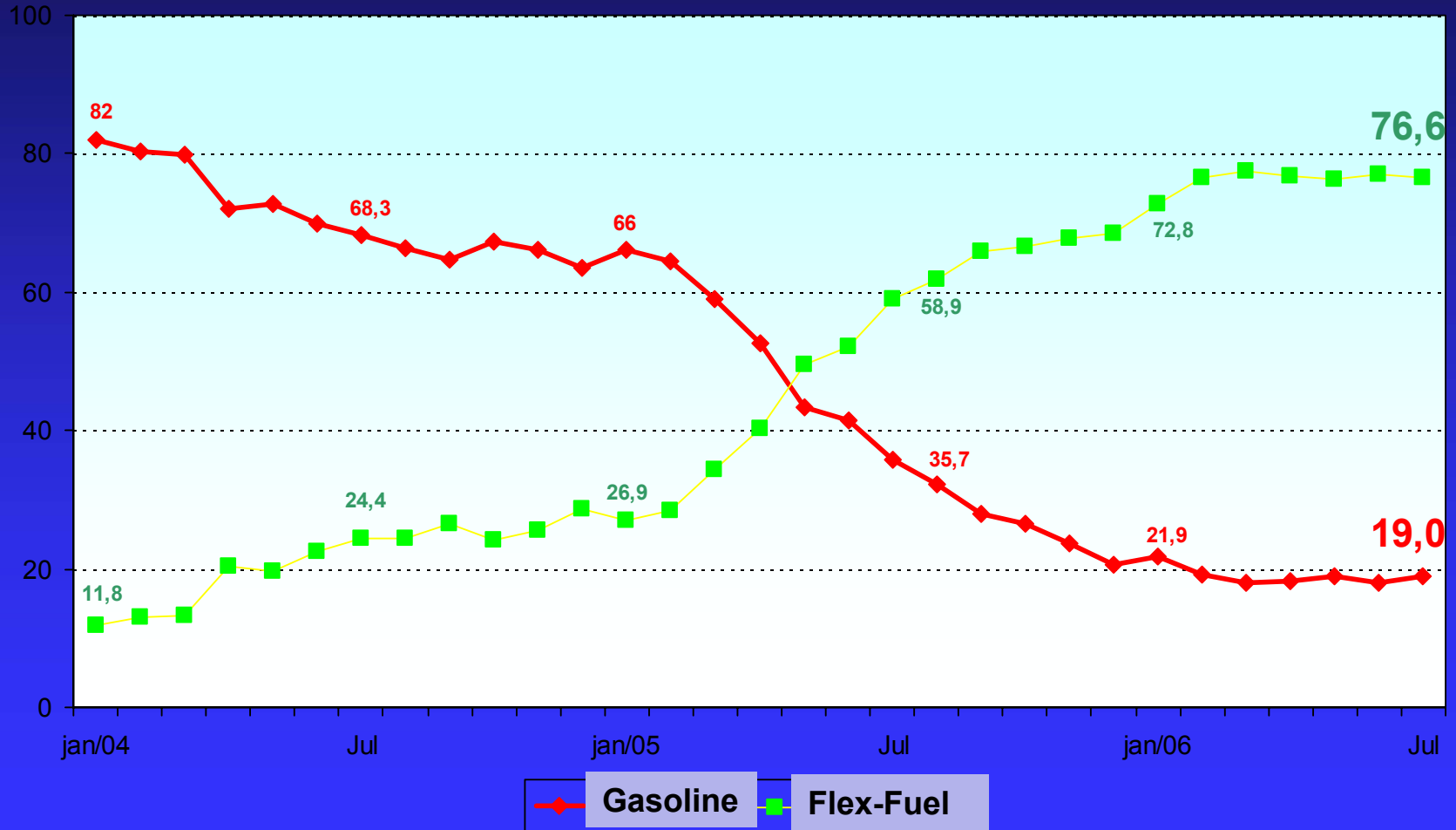


CITROËN



# Share of Flex Fuel and Gasohol (25% Ethanol) Vehicles in the Light Vehicles Brazilian Market.

Source: ANFAVEA



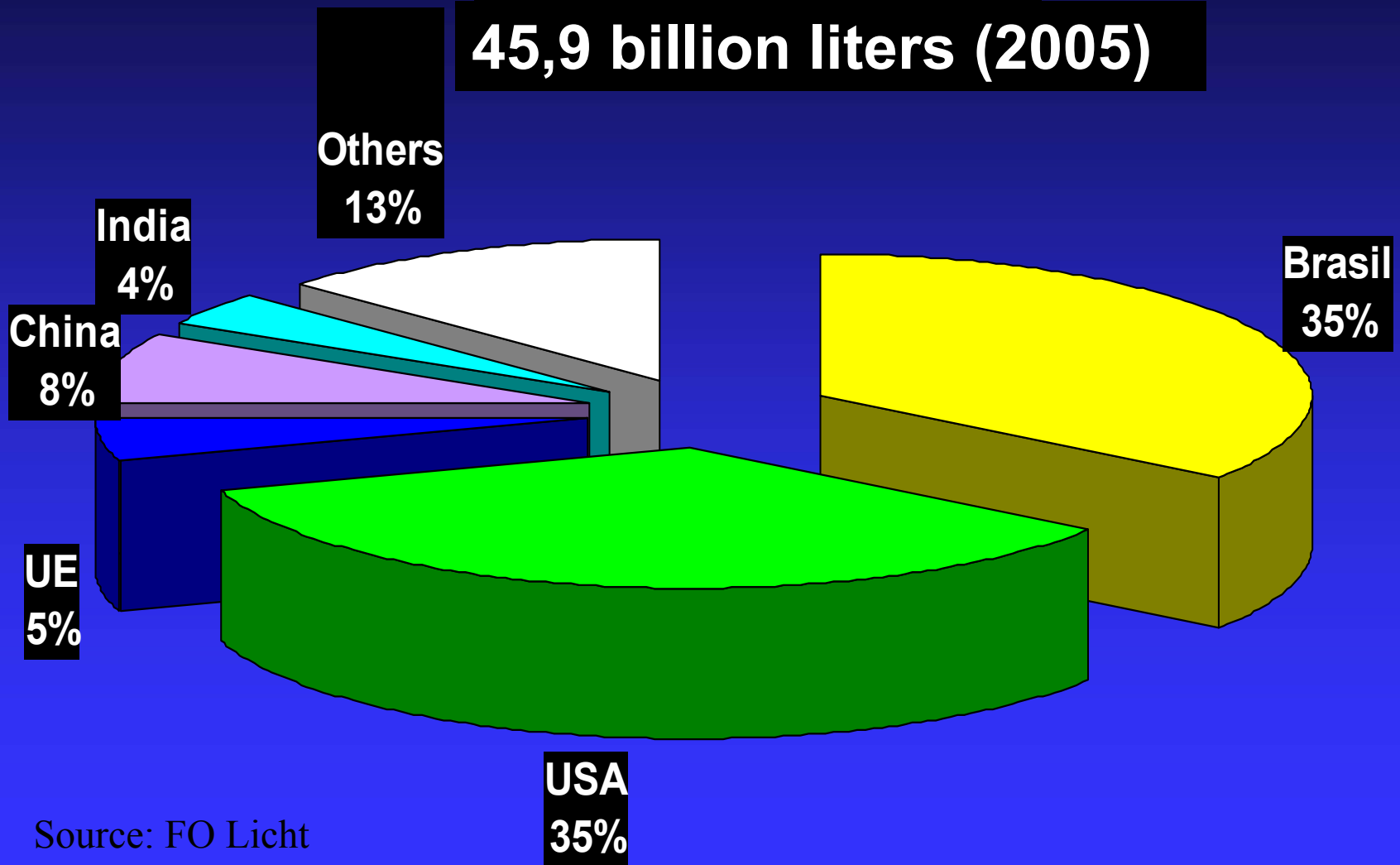
# Benefits for the Consumers

- Vehicles can be fueled with a mix gasoline/hydrated ethanol in any proportion at any point in time.
- Possibility to choose the fuel in each refueling in accordance with the price at that particular pump station, availability, performance and consumption.



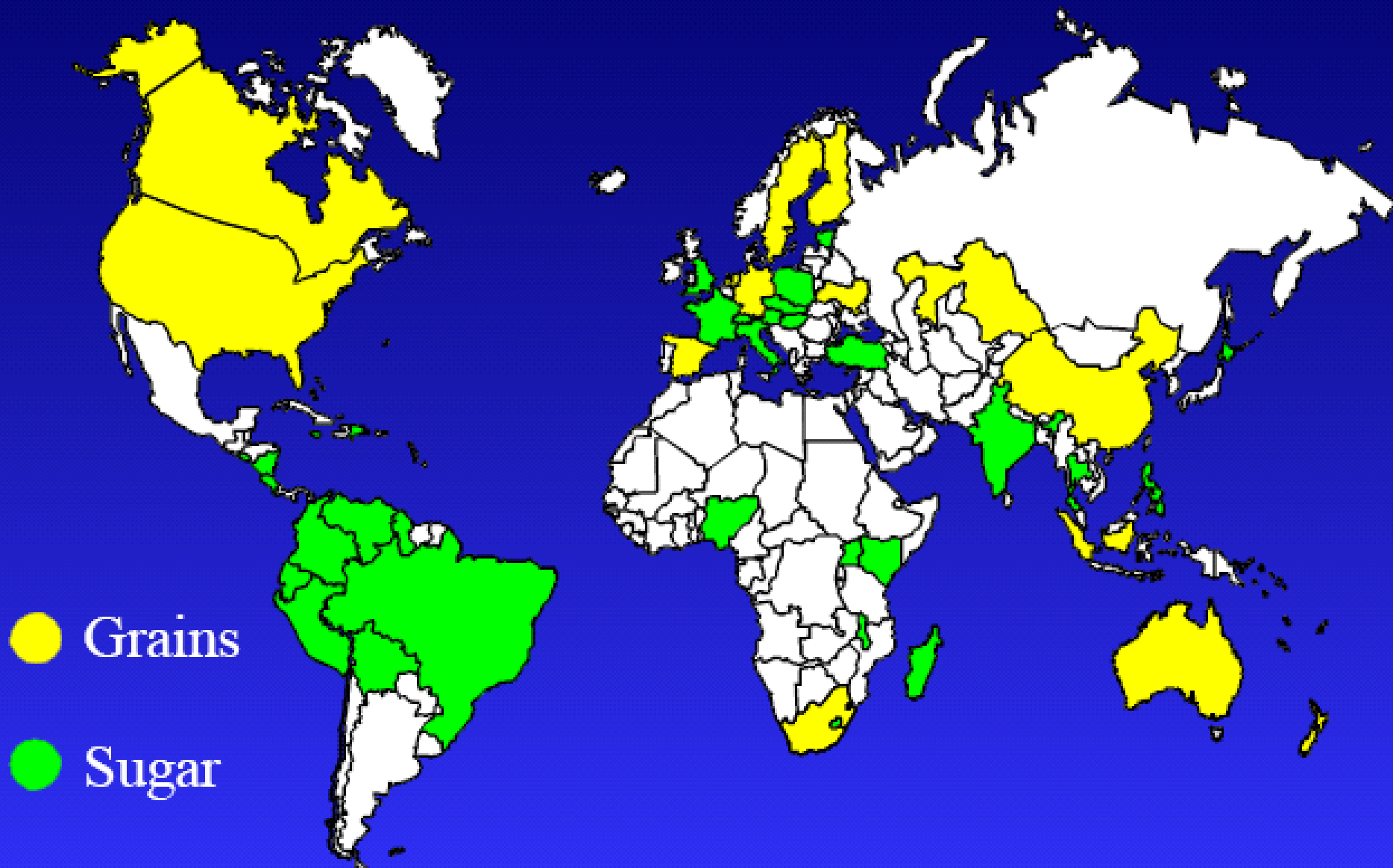
# Ethanol World Production

45,9 billion liters (2005)



Source: FO Licht

# World Fuel Ethanol 2006



Fonte: Berg, Cristoph, Ethanol World Market; F.O.Licht 2<sup>nd</sup> Sugar and Ethanol Brazil, SP  
21- 23/03/06

# Ethanol in Brazil: Oil economy and environmental benefits

## FUEL DEMAND FOR LIGHT VEHICLES IN BRAZIL

