

A importância do petróleo e gás para o desenvolvimento do Maranhão

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Ex-diretor da ANP

Roteiro

- **O Maranhão no cenário de óleo e gás**
- **A demanda de energia no planeta;**
- **A Margem Equatorial;**

An underwater photograph showing sunlight filtering through the water, creating a shimmering, ethereal effect. The light rays are visible as bright, wavy patterns against the darker blue background of the water. The overall mood is serene and mysterious.

O MARANHÃO NO CENÁRIO DE ÓLEO E GÁS

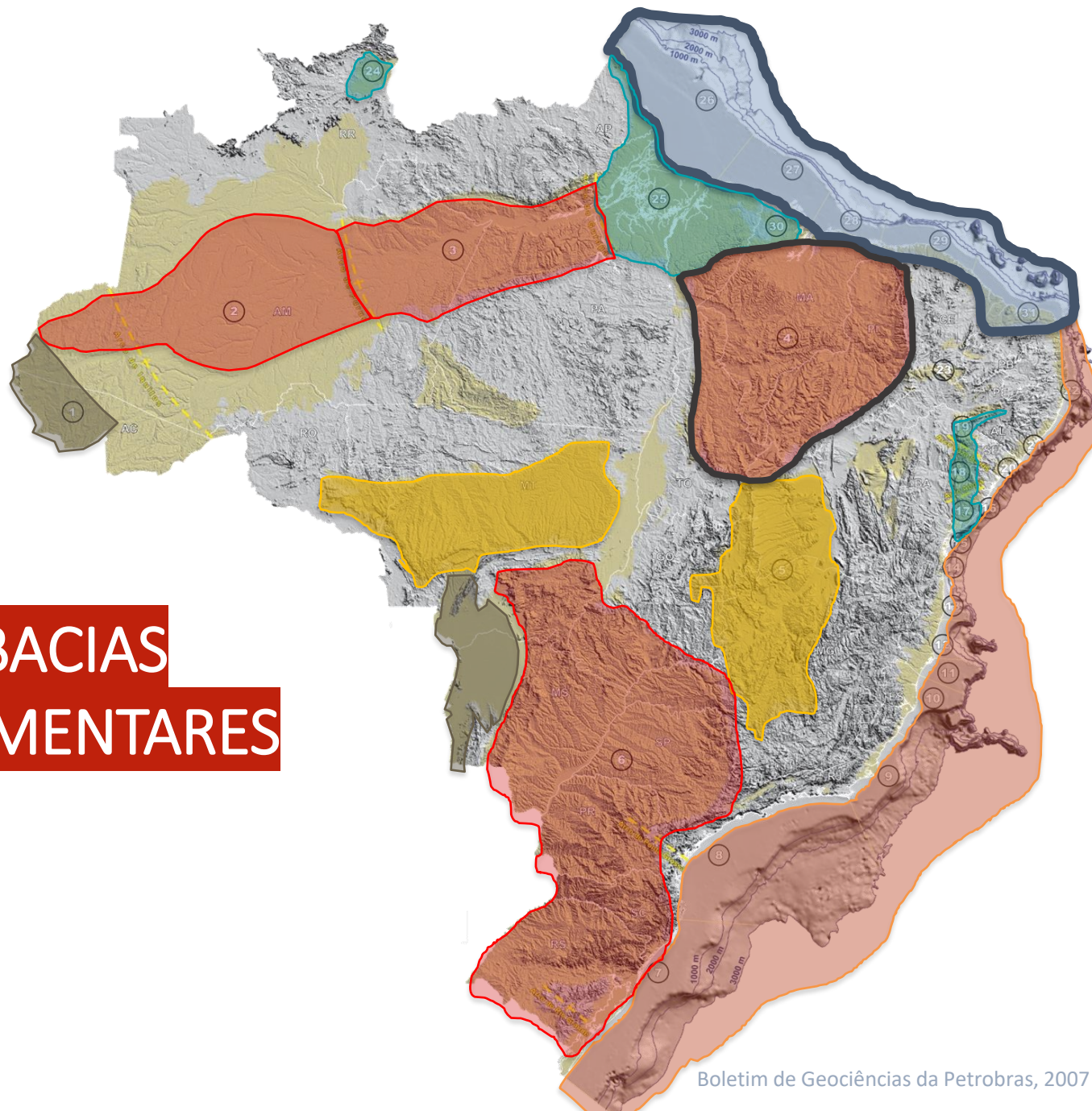
540 milhões de anos

BACIAS SEDIMENTARES

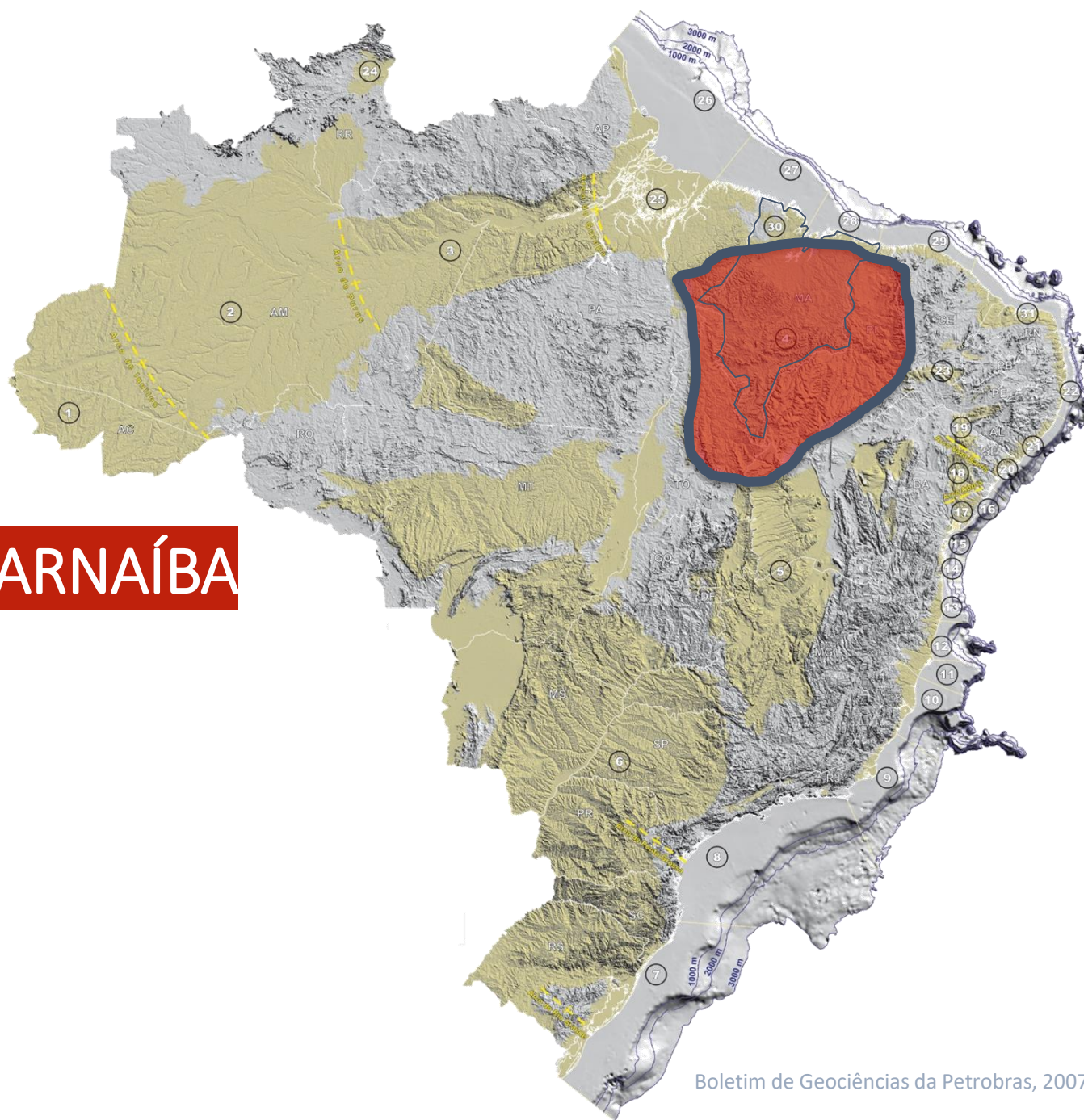


Boletim de Geociências da Petrobras, 2007

BACIAS SEDIMENTARES

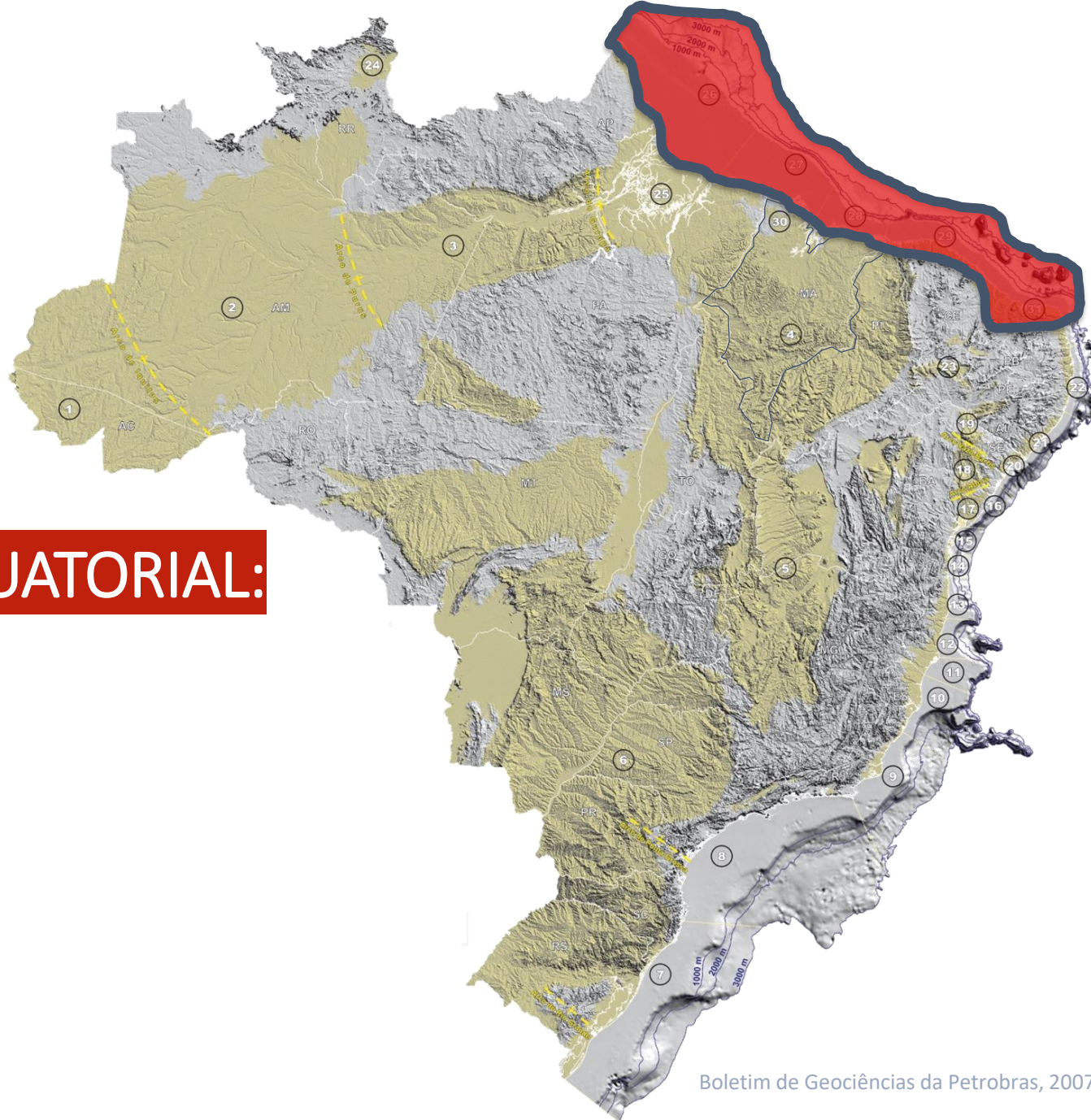


BACIA DO PARNAÍBA



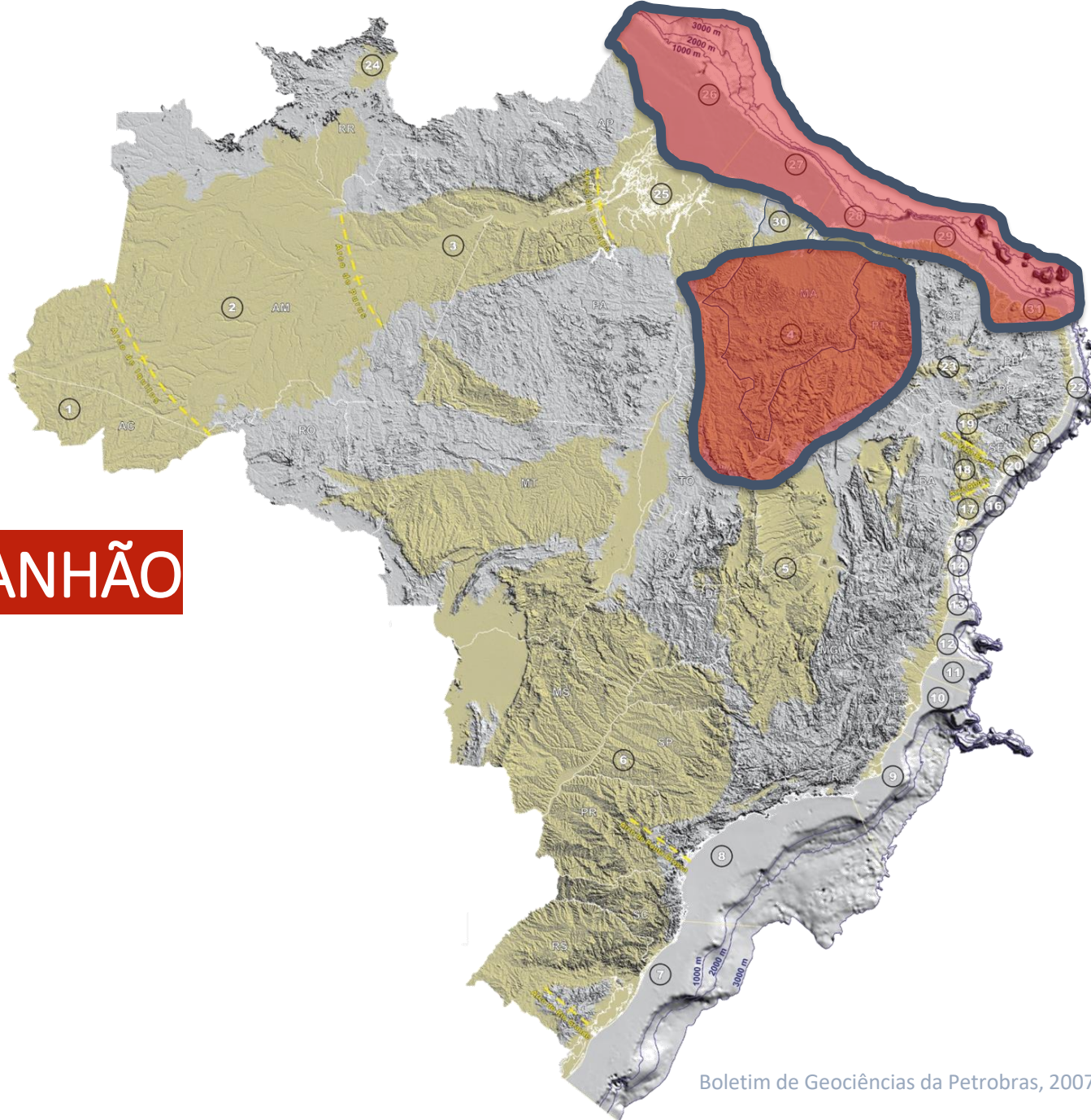
Boletim de Geociências da Petrobras, 2007

MARGEM EQUATORIAL:



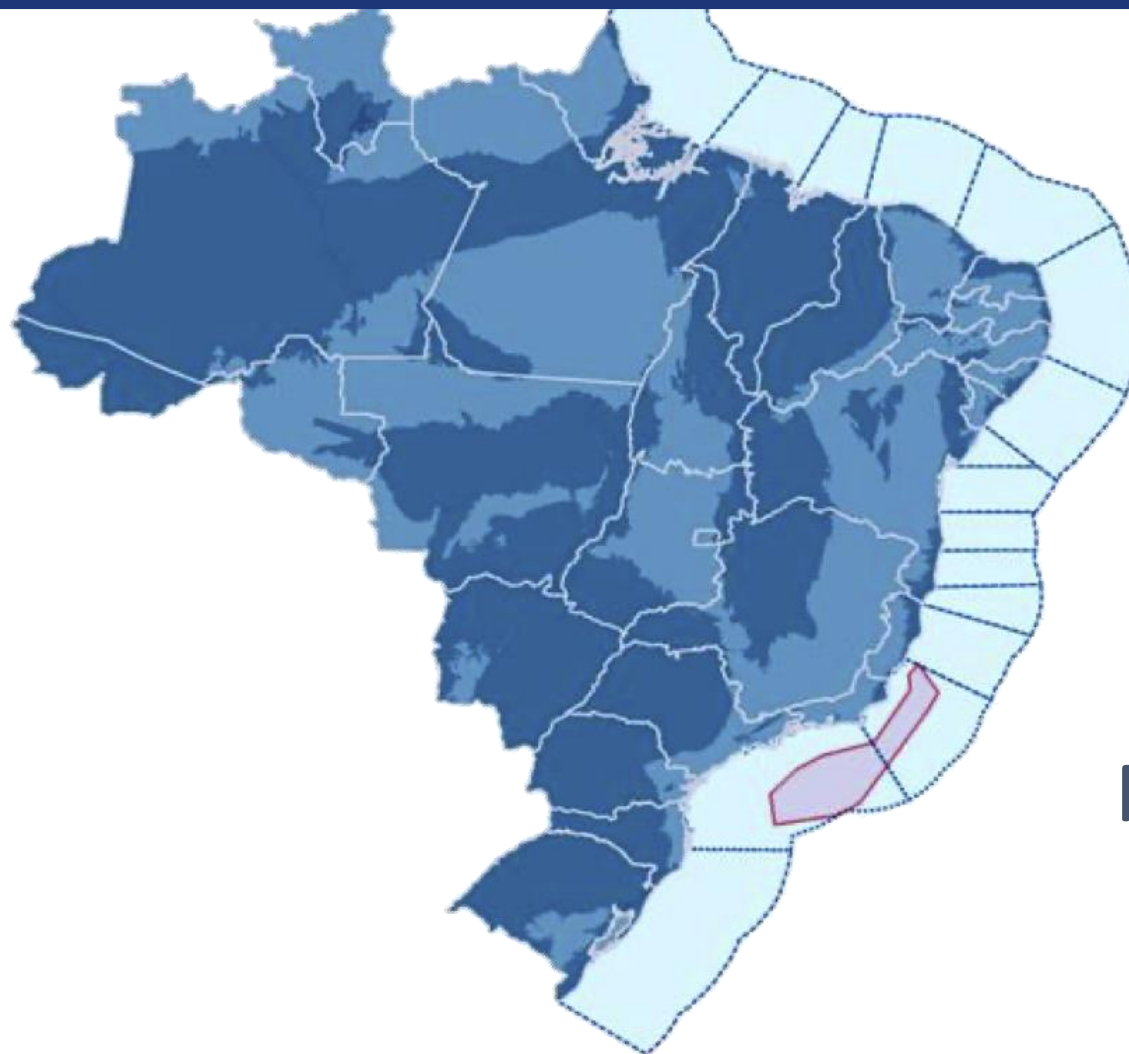
Boletim de Geociências da Petrobras, 2007

O MARANHÃO



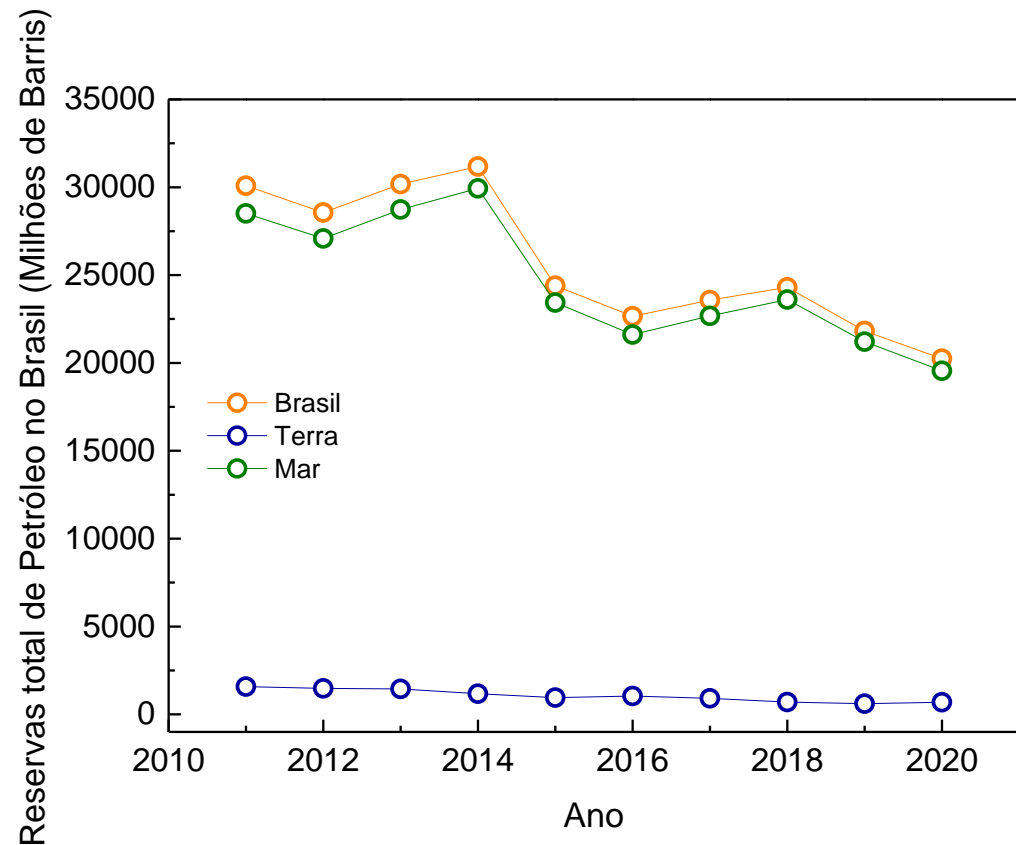
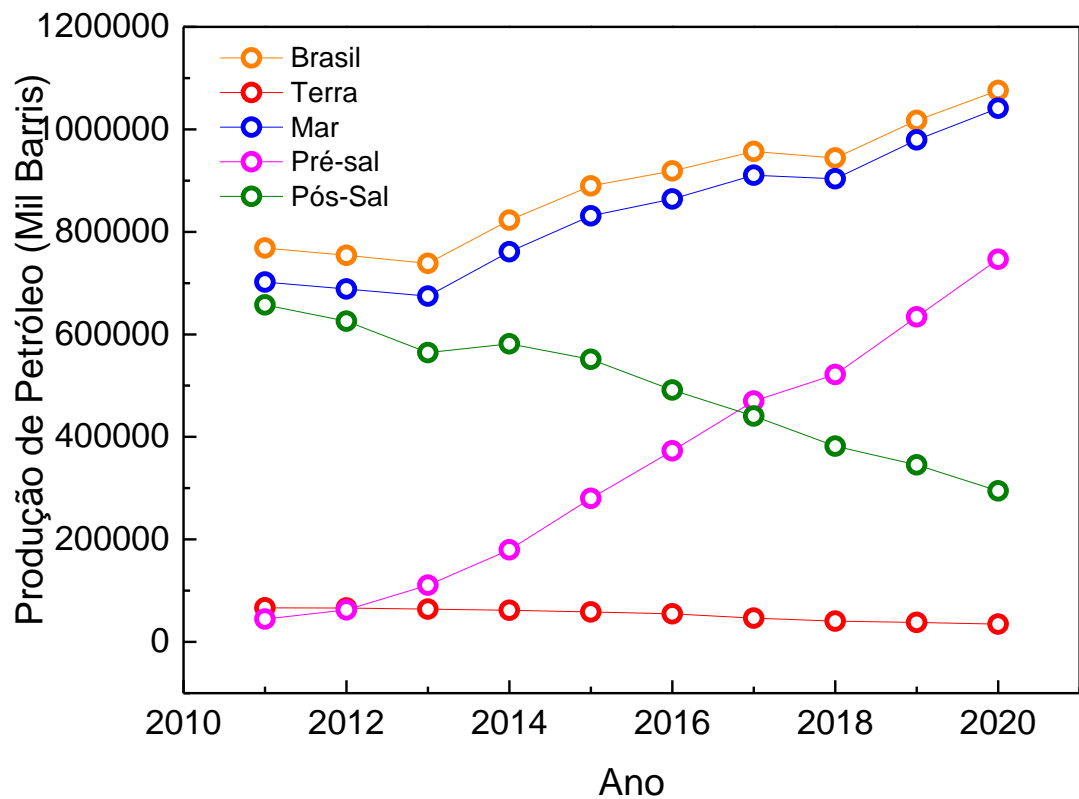
Boletim de Geociências da Petrobras, 2007

Produção do Pré-Sal no Brasil



PRÉ SAL

Produção do Pré-Sal no Brasil



A Margem Equatorial Brasileira

MARGEM EQUATORIAL BRASILEIRA



The background is an abstract composition of dark teal and deep blue tones. It features a central horizontal band of lighter, more textured teal, which appears to be a reflection or a layer of light on a dark surface. The overall effect is ethereal and atmospheric.



A DEMANDA DE ENERGIA NO PLANETA

Valor da Informação

2010

2025

Rank	First quarter ^[83]		Second quarter ^[84]		Third quarter ^[85]	
1		PetroChina ▼329,259.7		ExxonMobil ▼291,789.1		ExxonMobil ▲314,622.5
2		ExxonMobil ▼316,230.8		PetroChina ▼268,504.8		PetroChina ▲270,889.9
3		Microsoft ▼256,864.7		Apple ▲228,876.8		Apple ▲259,223.4
4		ICBC ▼246,419.8		ICBC ▼211,258.7		Petrobras ▲220,616.5
5		Apple ▲213,096.7		Microsoft ▼201,655.8		ICBC ▲213,364.1

Rank	First quarter	
1		Apple ▼3,337,000 ^[39]
2		Microsoft ▼2,791,000 ^[40]
3		Nvidia ▼2,644,000 ^[41]
4		Amazon ▼2,016,000 ^[42]
5		Alphabet ▼1,895,000 ^[43]

A Revolução da Inteligência Artificial



MUDANÇA DE COISAS PARA CONCEITOS



- “O Uber, a maior empresa de táxis do mundo, não possui sequer um veículo.
- O Facebook, o proprietário de mídia popular do mundo, não cria nenhum conteúdo.
- Alibaba, o varejista mais valioso, não possui estoques.
- E o Airbnb, o maior provedor de hospedagem do mundo, não possui sequer um imóvel”

–Tom Goodwin

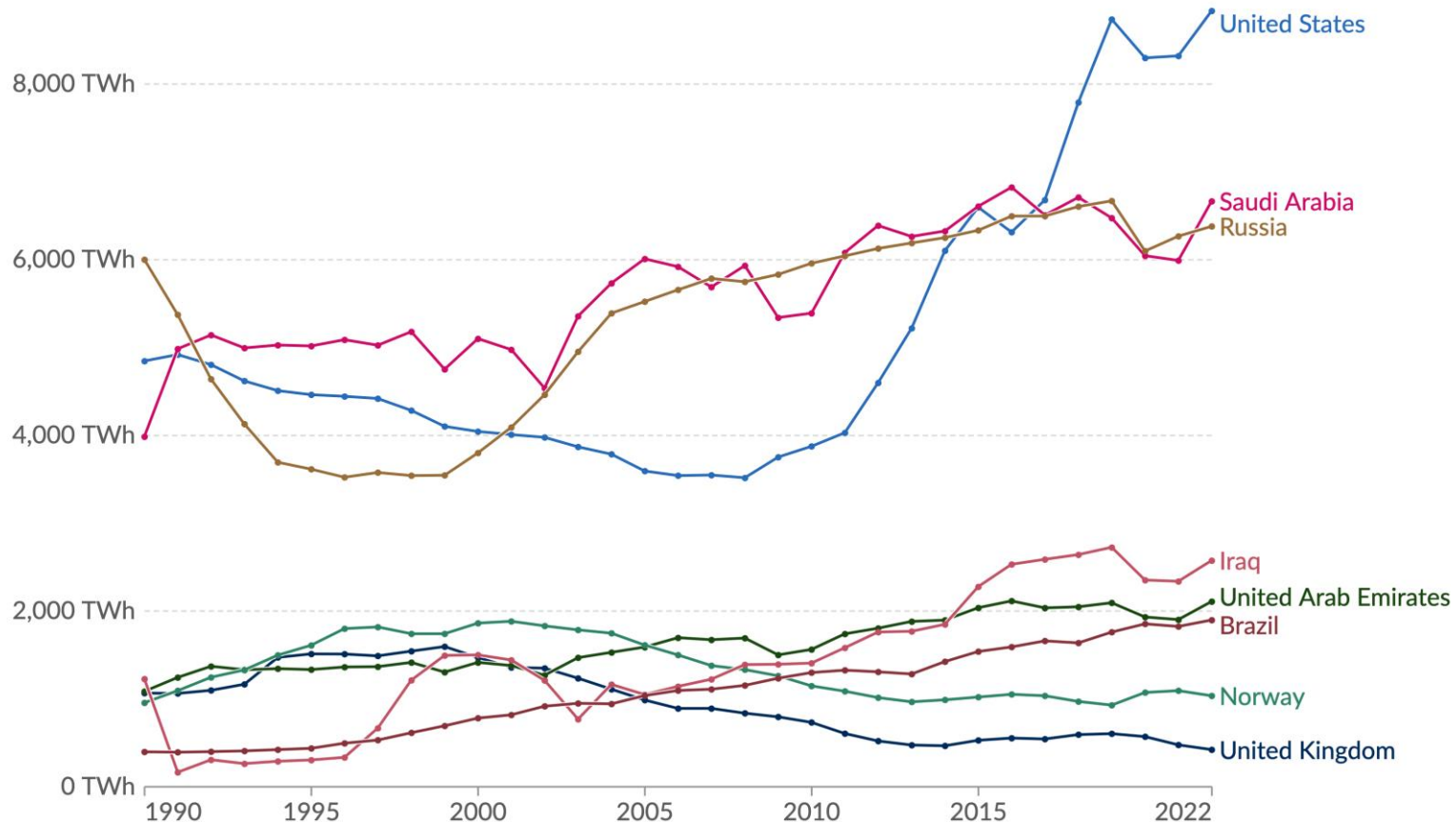
Produção Global de Petróleo Bruto

EUA lideram a partir de 2015

Oil production

Measured in terawatt-hours.

Our World
in Data



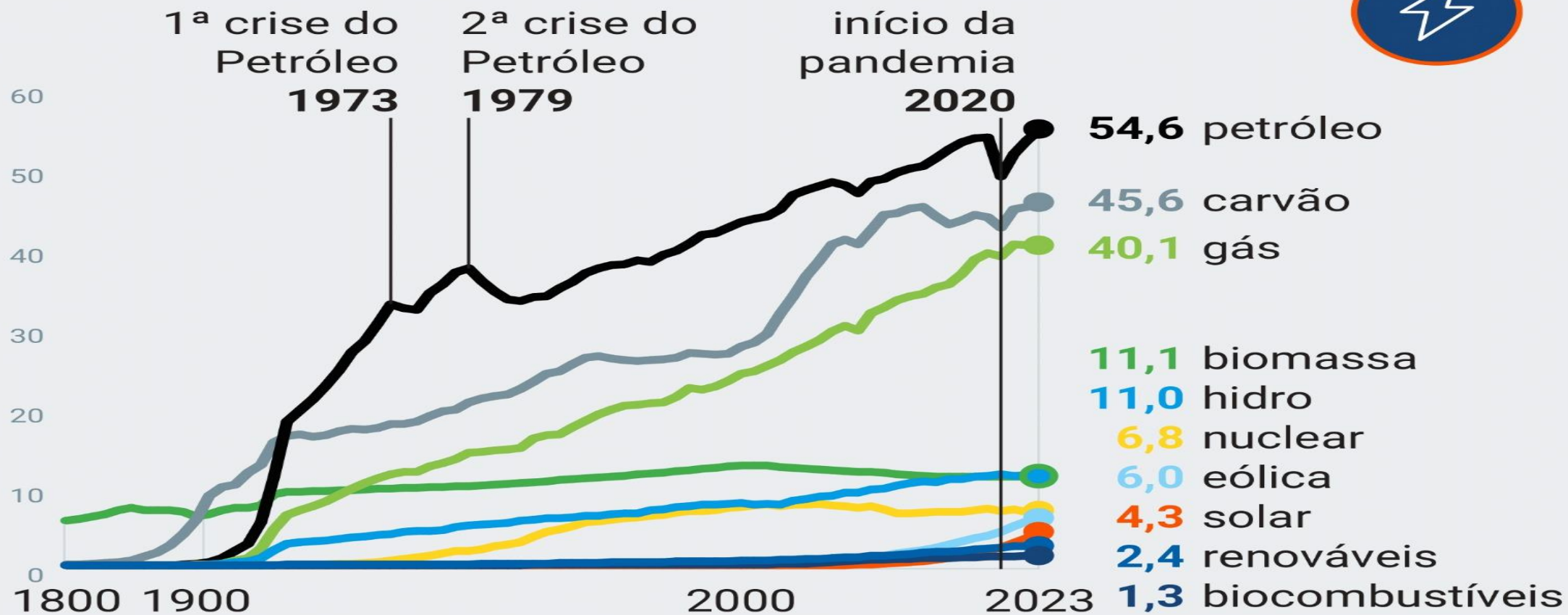
Data source: Energy Institute - Statistical Review of World Energy (2023); The Shift Data Portal (2019)

OurWorldInData.org/fossil-fuels | CC BY

ENERGIA

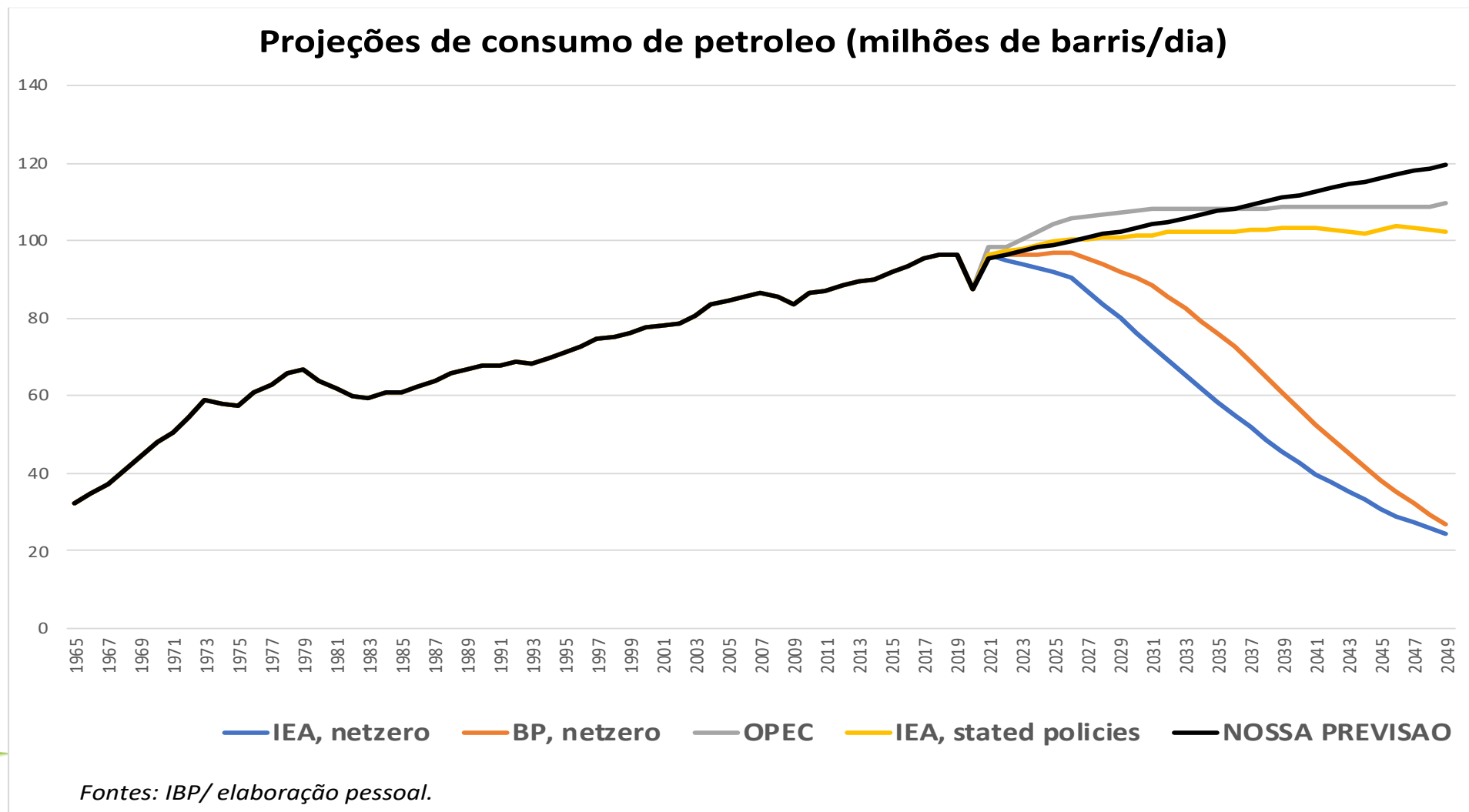
MUNDO DIVERSIFICOU FONTES ENERGÉTICAS DESDE 1800

petróleo, carvão e gás natural, porém, ainda lideram em consumo total (em mil terawatts-hora)



fonte: Energy Institute – Institute Statistical Review of World Energy (2024): Vaclav Smil (2017)

Consumo estimado de petróleo em 2050

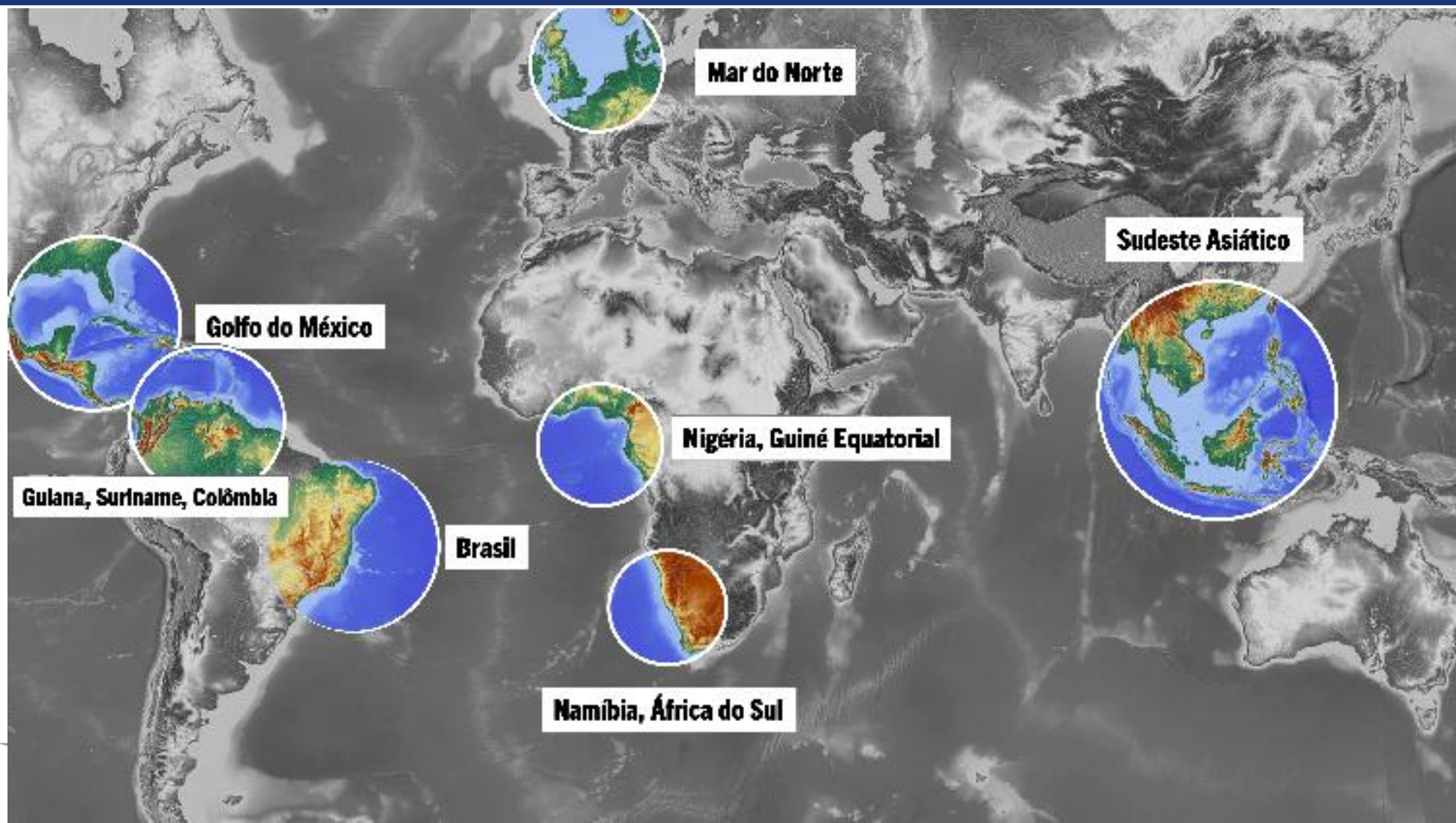


Ásia

Mais gente vivendo dentro que fora do círculo



Atividades petrolíferas pelo mundo

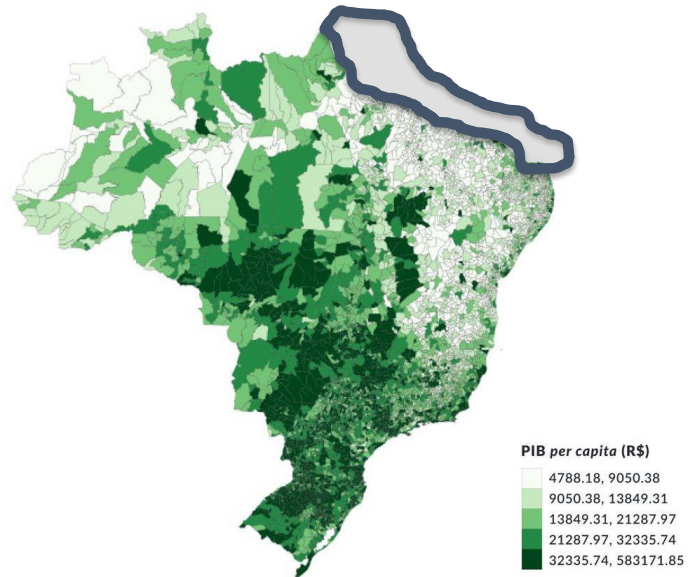


An underwater photograph showing sunlight filtering through the water, creating a shimmering, ethereal effect. The light rays are visible as bright, wavy patterns against the darker blue background of the water. The overall mood is serene and mysterious.

CENÁRIO BRASIL

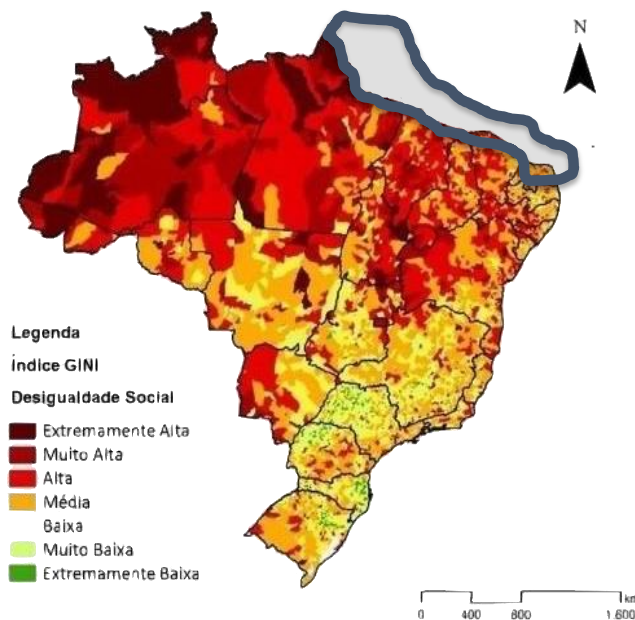
Desigualdade: Indicadores da MEQ

PIB PER CAPITA

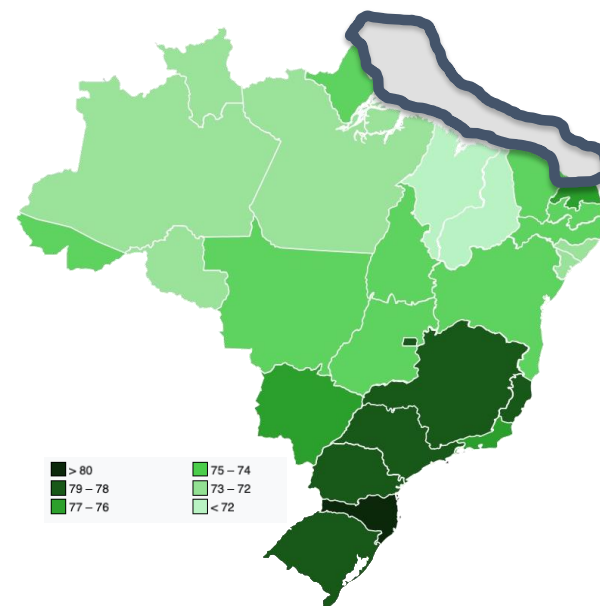


Fonte: IBGE

INDICE GINI



EXPECTATIVA DE VIDA



Consumo per capita de energia primária

Per capita energy from fossil fuels, nuclear and renewables, 2023

Measured in kilowatt-hours of primary energy consumption per person, using the substitution method.

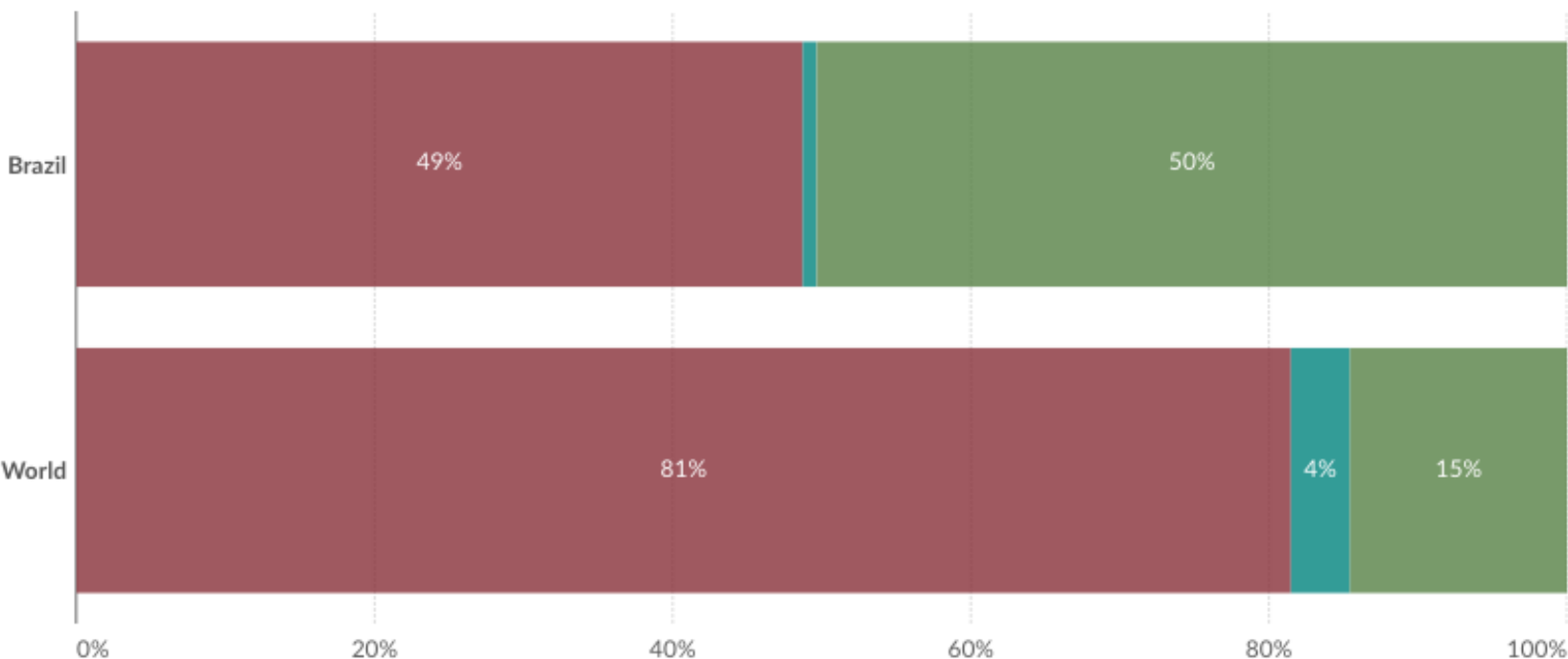
Our World
in Data

Table Chart

Edit countries and regions

Settings

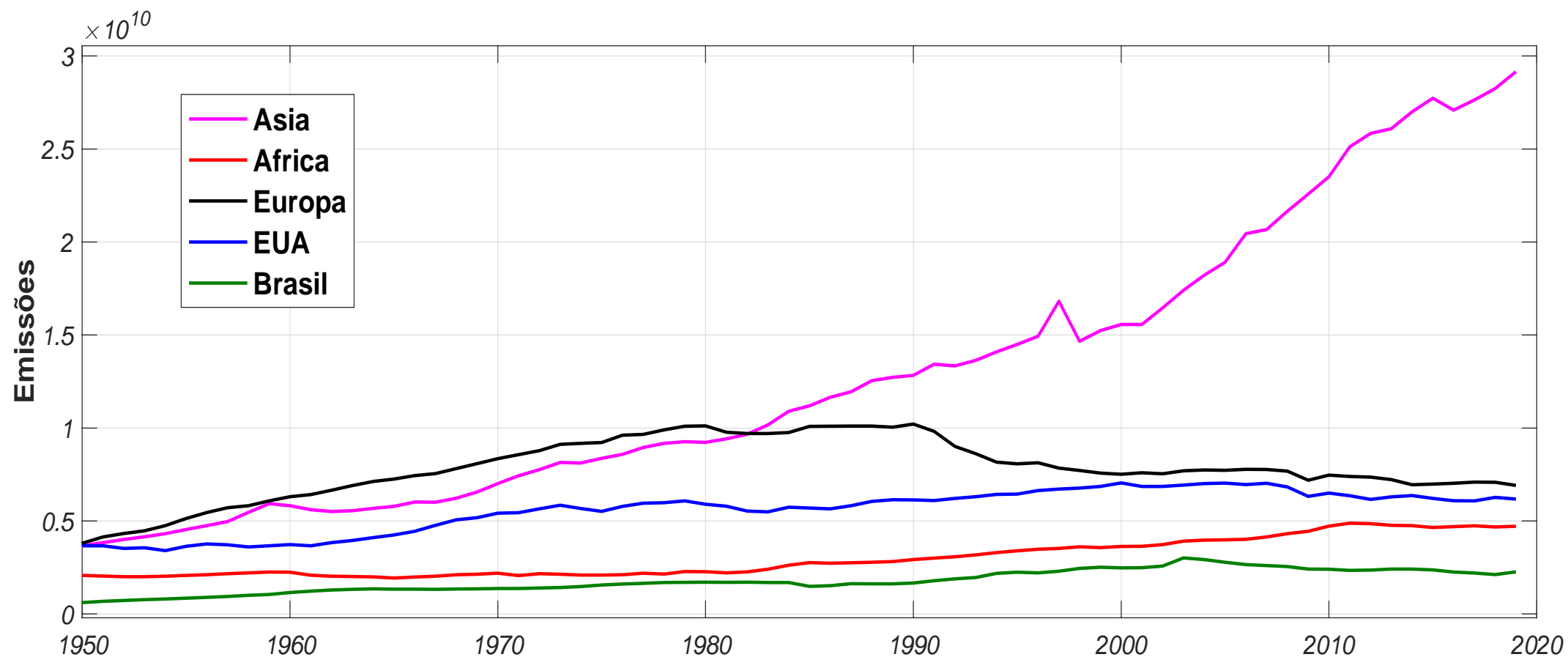
Fossil fuels Nuclear Renewables



Data source: Energy Institute - Statistical Review of World Energy (2024); Population based on various sources (2023) - [Learn more about this data](#)

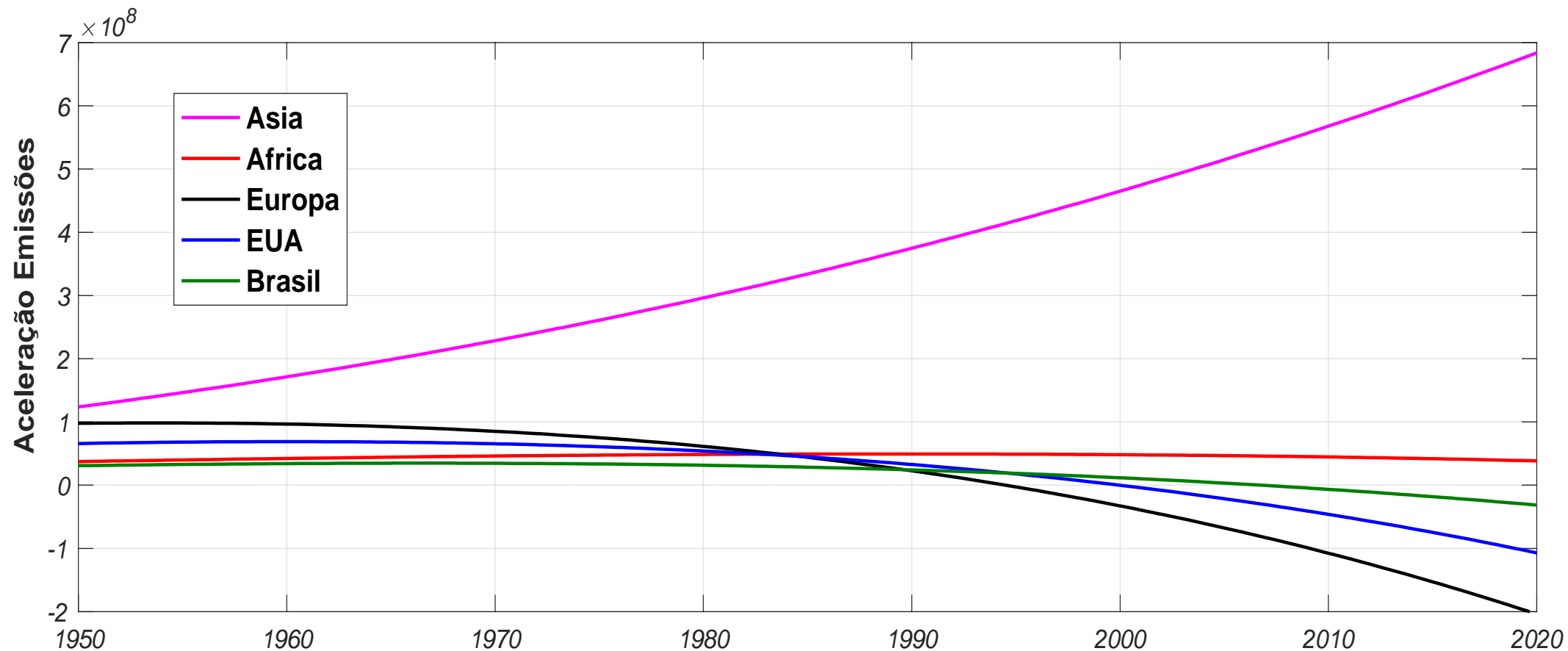
OurWorldinData.org/energy-mix | CC BY

Emissões de Gases de Efeito Estufa

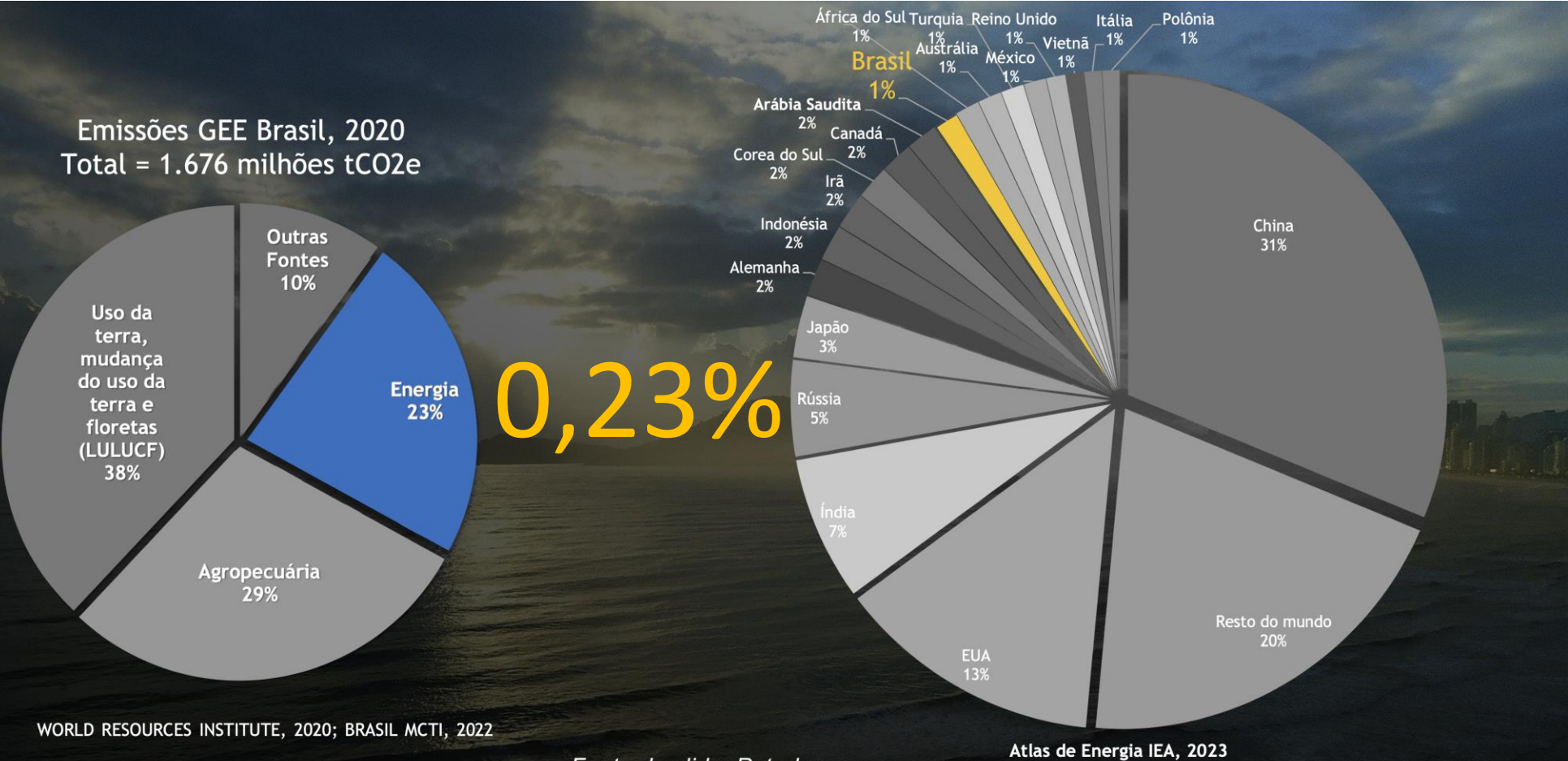


Fonte: Met Office Hadley Centre (HadCRUT5)

Aceleração das Emissões

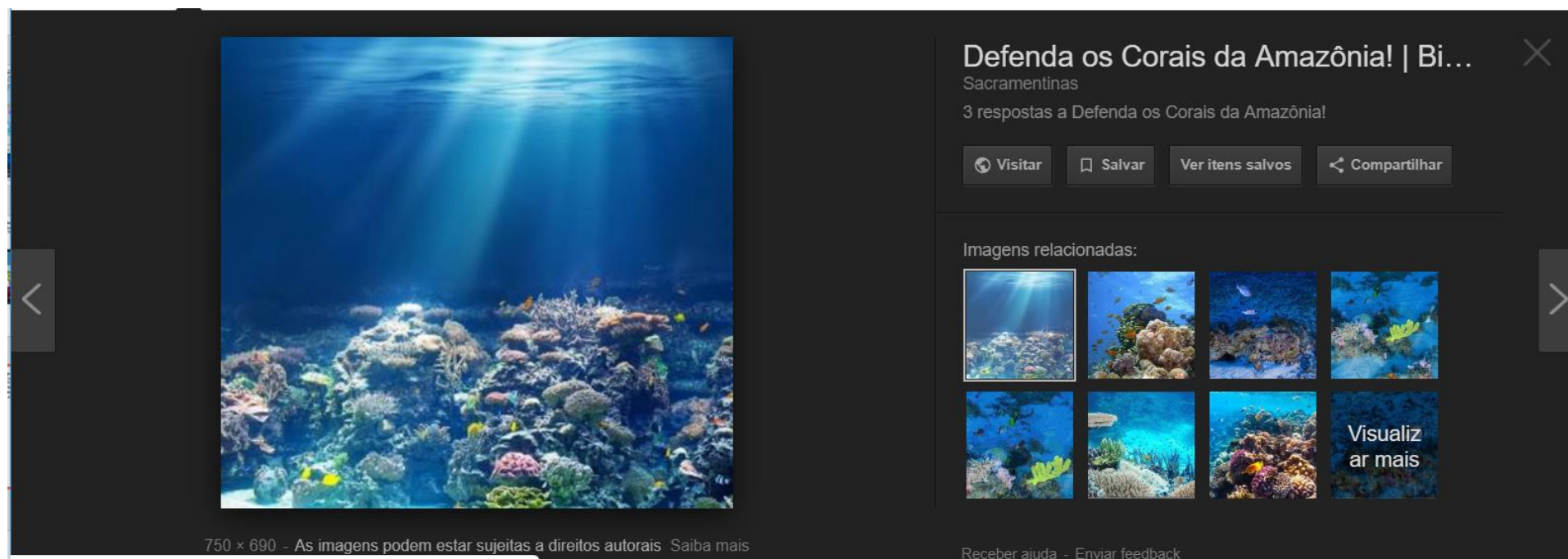


Emissões do Brasil no Mundo



O debate sobre os corais da Foz do Amazonas

O que foi divulgado...



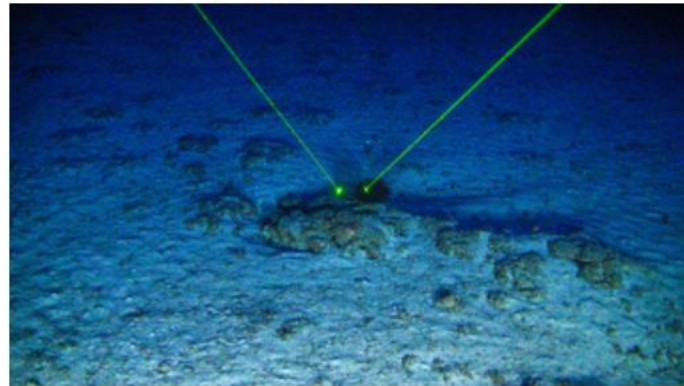
Fonte:

https://www.google.com.br/search?q=greenpeace+media&tbm=isch&tbs=rimg:Ca2MYwrwaeweljjTuSplU2jmN0ZbS4RrE2TLfJSCwJ8hoKqoFdXK5L_15INyCKWU29viQTIYRp8OWMdSIWmdb4QGsmSoSCdO5KmVTaOY3EU2gMbNvLkg1KhJRIltLhGsTZMsRx8pJRQW3VPAqEgl8IILAnyGgqhFYGjjTKCIEsCoSCagV1crkv_1mUEY1hwjqCbpWXXKhJ3IlpZTb28hARskBenfAdxDkqEglMhhGnw5Yx1BFjzVnbGus0SyoSCaVaZ1vhAayZEXaVofXVDB2t&tbo=u&sa=X&ved=2ahUKEwjHpvHU25_eAhWGkZAKHdDsC9lQ9C96BAgBEBs&biw=1193&bih=547&dpr=1.35#imgsrc=4fxMXMlxgDDI4M:

O debate sobre os corais da Foz do Amazonas

A realidade...

Fundo carbonático de algas calcárias
esparças, esponjas, peixes



4 Feb, 2017
Amazon Reef

 [Add to lightbox](#)

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4 Feb, 2017

Anemone in the Amazon Reef

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4 Feb, 2017



4 Feb, 2017

O debate sobre os corais da Foz do Amazonas

A realidade...

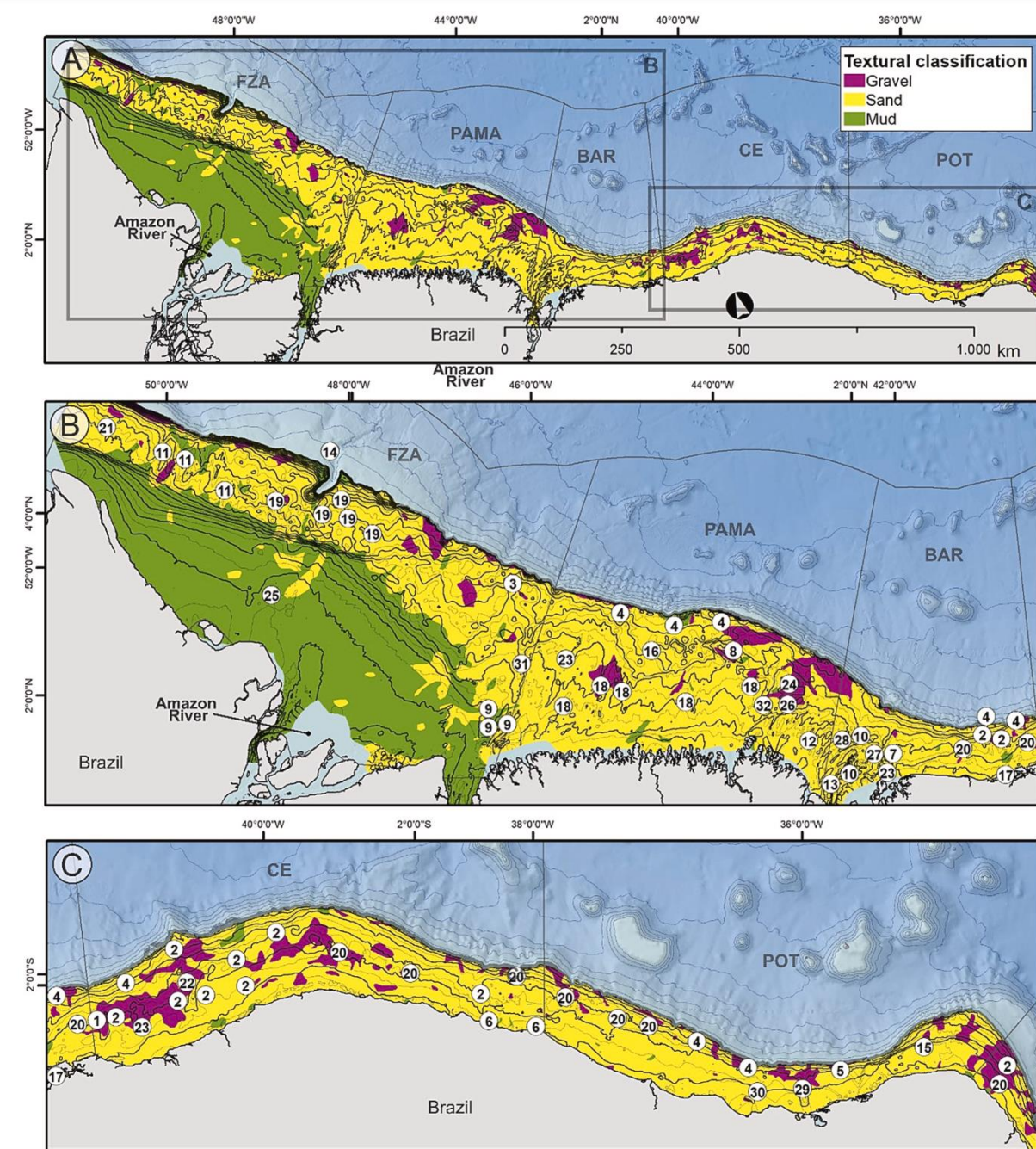
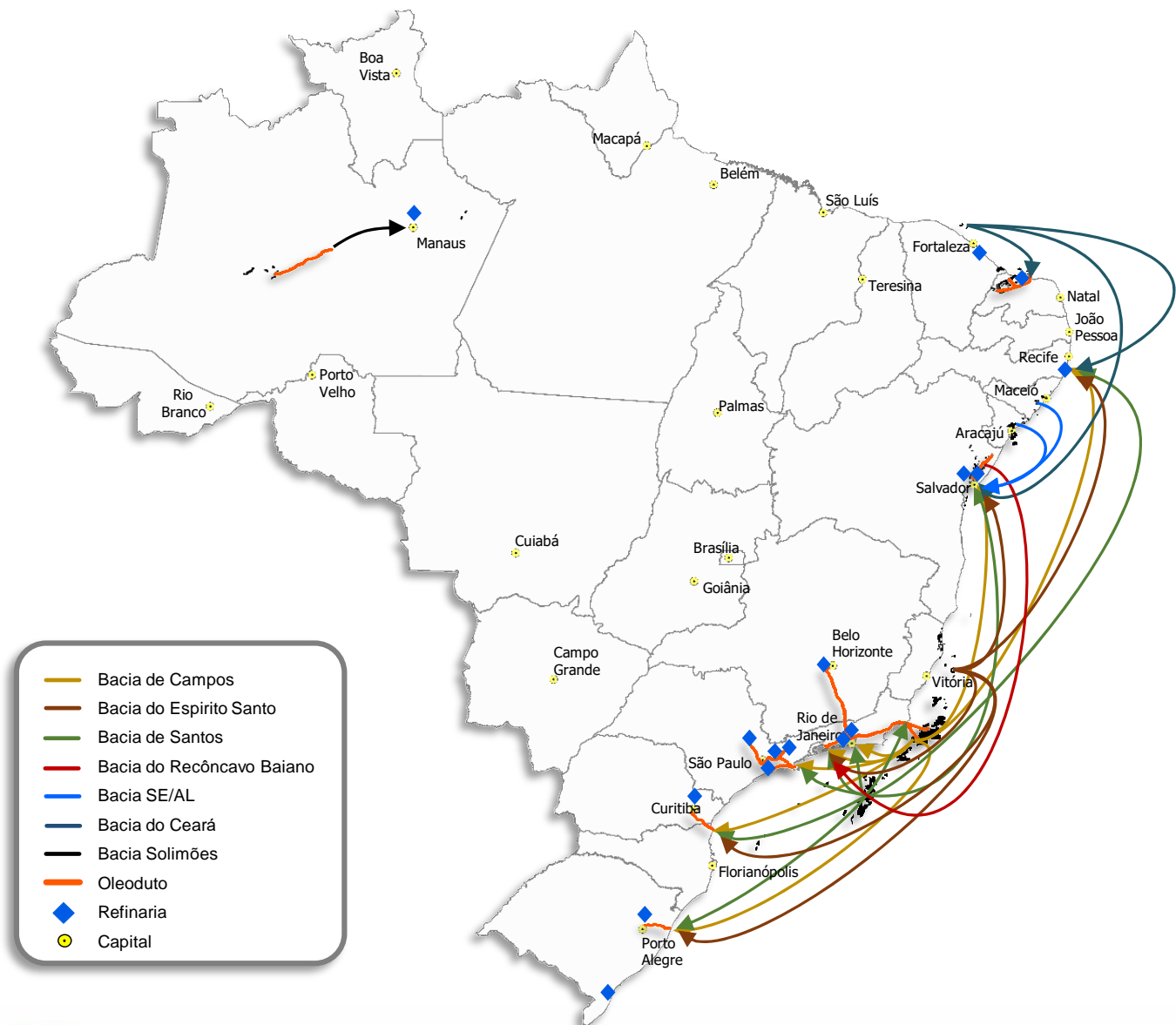


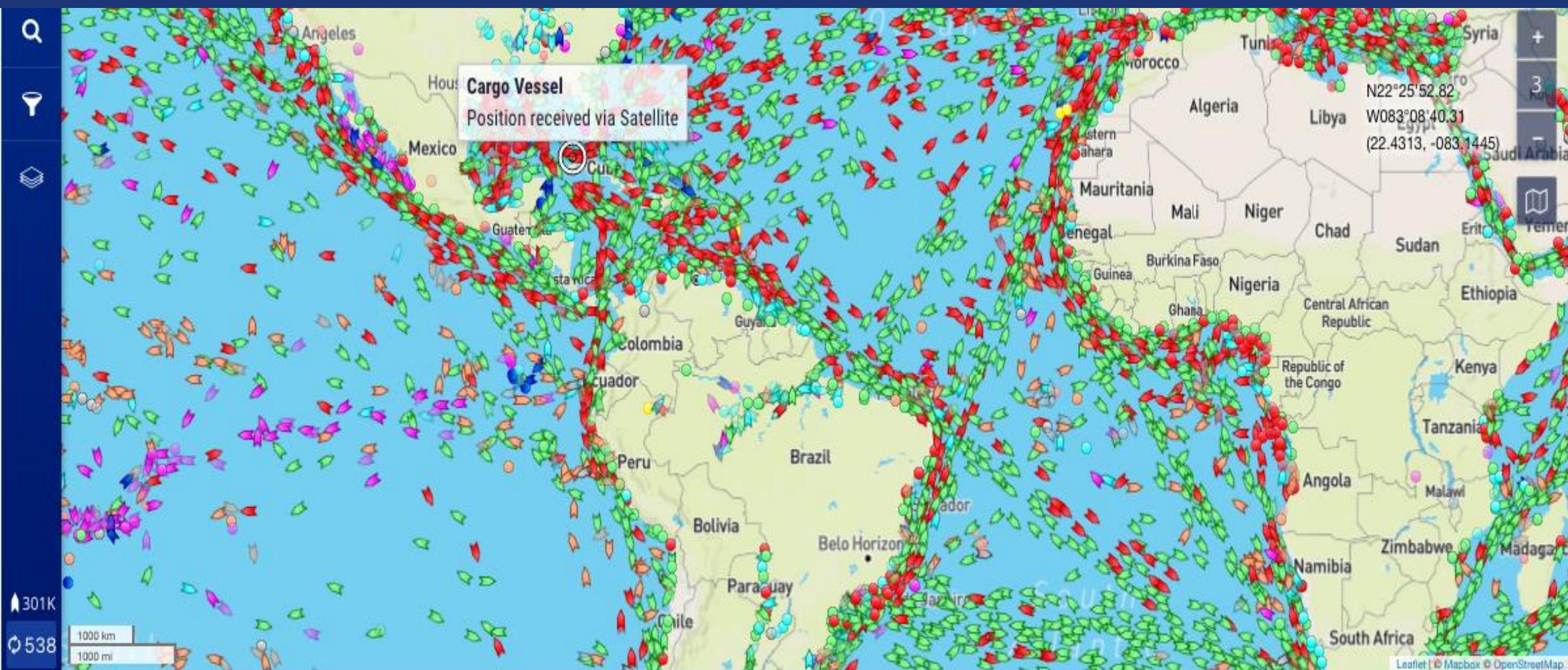
Fig. 5. Grain size classification based on analysis of 5515 surface samples, seabed images, and geomorphological features (A). The shelf is predominantly composed of sand with a high contribution of mud at the Amazon Submarine Delta (B). Gravel is found at isolated spots on the outer shelf and are strongly associated with bioclastics (B and C). Seabed features are listed in Fig. 4.

Movimentação de Petróleo

Mapa 2: Fluxos de Movimentação Interna de Petróleo por Bacia



O fluxo de navios no planeta e na Margem Equatorial

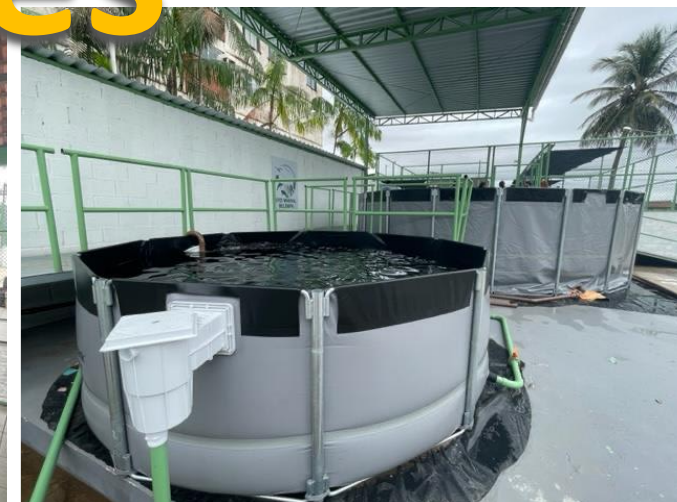


Centro de reabilitação da fauna



Centro de Reabilitação da Fauna Belém, PA

R\$ 50 milhões



Centro de reabilitação da fauna



Centro de Reabilitação da Fauna
Belém, PA



OIAPOQUE: Mais um

R\$ 150 milhões



E o Maranhão?

- **A História mostra que a mobilização é fundamental!**
- **O Maranhão tem duas bacias: Pará-Maranhão e Barreirinhas;**
- **Lutaremos?**



VIVA O BRASIL!