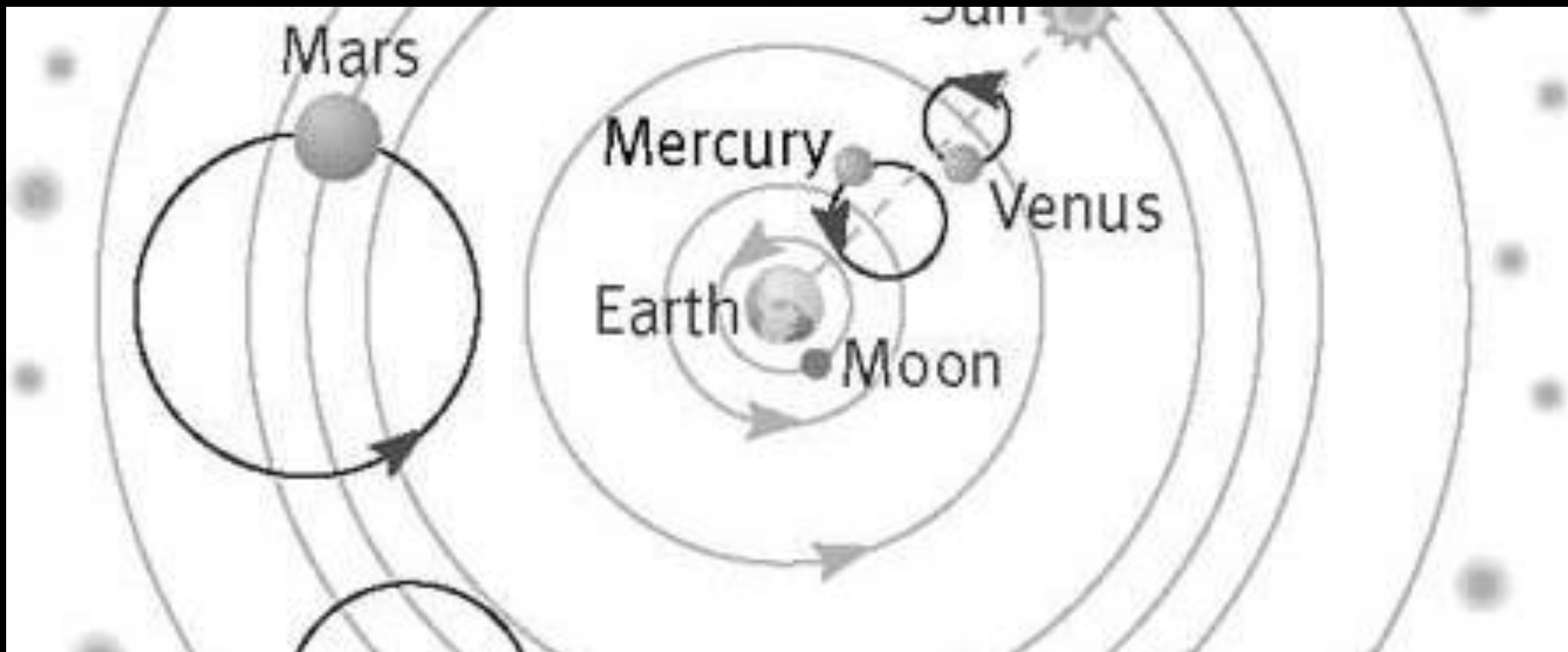


On Time and Water
in the
light of paradigm shifts.

Andri Snær Magnason
27th of September 2021

Jarǝmiǝjukenningin



Copernicus 1543

In **1543**, Nicolaus Copernicus detailed his radical theory of the Universe in which the Earth, along with the other planets, rotated around the Sun.

His theory took more than a century to become widely accepted



Flugbók no. 1

Nafn Hulda Filippusdóttir

Selas blatt 3

Reykjavík

Fæddur 29 júní 1924

Gekk í félagið 6 mars 1944



formaður

Bókin byrjuð 28-5-1944

Bókin útskrifuð

Hulda G. Filippusdóttir

Eiginhandar undirskrift



1809

“The 1st of July 1810; we will then resign, when a proper and suitable constitution shall be fixed on, and that the poor and common people shall have an equal share in the government with the rich and powerful.”

A new scientific truth does not triumph by convincing its opponents and making them see the light, but rather because its opponents eventually die and a new generation grows up that is familiar with it — Max Planck 1950

1918





In a paradigm shift:

You are part of the change.

or

You are hit by the change.

“Ocean Acidification”

First mentioned in Iceland
In newspapers 2006



Landsbókasafn Íslands - Háskólabókasafn
Þekkingarveita í allra þágu



Leita

"súrnun hafsins"

Leita

Ítarleit

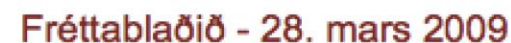
☐ Nota beygingarlýsingu ☐ Langir útdrættir

Niðurstöður 1 - 4 af 4 fyrir "*súrnun hafsins*"

2000-2009

rööun

vægi leitarorða



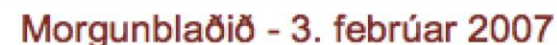
9. árgangur 2009, 76. tölublað, Blaðsíða 78

sé mikill en erfitt verði að snúa henni við. Enn sé þó tími til að grípa inn í: ?Fyrst og fremst verða stjórnámamenn að átta sig á því að **súrnun hafsins** er



94. árgangur 2006, 247. tölublað, Blaðsíða 10

sem mun fjalla um áhrif loftslagsbreytinga á þörungavöxt í N-Atlantshafinu auk þess að ræða um **súrnun hafsins** vegna gróður- húsaáhrifa. Ólafur Karvel Pálsson og



95. árgangur 2007, 33. tölublað, Blaðsíða 6

fram að uppsöfnun koldíoxíðs í andrúmsloftinu geti valdið hærra sýrustigi í hafinu. ?Koldíoxíðið leysist upp í vatni og myndar súru og **súrnun hafsins** getur haft



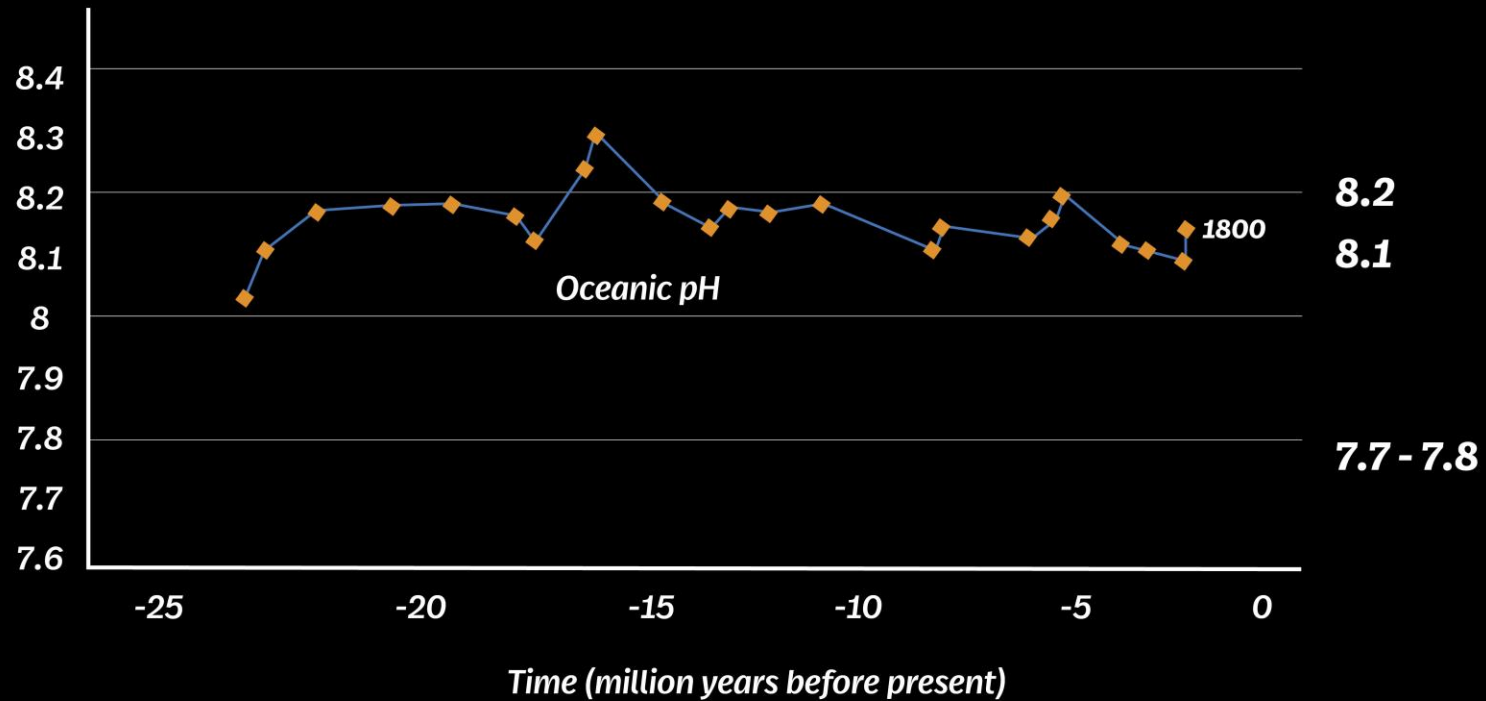
97. *árgangur* 2009, 335. tölublað, Blaðsíða 27

Súrnun hafsins ógnar fram- tíðarhagsmunum Íslendinga BÆJARSTJÓRN Hafnarfjarðar ákvað samhljóða á fundi sín- um þann 18. desem- ber 2007 að selja 95% af því hlutafé

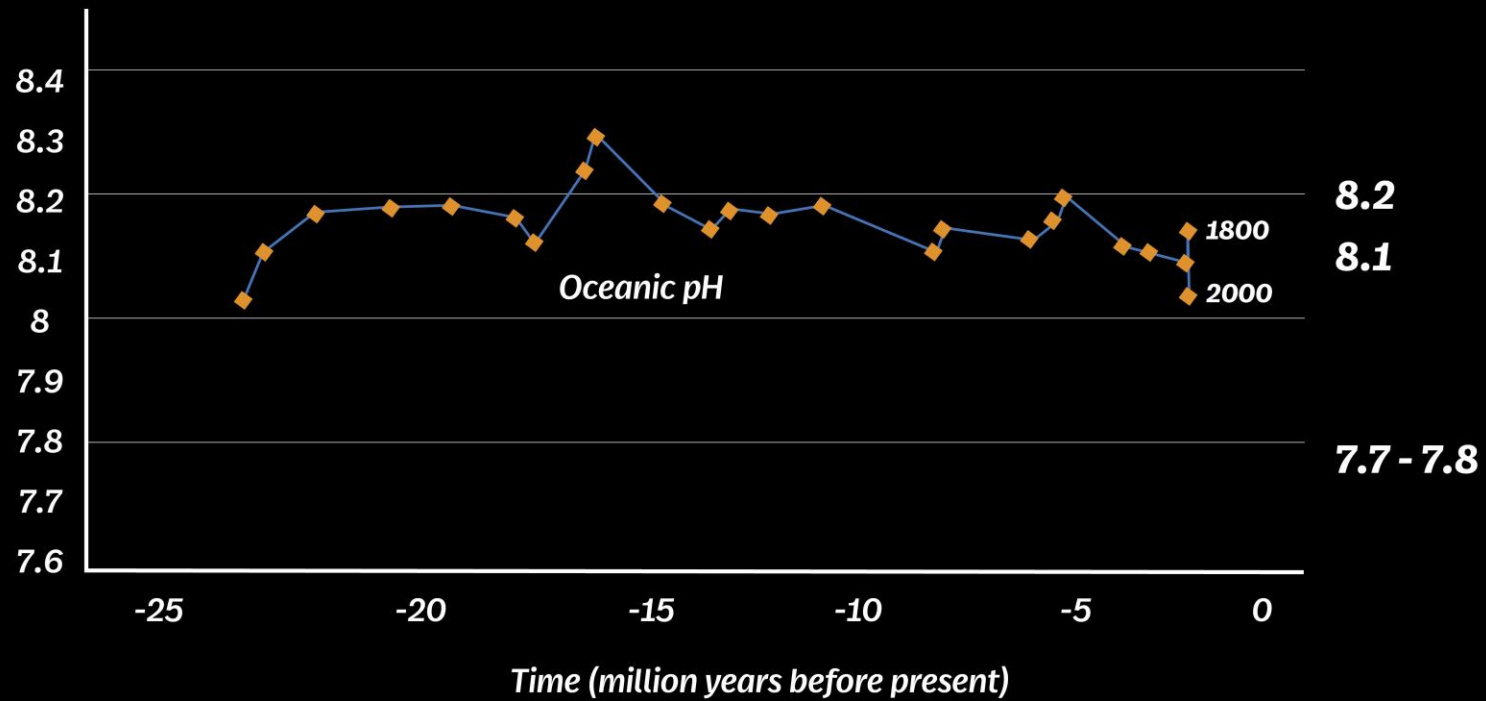
- > Morgunblaðið (3)
- > Fréttablaðið (1)

Ar:

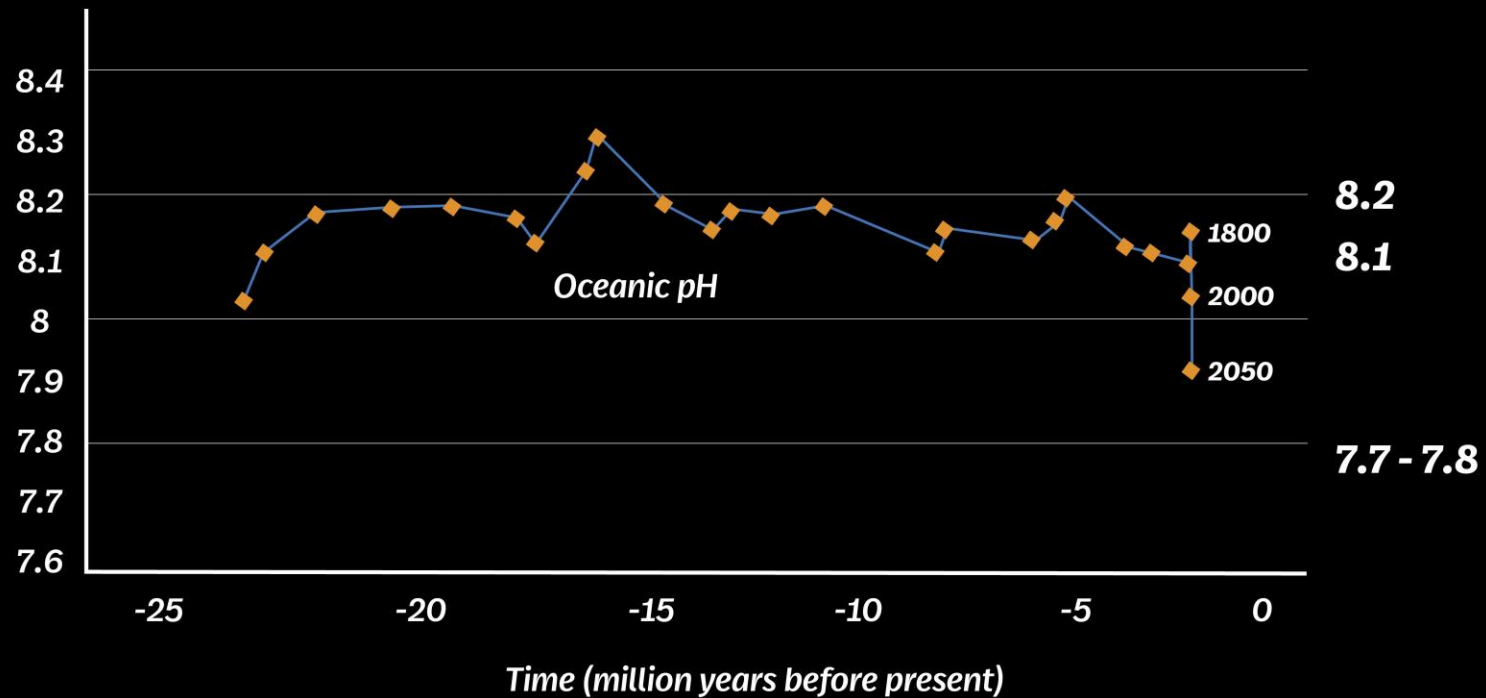
- > 2006 (1)
- > 2007 (1)
- > 2009 (2)



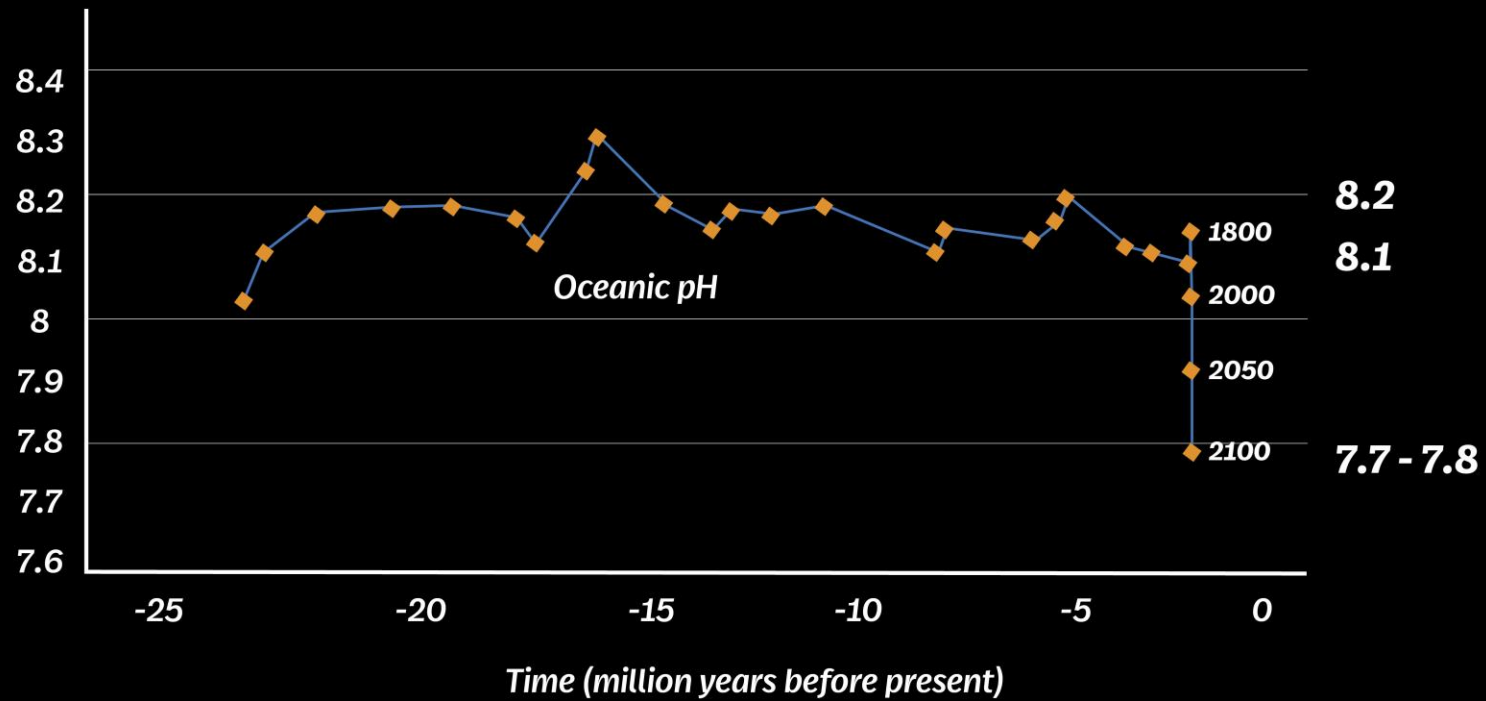
About 30% of CO₂ emissions end in the world oceans.



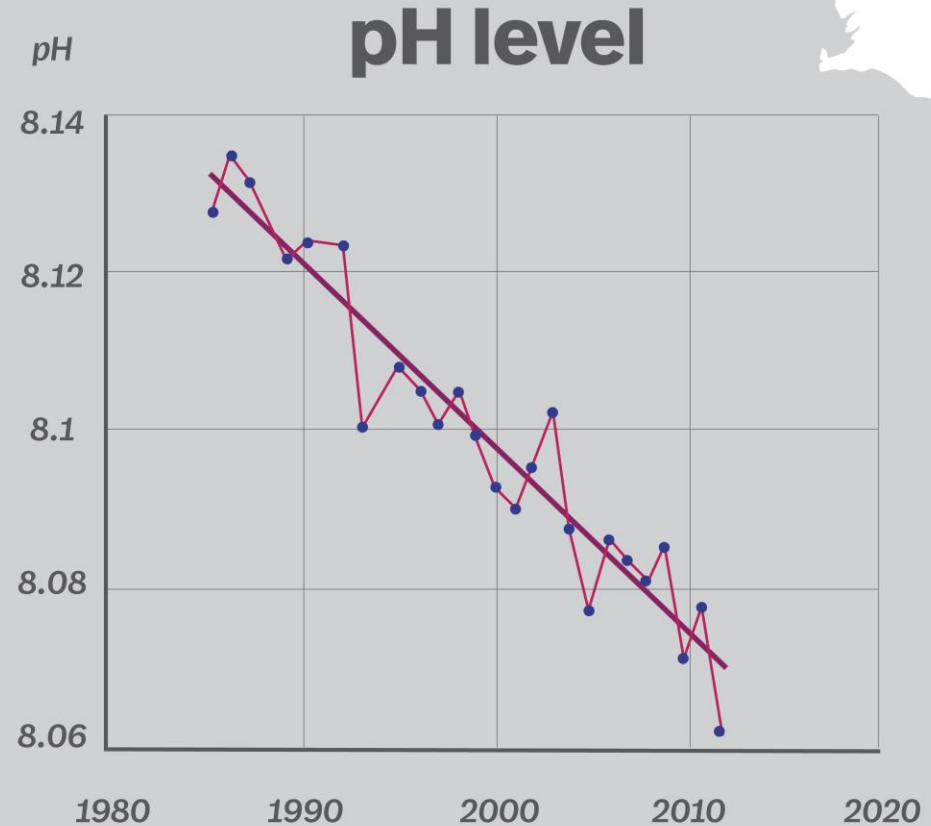
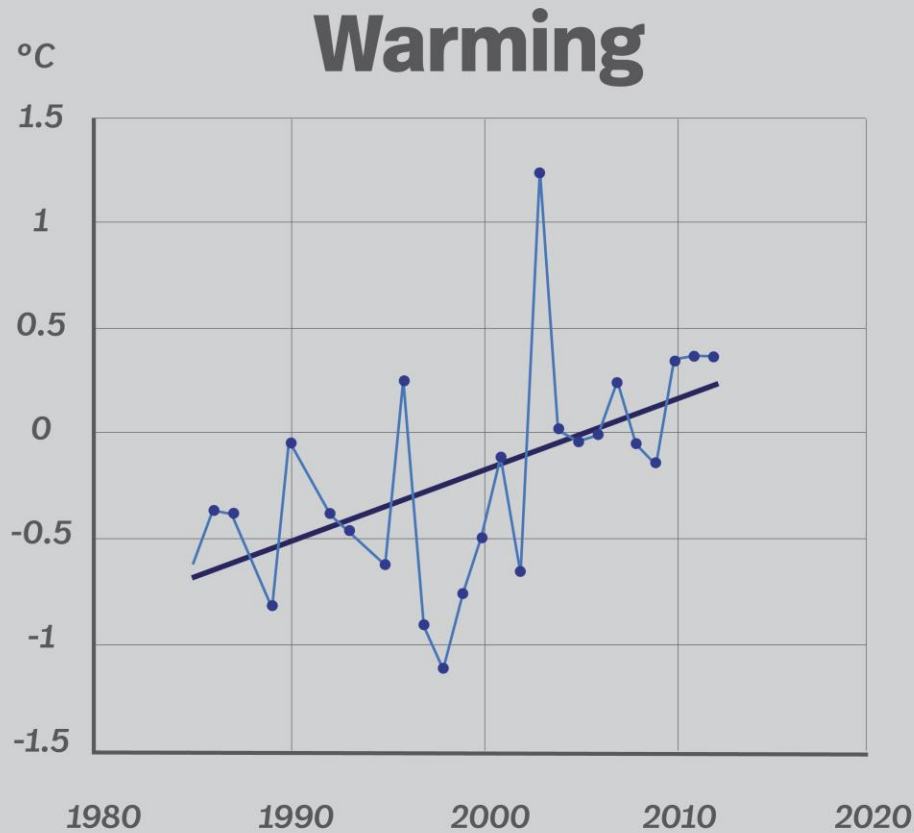
About 30% of CO₂ emissions end in the world oceans.



About 30% of CO2 emissions end in the world oceans.

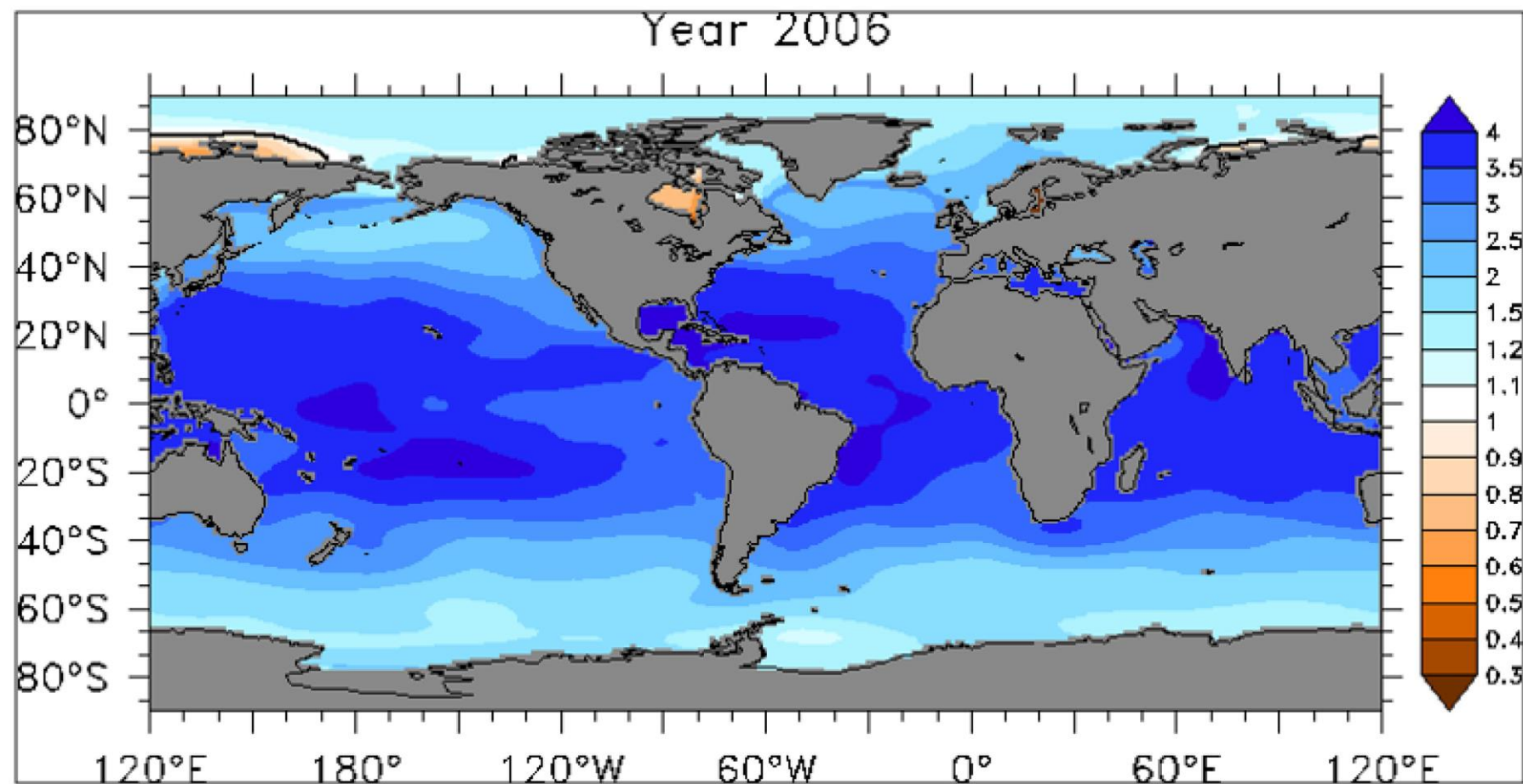


About 30% of CO2 emissions end in the world oceans.



Jón Olafsson, 2009.

Changes in the ocean due to increased CO₂.

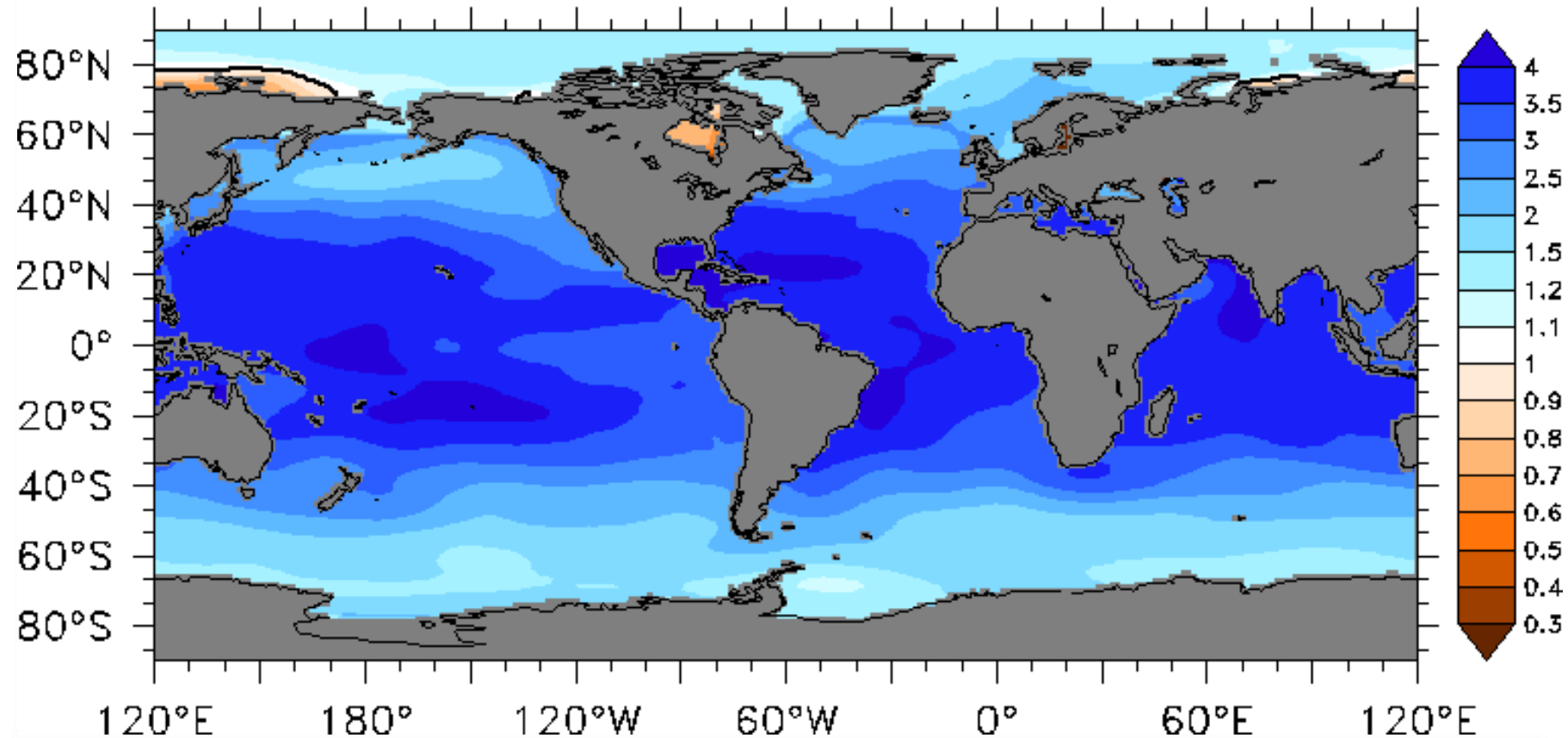


Mettun aragóníts við yfirborð sjávar

Yfirmettað

Undirmettað

Year 2006



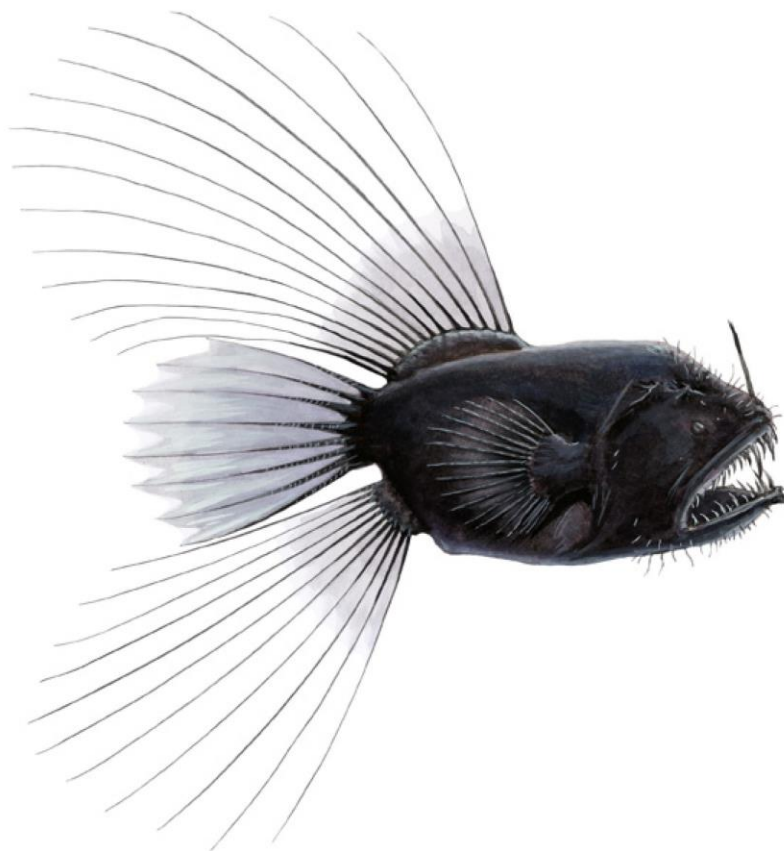
Mettun aragóníts við yfirborð sjávar

Yfirmettað

Undirmettað

This information is an example of an unavoidable paradigm shift.
It means that everything planned and calculated needs to be
rethought, redesigned, recalculated...

Because nobody intended to cause such damage to the world
oceans.

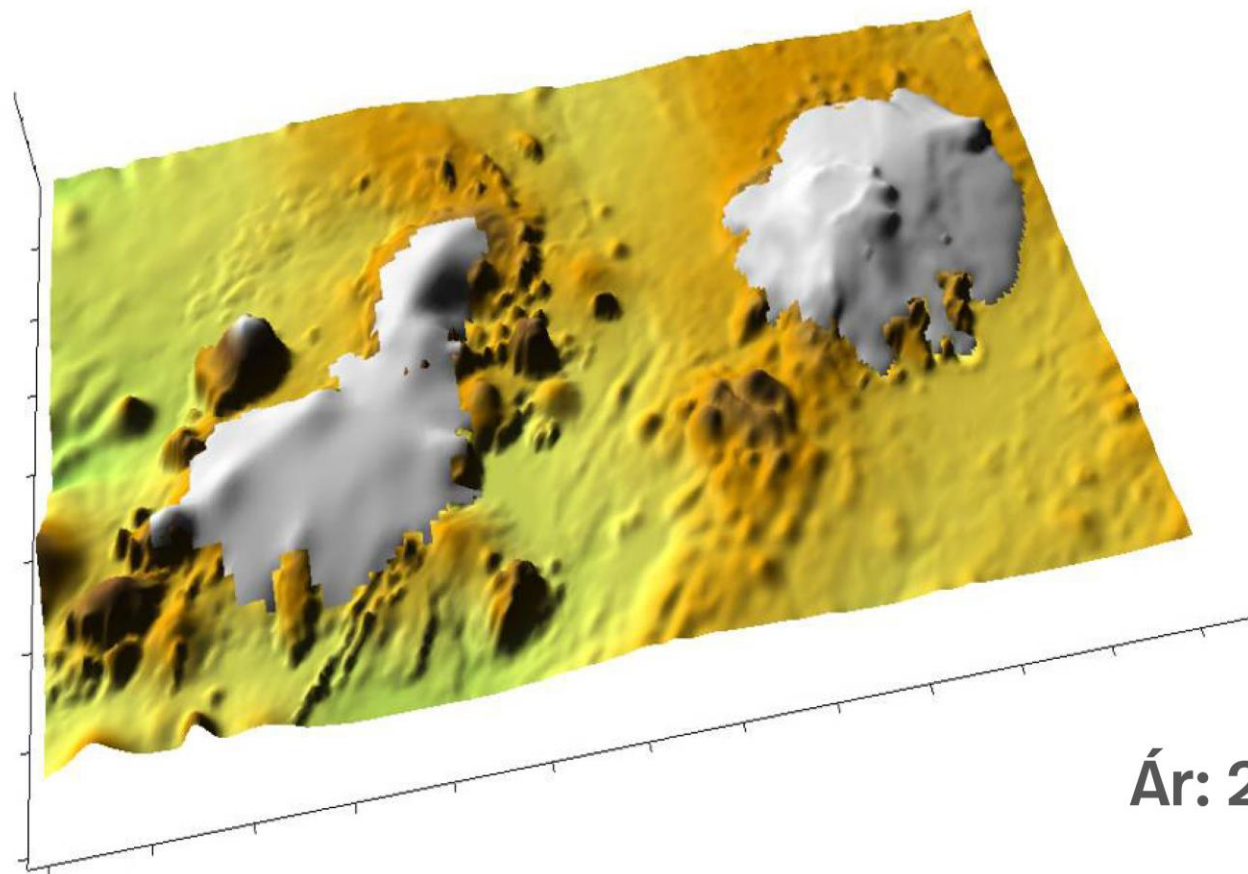




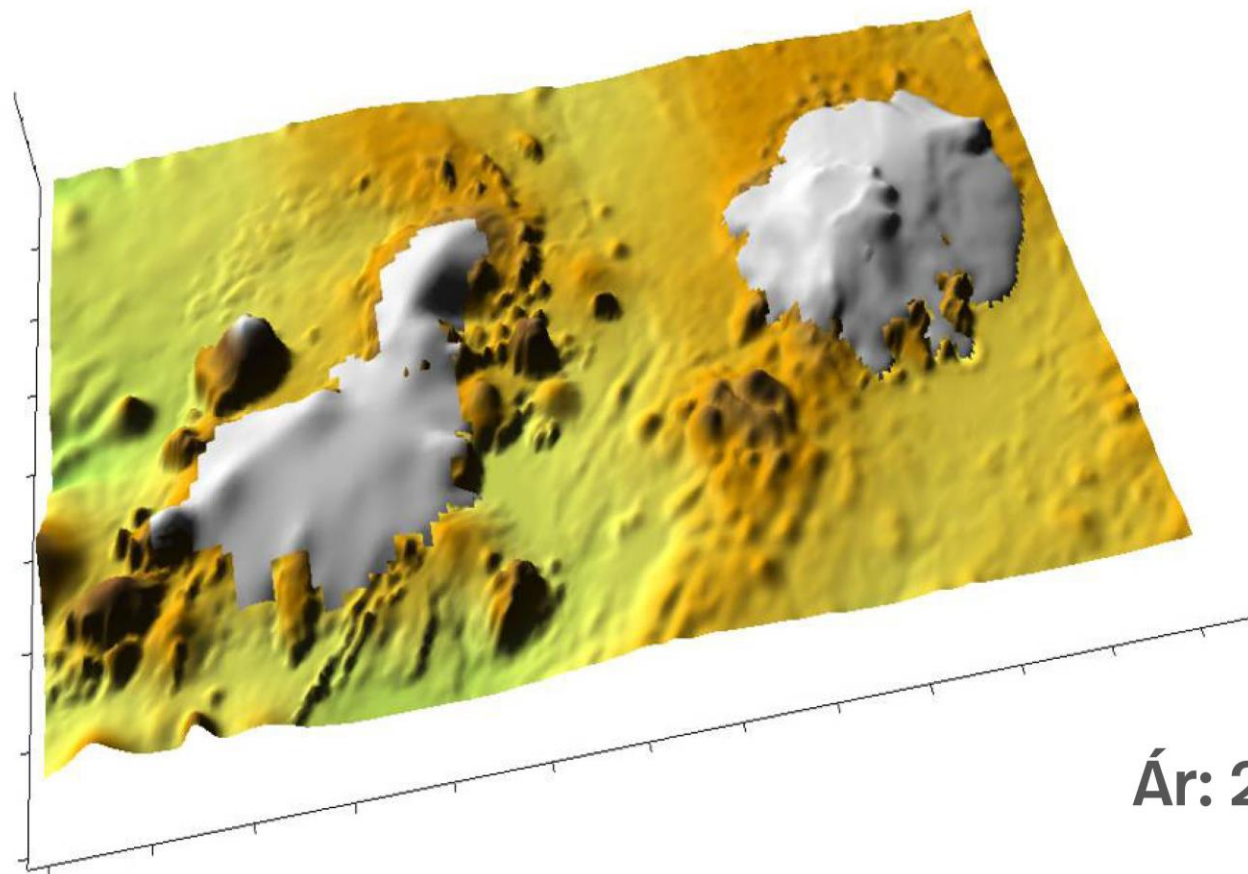




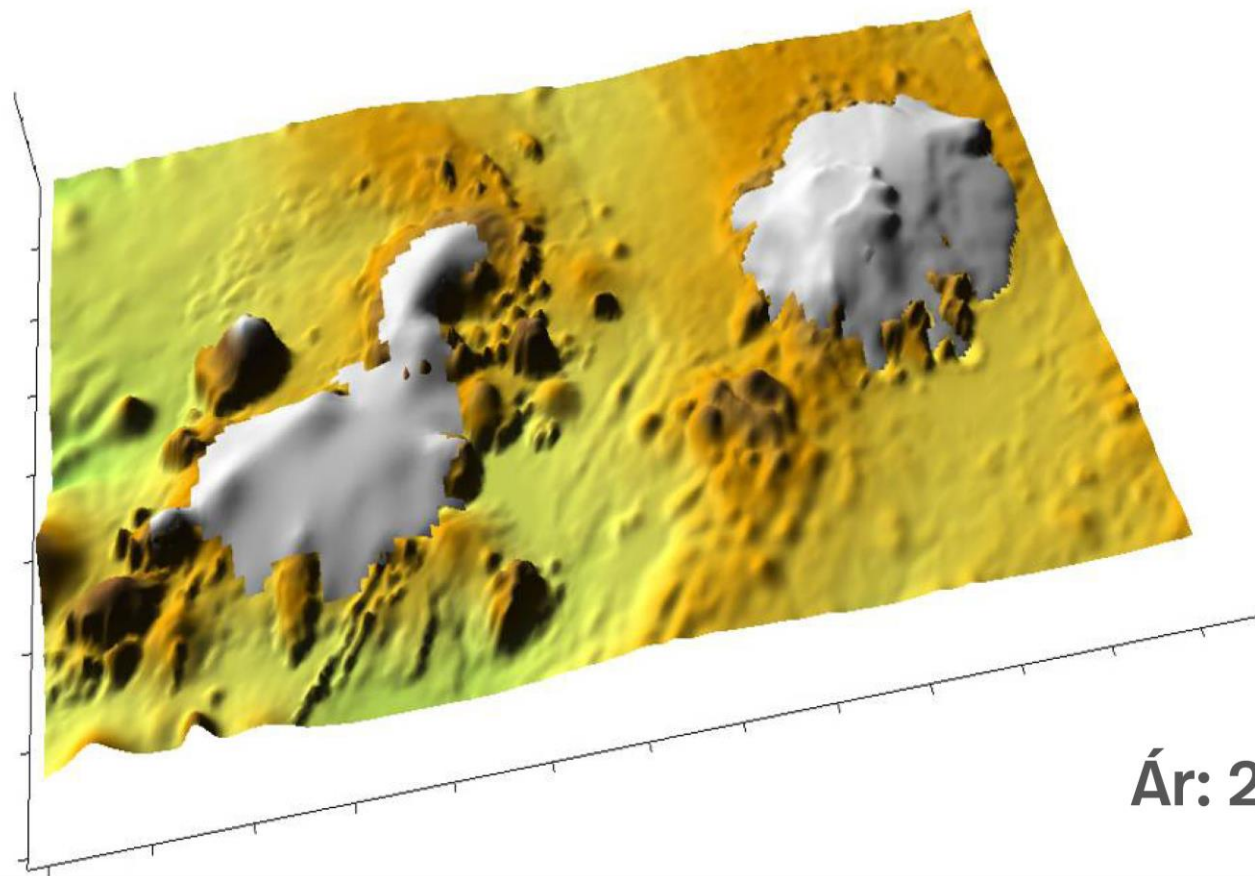




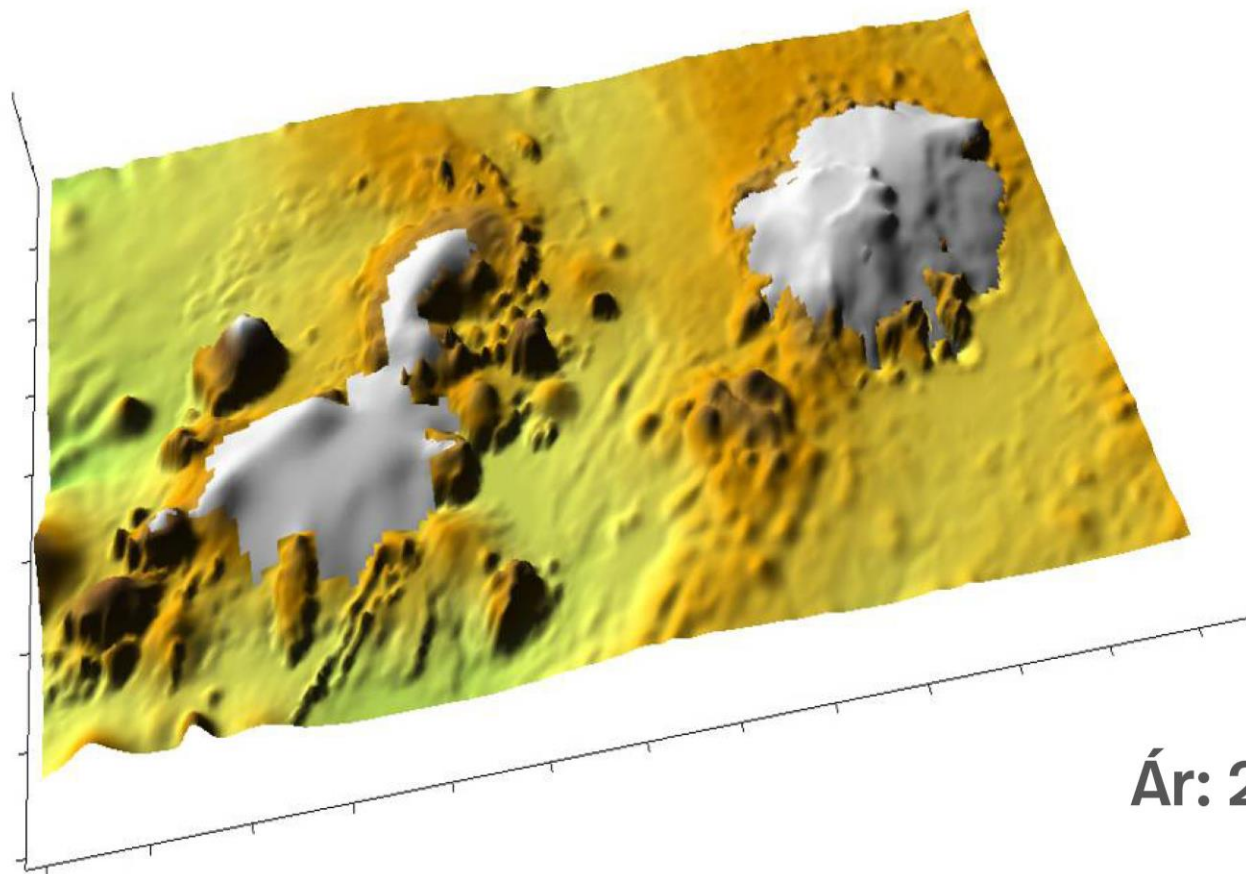
Ár: 2000



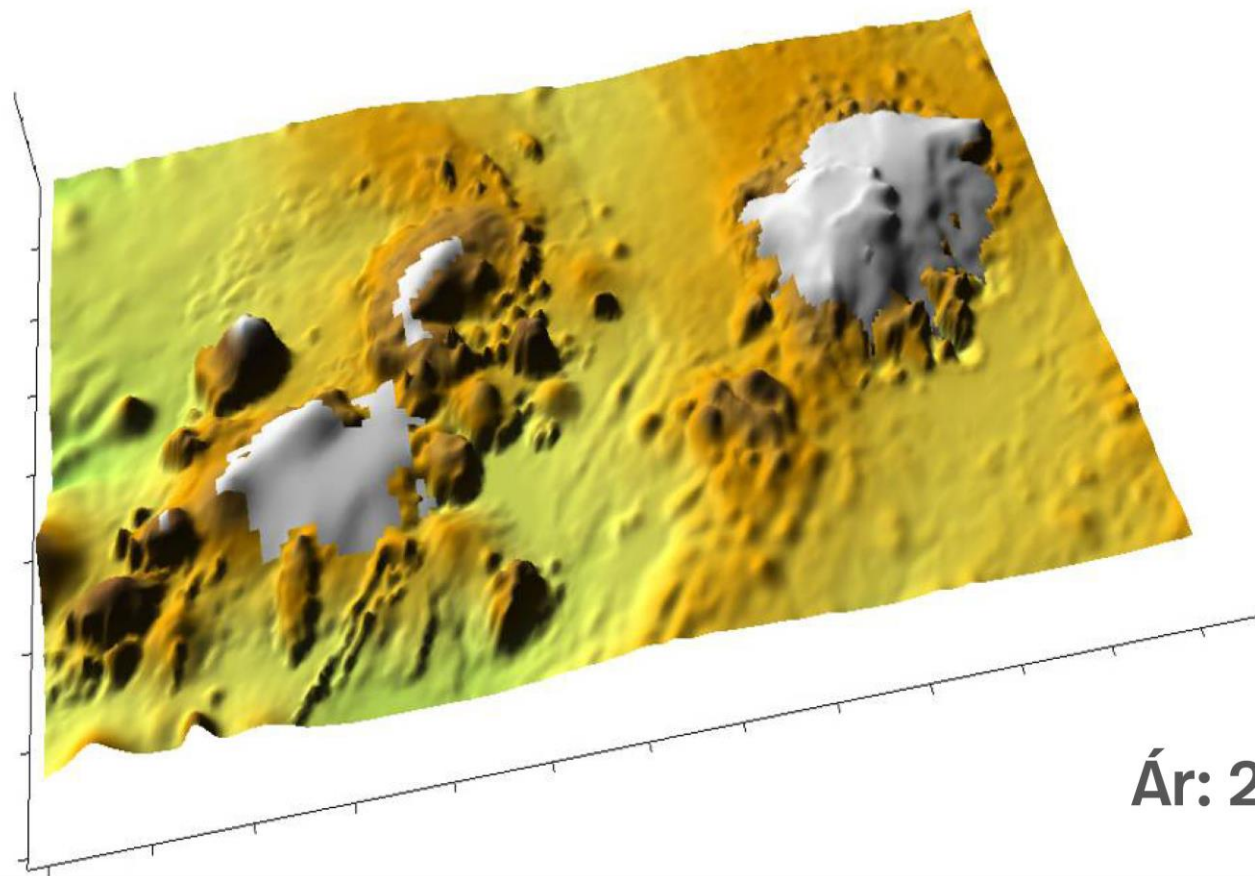
Ár: 2020



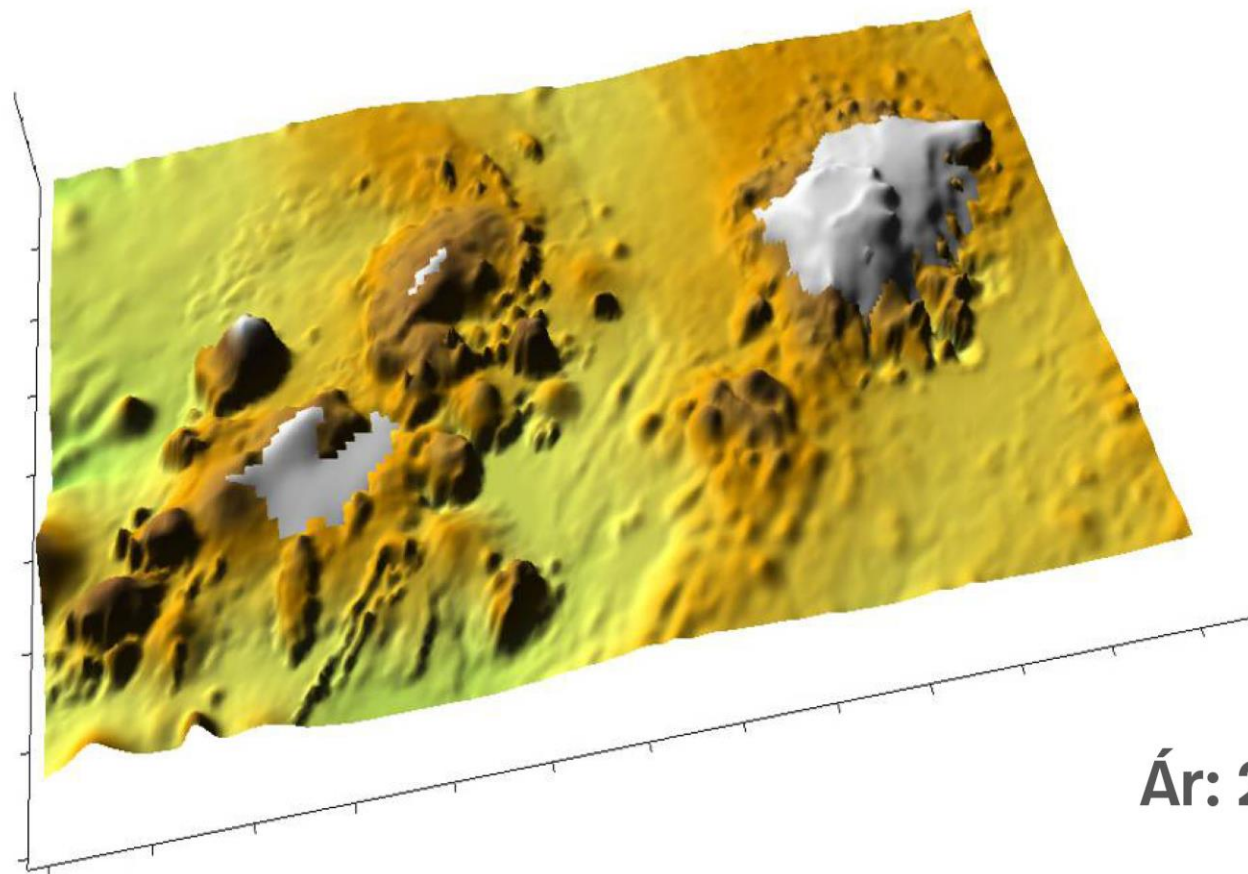
Ár: 2040



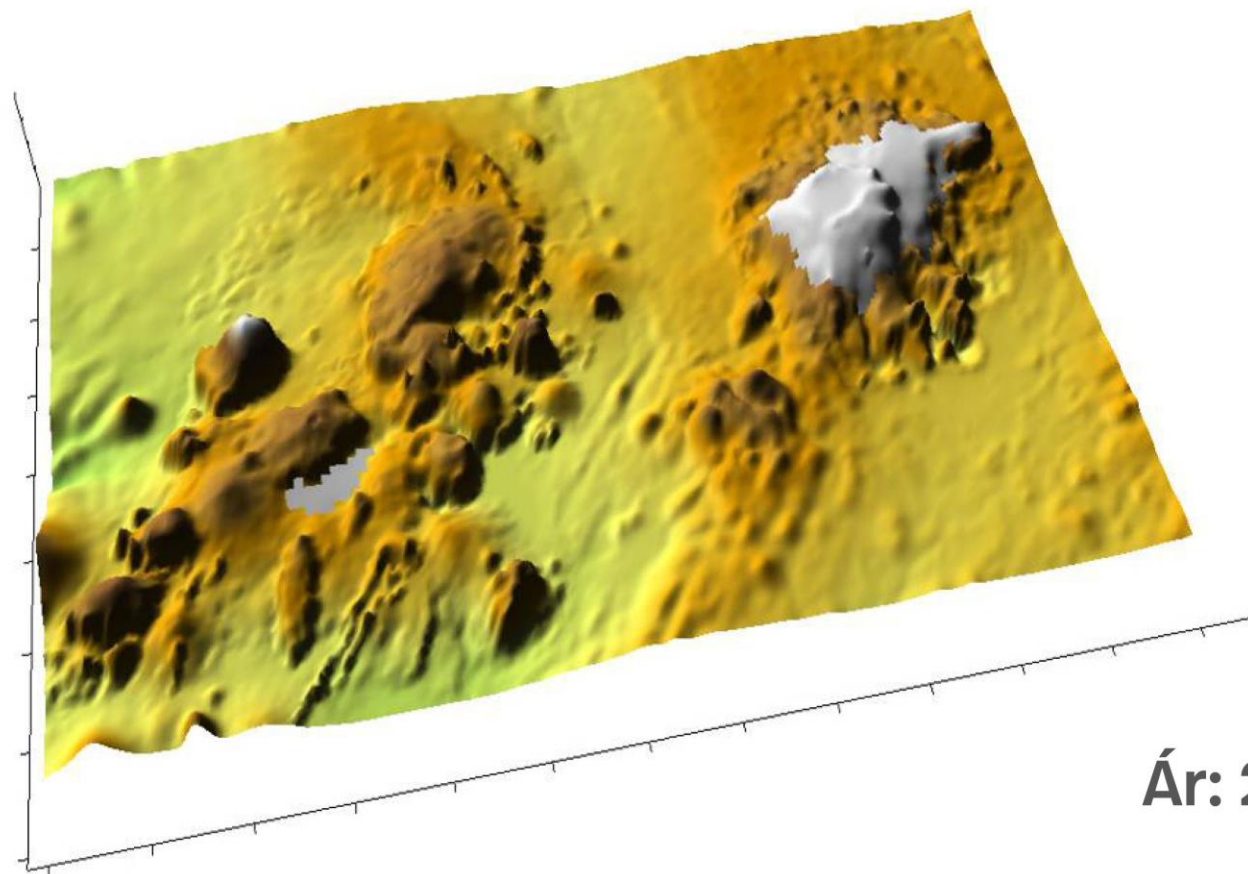
Ár: 2060



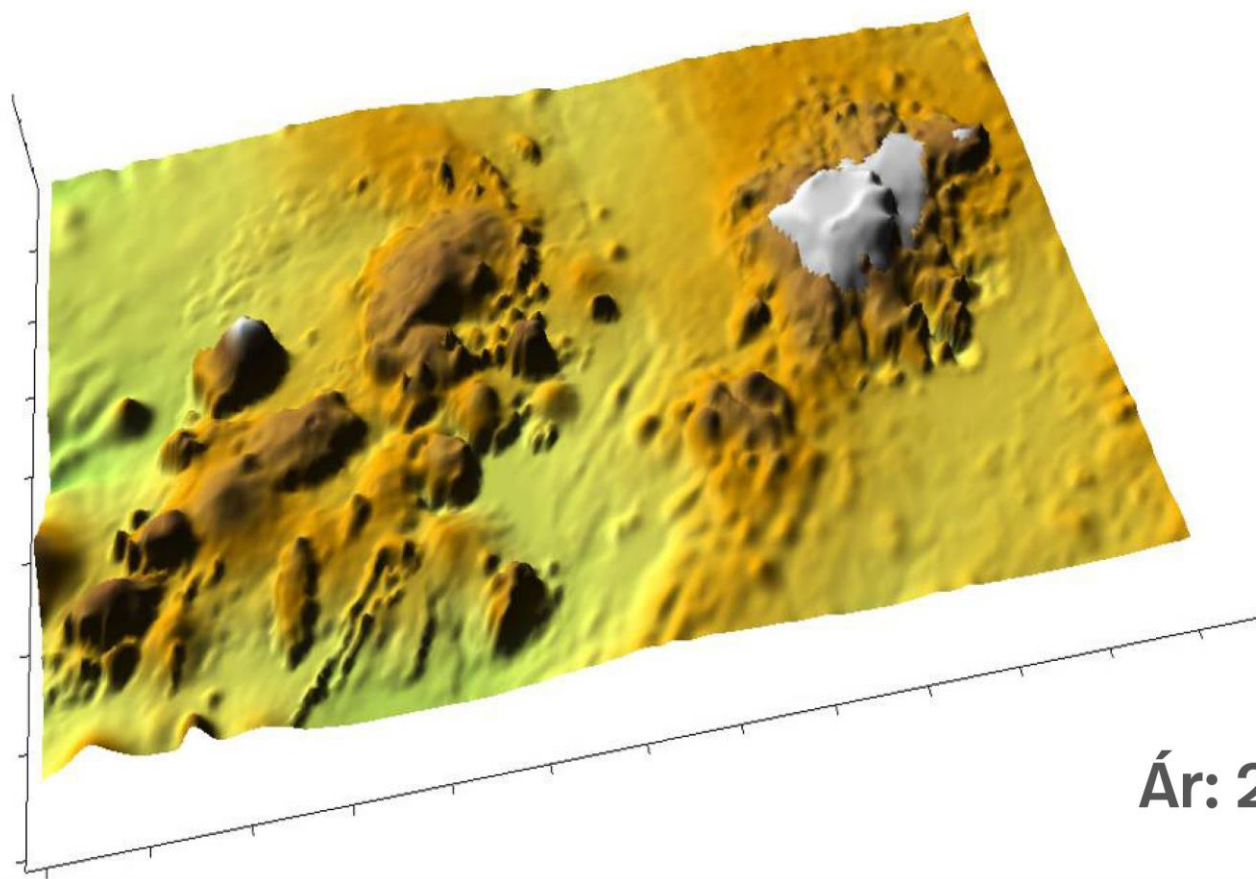
Ár: 2080



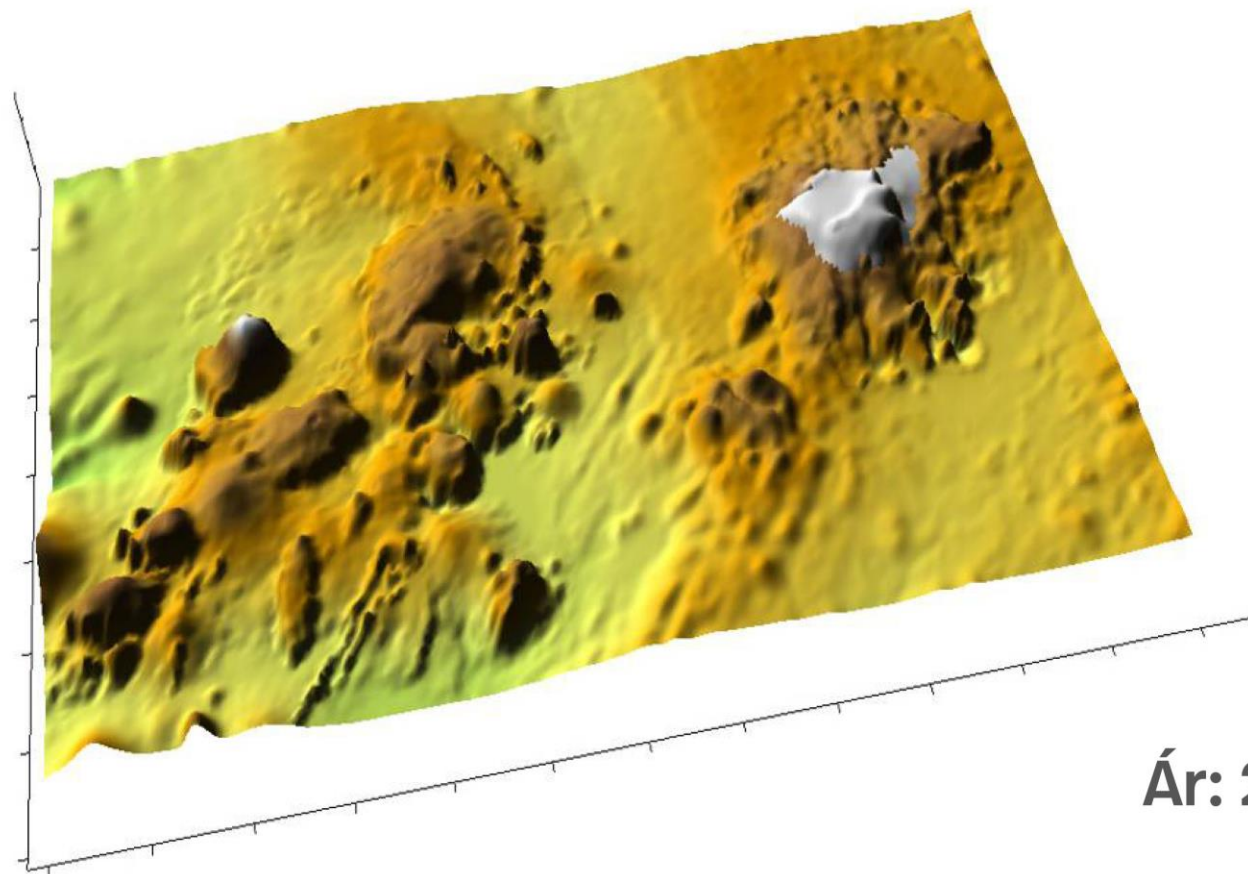
Ár: 2100



Ár: 2120



Ár: 2140

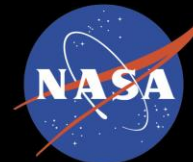


Ár: 2160

2160?

**When
is
someone
still
Alive that
you
will love?**

GLOBAL CLIMATE CHANGE

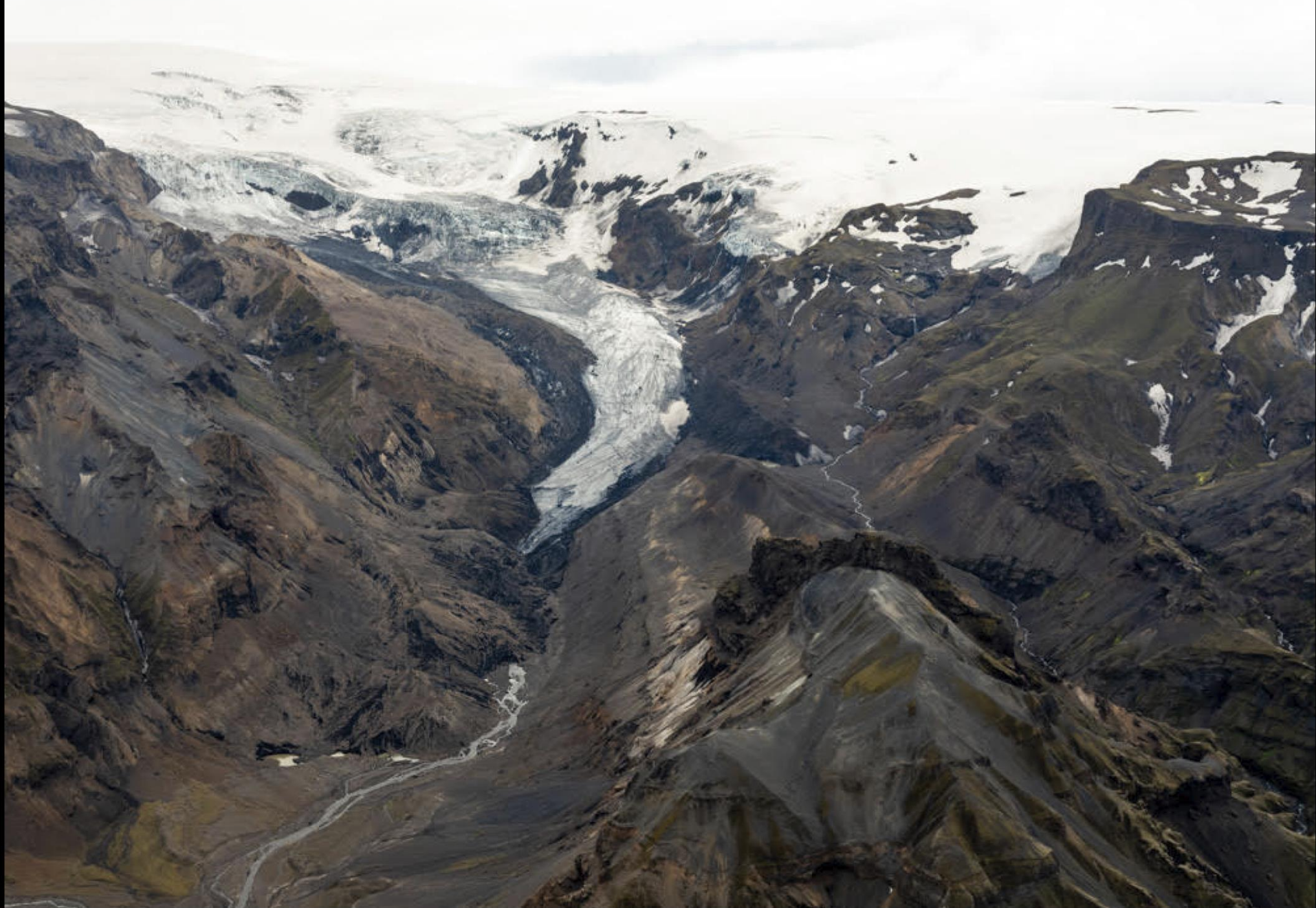


CO₂ Parts per million

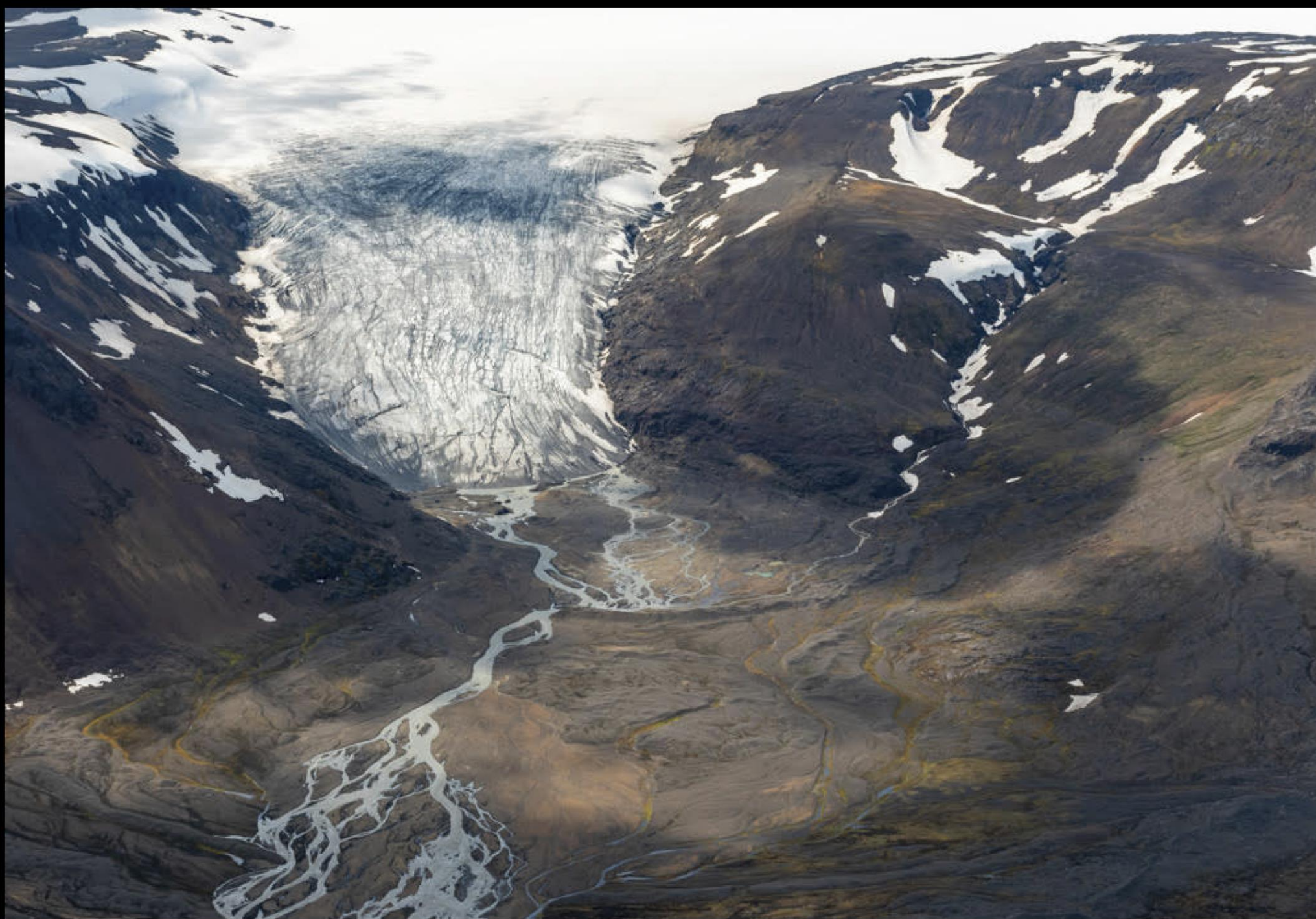


Years before today 1950=0









Bréf til framtíðarinnar

Ok er fyrsti nafnkunnur jökullinn til að missa titil sinn.
Á næstu 200 árum er talið að allir jöklar landsins fari sömu leið.
Þetta minnismerki er til vitnis um að við vitum
hvað er að gerast og hvað þarf að gera.
Aðeins þú veist hvort við gerðum eitthvað.

A letter to the future

Ok is the first Icelandic glacier to lose its status as a glacier.
In the next 200 years all our glaciers are expected to follow the same path.
This monument is to acknowledge the fact that we know
what is happening and what we need to do.
Only you know if we do anything.

Agla
411



Mayor Garcetti's speech at the C40 Chair Handover Ceremony in Copenhagen, Denmark



Watch later



Share



MORE VIDEOS

We have 12 years to limit climate change catastrophe, warns UN

Urgent changes needed to cut risk of extreme heat, drought, floods and poverty, says IPCC

● [Overwhelmed by climate change? Here's what you can do](#)

Jonathan Watts *Global environment editor*

Mon 8 Oct 2018 07.23 BST



118,051



▲ A firefighter battles a fire in California. The world is currently 1C warmer than preindustrial levels. Photograph: Ringo HW Chiu/AP

Markets

100 Million Barrels: The World Hit a Daily Oil and Liquids Record

Dan Murtaugh

12 October 2018, 08:00 GMT

- ▶ 3Q production rises to 100.3 million barrels a day, IEA says
- ▶ OPEC, Americas and biofuels lead increases in global output

A Cuts Oil Demand Forecast as Prices Remain High

RESUME

UP NEXT

MEX CRUDE OIL

CL1	Intraday	66.79	+0.36	0.53%

The video player shows a news report with a background image of a woman and a man. The 'UP NEXT' section features a thumbnail of a man speaking, with a play button icon.







A vibrant underwater photograph of a coral reef. The foreground is filled with diverse coral species, including branching, table, and brain corals in shades of brown, orange, and purple. The water is clear and blue, with sunlight filtering down from the surface, creating a shimmering effect. The background shows more coral structures and the deep blue of the open ocean.

Warming of 1.5 °C instead of 2 °C

Coral reefs would
decline by 70 - 90%
instead of all virtually
disappearing.







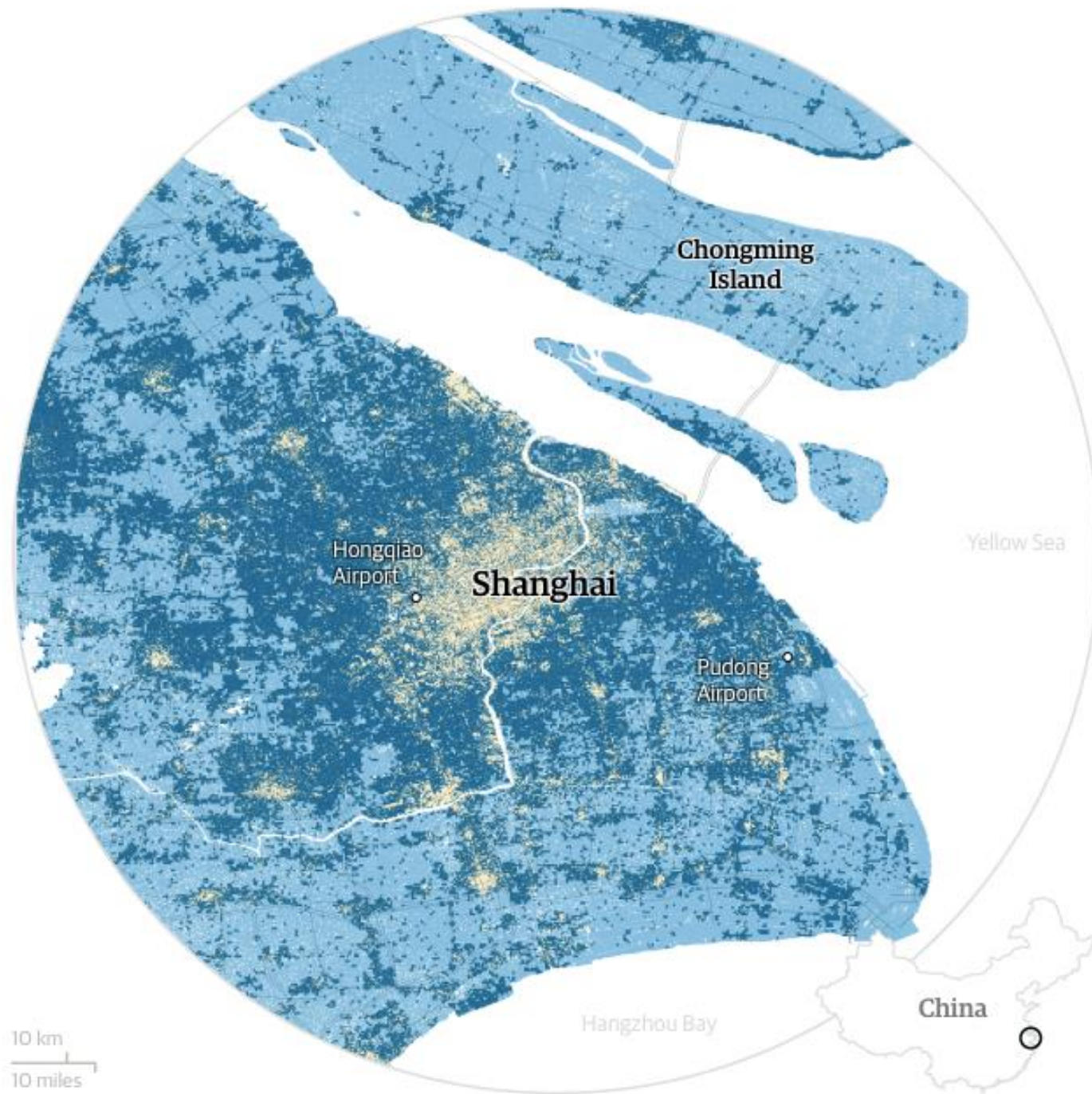




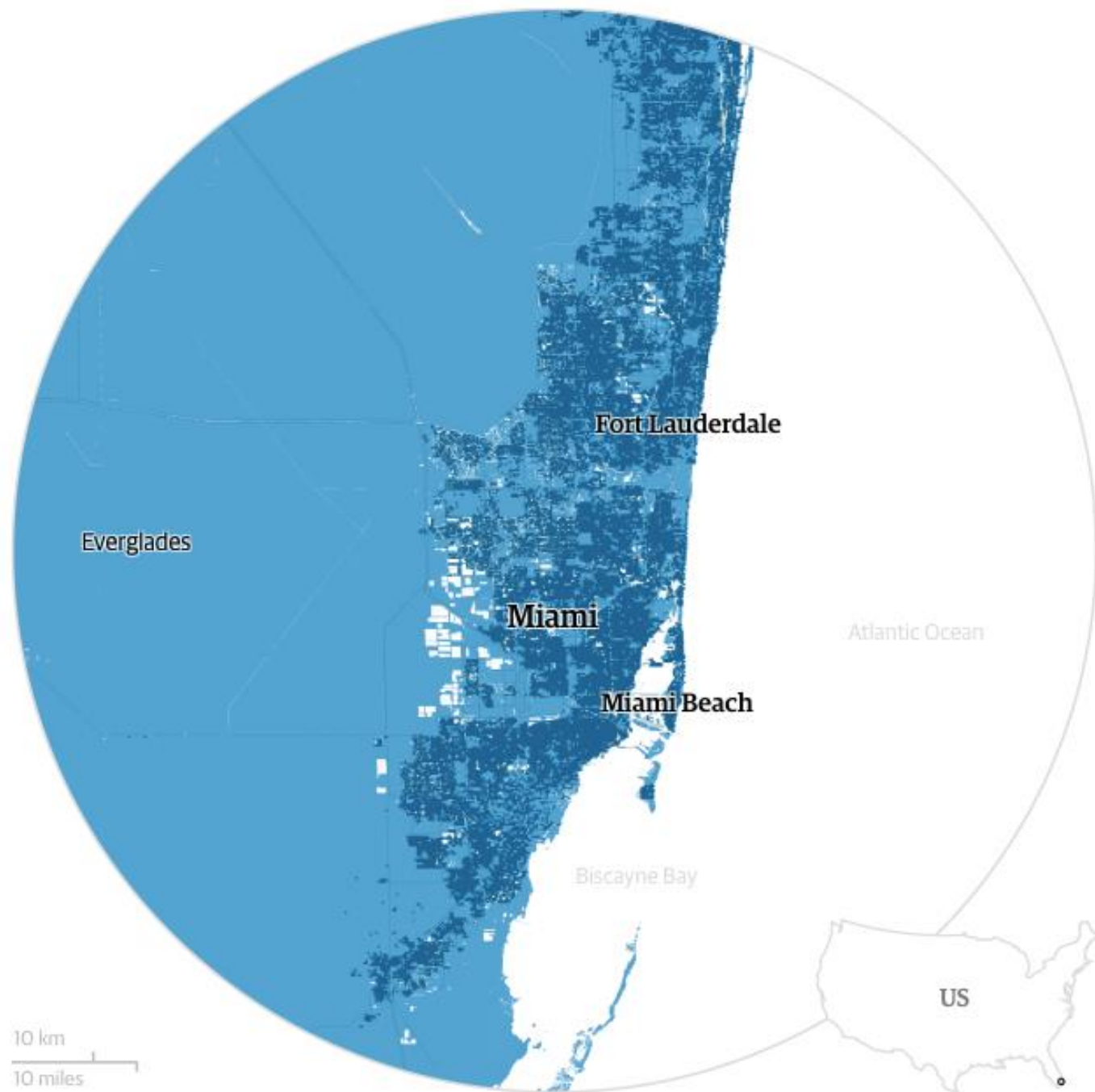


And
glaciers
become
water

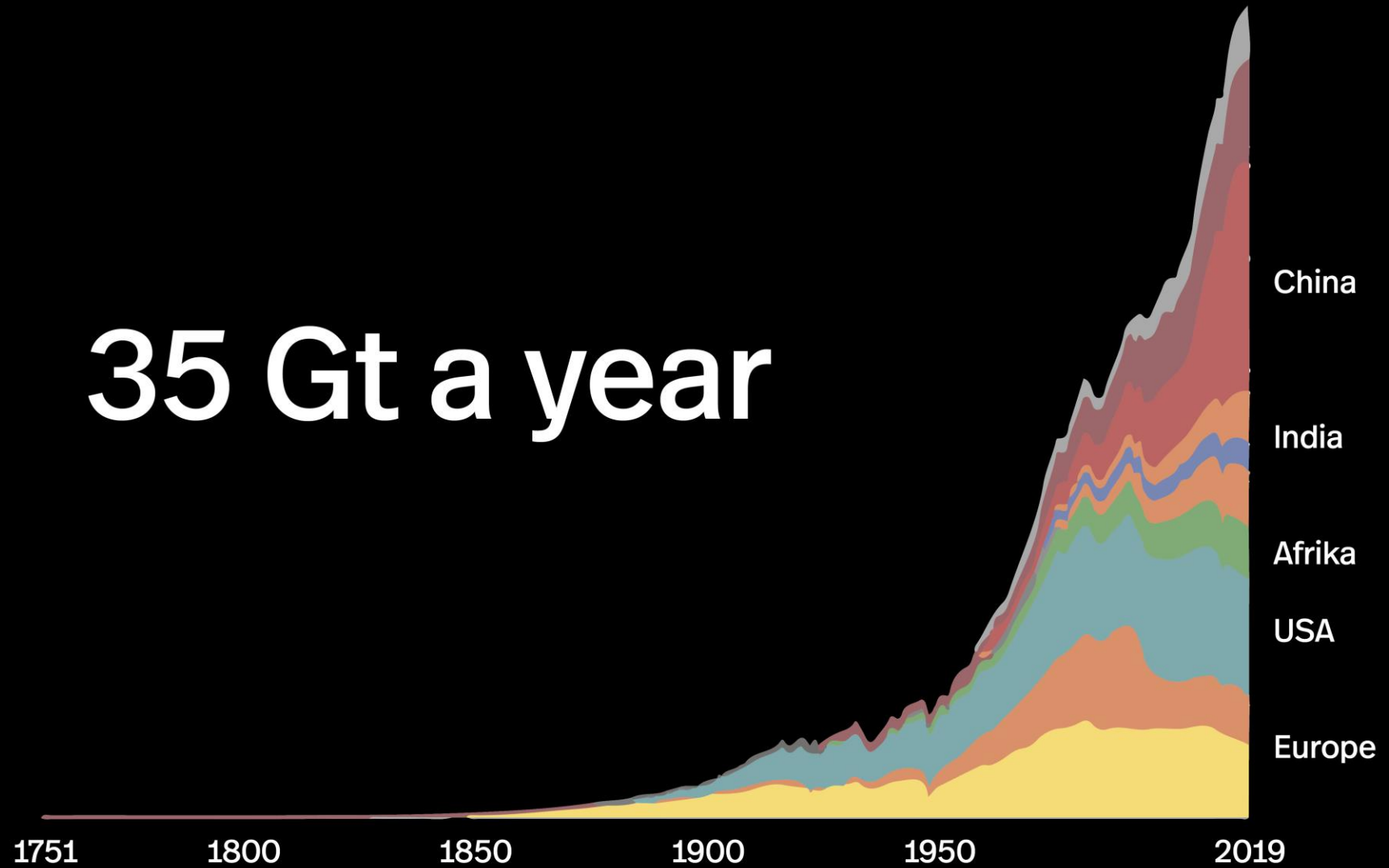


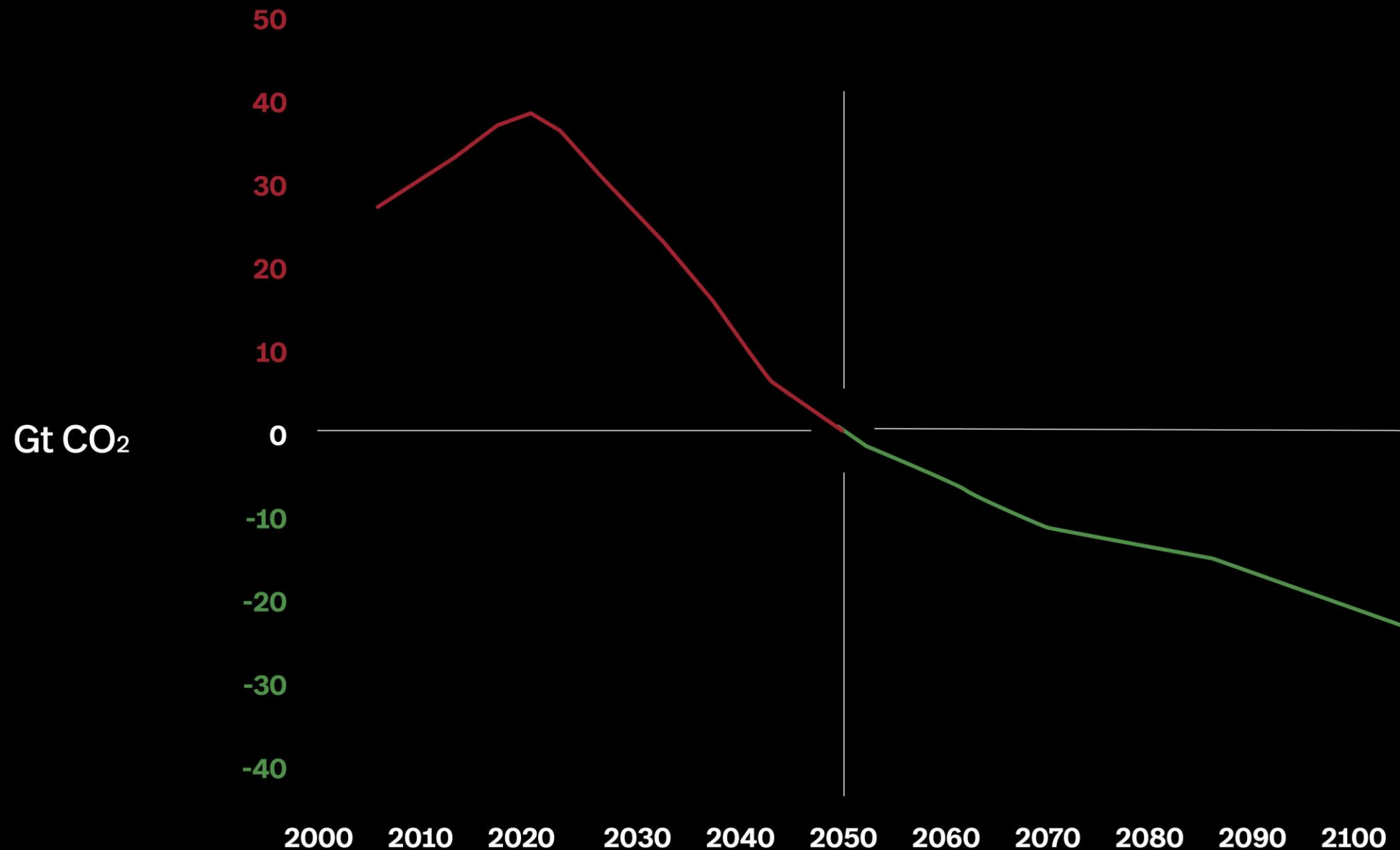




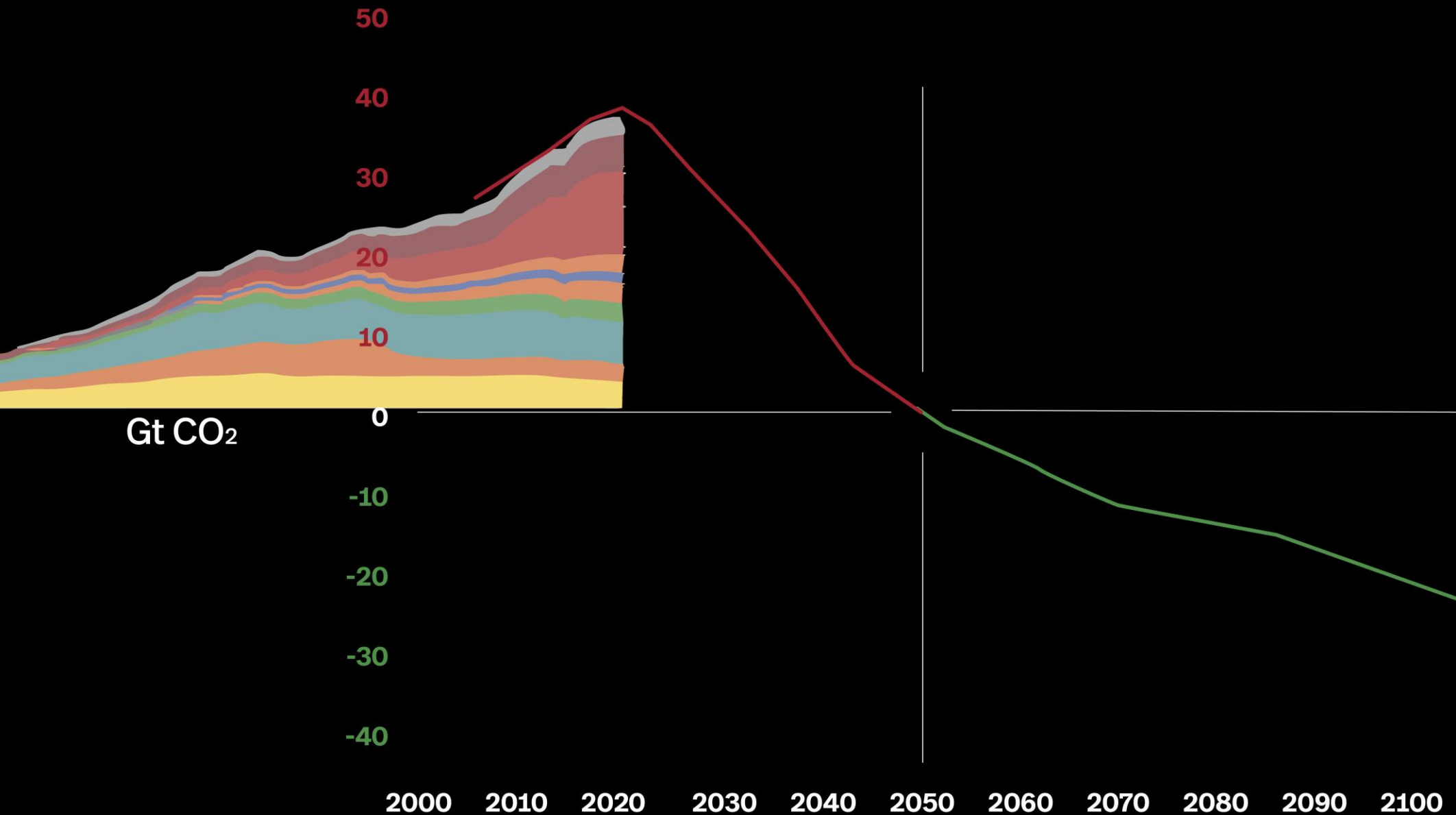


35 Gt a year



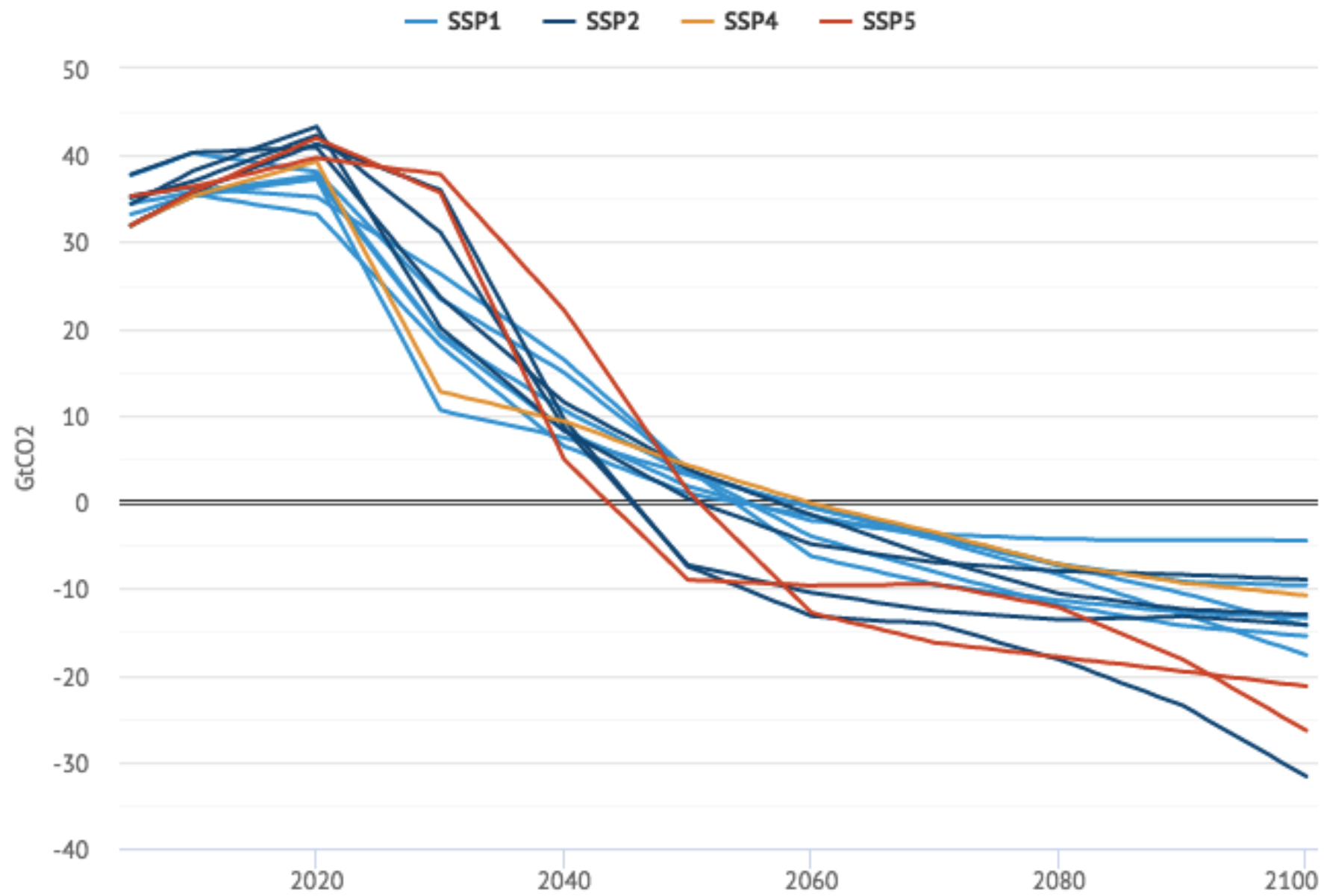


We have 30 years to reduce emissions to zero - and negative from 2050



We have 30 years to reduce emissions to zero - and negative from 2050

CO2 Emissions



Biggest challenge we can think of.

Has the paradigm shifted?

Do we understand the words?

Or are we hearing them without changing our reality?



SKOLSTREJK
FÖR
KLIMATET

G. Thunberg

UNITE
BEHIND
THE
SCIENCE
#FridaysForFuture

HARKEN

Everything needs to be changed

What we eat.

How we travel.

How we build and from what materials.

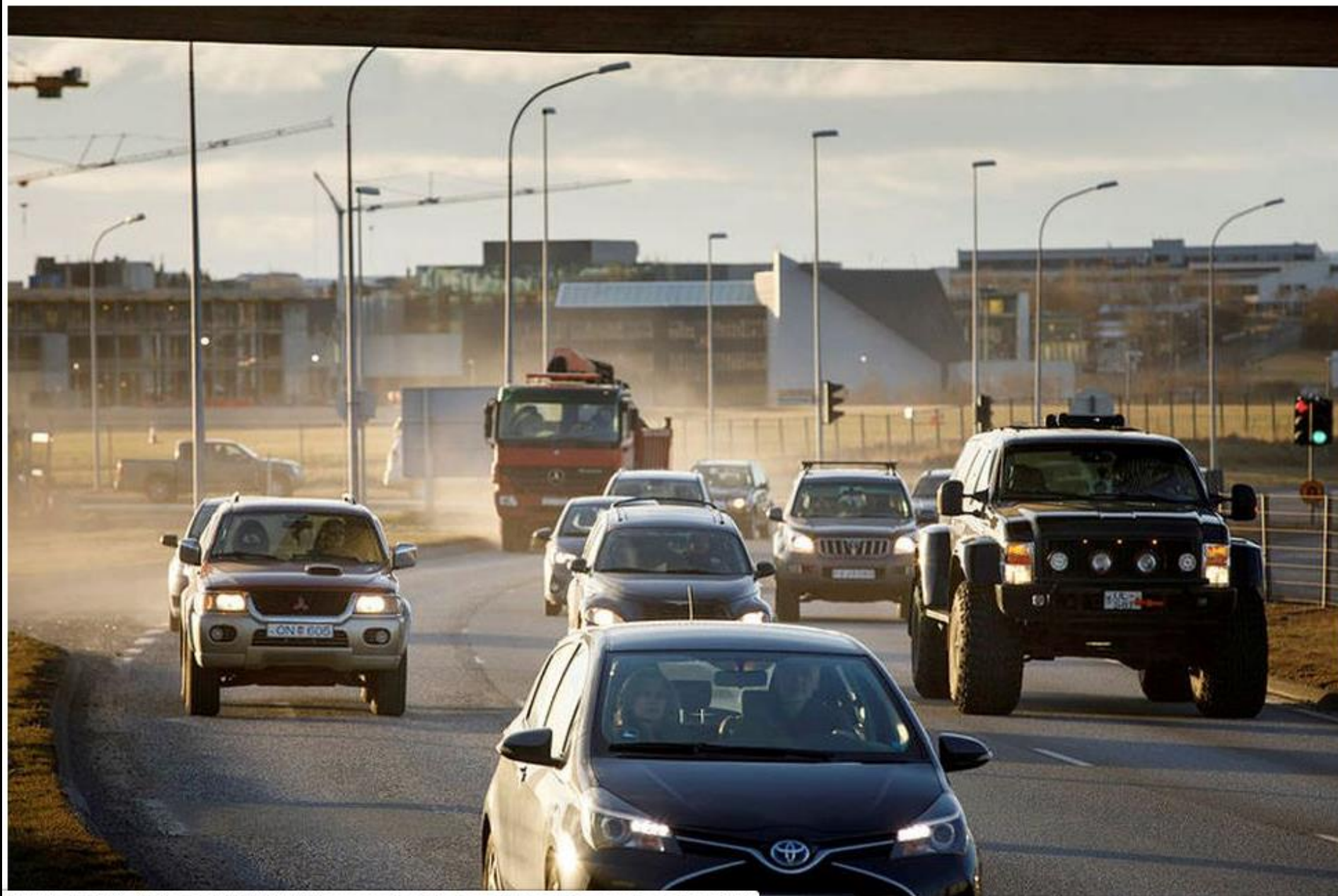
All consumption.

Change all sources of energy.

Umferðartafir á Miklubraut

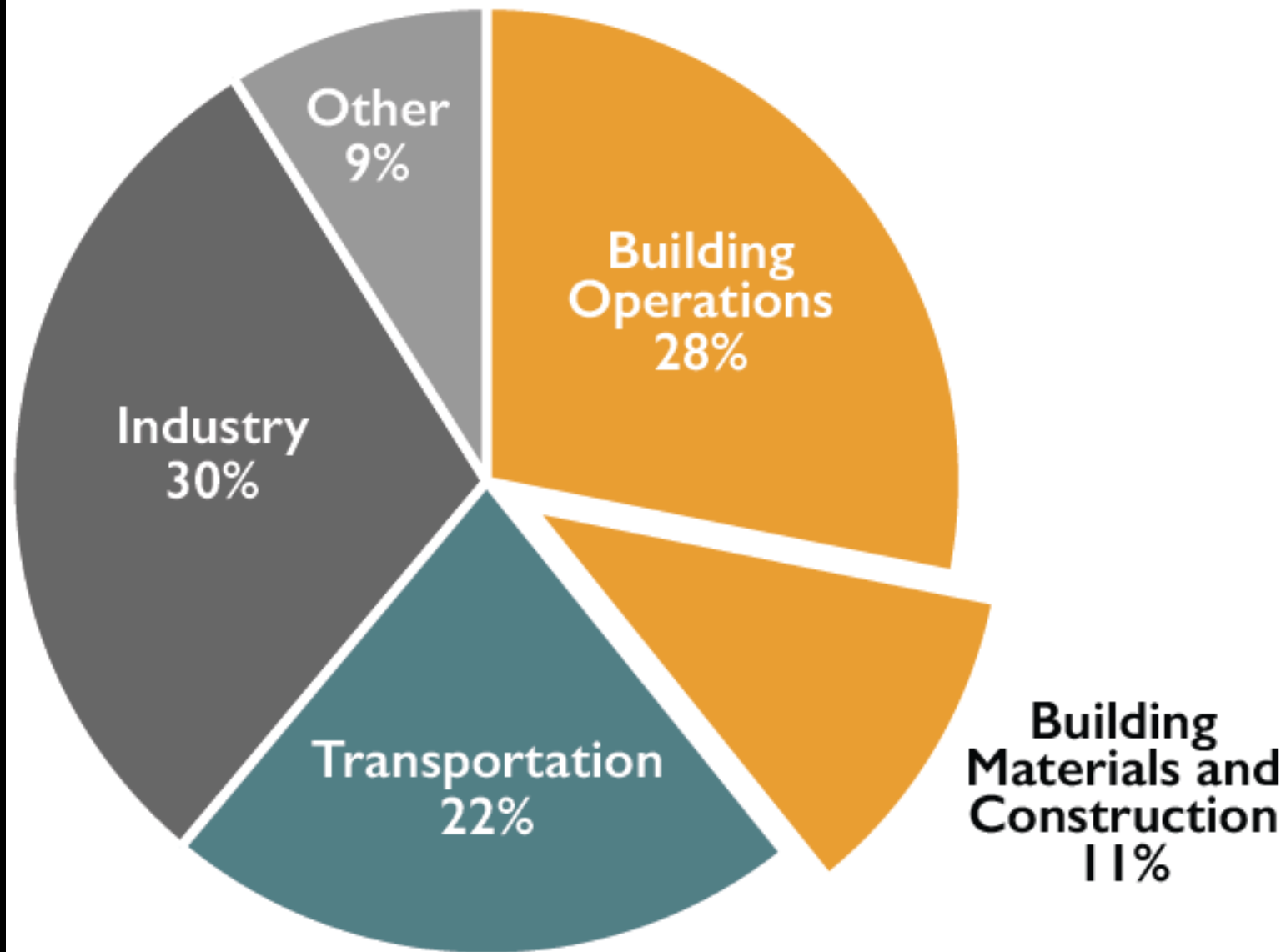


Losun frá vegasamgöngum aukist gríðarlega





Global CO₂ Emissions by Sector



Source: © 2018 2030, Inc. / Architecture 2030. All Rights Reserved. Data Sources:
UN Environment Global Status Report 2017; EIA International Energy Outlook 2017



SKÖPUM
GRÆN
STÖRF

ÞAD ER
LÖNGU
KOMINN
Aðgerðir
Núna

ADGERD

EG
JÖRDIN

BE PART
OF THE
SOLUTION
not
OF THE
Pollution
TO VEGAN

KLUKKAN
TIFAR

VIÐ HÖFUM EKKITÍMATIL AÐ
~~BÍÐA~~ AÐGERÐIR STRAX
PEOPLE'S CLIMATE MARCH

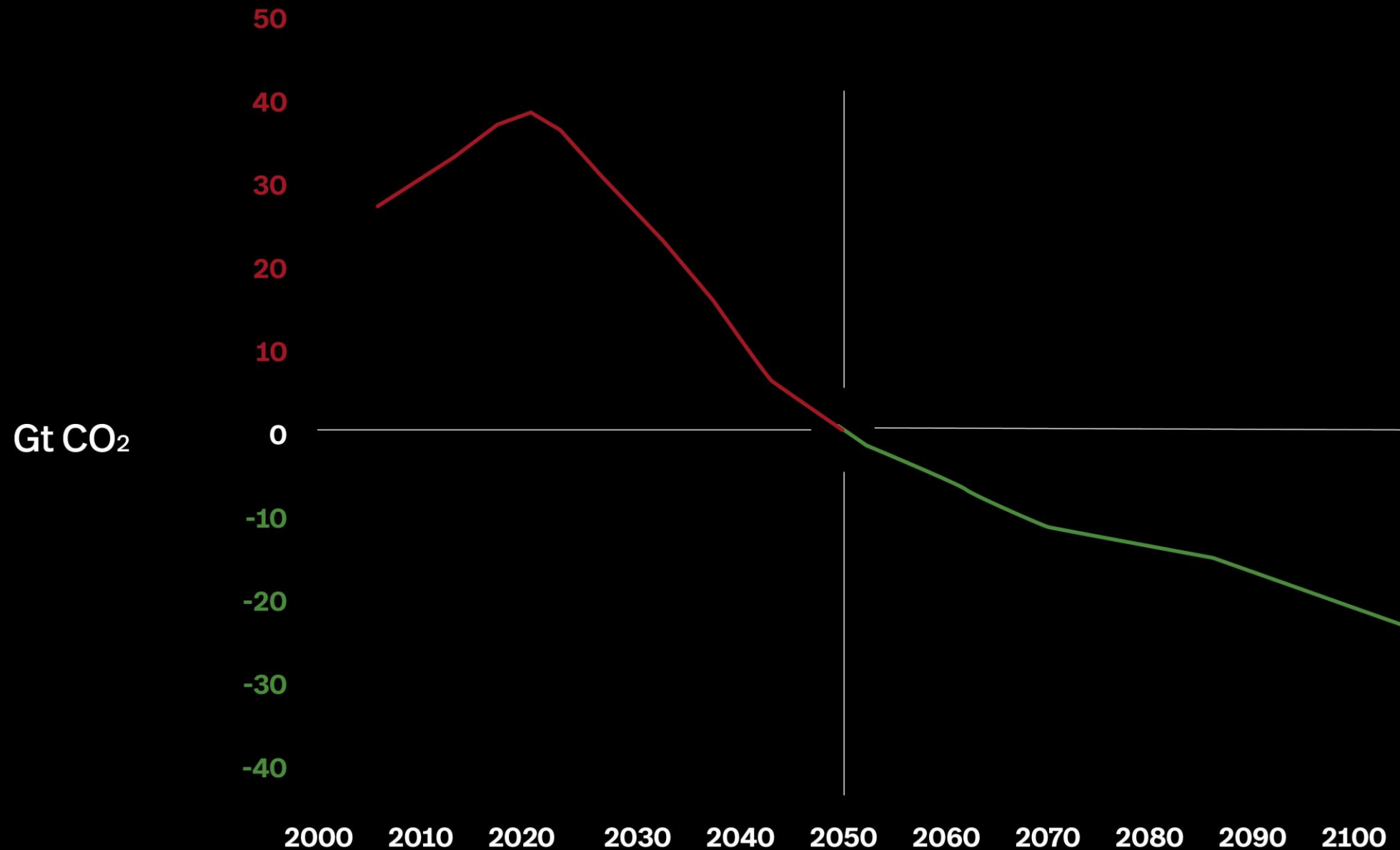


World's largest carbon-capture plant Orca opens in Iceland

CO2 removal

- We need to bind 1000GT of CO2 in 50 years.

A new global infrastructure? -
adding to water, power,
transportation, harbours



CO₂ losun á 21. öld - ef halda skal jörðinni neðan við 1,5/2 °C hlýnun



**When
is
someone
still
Alive that
you
will love?**

2020 - 2050

**What can be done
In 30 years?**



1903 - 37 m



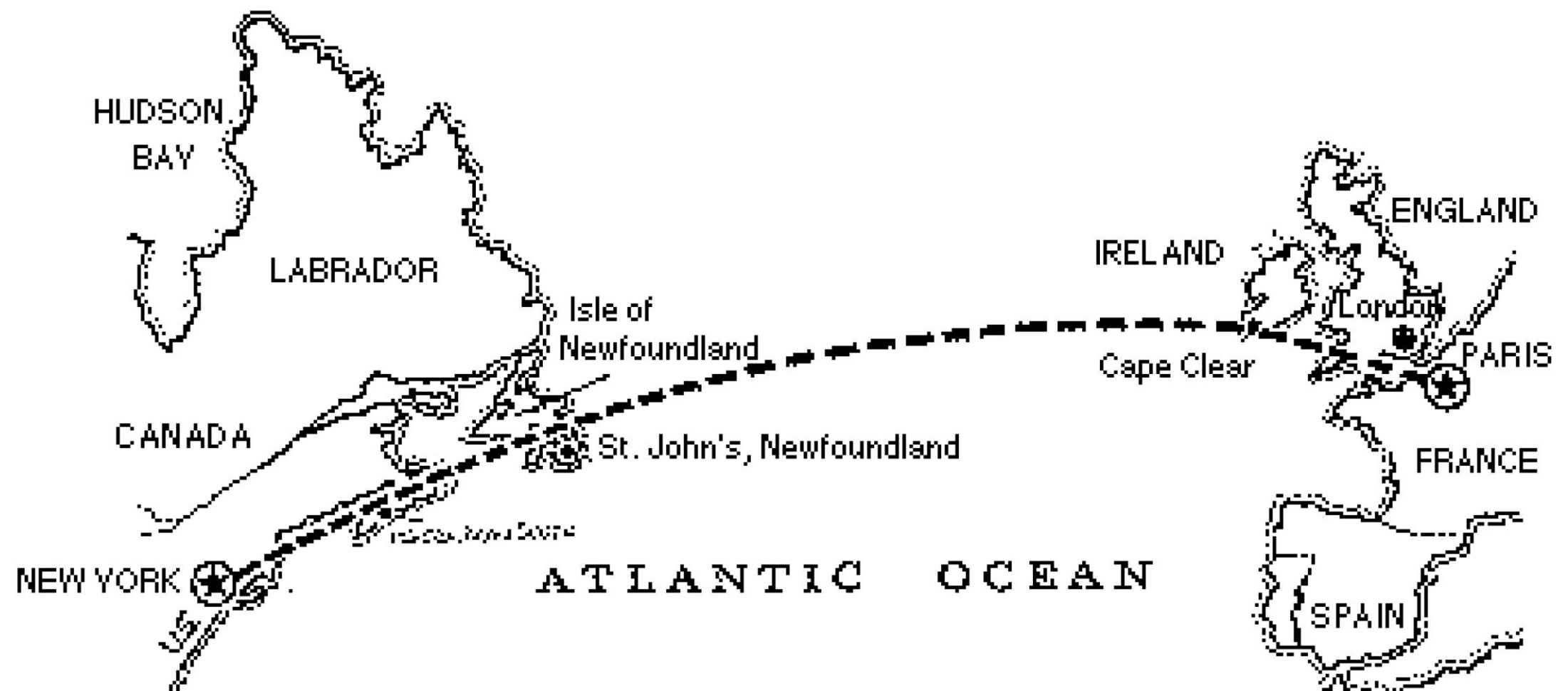
1905 - 32 km



1917 - Red Baron



1927 - Lindbergh: New York - Paris





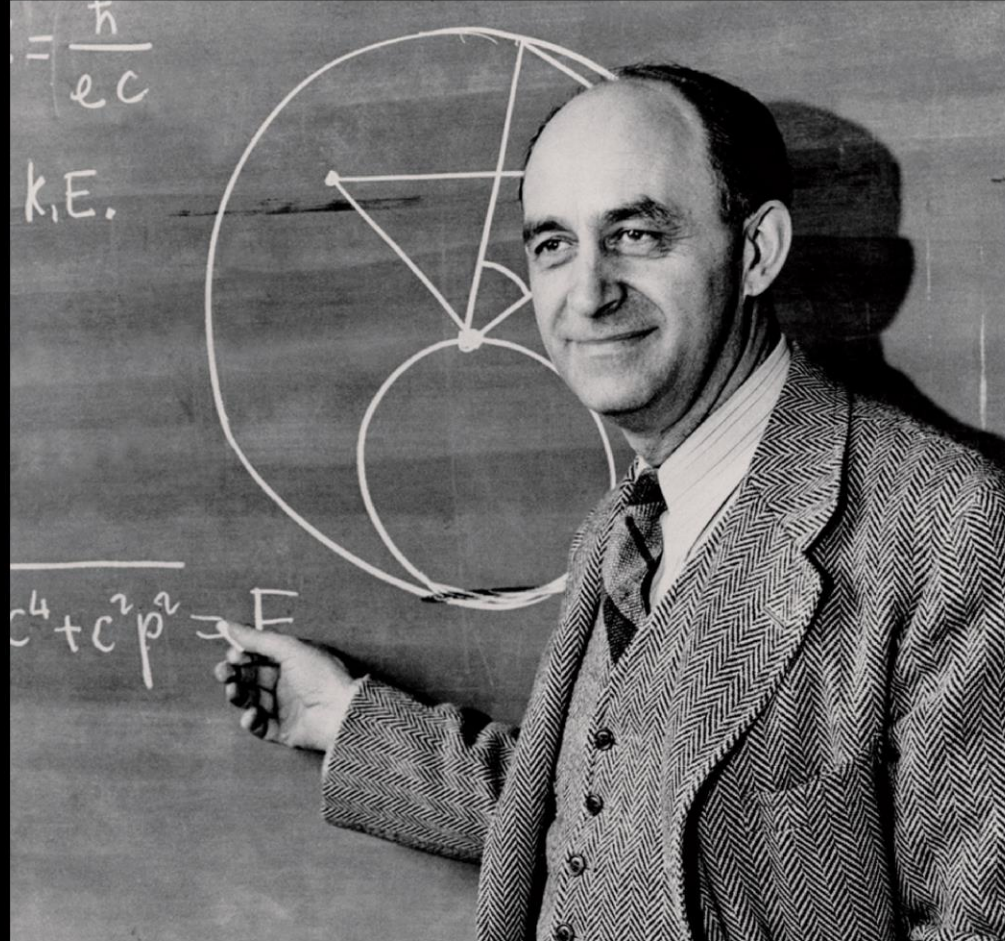
May 11th 1935 - DC.3 - First complaint over service in an airplane.



1969 - The moon



1932 - James Chadwick - Discovery of the Neutron



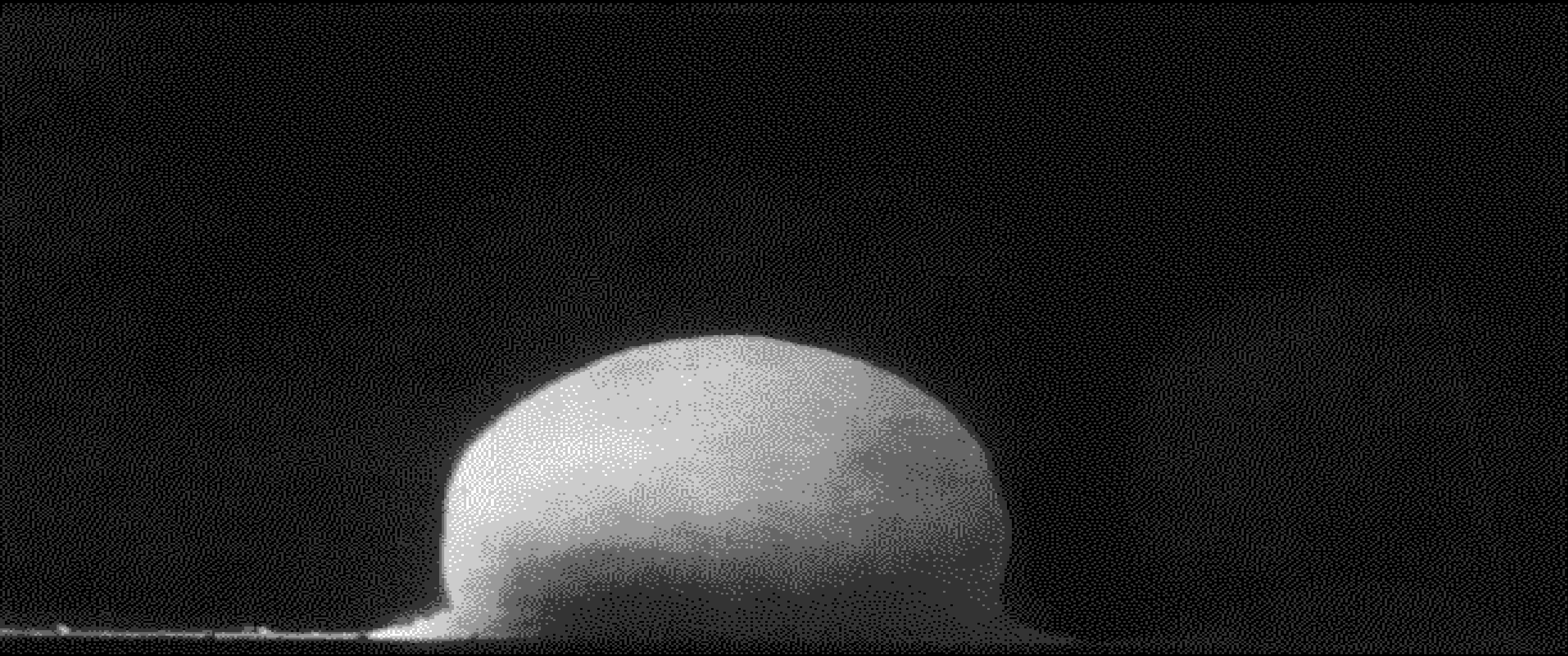
1934 Enrico Fermi - Achieves the first nuclear fission

1942 Enrico Fermi

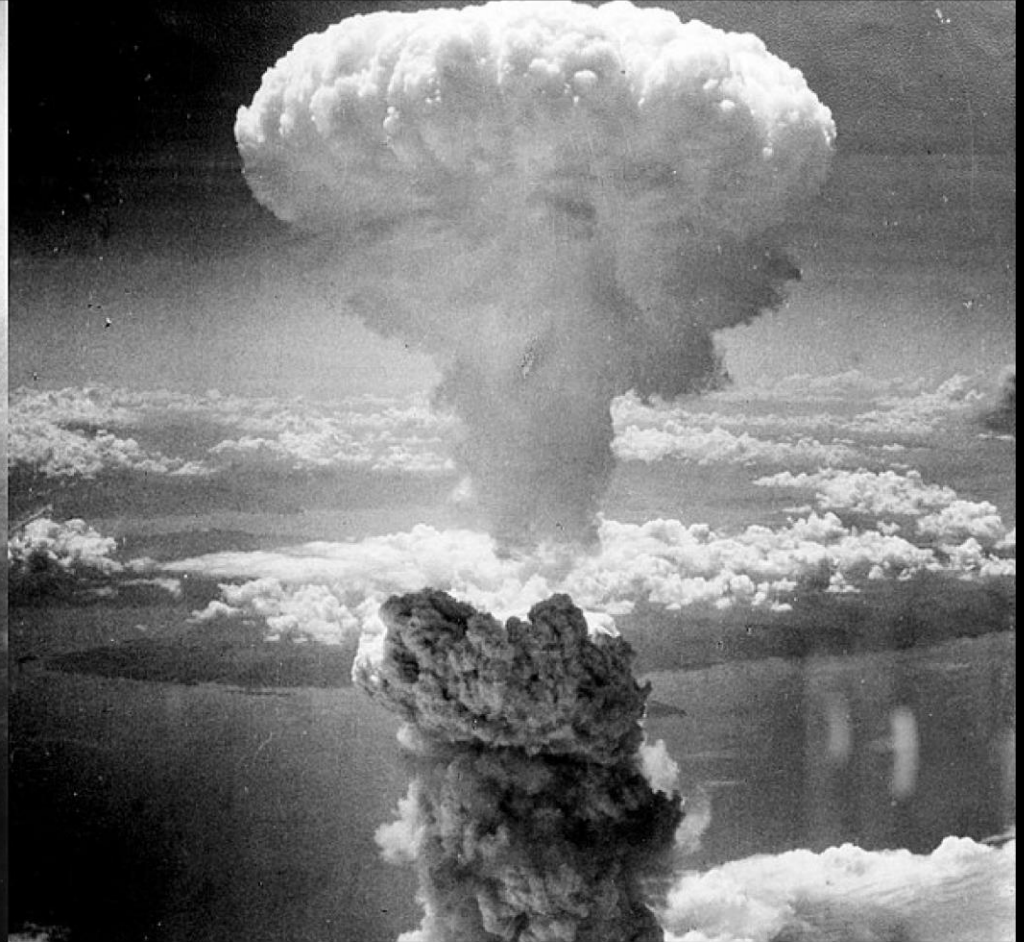
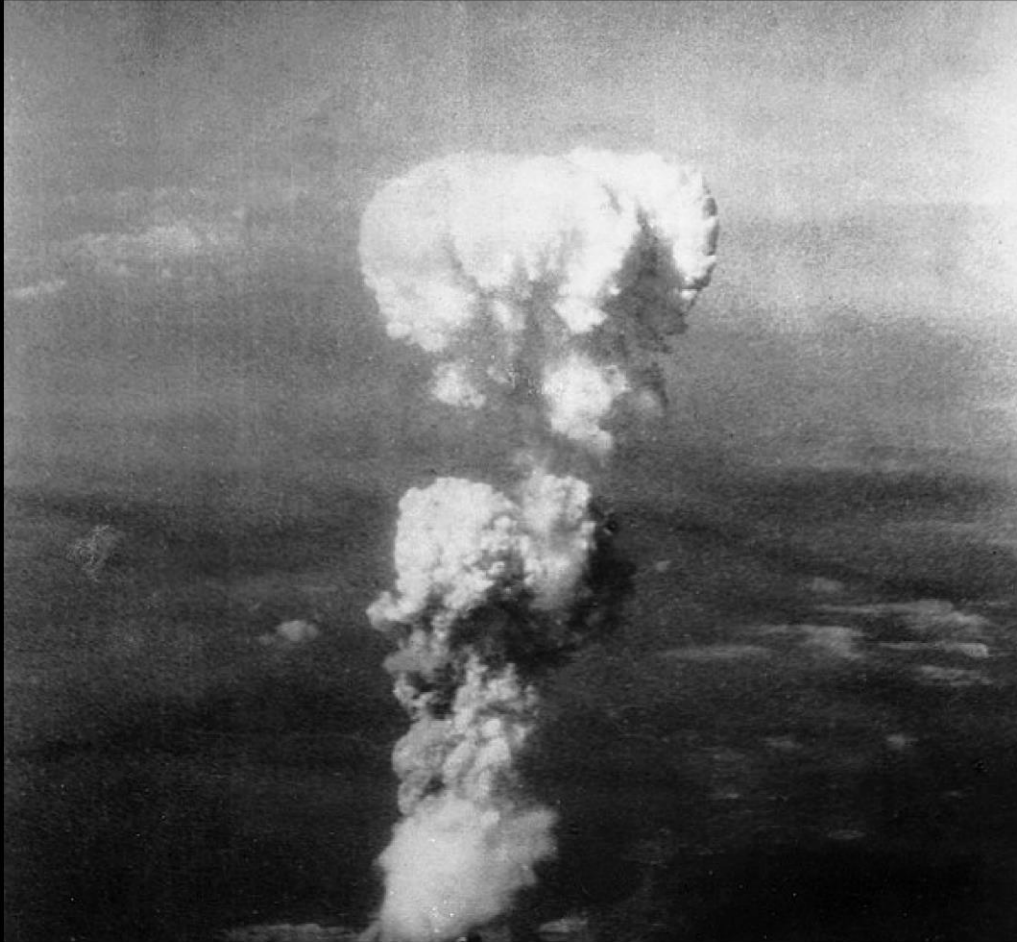
First chain reaction
in Chicago.

1942

Manhattan Project.



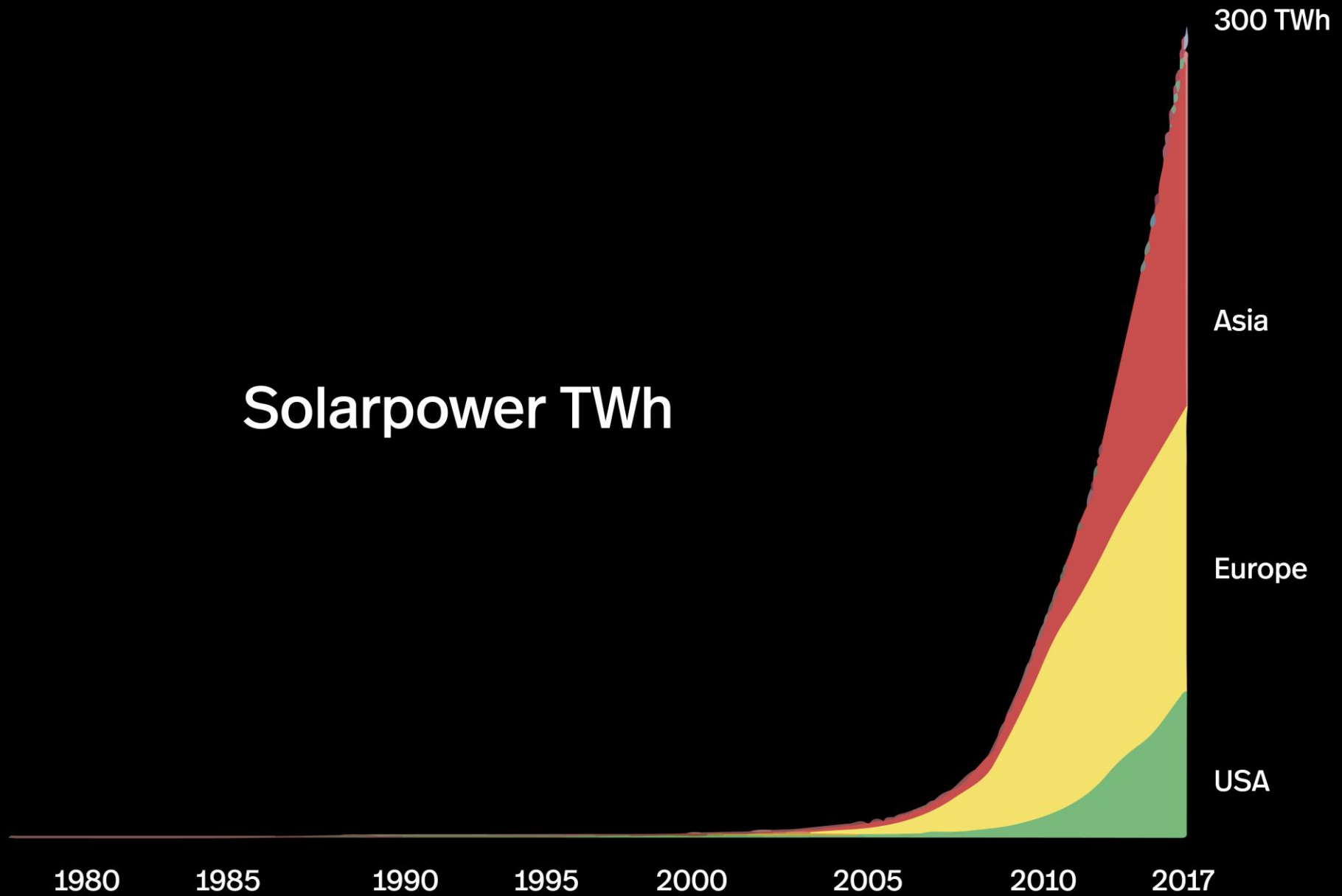
16th. of July 1945

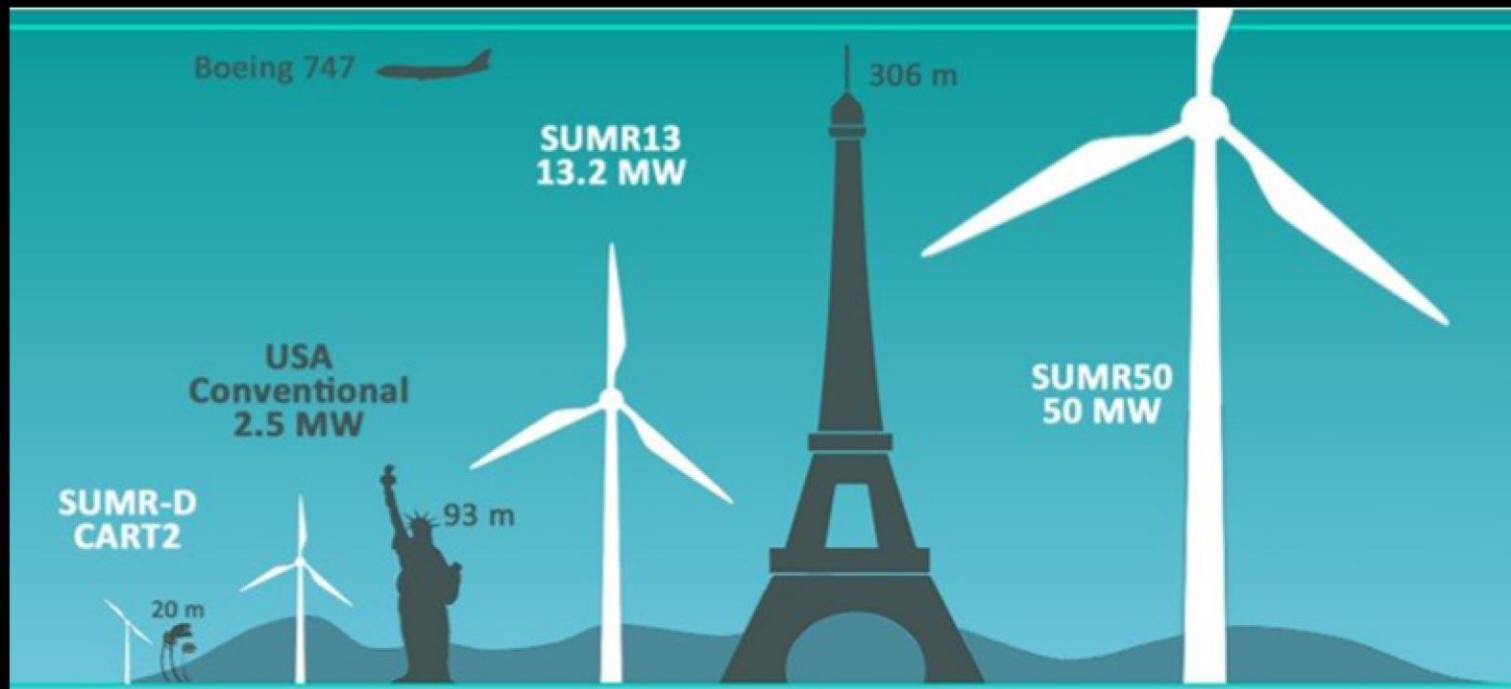


6. & 9th. of august 1945

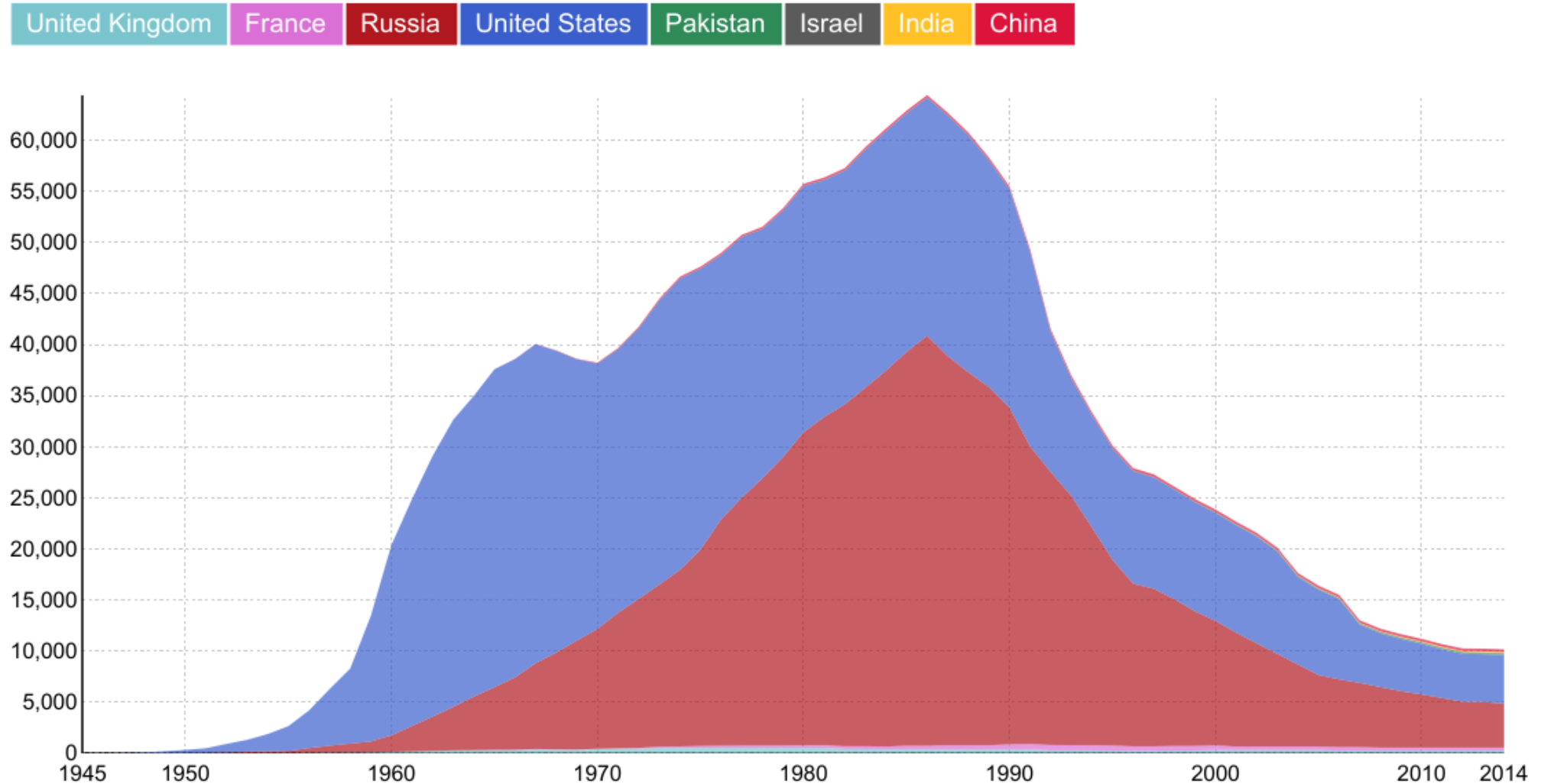


Solarpower TWh





Number of nuclear warheads in the inventory of the nuclear powers, 1945-2014



2.13 AIDS Deaths

There have been a total of 13,584 reported AIDS deaths in Canada between 1980 and 2011. ⁶ Figure 21 shows the dramatic decline in AIDS mortality after 1996.

Figure 21: Number of reported deaths of reported AIDS cases, 1980-2011, (n=13,584)

