

Biofuel in Brazil

Jose Robert Moreira

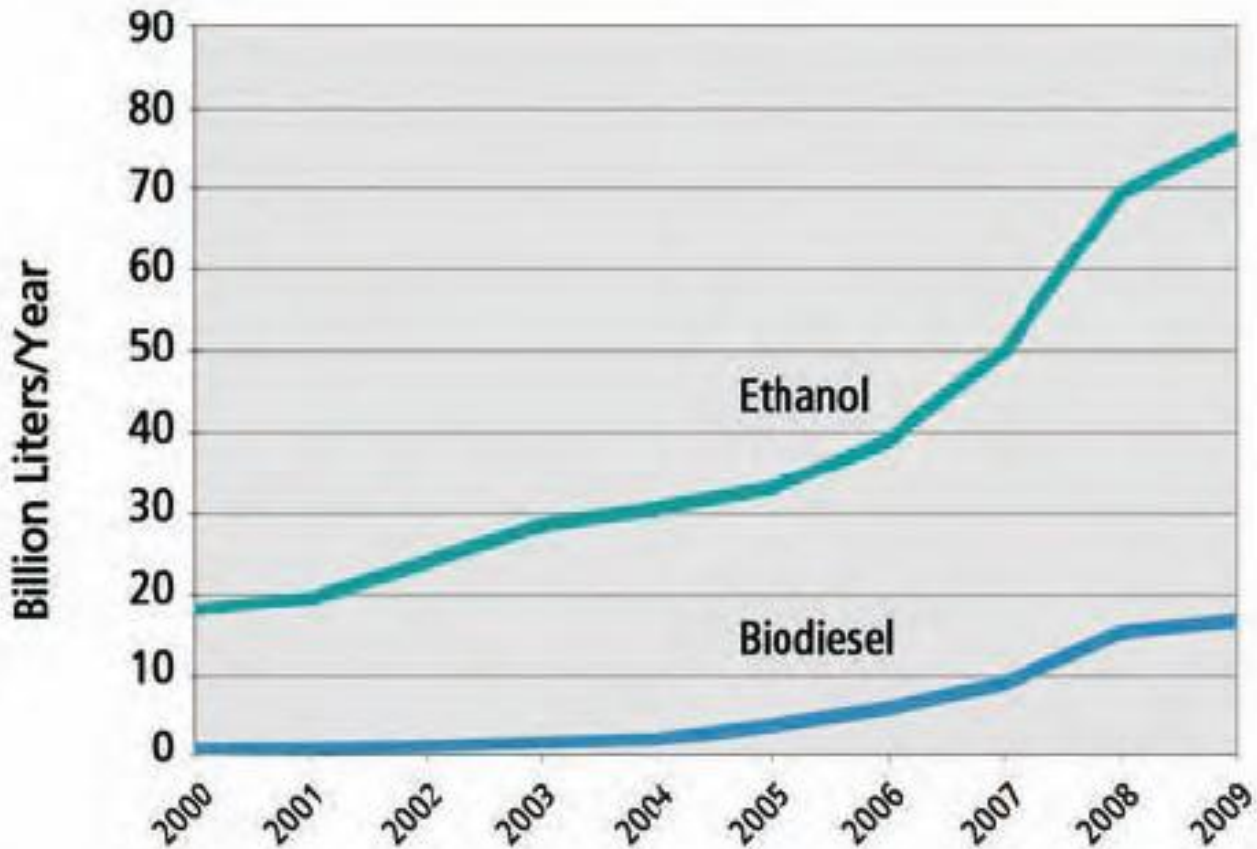
JICA Expert

Brazilian Bio-fuel Today



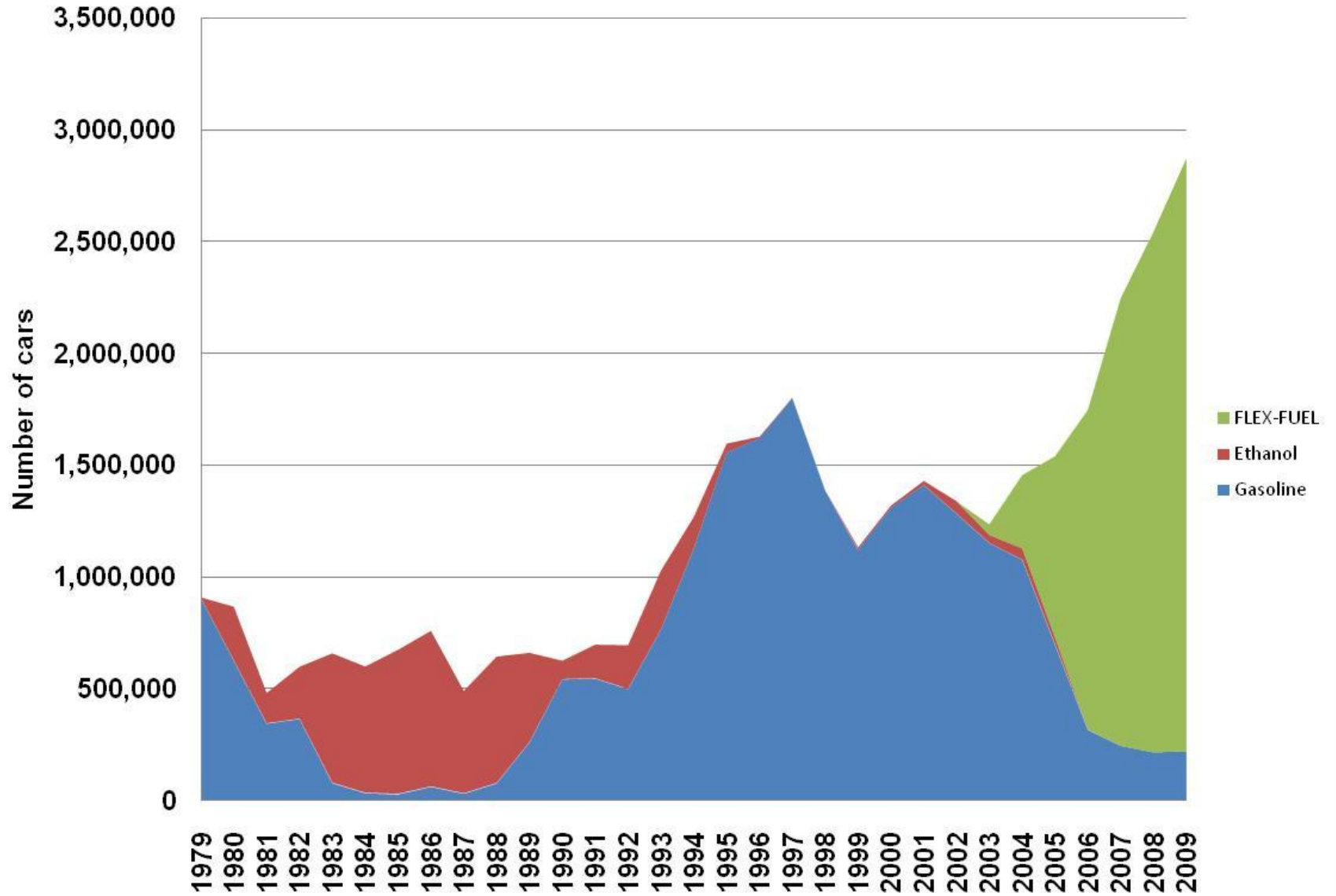
Source ; Jose Robert Moreira

Figure 11. Ethanol and Biodiesel Production, 2000–2009



Source ; Jose Robert Moreira

Sales of new Cars in Brazil - 1979 to 2009



Source ; Jose Robert Moreira

Profile of Automobile Fleet in Brazil 2010-2019



Fonte: EPE (PDE 2019)

Gasoline Ethanol Flexfuel

Source ; Jose Robert Moreira

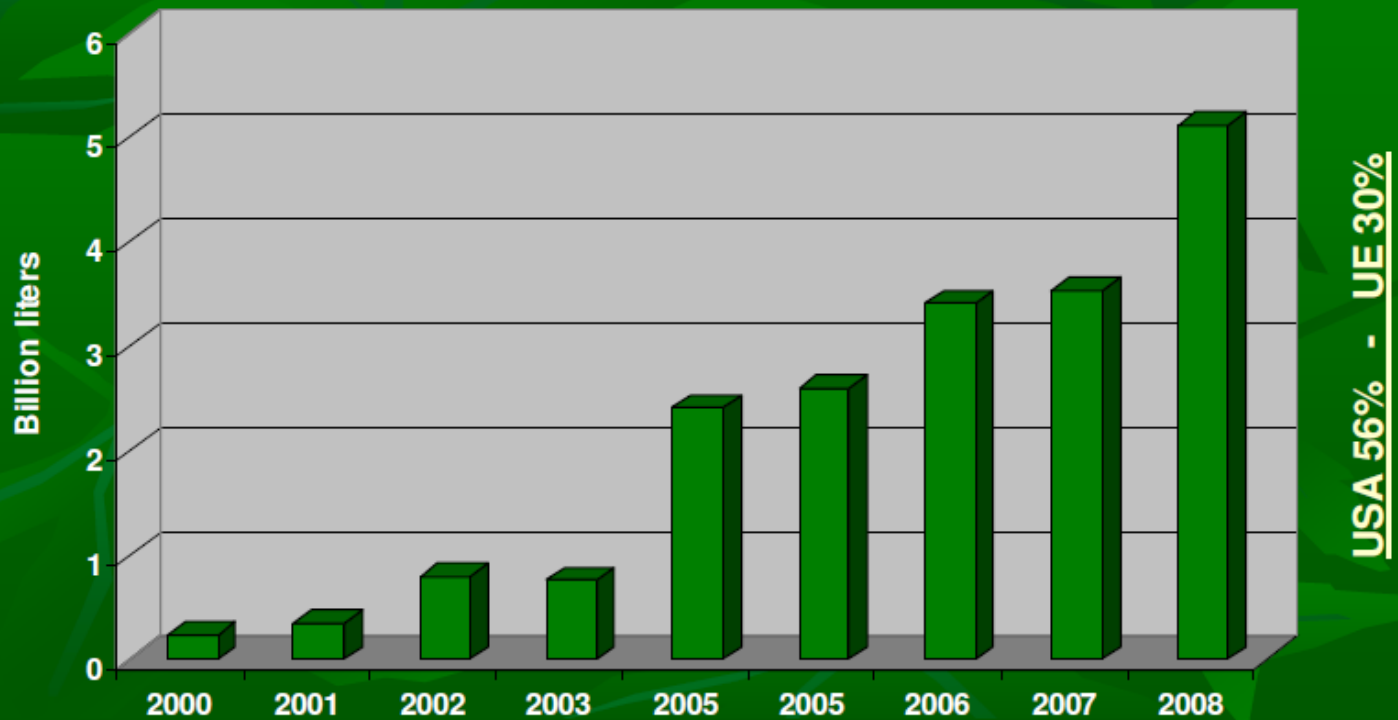
- Veículos a álcool, mistura álcool - gasolina e *flex fuel* ;
- Veículos e motores importados;
- Avião a álcool.



World



Brazilian bioethanol exports



Sources: Secex 2008 and Unica 2009

Source ; Jose Robert Moreira

Sugar cane Agro-Industry

Investment for alcohol production

2005:

- No. of Mills: 313
- Production: 16 million m³
- Installed capacity: 18 million m³
- Cultivated area for alcohol: 2.7 million ha,

2010:

- Investments of US\$ 20.0 billion in 89 plants
- Increase in alcohol production in 2010 relative to 2005: 11 million m³
- Expansion of sugar cane area: 3 million ha



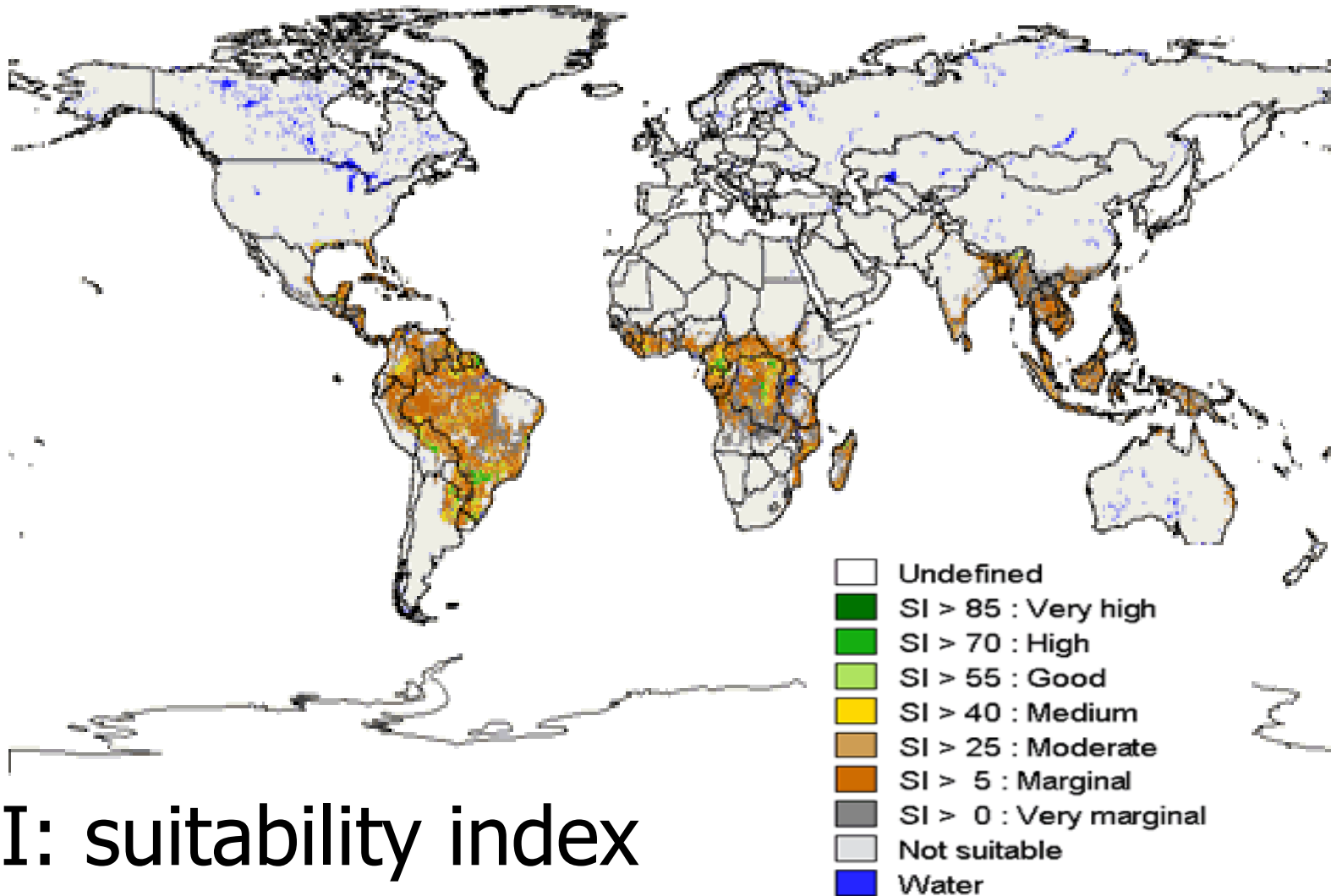
Brazil (Total area):	851
Potential agricultural area:	383
Availability for agriculture expansion:	91
Present area used for alcohol and electricity:	3
	(million ha)

Fontes: Ministério de Minas e Energia;
Ministério da Agricultura, Pecuária e Abastecimento; UNICA - 2006

FOOD VERSUS FUEL



FAO's sugarcane potentials

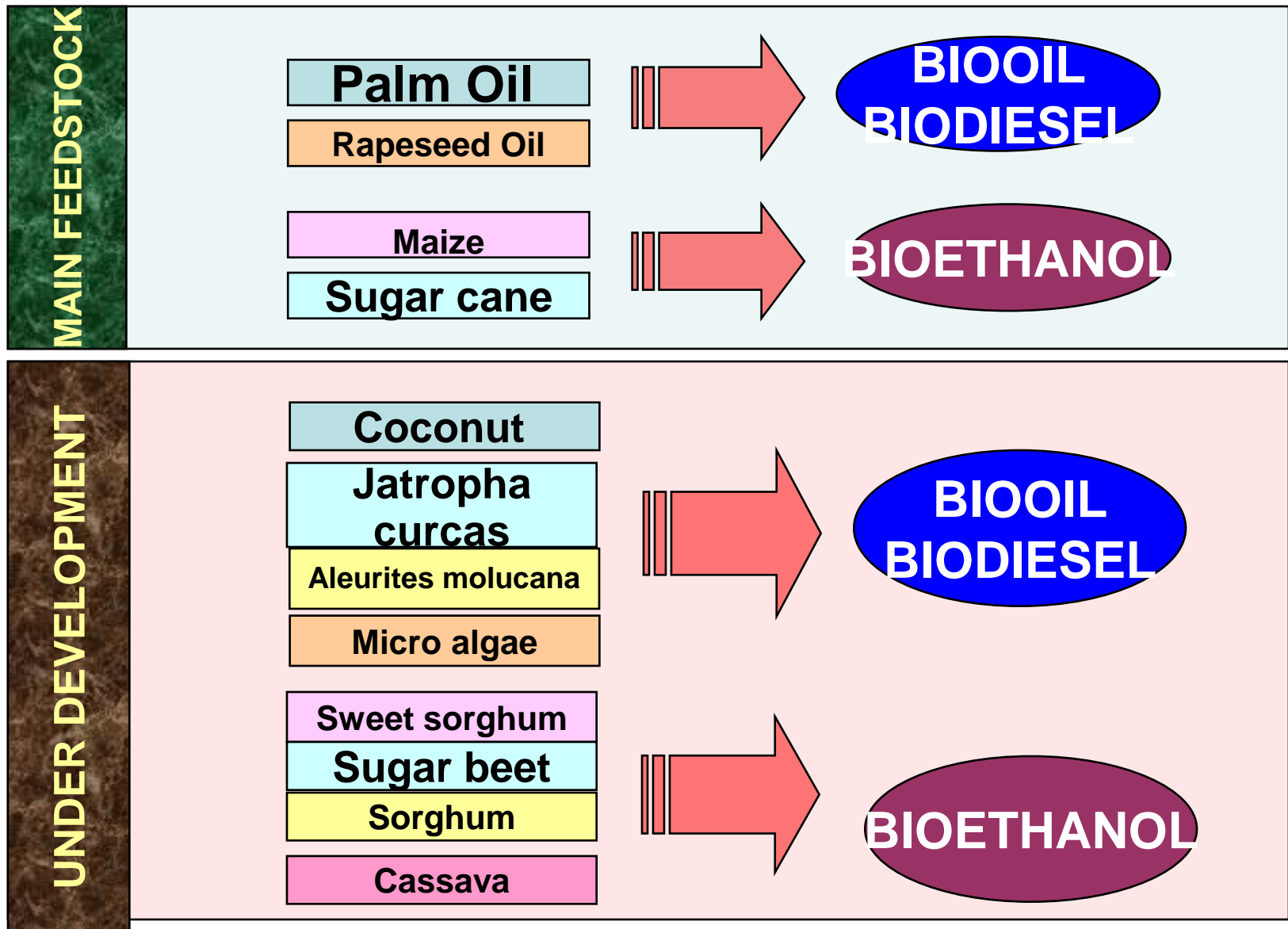


SI: suitability index

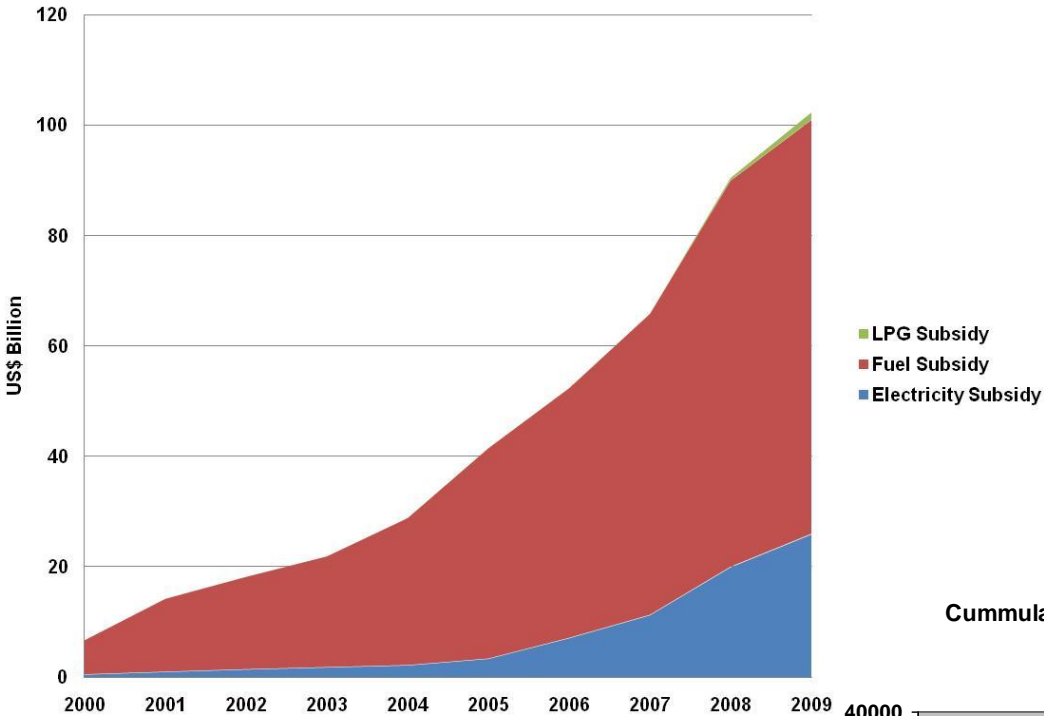
<http://www.fao.org/ag/AGL/agll/gaez/ds/ds.htm>

Source ; Jose Robert Moreira

BIOFUELS FEEDSTOCK

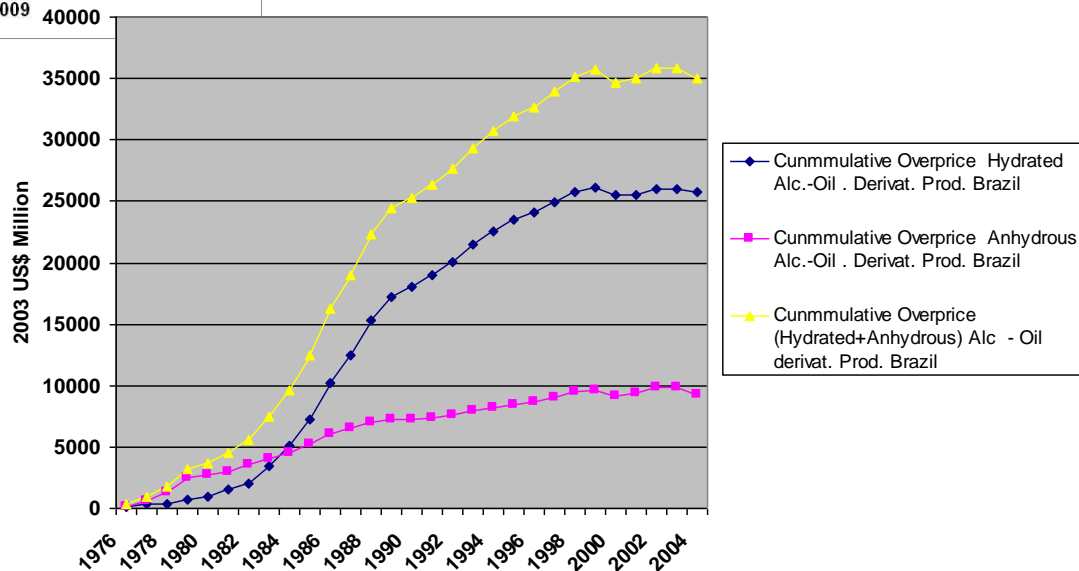


Accumulated Fossil Fuel Subsidy for Indonesia 2000-2009



Indonesia
 Within 10years
 Accumulated Subsidy
 for Fuel is US\$100bil
 >>Less Bio-fuel

Cummulative Overprice Paid by Liquid Fuels Consumers Due Gasoline Displaced by Ethanol



Brazil
 Within 30years
 Accumulated Subsidy
 for Fuel is US\$35bil

Source ; Jose Robert Moreira Year