

# „NARAVA“ IN „DRUŽBA“ V KRIZI ANTROPOCENA

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5. konferenca učiteljev/-ic naravoslovnih predmetov – NAK 2019  
IZOBRAŽEVANJE ZA SEDANJOST IN PRIHODNOST




REPUBLIKA SLOVENIJA  
MINISTRSTVO ZA IZOBRAŽEVANJE,  
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## the Anthropocene Equation

Last 4 billion years



$$\frac{dE}{dt} = f(A, G, I)$$

Last 40 years  
(current)



$$\frac{dE}{dt} = f(H)$$

$A, G, I \rightarrow 0$

**Where:**  
*E* is the Earth system  
*A* is astronomical forces  
*G* is geophysical forces  
*I* is internal dynamics

**Where:**  
*H* is industrialized societies

The Anthropocene Equation, Gaffney and Steffen 2017.  
Design: Globalea

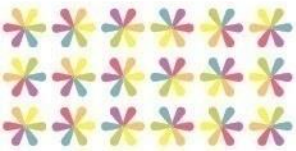
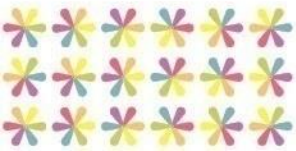
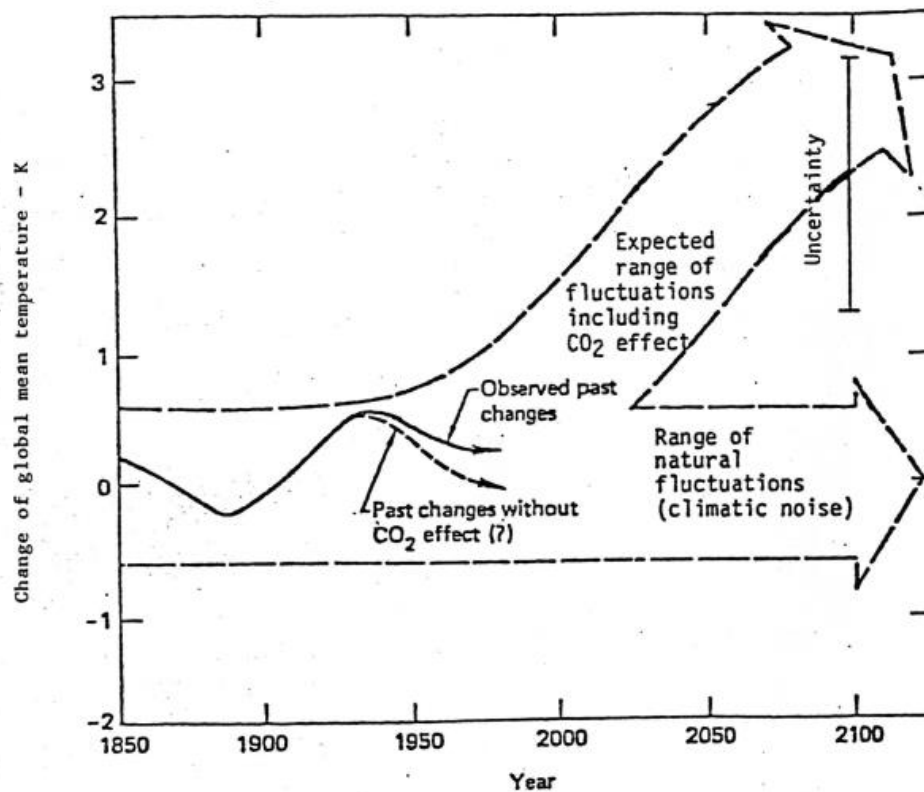
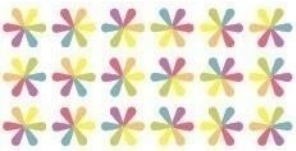
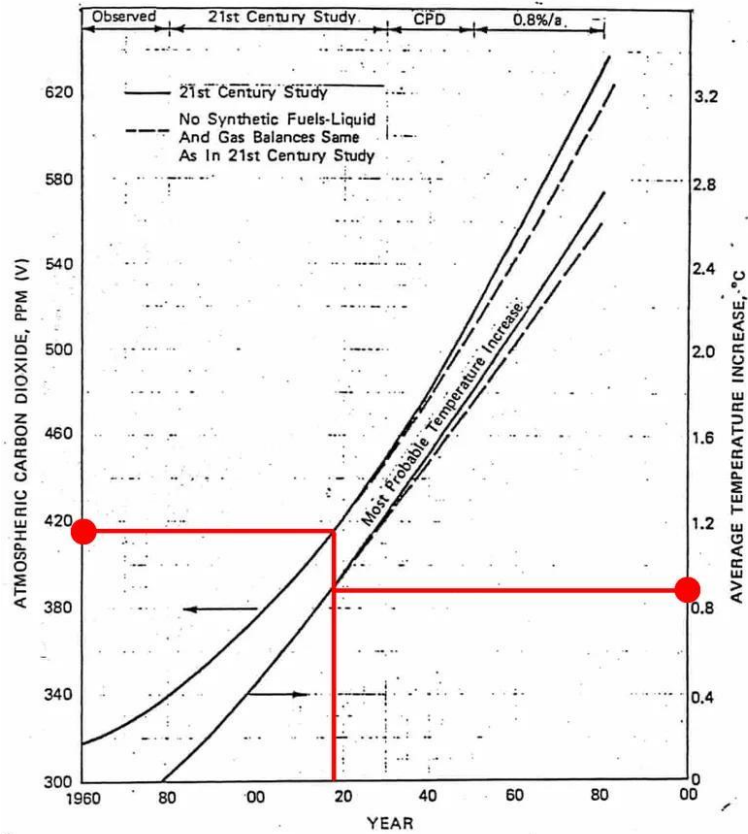


Figure 9

Range of Global Mean Temperature From 1850 to the Present  
with the Projected Instantaneous Climatic Response to  
Increasing CO<sub>2</sub> Concentrations.

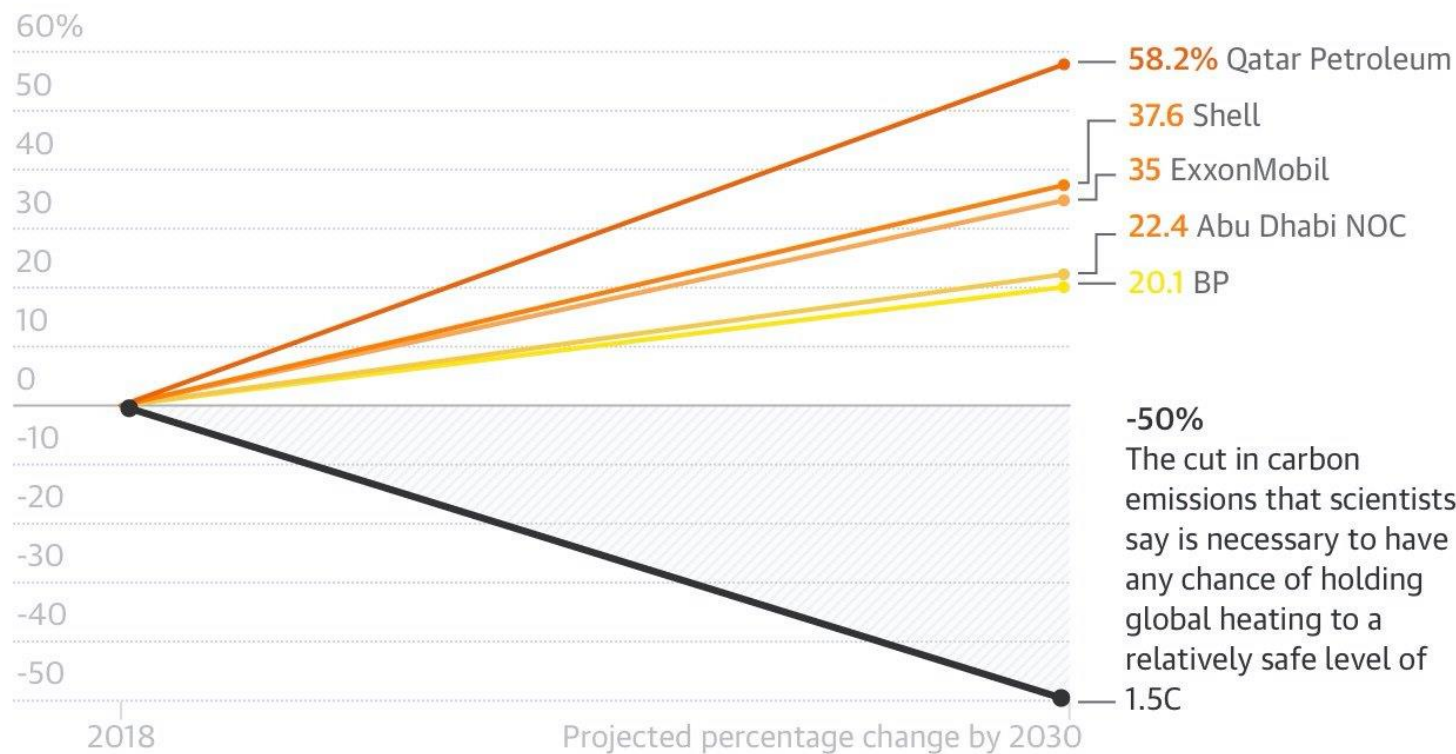


GROWTH OF ATMOSPHERIC CO<sub>2</sub> AND AVERAGE GLOBAL TEMPERATURE INCREASE AS A FUNCTION OF TIME

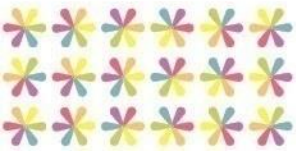


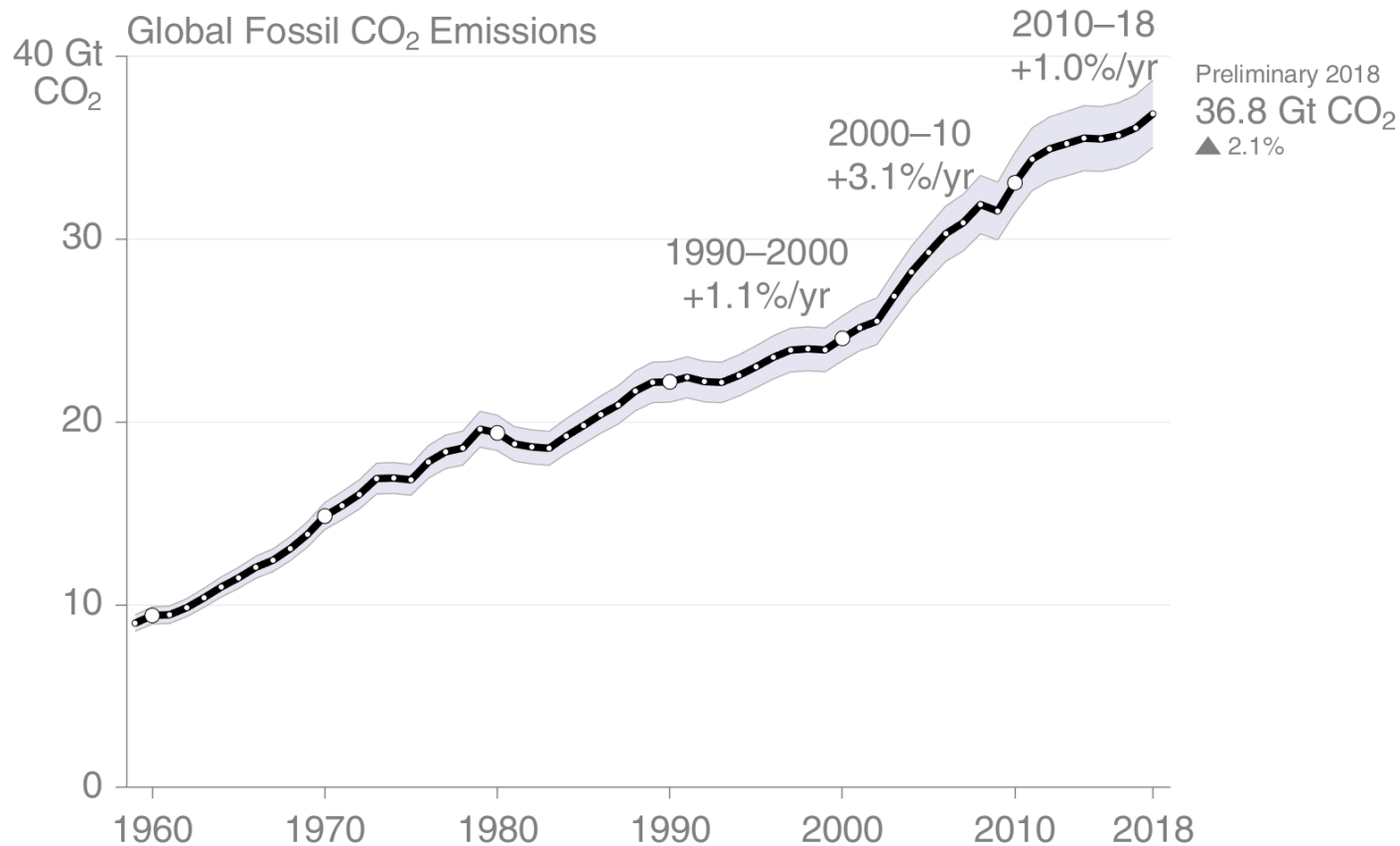
# Shell and ExxonMobil have a projected oil and gas production increase of more than 35% between 2018 and 2030

Oil and gas projected production increases between 2018 and 2030

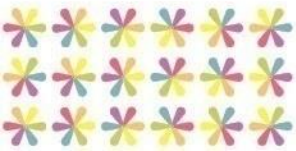


Guardian graphic. Source: Rystad Energy, IPCC. Selected companies from top 50 oil and gas companies shown





© Global Carbon Project • Data: CDIAC/GCP/BP/USGS



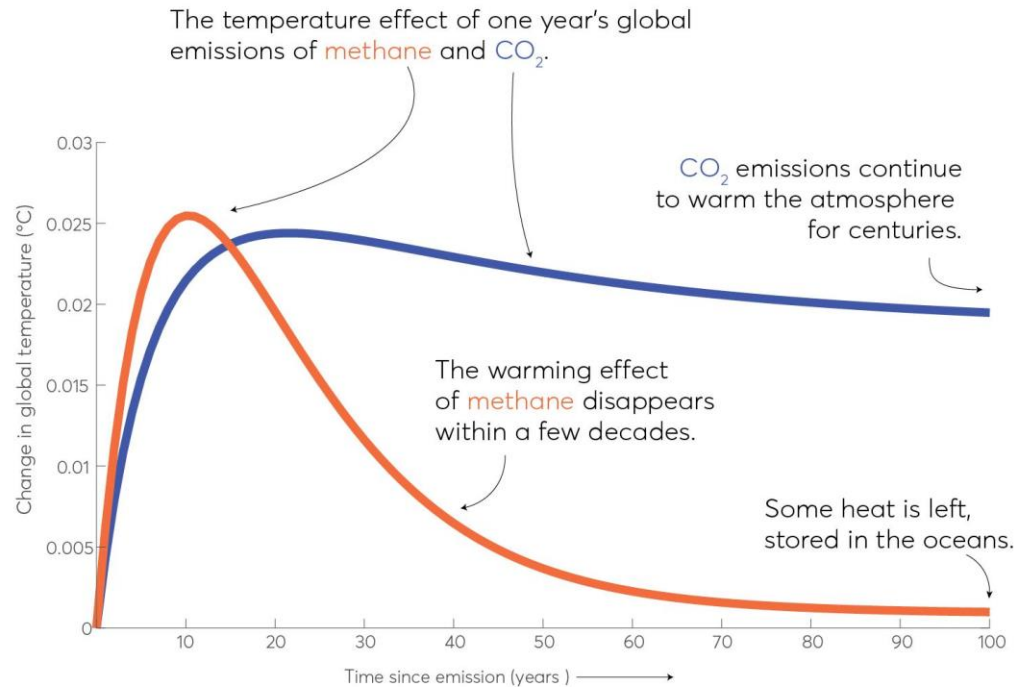
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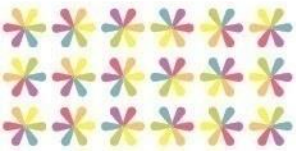


## Warming from methane decreases sharply after ten years.

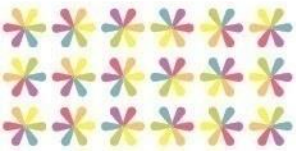
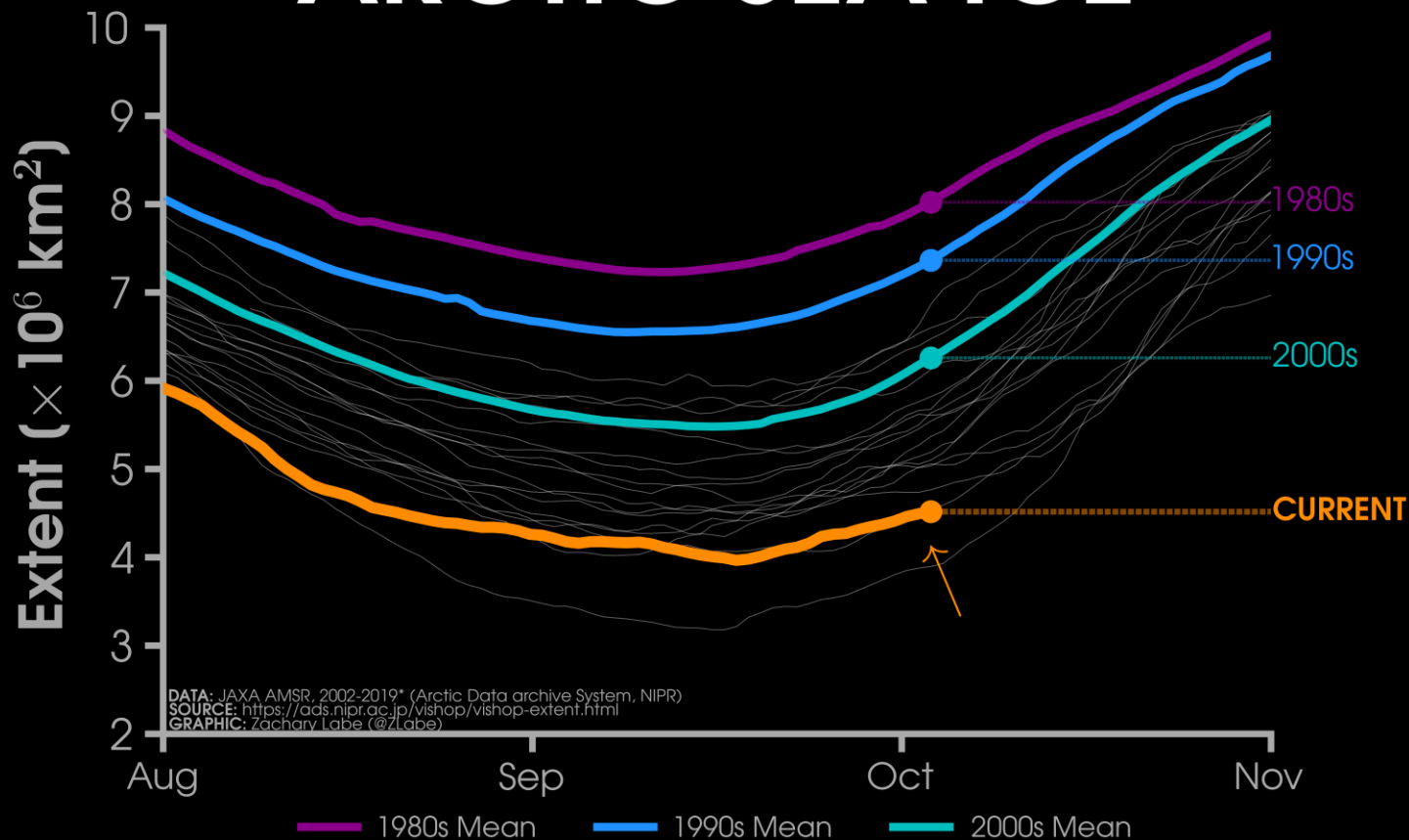


Source: Community Emissions Data System (CEDS) / Borgar Aamaas, CICERO

[www.cicero.oslo.no](http://www.cicero.oslo.no)



# ARCTIC SEA ICE



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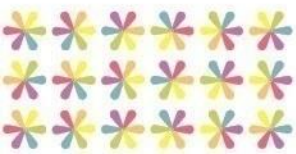
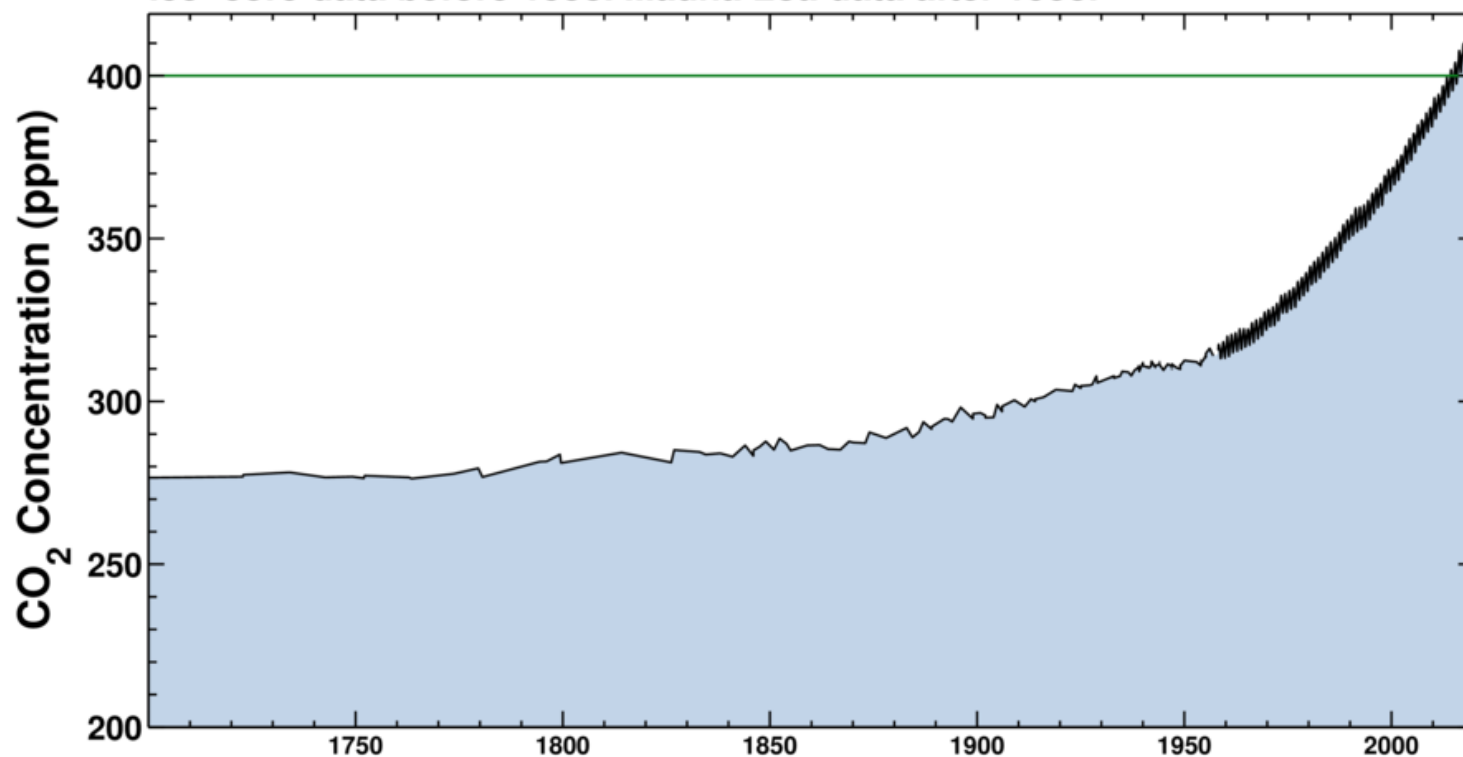
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Latest CO<sub>2</sub> reading  
May 18, 2019

# 415.02 ppm

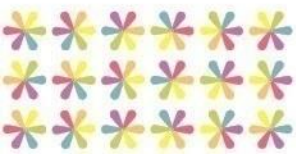
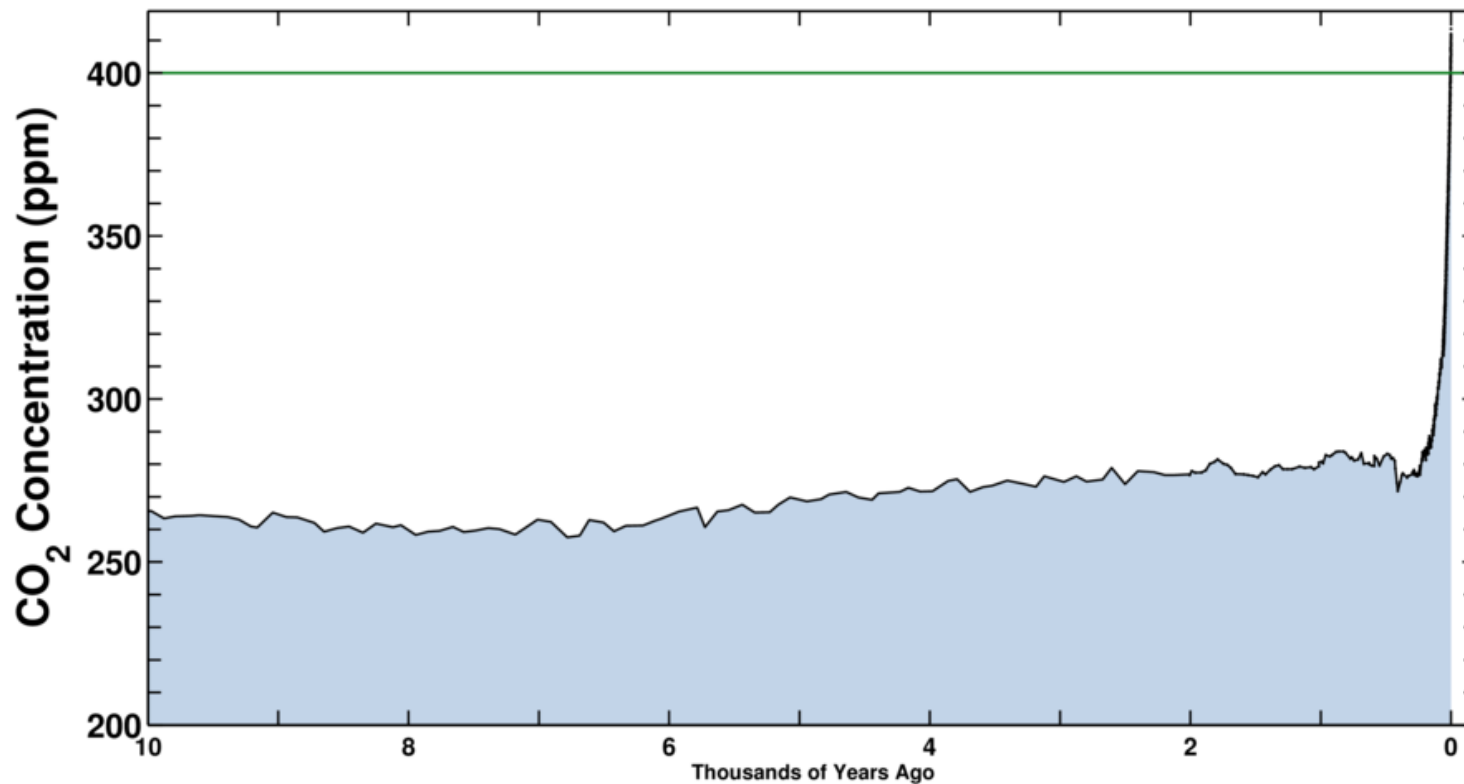
Ice-core data before 1958. Mauna Loa data after 1958.



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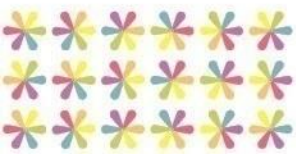
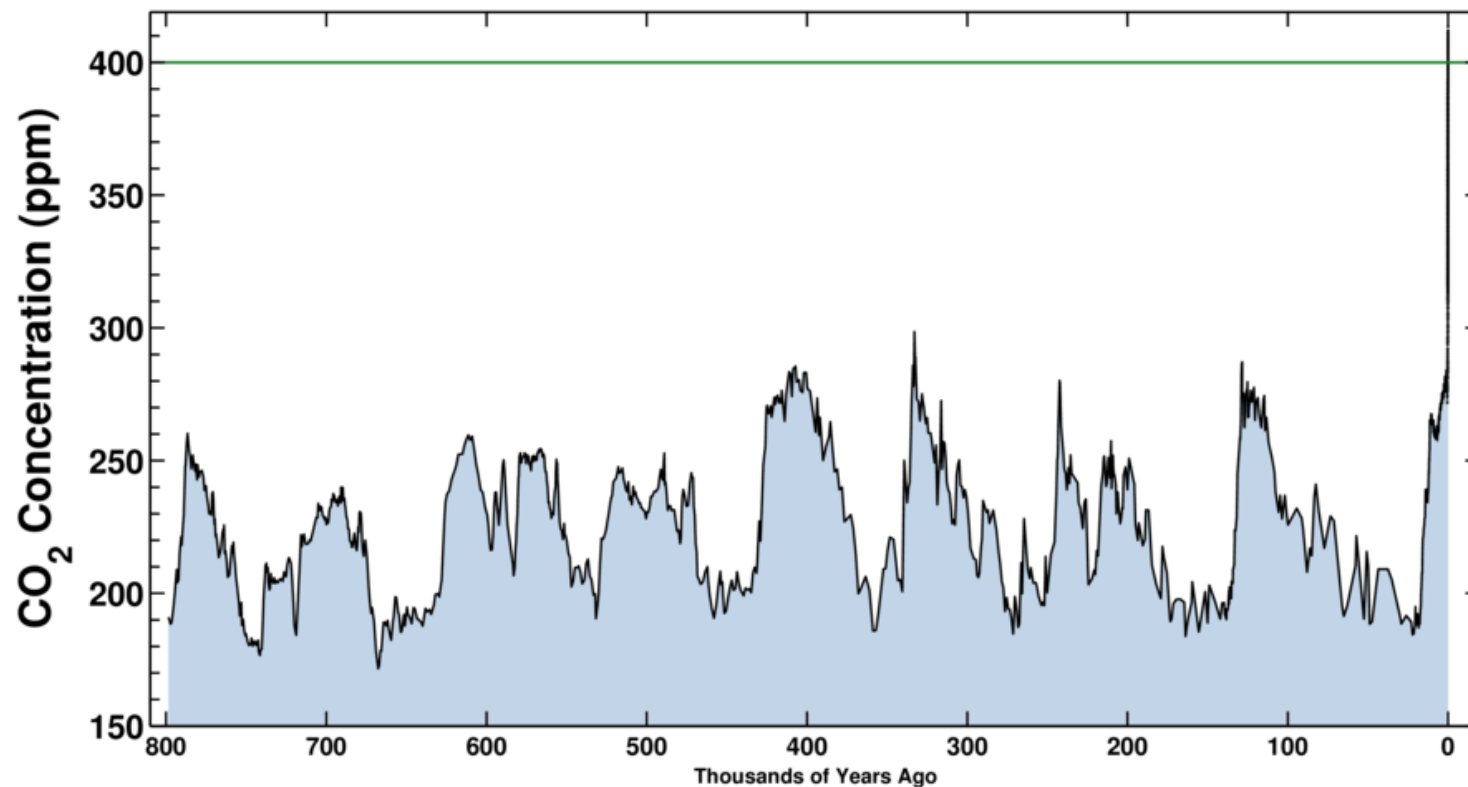
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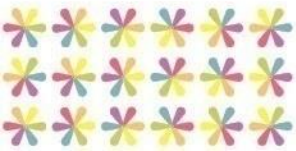
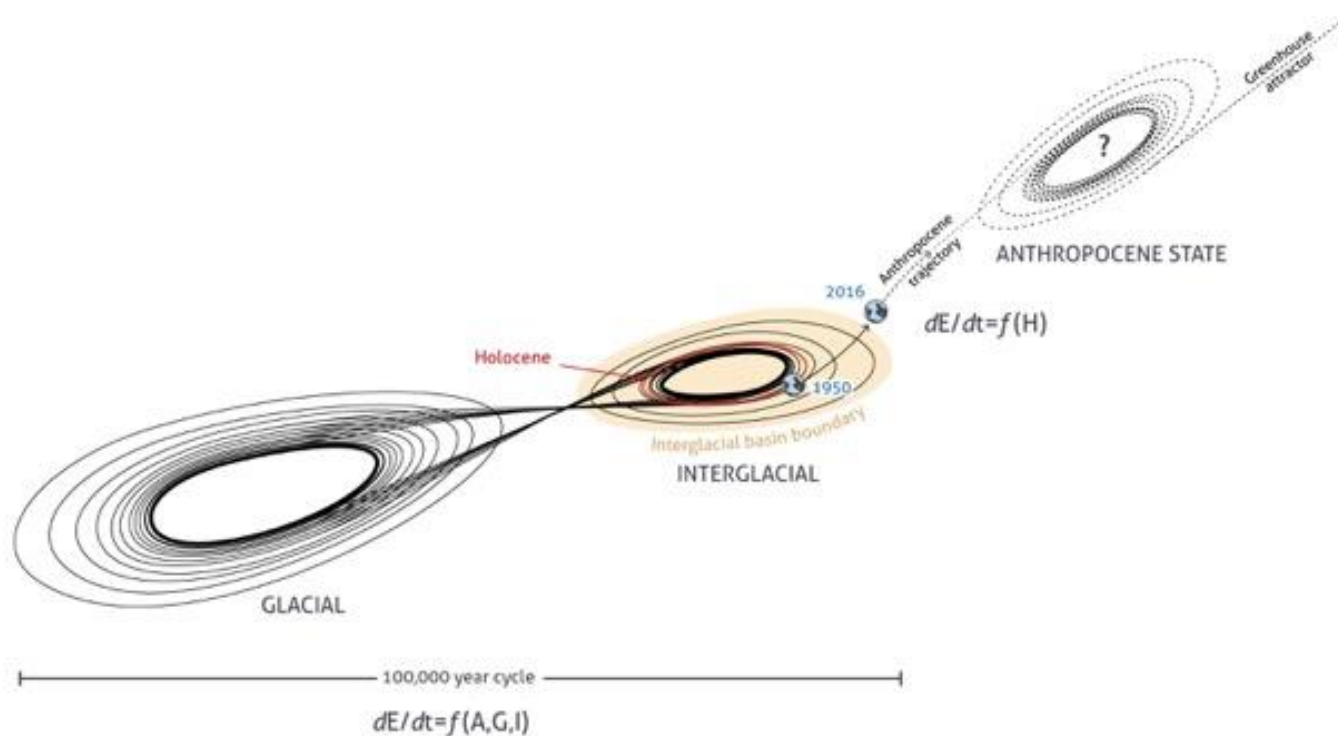
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EVROPSKA UNIJA  
EVROPSKI  
SOCIALNI SKLAD  
NALOŽBA V VAŠO PRIHODNOST



## Limit cycles of the earth system the last 1.2 million years and potential earth trajectories the coming 100 years

