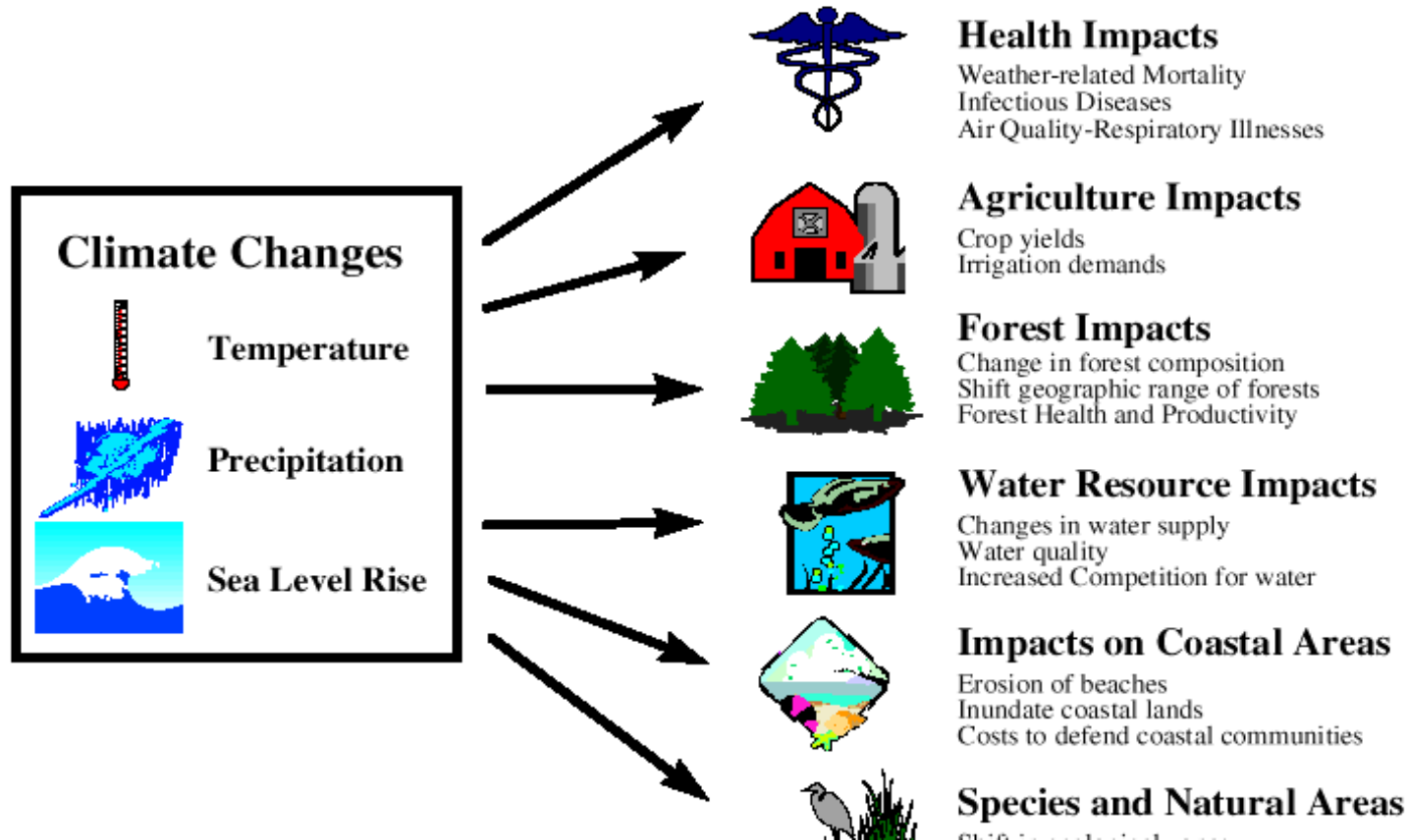


An aerial photograph of a large, irregularly shaped ice floe. The ice is white and textured, with a large, clear, turquoise-colored meltwater pool in the center. The surrounding sea ice is dark blue and fragmented into smaller pieces. The text "Climate Change and Pandemic" is overlaid in white, sans-serif font across the middle of the image.

# Climate Change and Pandemic

# Potential Climate Change Impacts



POTENTIAL  
IMPACTS OF  
CLIMATE  
CHANGE

# HUMAN HEALTH AFFECTED BY CLIMATE CHANGE:

Alteration in distribution of some infectious disease vectors

Seasonal distribution of some allergenic pollen species

Increased heat wave related deaths.

# IMPACT OF CLIMATE CHANGE ON HEALTH



Understanding Climate & Health Associations in India

These serious conditions are sensitive to being worsened by climate change. Current burden of these conditions are:

**2,037 DEATHS**

in 2015 due to heat waves in 8 states of India

**8,51,372**

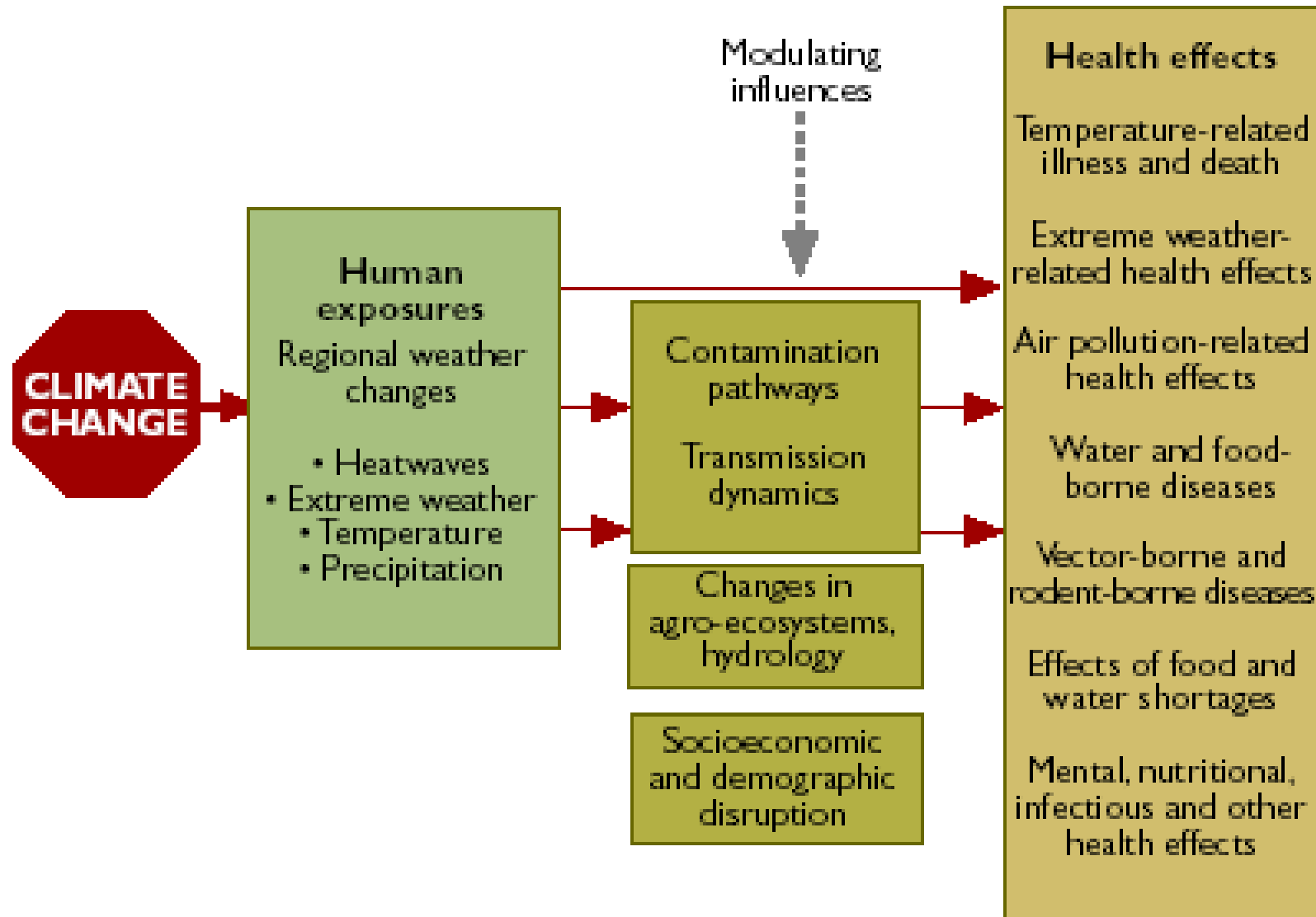
total cases of malaria reported in India in 2014

**33,320**

cases of dengue in India in 2014

**6533**

reported deaths from Floods/Cyclone in India (2004- 2014)



## Climate Change Signature and Health Impacts

- Increasing frequency and strength of extreme weather events
- Expanding range and spread of vector-borne diseases like malaria or dengue
- For others, such as the COVID-19 pandemic, the connection with climate change is less clear out

# CLIMATE CHANGE & INFECTIOUS DISEASE LINKS

- A pandemic is an epidemic of an infectious disease that has spread across a large region, for instance multiple continents or worldwide, affecting a substantial number of people.
- Humans have known that climatic conditions affect epidemic diseases from long before the role of infectious agents was discovered, late in the nineteenth century.
- The evolution of these viral diseases may or may not directly affected by climate change. But can definitely affects its transmission, prognosis, diagnosis and treatment

# CLIMATE CHANGE AND CORONAVIRUS

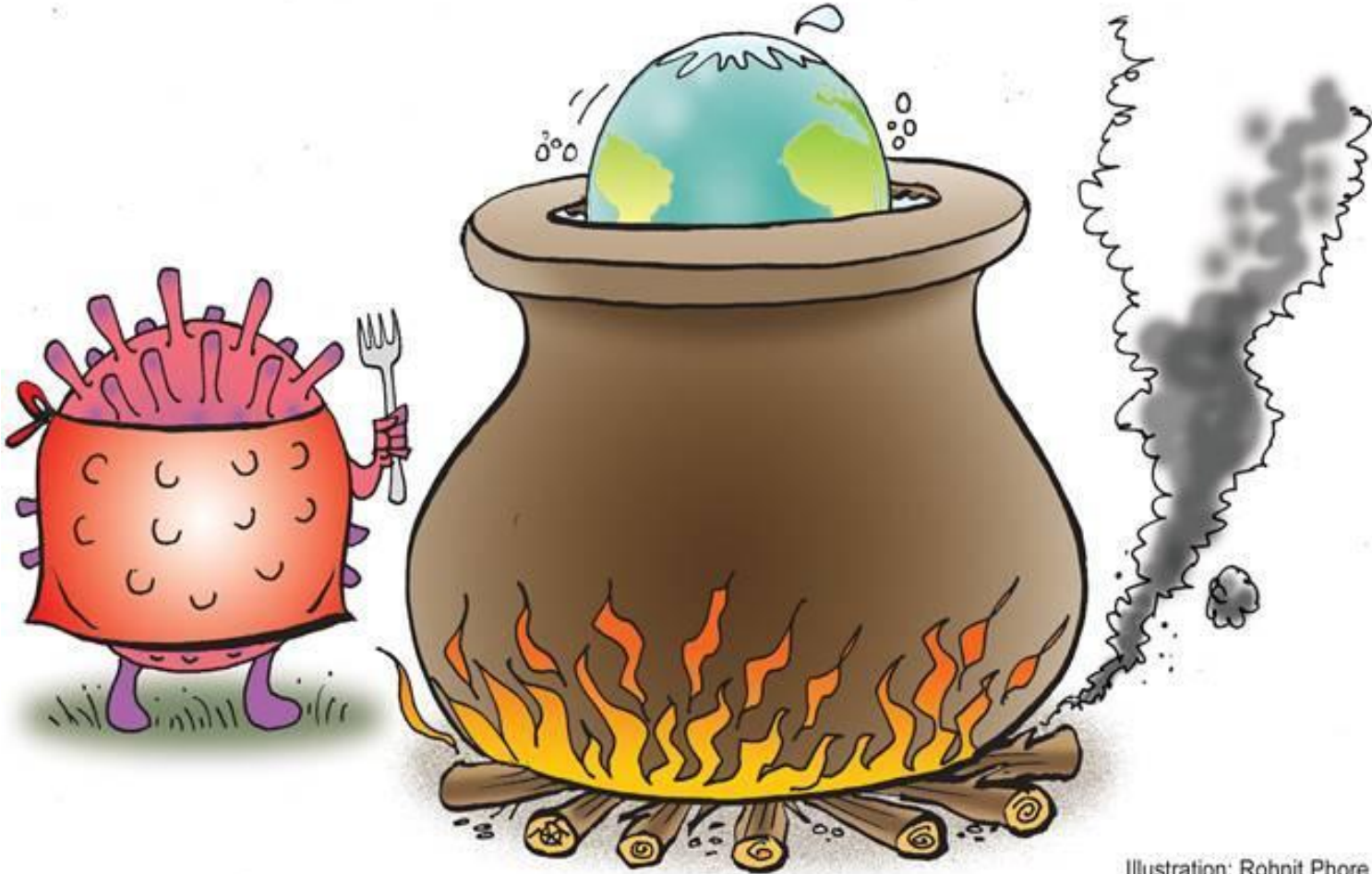


Illustration: Rohnit Phore

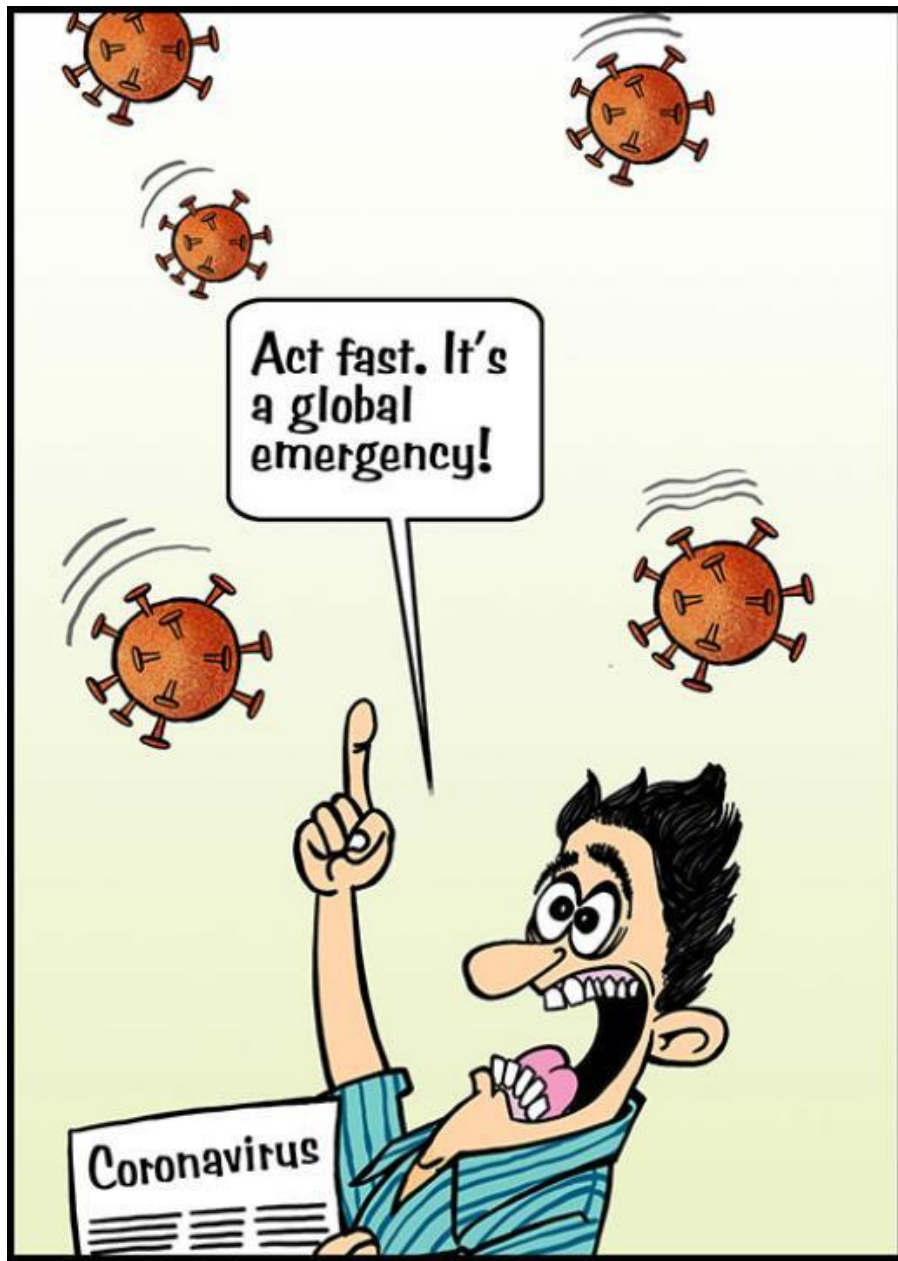


Coronavirus (COVID-19) is an infectious diseases caused by newly discovered coronavirus

This resulted in global pandemic and economic crisis

This is not a surprise, due to uncontrolled anthropogenic activities such crisis might effect the world in future and climate change could be the main reason.

According to the UN Food and Agriculture Organization (FAO, 2005) climate change and globalization could promote the spread of avian influenza and create a global pandemic. As the climate becomes more unstable, its role increases.



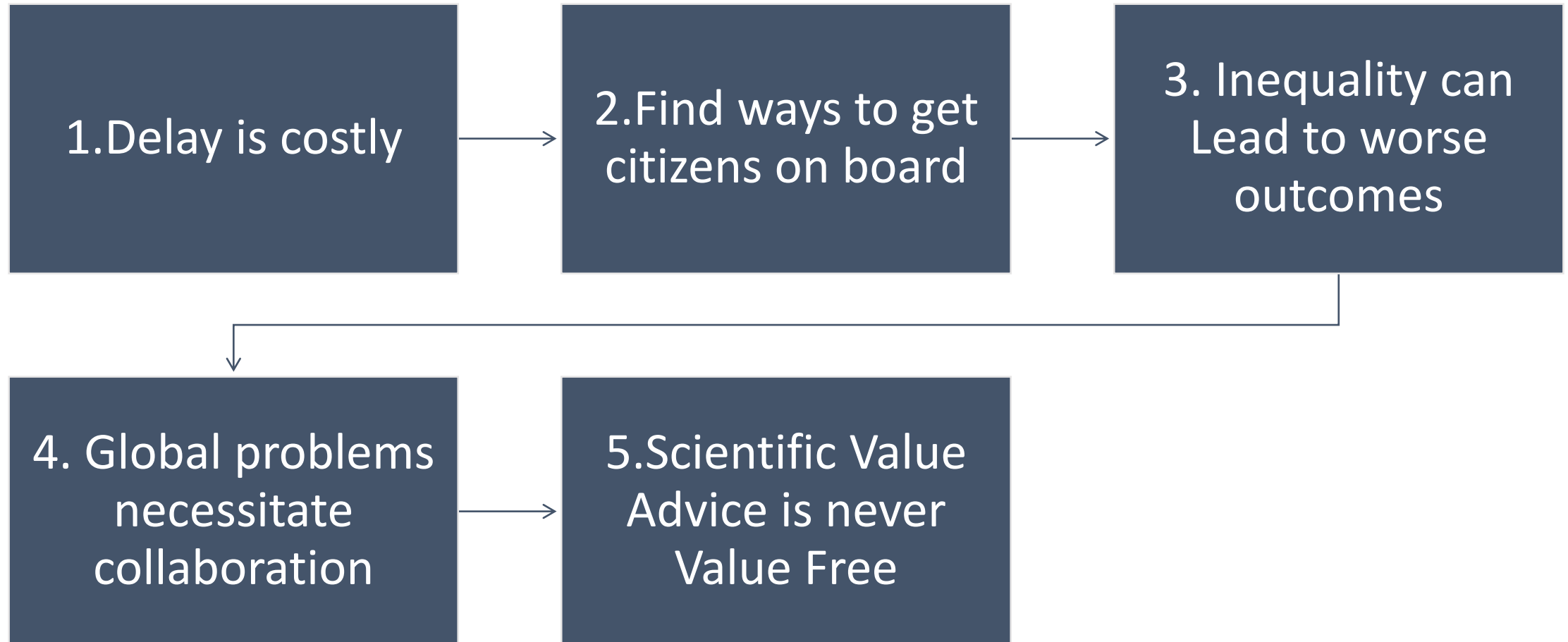
# Climate Change and Corona Virus

Biggest carbon crash ever recorded!!!

No war, no recession, no previous pandemic has had such a dramatic impact on emissions of CO<sub>2</sub> over the past century as Covid-19 has in a few short months

Despite this massive fall this year, the concentrations of CO<sub>2</sub> in the atmosphere and warming our planet won't stabilise until the world reaches net-zero

# Policy Lessons



# Lessons.....

- Well-resourced, equitable health systems with a strong and supported health workforce are essential for protection from health security threats, including climate change.
- Reversal of Austerity measures that have strained many national health systems for resilient economies and societies
- For e.g., many Iranian lives could have been saved at the early stages of the COVID-19 outbreak in the country, if its beleaguered healthcare system had been better prepared for what was to come. For example, the people of Haiti would have been much more adept in coping with and recovering from the lasting effects of 2016's Hurricane Matthew – which was **exacerbated by climate change** – if they had had a resilient and well-resourced health system in place to support them.



# Lessons drawn...

Dramatic change in behaviour

Temporary shift of gears could lead to a long-term shift in old behaviours and assumptions

Although climate change presents a slower, more long-term health threat, an equally dramatic and sustained shift in behaviour needed to prevent irreversible damage

## Lesson Drawn ...

Crises like COVID19 and Climate Change offer an opportunity for a regained sense of shared humanity

Financial and social support packages to resuscitate the global economy post-pandemic should therefore promote health, equity, and environmental protection

Ultimately, public health is a political choice

If we learn the lessons of COVID-19, we can approach climate change more informed about the consequences of inaction.”

- **Let science and innovation lead the way.**
- So just as we need new tests, treatments, and vaccines for the novel coronavirus, we need new tools for fighting climate change: zero-carbon ways to produce electricity, make things, grow food, keep our buildings cool and warm, and move people and goods around the world. And we need new seeds and other innovations to help the world’s poorest people—many of whom are smallholder farmers—adapt to a less predictable climate.

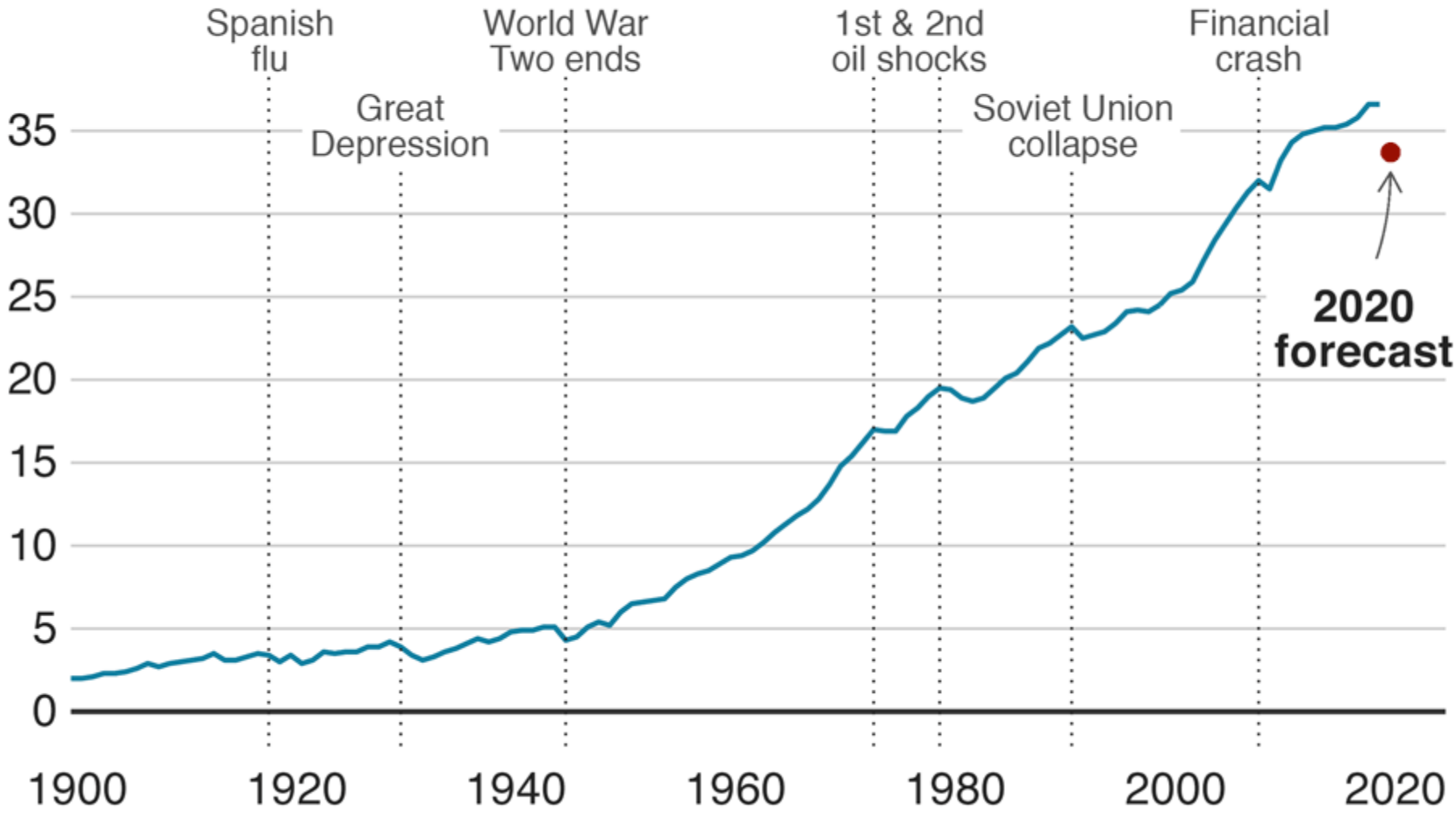




**Start now**

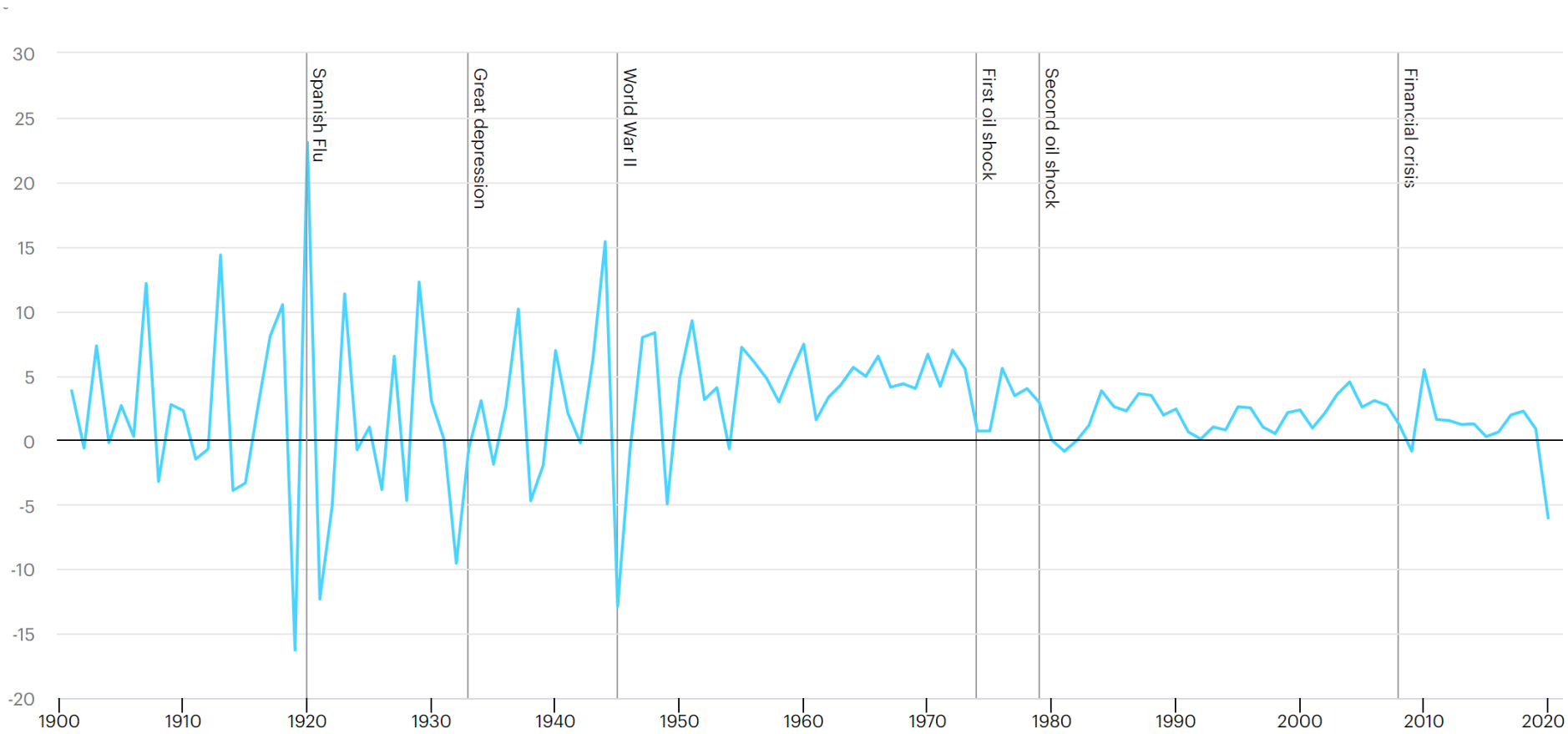
# Global CO2 emissions, 1900-present

Billion tonnes of CO2 per year



Source: Global Carbon Project, CDIAC & IEA

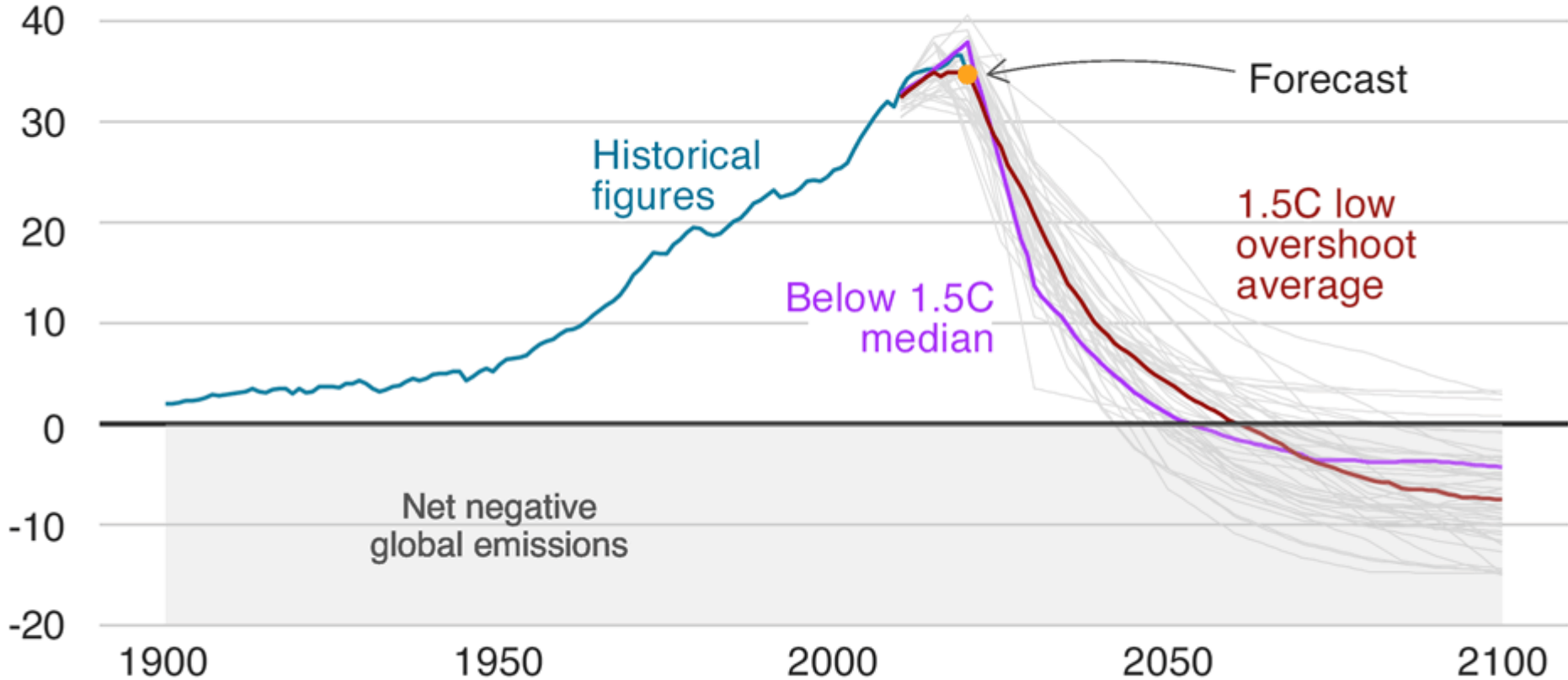
# Trends of Dramatic fall of CO2



# What if CO<sub>2</sub> was cut like this each year?

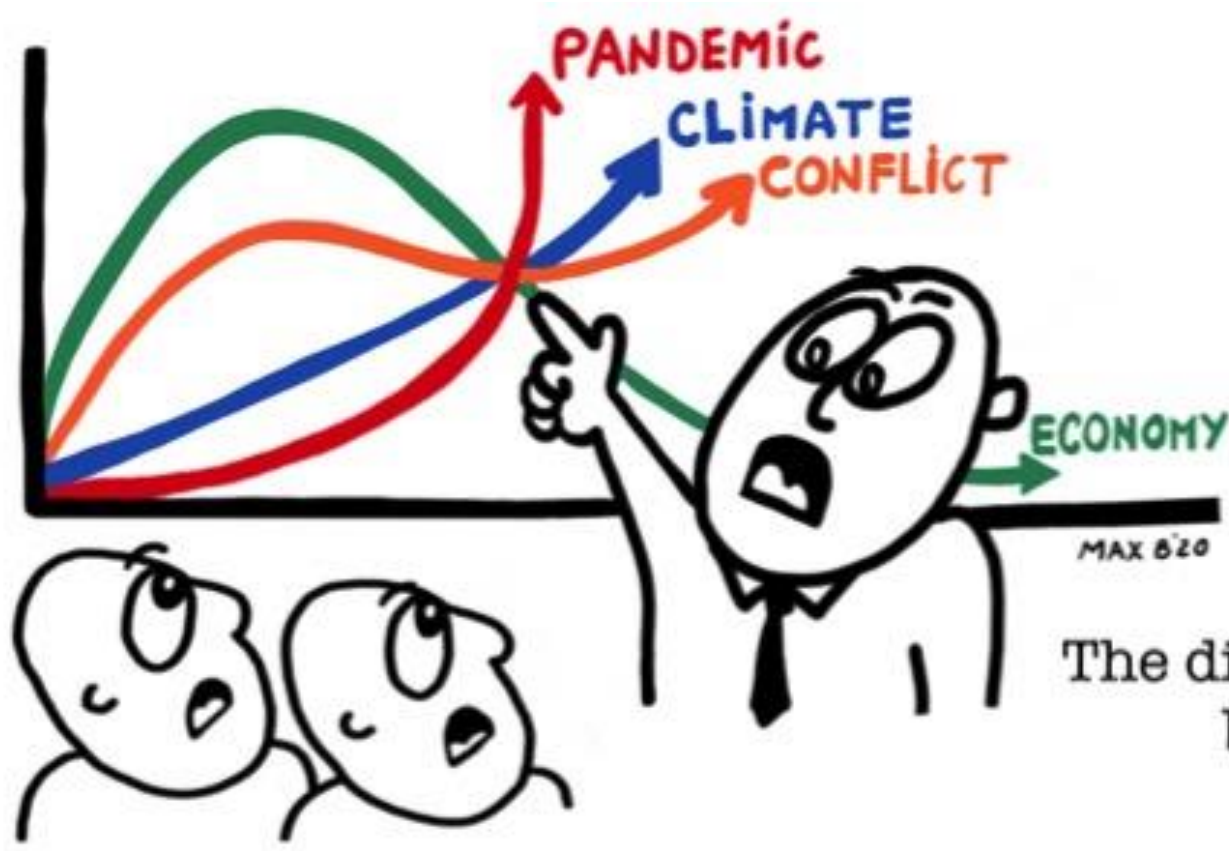
- To keep the world on track ( under 1.5C )this century, the world needs similar cuts for the foreseeable future
- If Covid-19 leads to a drop in emissions of around 5% in 2020, then that is the sort of reduction we need every year until net-zero emissions are reached around 2050
- Such emissions reductions will not happen via lockdowns and restrictions, but by climate policies that lead to the deployment of clean technologies and reductions in demand for energy

# Keeping temperature rise to 1.5C



Source: Glen Peters, IAMC, IIASA



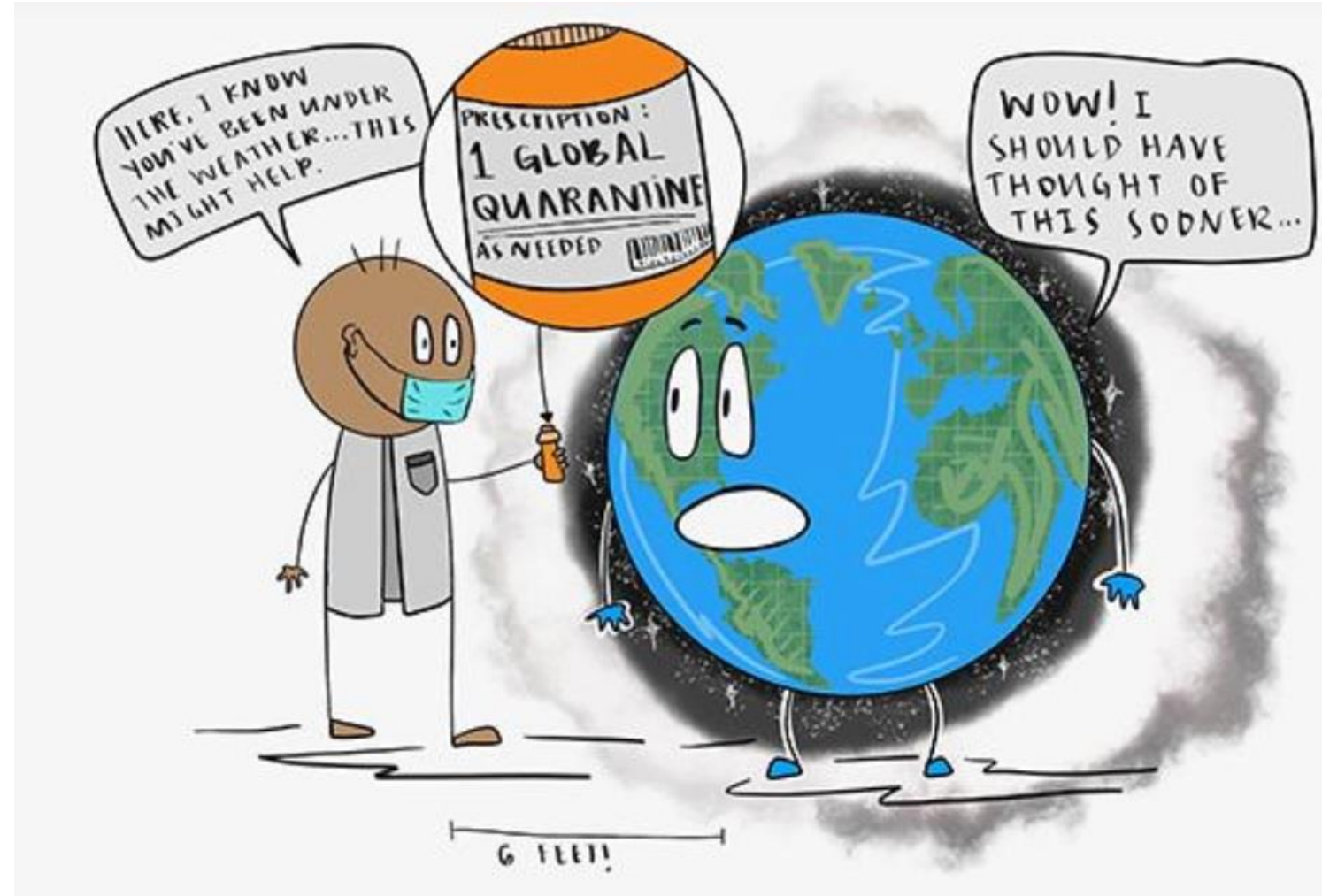


The disasters are collaborating better than we are!

# ANYWAYS! EARTH IS REVIVING

From Past few decades we were putting efforts to save environment but not ready to limit our carbon footprints

Here is one virus, which causes lockdown at various places and help reviving nature



# Quiz

1. Which outbreak was observed in 2014-2016

(a) Ebola and Zika (b) Plague (c) Spanish Flu (d) Black Death

2. Which Pandemic is termed as once in century

(a) COVID19 (b) Ebola (c) Zika (d) Influenza

3. Which continent was struck by Black Death epidemic in the 14<sup>th</sup> Century

(a) Europe (b) Asia (c) Africa (d) Australia

4. When did the Oil Crisis take place

(a) 1970s (b) 1960s (c) 1950s (d) 1990s

5. Name a vector borne disease

(a) Malaria (b) Diabetes (c) Ricketts (d) Scurvy



Thank you



While these energy sources have transformed the world, the carbon seeping into our atmosphere has driven up global temperatures by just over 1C since the mid-1850s. They could rise by 3-4C by the end of this century if CO2 levels aren't savagely reduced.

Over the past 100 years, as indicated on the graphic, a number of events have shown that dramatic falls in carbon are possible.

Much is made of the financial crash in 2008-2009, but in reality, carbon emissions only fell by around 450 million tonnes between 2008 and 2009.

This is much smaller than the fall in CO2 in the aftermath of World War II, which saw a drop of around 800 million tonnes.

It is also smaller than the global recession in the early 1980s that followed the oil crisis of the late 1970s.

During this period, CO2 went down by around one billion tonnes.

But the coronavirus pandemic of 2020 dwarves all of these previous shocks by some distance.

In a few months, demand for energy globally has fallen off a cliff.

The International Energy Agency (IEA) **says that the world will use 6% less this year** - equivalent to losing the entire energy demand of India.

This will feed through to large falls in CO2.

<https://www.youtube.com/watch?v=R1h1L6vj3BI>