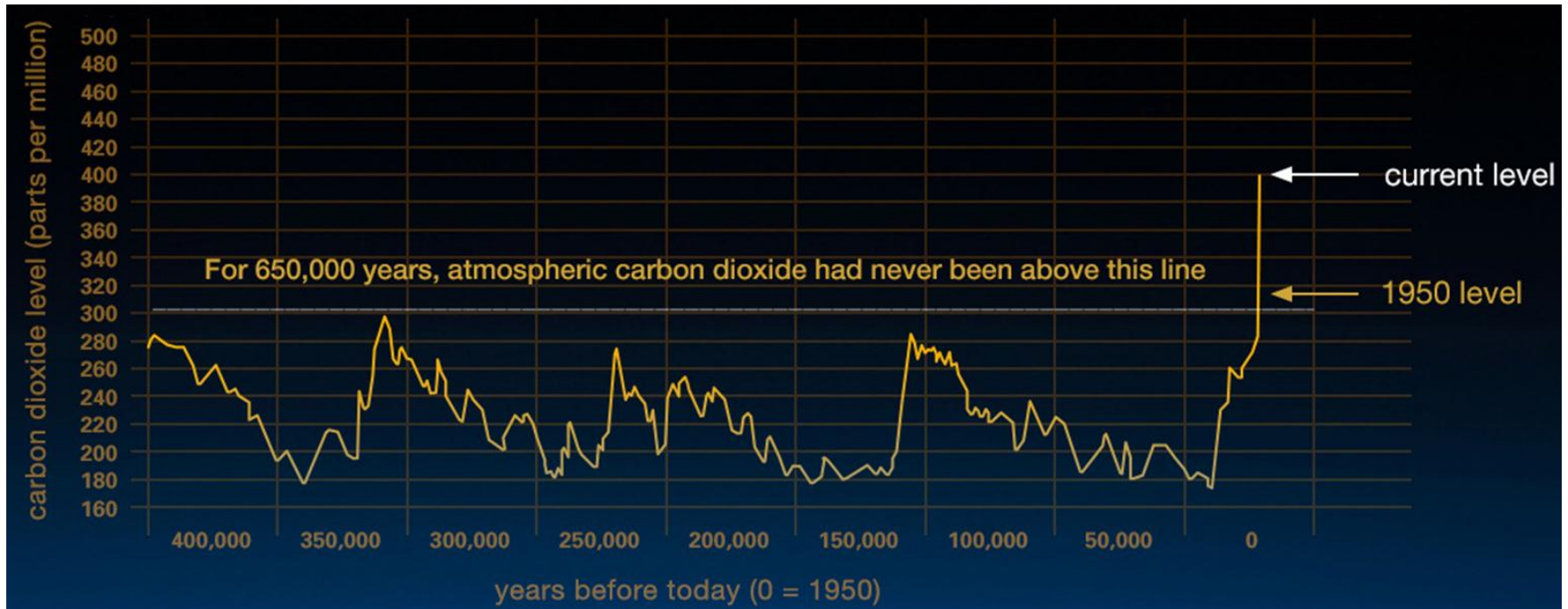


# **Resumo climático: ciência e política**

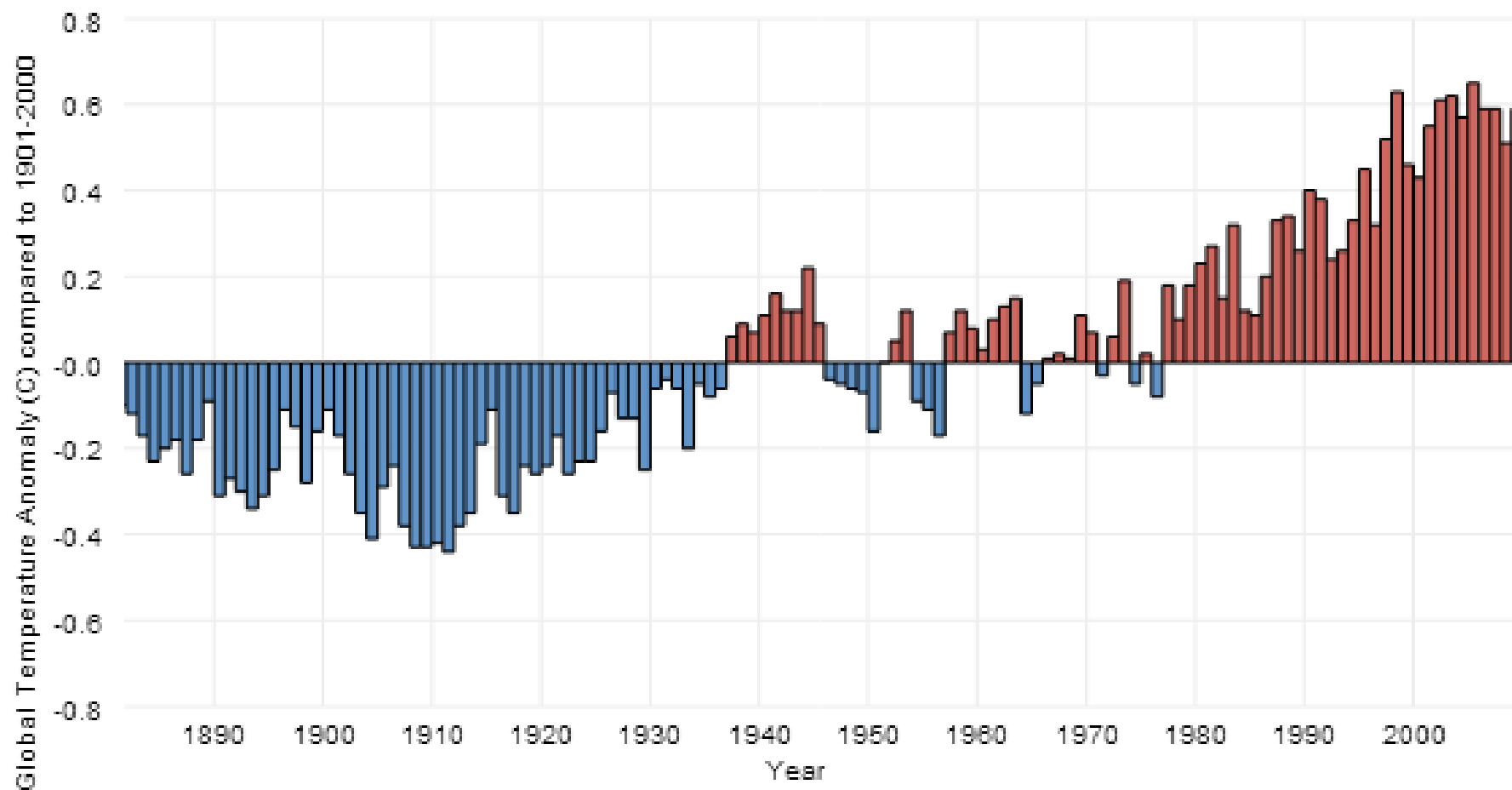


# Ciência: onde estamos?

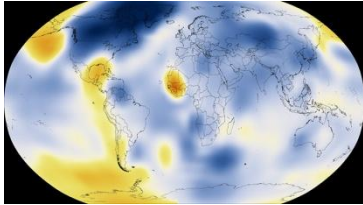


Credit: Vostok ice core data/J.R. Petit et al.; NOAA Mauna Loa CO<sub>2</sub> record.

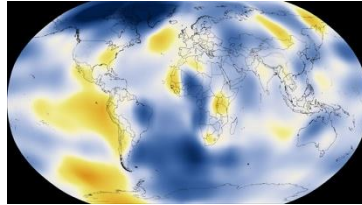
# Ciência: onde estamos?



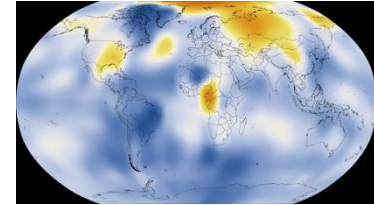
# Ciência: onde estamos?



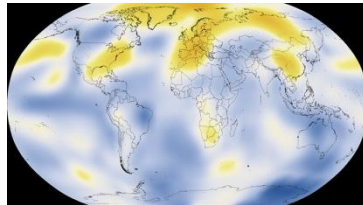
1884



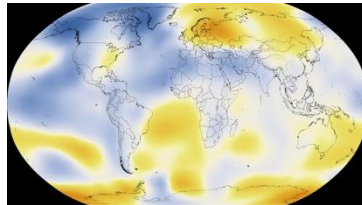
1900



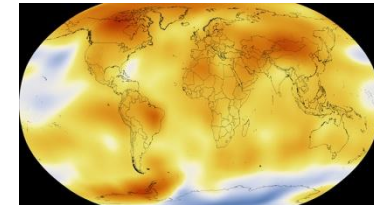
1925



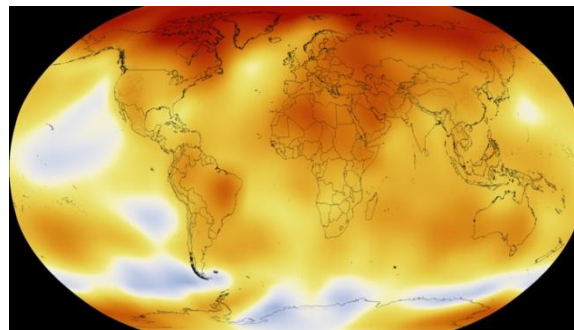
1950



1975



2000



2014

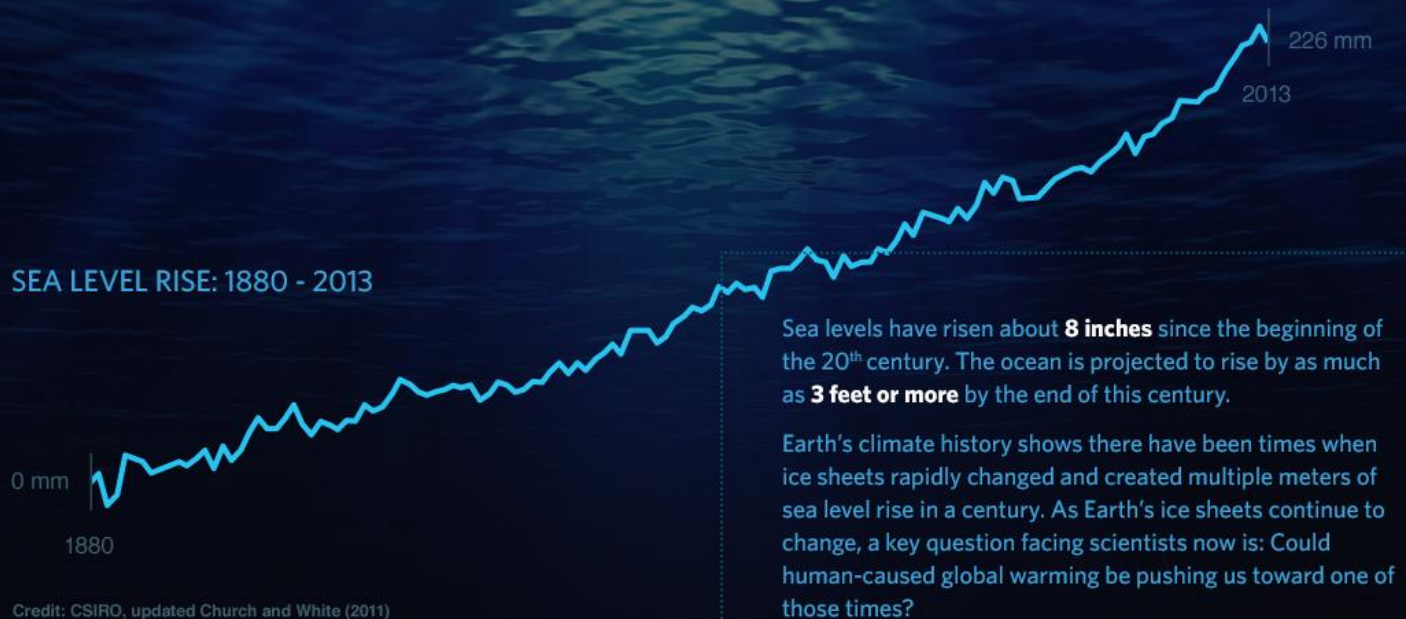


# Ciência: onde estamos?

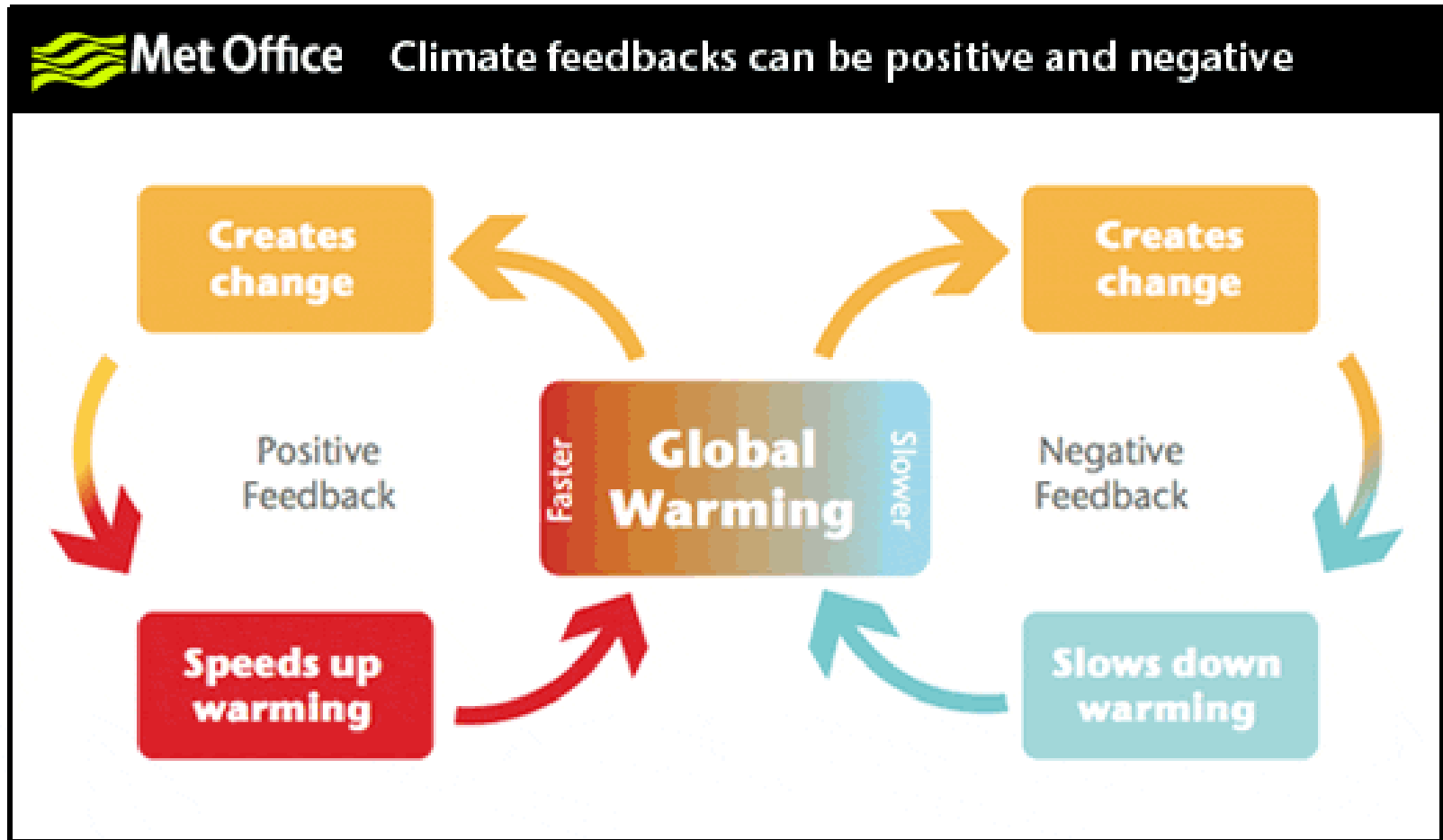


## AS OUR OCEAN WARMS, SEA LEVEL RISES

We know seas are rising and we know why. The urgent questions are by how much and how quickly.

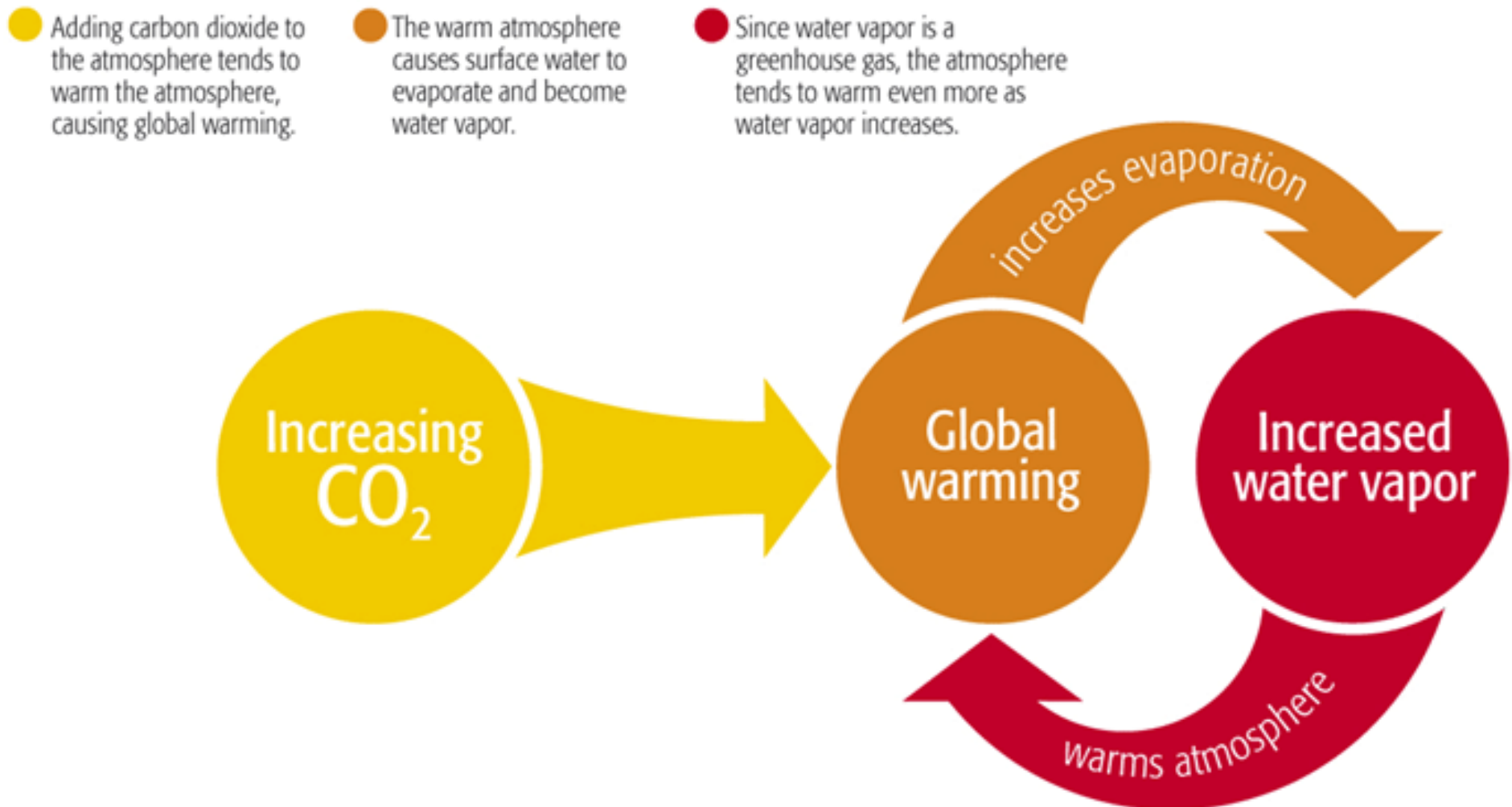


# Mecanismos de feedback

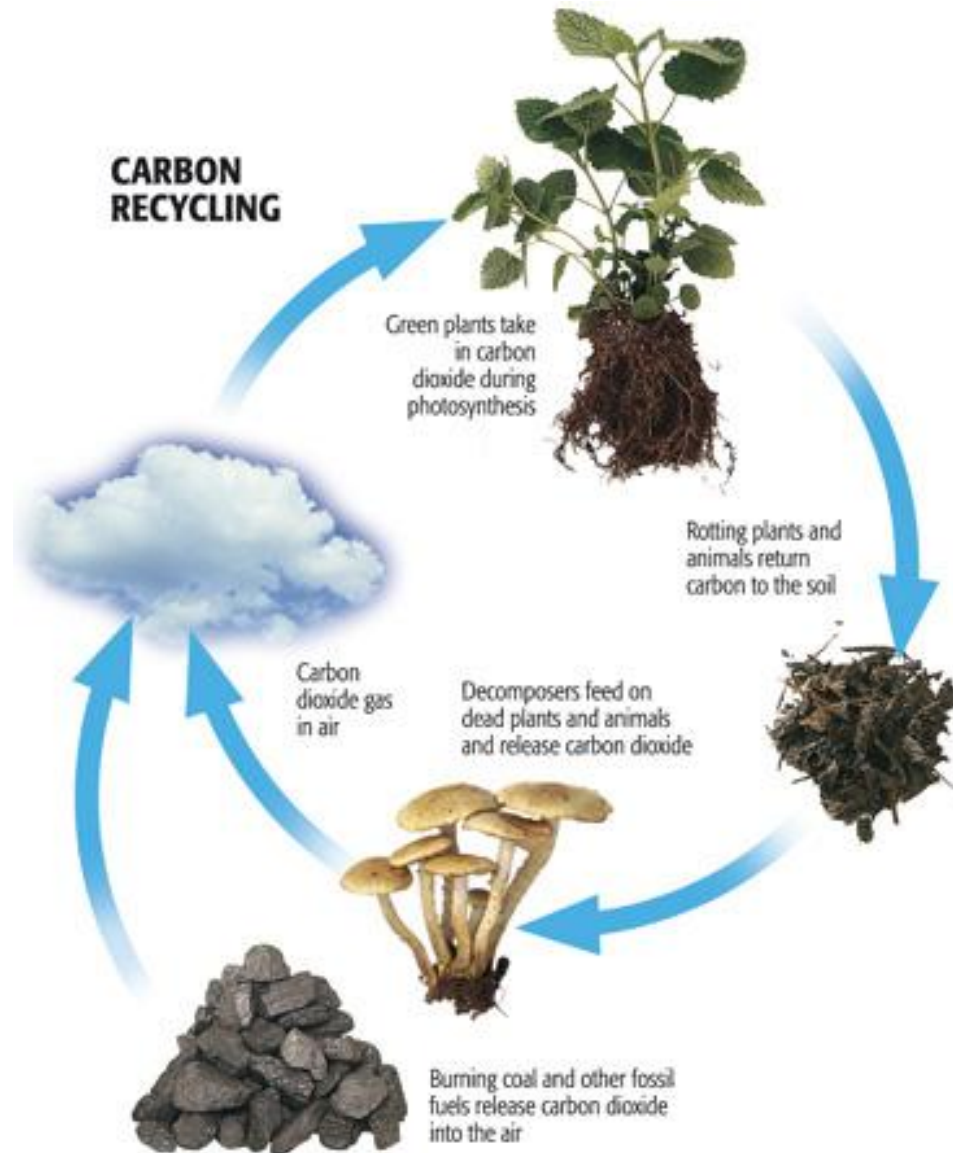


# Mecanismos de feedback

## POSITIVE FEEDBACK LOOP

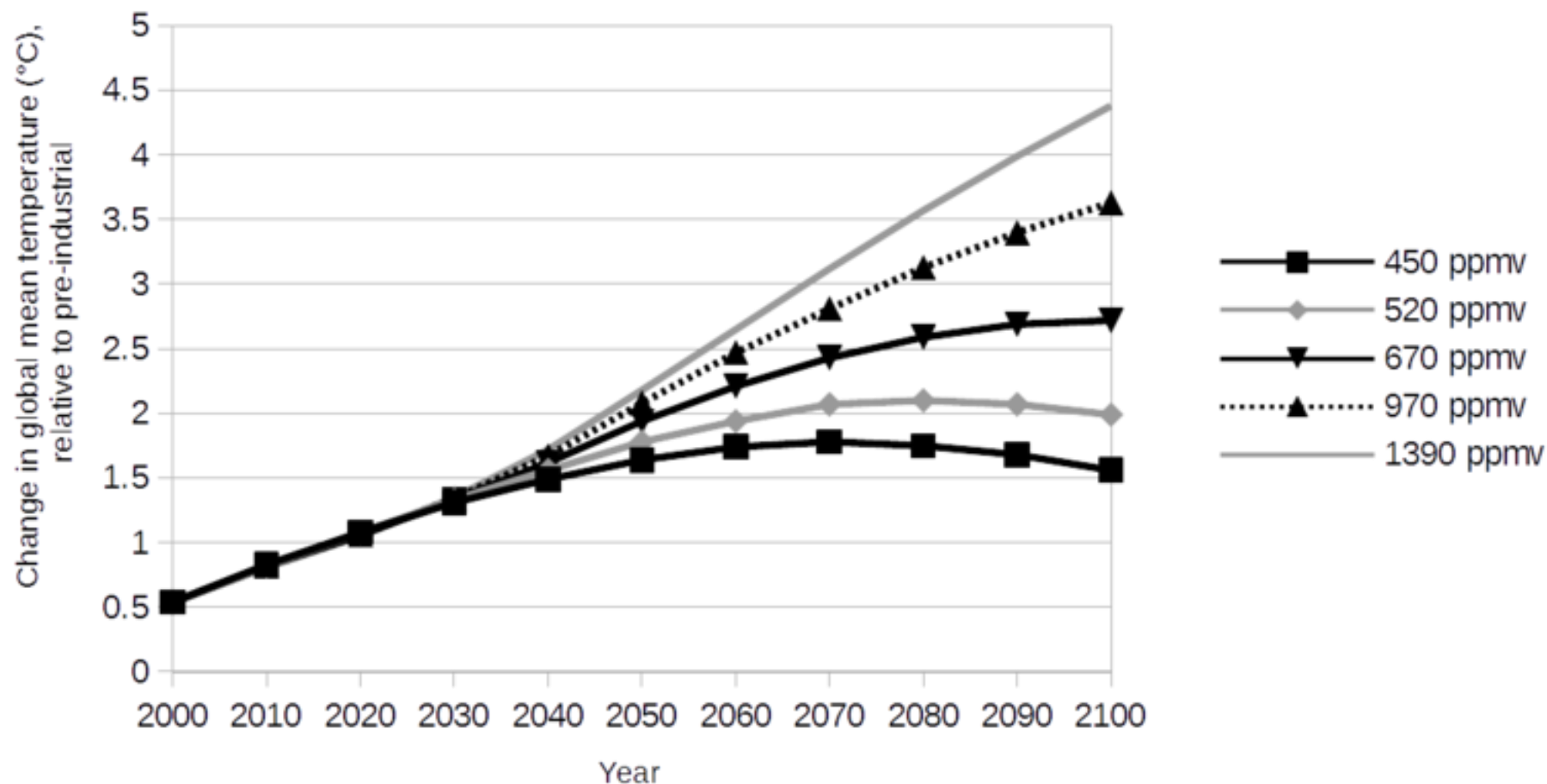


# Ciclo de carbono



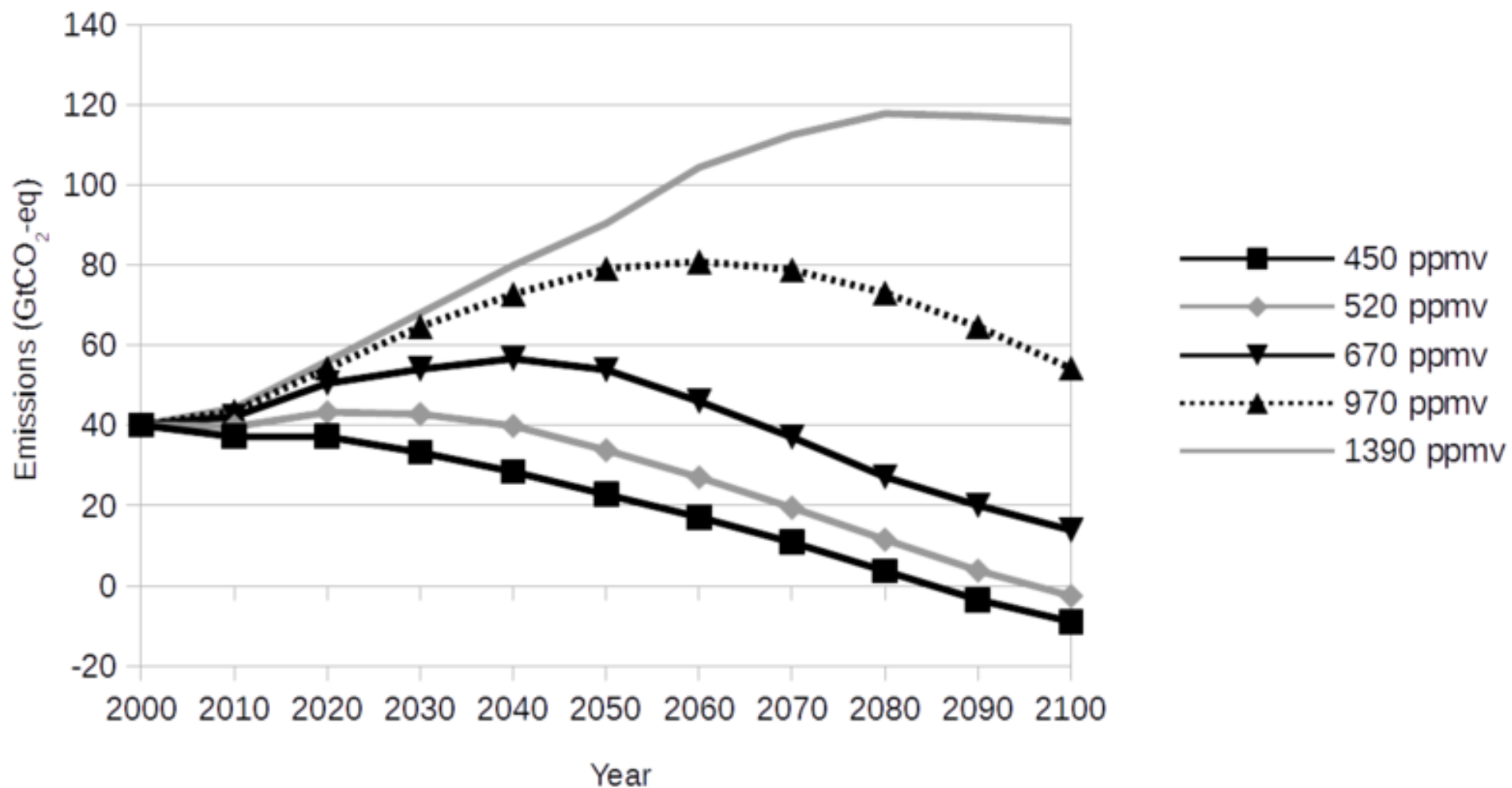


# Ciência: para onde vamos?



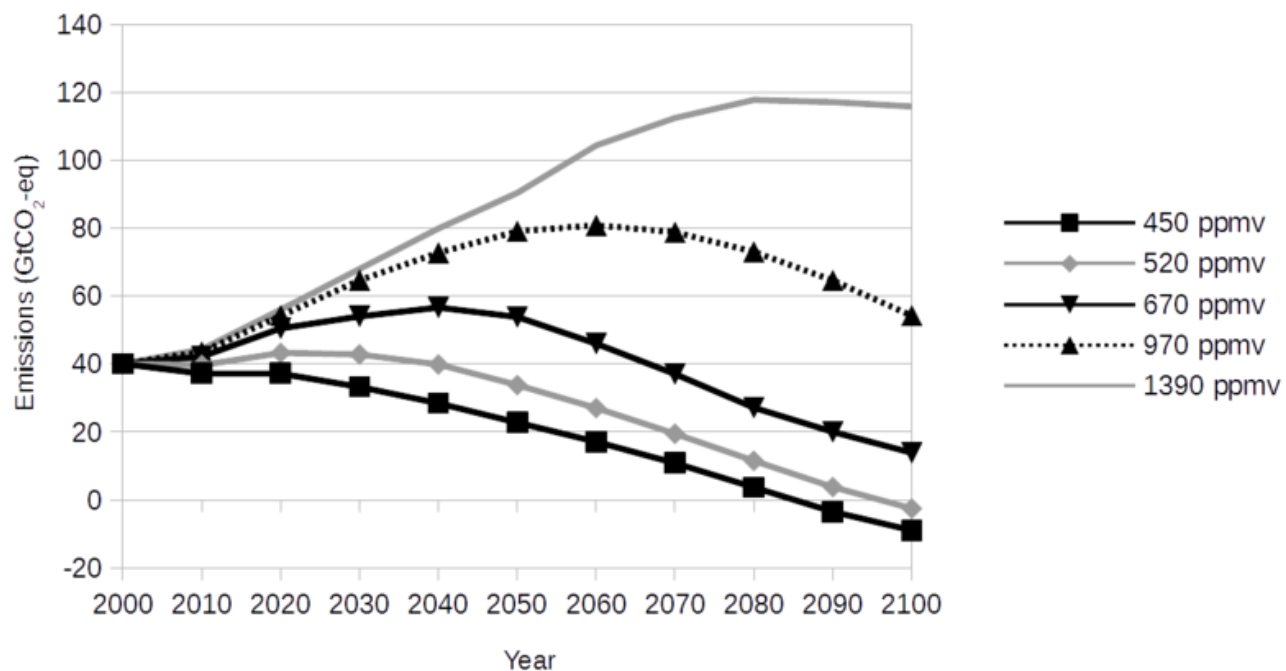
Variação da temperatura média global, relativamente aos valores pré-industriais, para vários cenários de estabilização da concentração de gases de efeito de estufa (GHG)

# Ciência: para onde vamos?



Emissões globais de GHG para vários cenários de mitigação

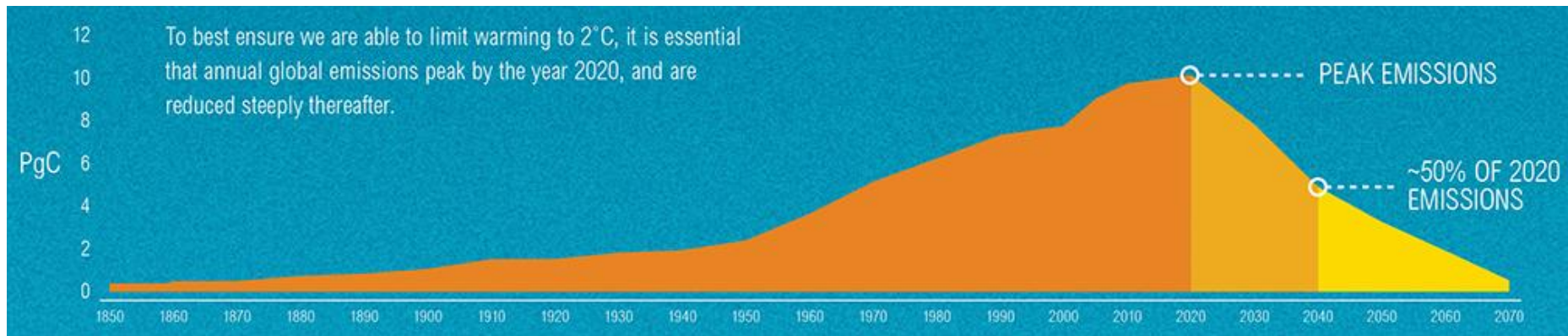
# Ciência: para onde vamos?



Scenario	Peaking decade
450 ppmv	2000
520 ppmv	2020
670 ppmv	2040
970 ppmv	2060
1390 ppmv	2080

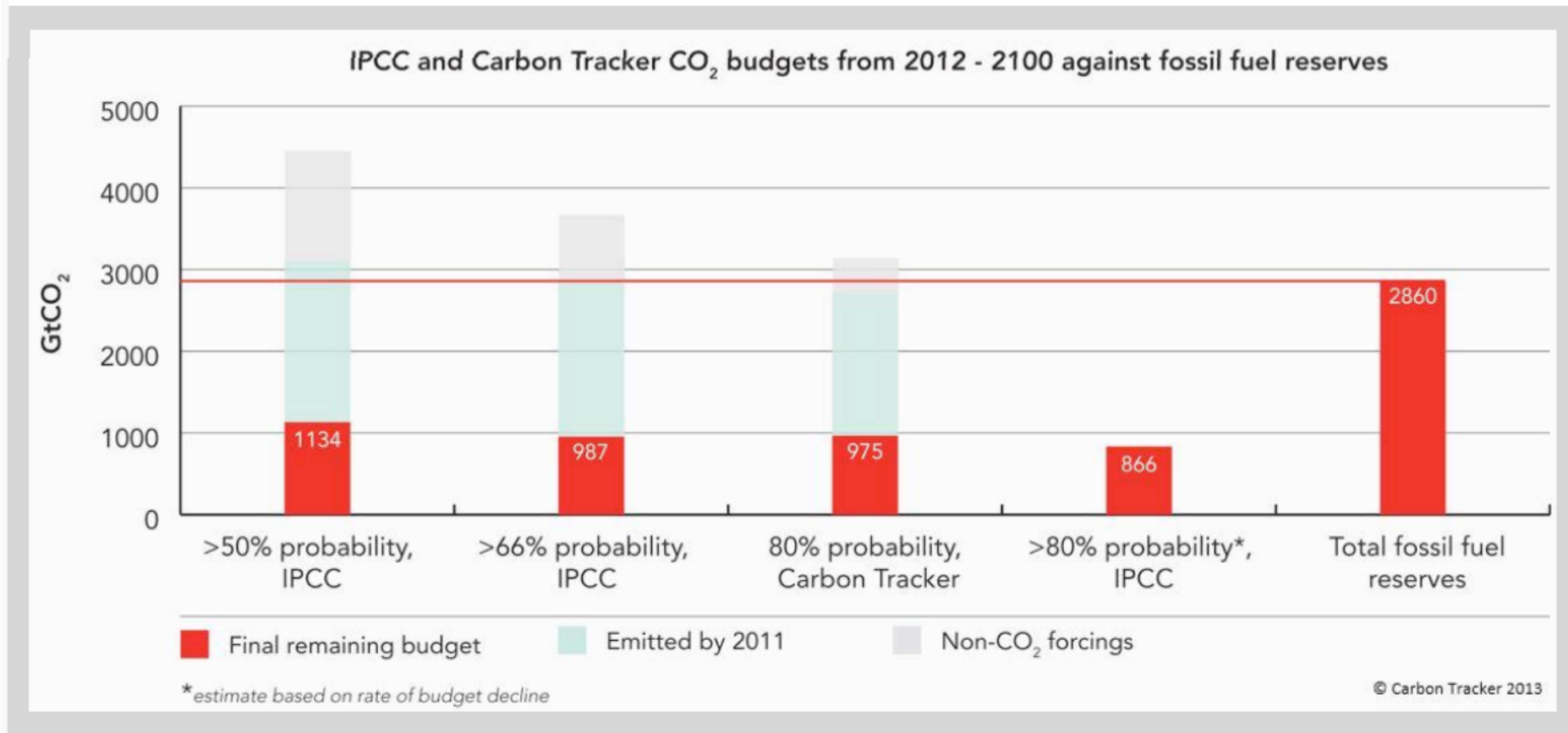
Emissões globais de GHG para vários cenários de mitigação

# Ciência: para onde vamos?



<http://www.wri.org/ipcc-infographics>

# Ciência: para onde vamos?



Apesar das reservas conhecidas serem mais do dobro do orçamento de carbono disponível, as petrolíferas gastam \$674 mil milhões/ano para encontrar novas reservas (<http://climatenexus.org/sites/default/files/article/CarbonBudget.pdf>)



# Política: o que foi feito?

1972 – United Nations Conference on the Human Environment

1979 – Primeira “World Climate Conference”

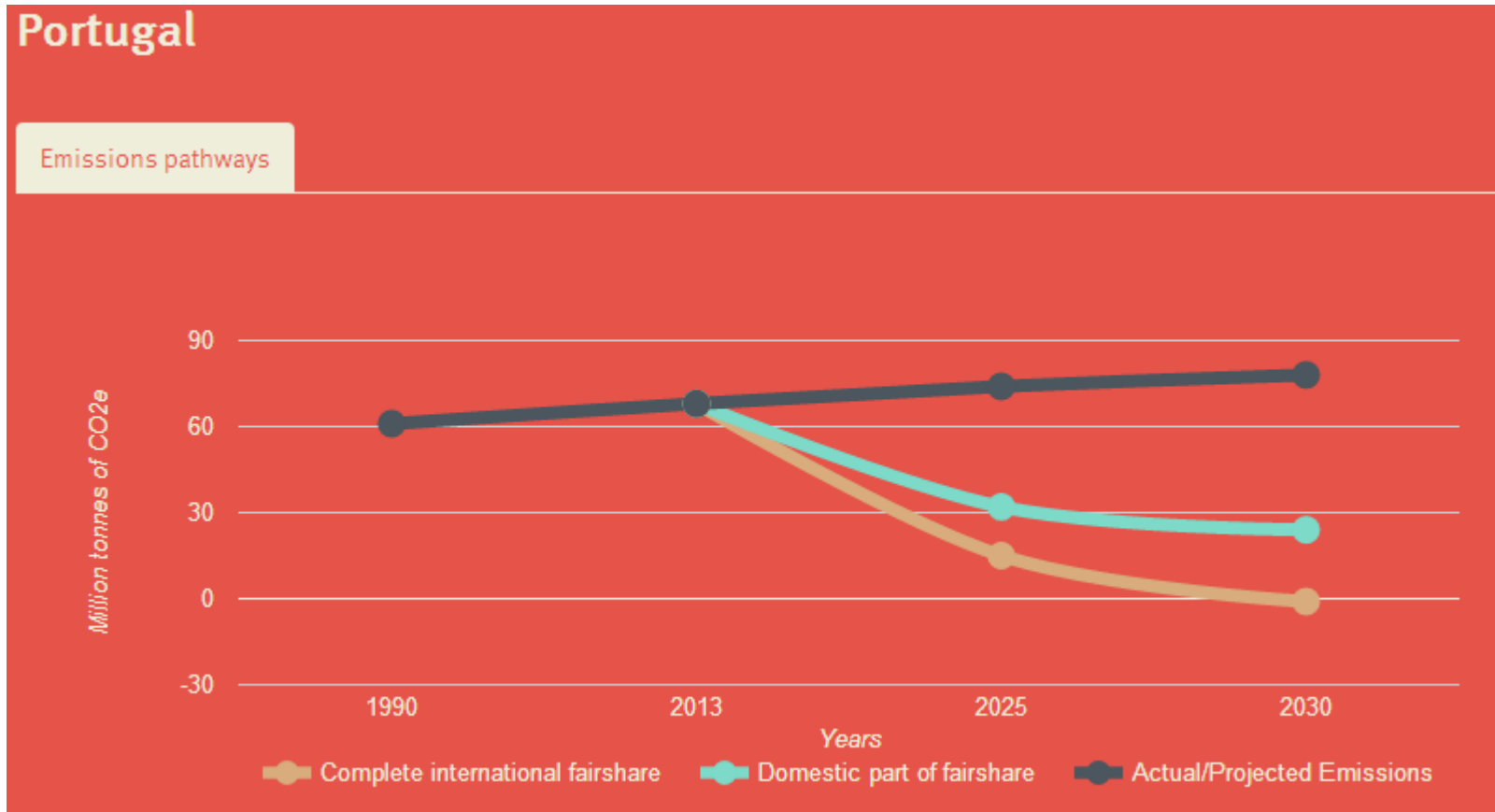
1988 – Criação do “Intergovernmental Panel on Climate Change”

1992 – Criada a United Nations Framework Convention on Climate Change

1997 – Assinatura do Protocolo de Quioto

# Política: o que fazer?

## Fairshare



# Política: o que fazer?

## Portugal

### Targets on 2013

	2025	2030
Change in domestic emissions	-52% to -62%	-65% to -75%
Complete international fairshare	-78% to -88%	-101% to -111%

### International Finance

This means that the international finance and technology transfer they must provide to meet their fairshare of effort could be as much as \$ 1.14 billion in 2025 and up to \$ 1.6 billion in 2030. The international finance for 2030 is equivalent to:



5 km of metro transit.



Delivering renewable energy for lives of dignity to 2 million people.



Increasing global research and development for agriculture by 2%.



Switch current fossil fuel subsidies for the equivalent of 16 million tonnes to instead transfer clean and appropriate technologies.



Which all together would create 48,000 new decent jobs.



**\$ 1.6 billion**

# Política: o que se pretende fazer?

## Intended Nationally Determined Contributions

Country	Date of Submission	Reduction	Target Year	Base Year	Climate Tracker Rating
Switzerland	27-02-2015	50%	2030	1990	MEDIUM
European Union (28 Member States)	06-03-2015	40%	2030	1990	MEDIUM
Norway	27-03-2015	40%	2030	1990	MEDIUM
Mexico	30-03-2015	25%	2030	Business as Usual Scenario	MEDIUM
United States of America	31-03-2015	26 - 28%	2025	2005	MEDIUM
Russian Federation	31-03-2015	25 - 30%	2030	1990	LOW
Andorra	30-04-2015	37%	2030	Business as Usual Scenario	MEDIUM
Canada	15-05-2015	30%	2030	2005	LOW/MEDIUM

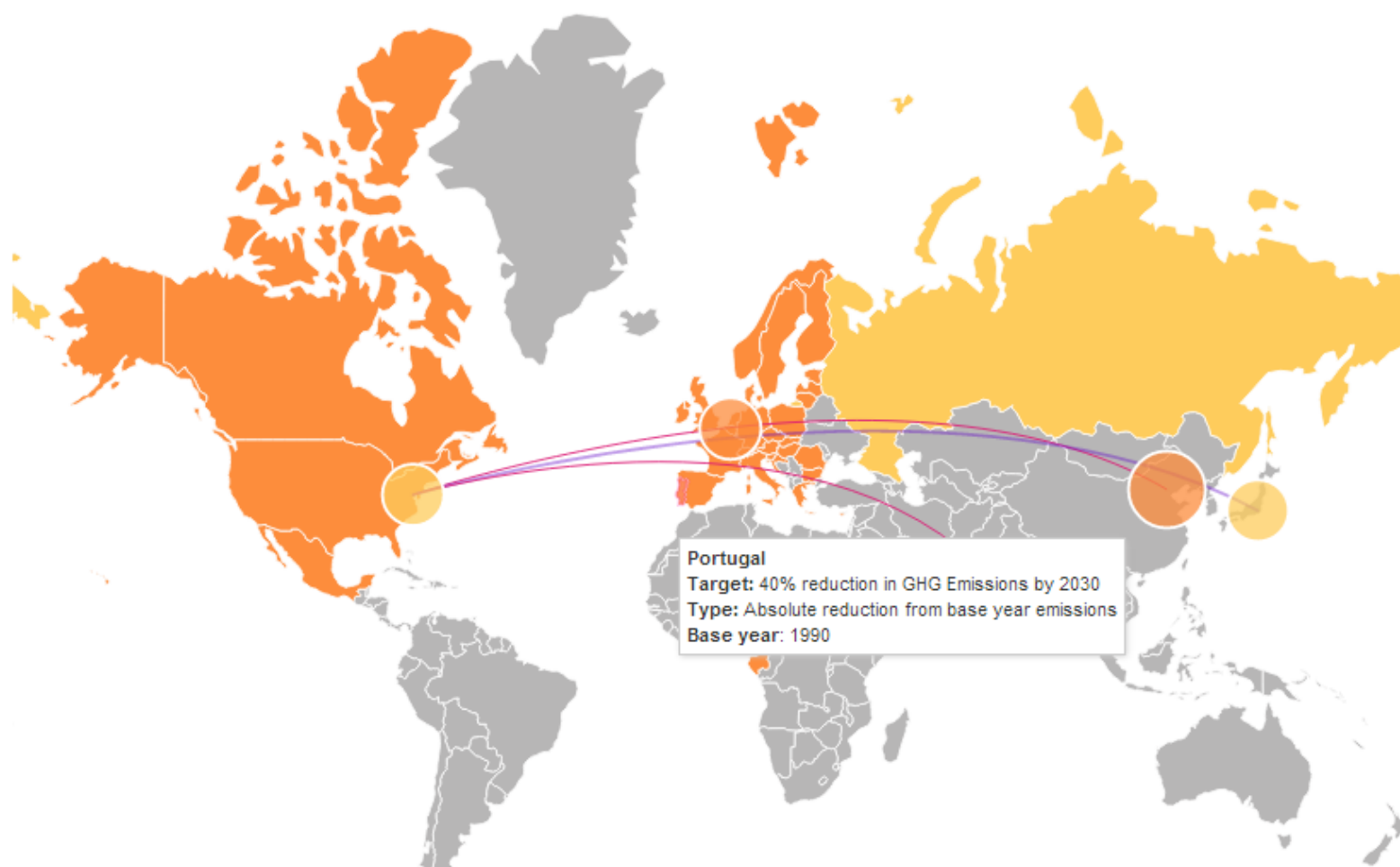
COP21: Paris Pledges

# Política: o que se pretende fazer?

## Intended Nationally Determined Contributions and Bi-lateral Commitments

Rated by ambition:

Low:  Medium:  High:  No Submission Received: 





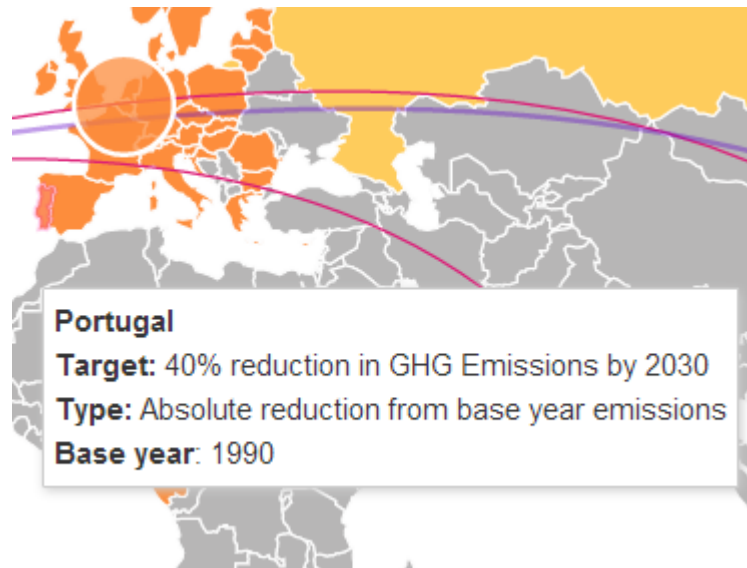
# Política: o que fazer VS o que se pretende fazer

## Portugal

Targets on 1990

	2025	2030
Change in domestic emissions	-47% to -57%	-61% to -71%
Complete international fairshare	-76% to -86%	-101% to -111%

As the international part of the effort is the reduction of approximately 18 million tonnes, international finance to be provided should be: \$ 1.14 billion



# FIM

