

# Module VI & VII

## Globalization and Environment

### Global Climate Change



*Lecture 7 (18 August 2024)*  
*Dr. Asib Ahmed*



**Department of Social Relations**  
**EAST WEST UNIVERSITY**

## **Topic covers:**

1. Basics of globalization
2. Types/forms of globalization
3. 4Cs of globalization
4. Tools of globalization
5. Characteristics of the components of globalization

## **Globalization**

Globalization is a term used to describe how trade and technology have made the world into a more connected and interdependent place.

Globalization also captures in its scope the economic and social changes that have come about as a result.

Globalization means the speedup of movements and exchanges (of human beings, goods, and services, capital, technologies or cultural practices) all over the planet.

One of the effects of globalization is that it promotes and increases interactions between different regions and populations around the globe.

# Globalization

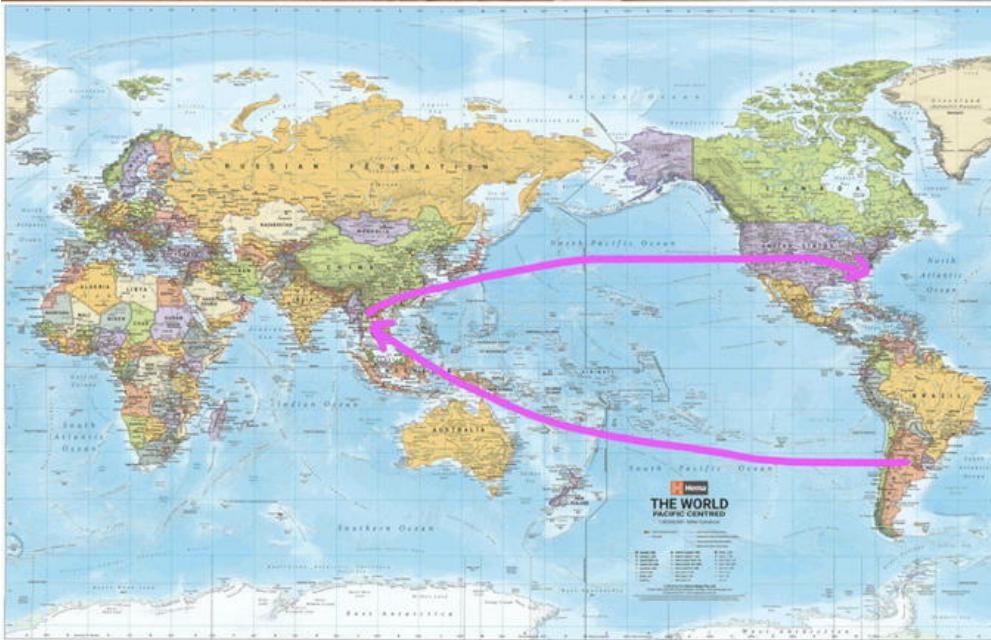
Globalization is the closer integration of the countries and peoples of the world ... brought about by the enormous reduction of costs of transportation and communication, and the breaking down of artificial barriers to the flows of goods, services, capital, knowledge, and people across borders.

*Stiglitz, J. (2004) Globalisation and its Discontents.*

# Globalization

Globalisation is the **ongoing process** that is linking **people, neighborhoods, cities, regions** and **countries** much more closely together than they have ever been before. This has resulted in our lives being intertwined with people in all parts of the world via the food we eat, the clothing we wear, the music we listen to, the information we get and the ideas we hold.

While globalization is not a new process, it has accelerated rapidly since World War II



## **When did globalization begin?**

The Silk Road, an ancient network of trade routes across China, Central Asia, and the Mediterranean used between 50 B.C.E. and 250 C.E., is perhaps the most well-known early example of exchanging ideas, products, and customs.

Along with Chinese silk, Roman glass, and Arabian spices, ideas such as Buddhist beliefs and the secrets of paper-making also spread via these tendrils of trade.

Unquestionably, these types of exchanges were accelerated in the Age of Exploration, when European explorers seeking new sea routes to the spices and silks of Asia bumped into the Americas instead.

With the Information Age, globalization went into overdrive. Advances in computer and communications technology launched a new global era and Redefined what it meant to be “connected.”

## **Types/ forms of Globalization**

The phenomenon is so pervasive and inextricably linked with people's lives that both benefits and cons are often given the go by. Its effects are so waterproof that several hundred blog posts aspire to spell out the different types of globalization.

The following list is a list of the significant types of globalization:

Economic globalization

Social globalization

Cultural globalization

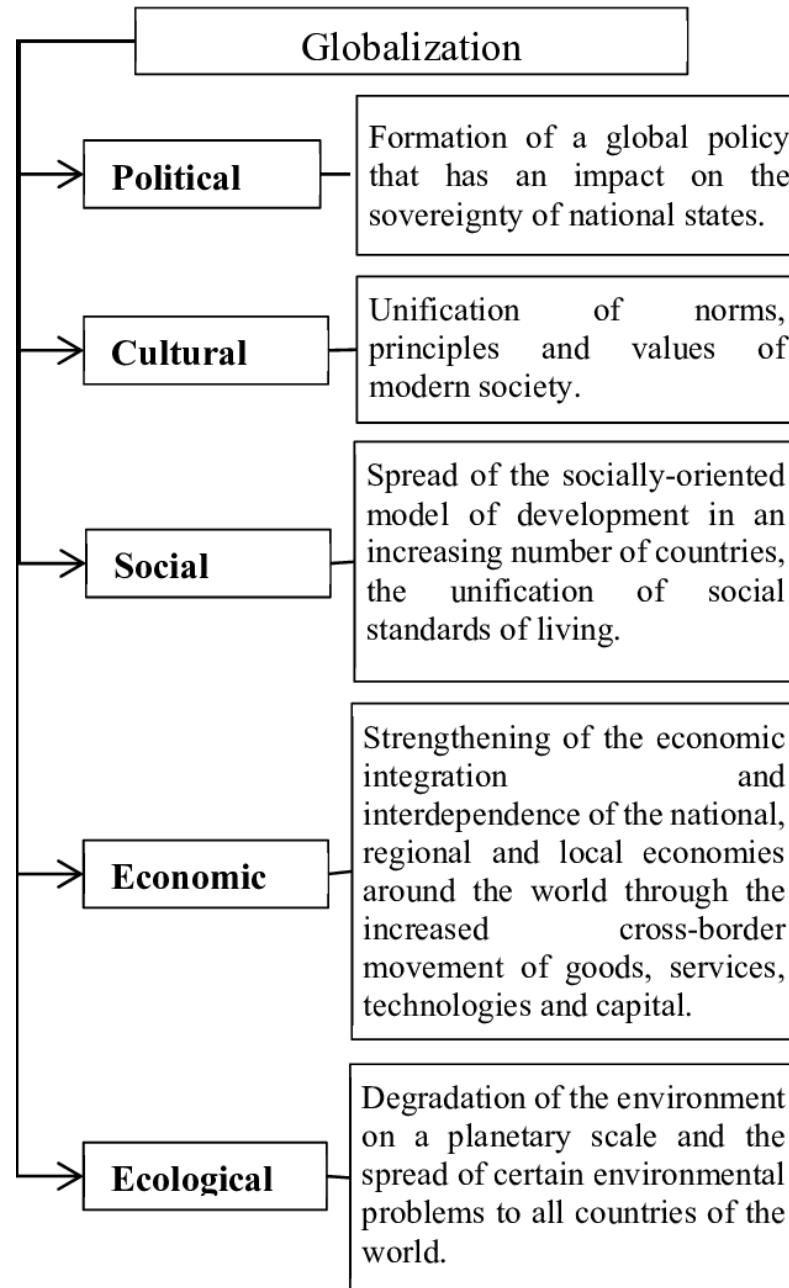
Political globalization

Environmental globalization

Technological globalization

Financial globalization

Geographical globalization



## **1. Economic globalization**

- Economic globalization integrates several liberal, conservative and hybrid economies into one giant interconnected marketplace. Constantly influencing each other, these markets are somewhat interdependent than independent.
- Economic globalization can be seen via how a bubble, a boom, or a recession in the USA influences people's jobs in Europe and Asia. It can also be seen in the performance of stock markets in one country fluctuating based on financial news in another country.

## **Benefits of economic globalization**

- Employees in developing countries have more opportunities
- Increased per capita consumption
- Better products at lower prices
- Increased income
- More options for unskilled workers

## **Cons of economic globalization:**

- **Job losses in developed markets:** Economic globalization has led to the development of manufacturing hubs worldwide. This has shifted manufacturing jobs from the first world to developing nations. Thus several countries face a glaring employment gap for their unskilled workers.
- **More power to businesses to influence governments:** Globalization has made companies more powerful. Their increased capital can affect people, thus swaying public opinions.
- **Increases exploitation of workers:** Although globalization has created jobs in developing countries, it hasn't happened without ill effects. Many sweatshops and mines employ workers for highly disrespectful wages. Countries in Africa are victims of economic globalization.
- **Encourage brash consumerism:** Increased per capita consumption in developed countries has pressured manufacturers. Globalization has led to higher income and a boom in production. Accompanied by increased consumer spending has led to the growth of different markets.

## **2. Social globalization**

- Social globalization is the integration of societies of the world.
- Before globalization, people were highly regionalistic. Several cultures existed, giving way to tribes, clans, and petty kingdoms. The effects of a good or bad economy, technology, and pandemics were limited to the societies these trends emerged from.
- However, in a globalized world, this is not the case. The pandemic itself is a depraved but significant example of how interconnected our society is. A contagion from one country has spread, mutated, and wreaked havoc to several societies of the world.

## **Benefits of social globalization**

- Increased exposure to more cultures and lifestyles
- Building diverse human resource pools
- Unionization of employees
- Starts a dialogue for various international problems

## **Cons of social globalization:**

- Lack of localization: As societies and cultures merge, the distinction between cultures becomes blurred.
- Increased homogenization of cultures: As the world becomes one massive society, cultures will become less distinct. The increased influence of Hollywood movies is already westernizing cultures in modernization.
- More prone to contagious diseases: Bitter experiences of the pandemic shall leave a lasting impression on the generation.

### **3. Political globalization**

- Political globalization refers to the ripple effects and continuity of political relationships between countries.
- Setting up international organizations such as the UN, NATO, WTO, which debates and regulate international politics and trade, is also an example of this type of globalization.
- Globalization also paved the way for international laws and clauses that secure the rights and interests of smaller nations.

## **Benefits of political globalization**

- Creation of the single society
- Formation of international organizations
- Healthy competition between nations for socio-economic growth
- A collective effort towards common problems
- Decentralization of the nation-state

## **Cons of political globalization**

- Softening of national boundaries: Political globalization has made mobility easier. However, this phenomenon has occurred to satiate business interests.
- Politics and business are getting intertwined: Most companies try to influence the political parties in the country. These countries need not necessarily be home-grown businesses. This allows foreign interests to sway the political wind according to their desire.

## 4. Technological globalization

- The spread of technology has put globalization on auto-pilot. Technology influenced business, marketing, talent acquisition, supply chain, data management.
- Technology has acted as both the cause and an effect of globalization. Technologies such as the internet, cloud computing, high-speed mobility have accelerated globalization. However, this type of globalization can be seen as a side-effect.

## **Benefits of technological globalization**

- Growth of tech-based startups and small business
- International and local mobile banking
- Automation
- Increased income
- More opportunities for unskilled workers

## **Cons of technological globalization**

- **Increased inequality and digital divide:** Although globalization has put a communication device in many people's hands, technological disparities and the digital divide are still rampant. This has led to unequal access to opportunities.
- **Job loss for unskilled workers:** Skilled workers and white-collar jobs are mostly safe from globalization. However, manual labor often faces the threat of globalization.
- **Increase in fake news:** Social media has led to rampant propaganda and fake news. Thai phenomenon affects not only local audiences but also global audiences.
- **Increased consumer spending on impulsive purchases:** E-wallets and faster shipping prompt people to make impulsive purchases.

## 5. Environmental globalization

- Environmental globalization is simply the consequence of all the after-effects of other types of globalization.
- Undoubtedly, the tide of development emanates from globalization pollutes the environment. Globalization increases our per capita consumption. This puts a lot of pressure on natural resources, which badly affects the ecological cycle.

# **What are the 4Cs of globalization?**

The US-based Partnership for 21st Century Skills (P21) identifies competencies needed in the global era called "The 4Cs", they are-

Communication

Collaboration

critical thinking

creativity

## **Tools of globalization**

The tools of globalization include various economic, technological, and cultural factors that contribute to the interconnectedness of the world.

Some key tools of globalization include –

- international trade agreements
- advancements in technology
- transportation infrastructure like shipping and air travel
- multinational corporations
- global financial systems
- cultural exchange through media and entertainment.

These tools have played a significant role in shaping the interconnected global economy and society.

## Characteristics of the components of globalization

### **1. Liberalization:**

The freedom of the industrialist/businessman to establish industry, trade or commerce either in his country or abroad; free exchange of capital, goods, service and technologies between countries.

### **2. Free Trade:**

Free trade between countries; absence of excessive governmental control over trade.

### **3. Globalization of Economic Activities:**

Control of economic activities by domestic market and international market; coordination of national economy and world economy.

## Characteristics of the components of globalization

### **4. Connectivity:**

Localities being connected with the world by breaking national boundaries; forging of links between one society and another, and between one country and another through international transmission of knowledge, literature, technology, culture and information.

### **5. Borderless Globe:**

Breaking of national barriers and creation of interconnectedness; the ideal of 'borderless globe' articulated by Kenichi Ohmae.

### **6. A Composite Process:**

Integration of nation-states across the world by common economic, commercial, political, cultural and technological ties; creation of a new world order with no national boundaries.

## Characteristics of the components of globalization

### 7. A Multi-dimensional Process:

**Economically**, it means opening up of national market, free trade and commerce among nations, and integration of national economies with the world economy.

**Politically**, it means limited powers and functions of state, more rights and freedoms granted to the individual and empowerment of private sector.

**Culturally**, it means exchange of cultural values between societies and between nations.

**Ideologically**, it means the spread of liberalism and capitalism.

## Characteristics of the components of globalization

### **8. A Top-Down process:**

Globalization originates from developed countries and the MNCs (multinational corporations) based in them.

Technologies, capital, products and services come from them to developing countries. It is for developing countries to accept these things, adapt themselves to them and to be influenced by them.

### **9. Global State vs Global Civil Society:**

In protest against the harmful effects of globalization on the vast multitude of people all over the world, particularly in developing countries, protest marches, demonstrations and meetings have been organized in different countries. These protests have taken militant forms in the last decade. Protest groups have tried to disturb and paralyse the meetings of WTO, World Bank and IMF.

## **Positive Impact of Globalization of Environment**

**Wealth from the globalization can Reduce poverty, creates education opportunity, and a stronger capacity of states and global institutions to implement sustainable development.**

Bring **corporate investment** to poor areas and as well as new technologies.

**Technological innovation** can bring less harmful forms of production

# **Positive Impact of Globalization of Environment**

1. Globalization encourages technology transfer
2. Help spread environmental solutions
3. Globalization can make environmental conservation compatible with development.
4. Often bring environmental collaboration between North and South, or Corporation and governments
5. Less pollution in developed regions
6. Encourages use of renewable energy

# **Negative Impact of Globalization on Environment and Society**

**Globalization creates conflict between trade and environment. Allow corporations to plunder the globe's fragile ecosystems. Thus, declining the common resources available for poor and common population**

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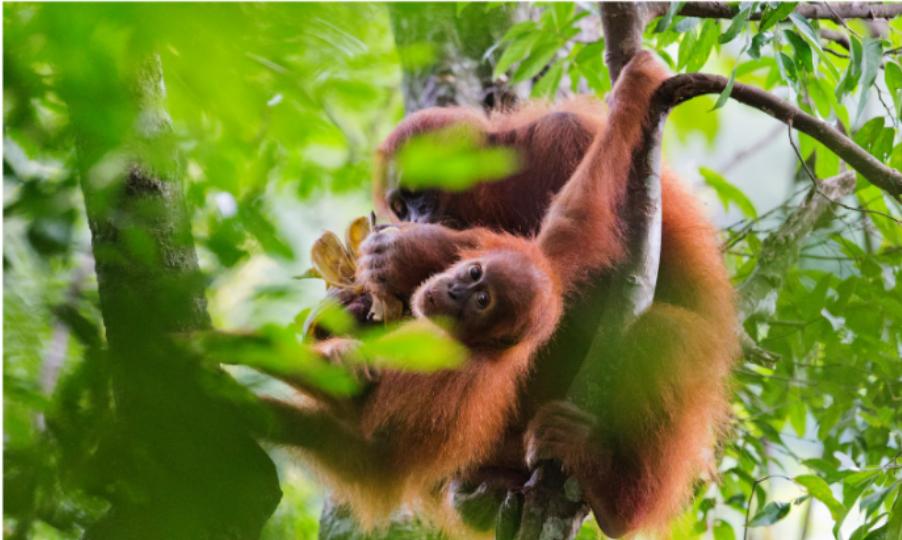
Environment ► Climate change    Wildlife    Energy    Pollution

**the palm oil debate**  
Guardian sustainable business

## 'The last place on Earth': how Sumatra's rainforest is being cleared for palm oil

Naomi Larsson  
Thu 28 Sep 2017 09.47 BST

5,355



▲ Critically endangered Sumatran orangutans in the Leuser ecosystem. Photograph: Paul Hilton

Sumatra's Leuser ecosystem is the only place where orangutans, rhinos, tigers and elephants coexist. But palm oil companies continue to clear it, claims NGO

Leuser ecosystem: one of most biodiverse places on Earth under threat - in pictures

A palm oil company is continuing to clear forest in a fast-diminishing elephant habitat in Indonesia's Leuser ecosystem despite being the subject of two reports into illegal deforestation, according to a prominent environmental organisation.

The Rainforest Action Network (RAN) published a study in July accusing

most viewed

Live Pakistan election 2018: vote-rigging claims rejected by electoral commission - live updates

CNN reporter banned: Fox joins outcry after exclusion from White House event

Bomb detonated outside US embassy in Beijing

**Globalization is often an ally of the chainsaw. Deforestation is mainly due to the conversion of forests into agricultural land, especially in developing countries. Take Brazil: for a little over a decade, much of its agriculture was export-oriented. Between 1996 and 2003, Brazilian soy exports to China rocketed from 15000 to 6 million tonnes. This dynamism involved deforestation and converting part of the rainforest into farmland.**



Industrial soy drives deforestation spike in Brazil, satellite images show



Total deforestation and conversion of native vegetation across Brazil increased from 1.6 million hectares (Mha) in 2018 to 1.84 Mha in 2019 and 1.83 Mha in 2020. The expansion of soy plantations is the [second largest direct driver of deforestation](#) and conversion, after the expansion of pasture for cattle farming and [land speculation](#).

**Globalization encourages use of HYV, pesticides and other agricultural technologies to increase production. Thus, it led to the declining soil fertility, loss of biodiversity and destroy indigenous agricultural practice**



© picture-alliance/dpa

*Argentina has lost 70 percent of its natural forest, much of it in the last 20 years, with increased soy production.*

*"They're making us sick, they're killing our children, but they're not going to jail for it," Silvia Gatica said. Disappointment and anger are written all over her face. In 1989, just three days after she gave birth, Gatica lost her daughter to kidney failure. There were five similar cases in her neighborhood Ituzaingo alone, a community where deformities in newborns are mounting, and the number of people with cancer is double the national average.*

*A medical report confirmed that the poison does not only end up on crop fields, but can also be found within the residents' bodies - especially in children.*

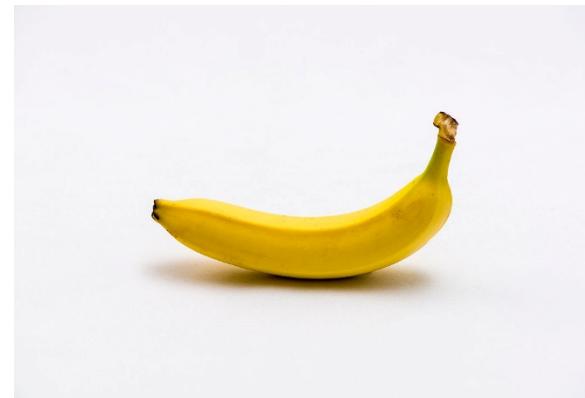
**Loss of genetic diversity and biodiversity.** Globalization often threatens endemic species. Many species have become extinct in recent decades. Again, the link between the extinction of some species and globalization is indirect.

**Ninety-nine percent of exported bananas** are a variety called the Cavendish

There are many varieties of banana in the world, and until the later half of the 19th century, the dominant one was called the Gros Michel. But in the 1950s, the crop was swept by a strain of Panama disease

The Cavendish was resistant to the disease and fit other market needs: it could stay green for several weeks after being harvested (ideal for shipments to Europe), it had a high yield rate and it looked good in stores.

There's a name for this situation: monoculture, the practice of fostering just one variety of something.



**Globalization, which is synonymous with rising international trade, has fostered the rapid production, trade and consumption of material goods in unprecedented quantities.**

**Drive overconsumption and unbalanced consumption, putting total global consumption well beyond the earth's carrying capacity**

## **Overall, more pollution in less developed countries**

 Washington Post

### [The scandals of Shein's fast-fashion empire](#)

Beyond Shein's uber cheap clothes, the fast-fashion retailer from China has been involved in numerous scandals, including claims of human...

 Brightly.eco

### [How Sustainable and Ethical Is Shein? Child Labor Accusations and Working Conditions](#)

If you've spent any amount of time on TikTok, YouTube, or Instagram, odds are you've heard of Shein. The fast-fashion retailer is known for...

 Global News

### [Shopping Shein? Fast-fashion brand under scrutiny for forced labour, environmental impact](#)

Chinese e-commerce giant Shein is well-known on apps like TikTok and Instagram among Generation Z shoppers, for offering throwaway fashion...

Jun 12, 2023

## Generate consumer prices that ignore environmental and social costs of production.



“Inside the production manager’s office, they use very bad, abusive language, like ‘this isn’t your father’s factory’, ‘the door is wide open, leave if you can’t meet the production goals’,”

**Revealed: Spice Girls T-shirts made in factory paying staff 35p an hour**

Workers producing tops sold to raise money for Comic Relief receive far below a living wage

‘Inhuman conditions’: life in factory making Spice Girls T-shirts

**“Sometimes they use more obscene language**

“Sometimes many female workers can’t bear the insults and pressure from the management, and they quit. Even last month, a few of my colleagues left because they faced very bad behaviour and they were shattered.”

Employees are forced to work overtime to hit “impossible” targets of sewing thousands of garments a day, meaning they are sometimes working 16-hour shifts that finish at midnight.

## **Negative Impact of Globalization of Environment**

**Globalization indirectly promotes CO2 emissions linked to industrial activity and consumption.**

**Globalization also promotes CO2 emissions from transport.** As critical drivers of globalization, transport systems have multiplied alongside international trade.

The major mode of transport that has characterized globalization in the past decades is the airplane. Aviation is today responsible for 4-9% of total GHG emissions released into the atmosphere.

**Increased consumption of fossil fuel,** therefore, increases the CO2 emission, and causing climate change



## The Globalization of Ivory

- What are the impacts on environment?
- How to find a balance between globalization and environment in this case?

**Loss of genetic diversity and biodiversity.** Globalization often threaten endemic species. Many species have become extinct in recent decades. Again, the link between the extinction of some species and globalization is indirect.

## **The Globalization of Ivory**

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

**Globalization creates conflict between trade and environment.** Allow corporations to plunder the globe's fragile ecosystems. Thus, declining the common resources available for poor and common population

Palm oil, an ingredient in half of all packaged foods worldwide

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

**Burden the Global South with unequal environmental costs and low environmental standards.**

<https://www.youtube.com/watch?v=JU0DXdAhdsA>

<https://youtu.be/bB3kuuBPVys>

## **Global environmental politics**

The study of global environmental politics has emerged as a problem-oriented and multidisciplinary field of inquiry that seeks to understand:

- (a) how and why global ecological problems arise and persist;
- (b) how ecological risks are distributed through space and time; and
- (c) how the global community (encompassing states and non-state actors) has responded, or ought to respond.

These three basic questions frame the field of inquiry of global environmental politics.

They also signal the enormous political challenges facing international and transnational collective efforts to protect the Earth's ecosystems and climate in a world of 193 sovereign states with vast disparities in capacity, resource endowments, population, cultures and levels of economic development.

## **Nexus between globalization and environment**

Globalization impacts the environment in two main ways:

1. through the connection of the world under one mode of industrial economic development and
2. through the subsequent effects, e.g. CO<sub>2</sub> emissions that such development has on the planet.

## **Pollution haven hypothesis**

One school of thought suggests that economic globalization can contribute to climate change through the “pollution haven hypothesis.”

This hypothesis posits that some developing countries may relax their environmental regulations to attract foreign direct investment (FDI) and industrial activities from multinational corporations.

## **Green growth**

The concept of “green growth” represents another school of thought that argues economic globalization, industry, capital flows, and innovation can be crucial in addressing environmental pollution and climate change.

The green growth perspective emphasizes that economic development and ecological sustainability are not necessarily conflicting goals; instead, they can be mutually reinforcing.



# Module VII

## Global Climate Change



*Dr. Asib Ahmed*



**Department of Social Relations  
EAST WEST UNIVERSITY**

## **Topic covers:**

1. Basics of climate and climate change
2. Hazard and disaster

# Weather and climate

Weather		Climate	
Short-term conditions of the atmosphere in a particular place.	01	The weather pattern of a particular place over a long period.	
Measured over a short period of time.	02	Measured over a long period of time.	
Affected by temperature, air pressure, and moisture, etc.	03	Affected by the climate system as well as altitude and latitude.	
Forecasted by collecting meteorological data.	04	Forecasted by collective weather statics over a long period of time.	

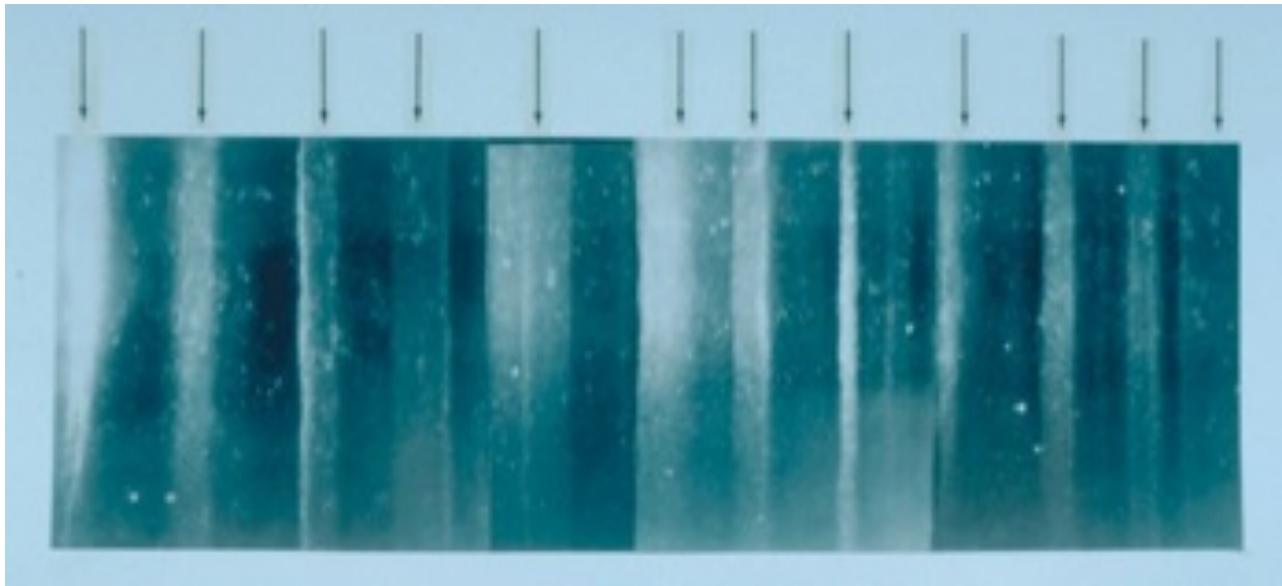
## What is Climate Change?

# **What is climate change?**

The planet's climate has constantly been changing over geological time. The global average temperature today is about 15 degree Celsius, though geological evidence suggests it has been much higher and lower in the past.

Climate Change refers to changes in climate characteristics including temperature, humidity, rainfall, wind, and severe weather events over long periods.

Looking into past temperature/ climate



**Scientists take cores from glaciers, ice sheets, and sediments to study past climates.**

By studying glaciers and ice sheets, scientists have been able to deduce global temperatures over the past few hundred thousand years by studying the gases and other materials that are trapped in the ice.

**What are the evidences that climate is changing,  
and is not a natural process/ caused by recent human activity?**

1. Looking at earth's past climate? Paleoclimatology

**What are the evidences that climate is changing,  
and is not a natural process/ caused by recent human activity?**

1. Looking at earth's past climate? Paleoclimatology.
2. Measurement of the sun's energy and its relationship with global temperature change

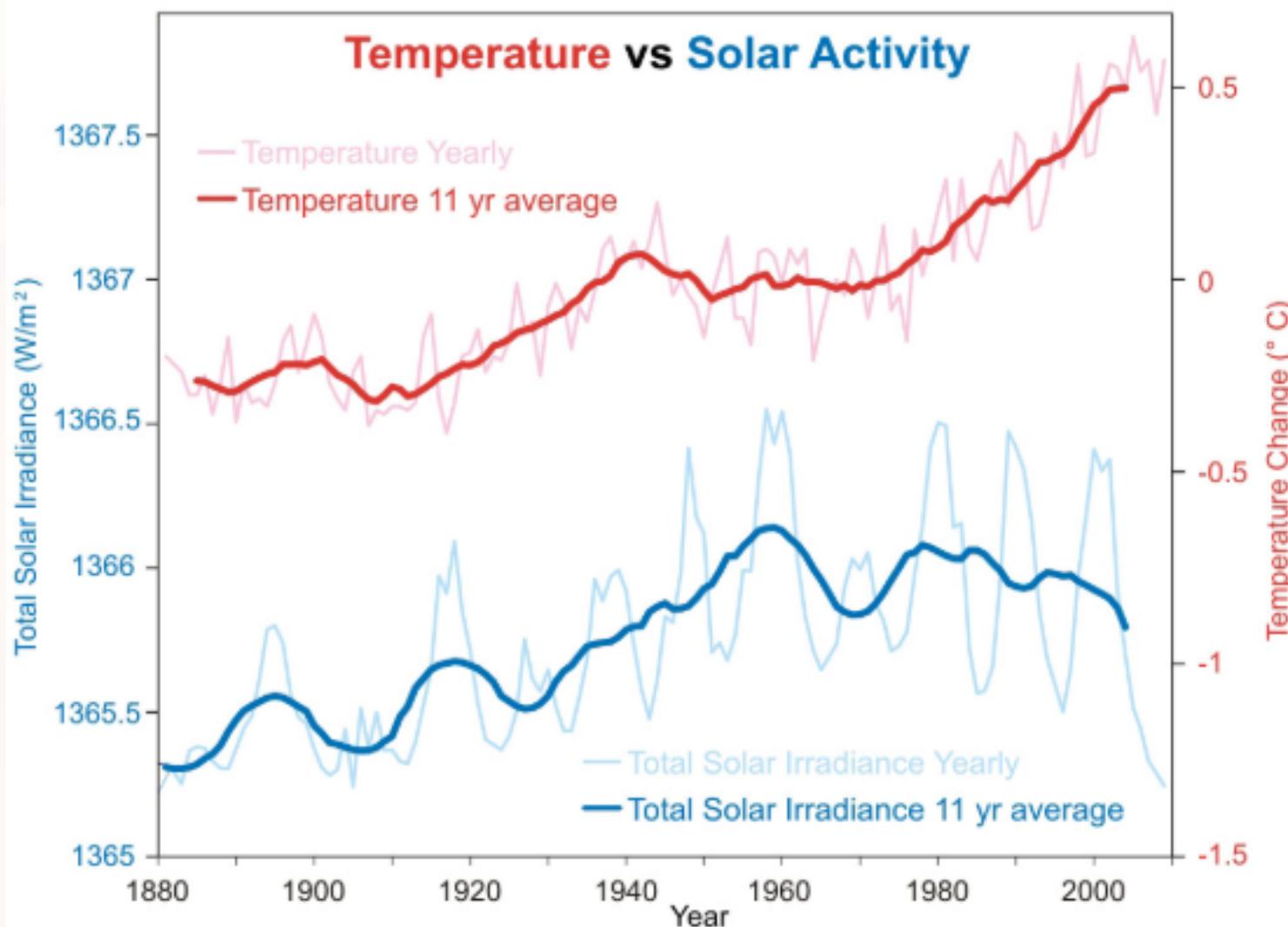
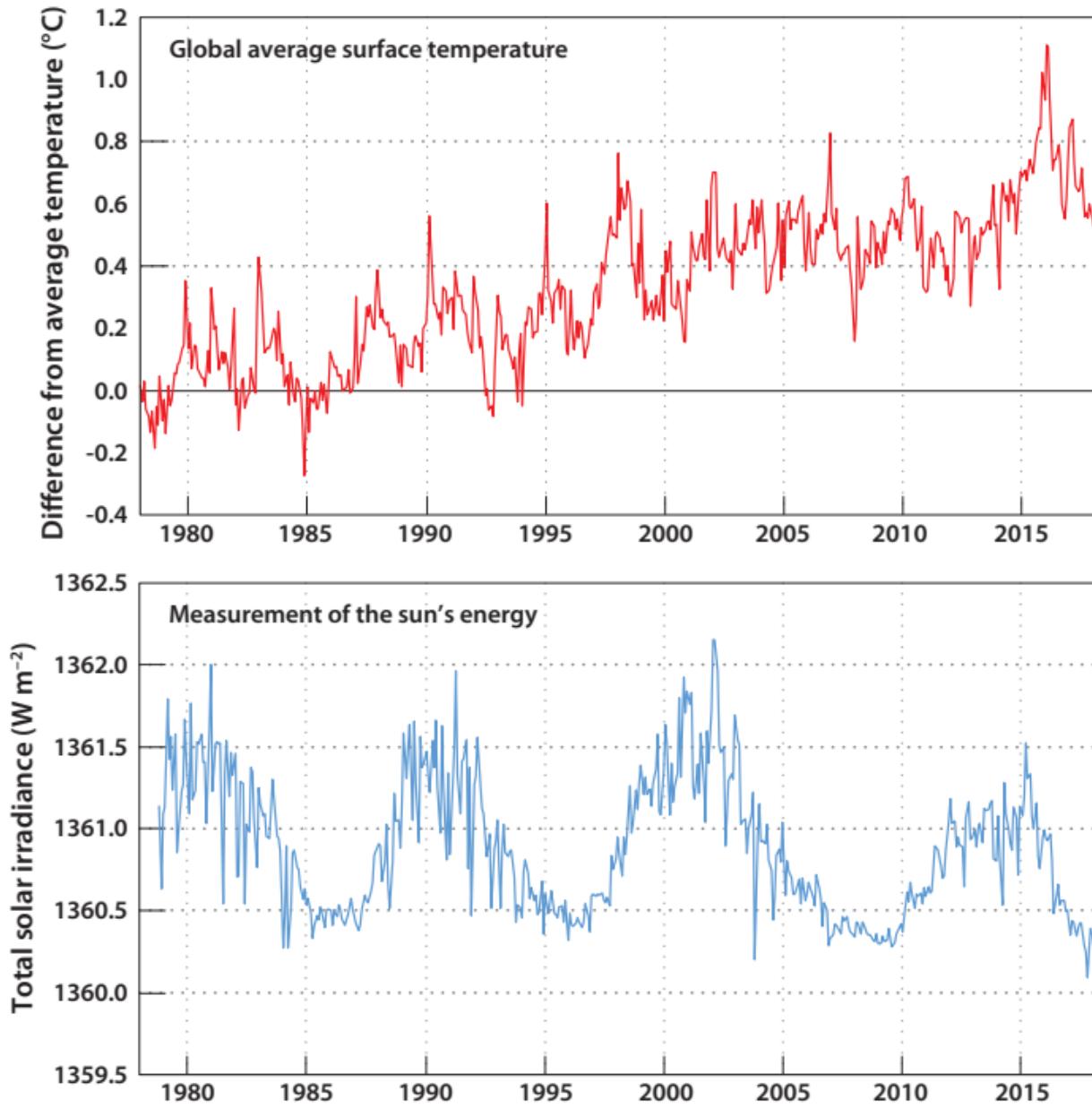


Figure 1: Annual global temperature change (thin light red) with 11 year moving average of temperature (thick dark red). Temperature from [NASA GISS](#). Annual Total Solar Irradiance (thin light blue) with 11 year moving average of TSI (thick dark blue). TSI from 1880 to 1978 from [Krivova et al 2007\(data\)](#). TSI from 1979 to 2009 from PMOD (see the PMOD index page for data updates).

The [Skeptical Science website](#) by Skeptical Science is licensed under a [Creative Commons Attribution 3.0 Unported License](#).

**FIGURE 2.** Measurements of the Sun's energy incident on Earth show no net increase in solar forcing during the past 40 years, and therefore this cannot be responsible for warming during that period. The data show only small periodic amplitude variations associated with the Sun's 11-year cycle. *Source: TSI data from Physikalisch-Meteorologisches Observatorium Davos, Switzerland, on the new VIRGO scale from 1978 to mid-2018; temperature data for same time period from the HadCRUT4 dataset, UK Met Office, Hadley Centre.*



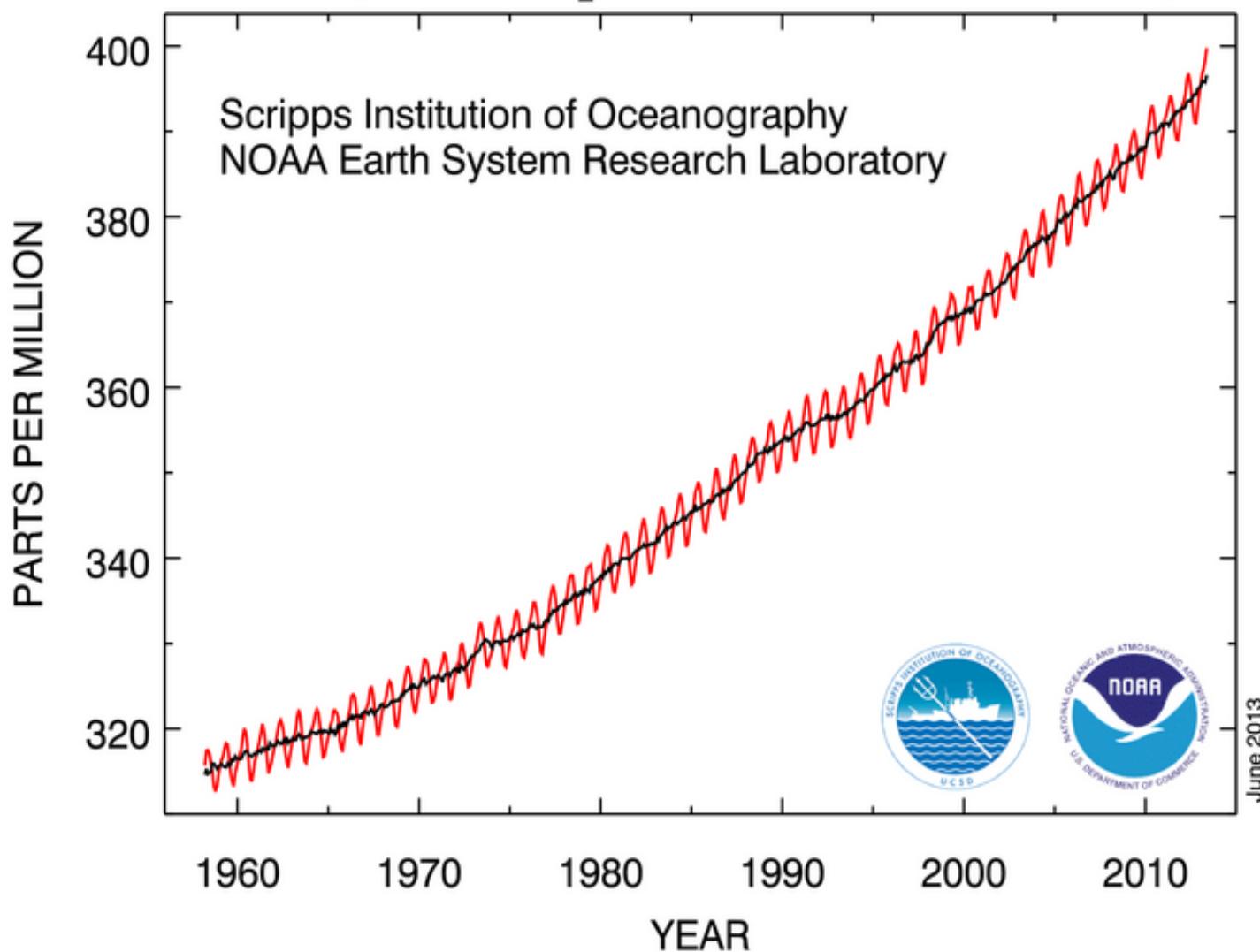
The Sun provides the primary source of energy driving Earth's climate system, but its variations have played very little role in the climate changes observed in recent decades.

Direct satellite measurements since the late 1970s show no net increase in the Sun's output, while at the same time global surface temperatures have increased

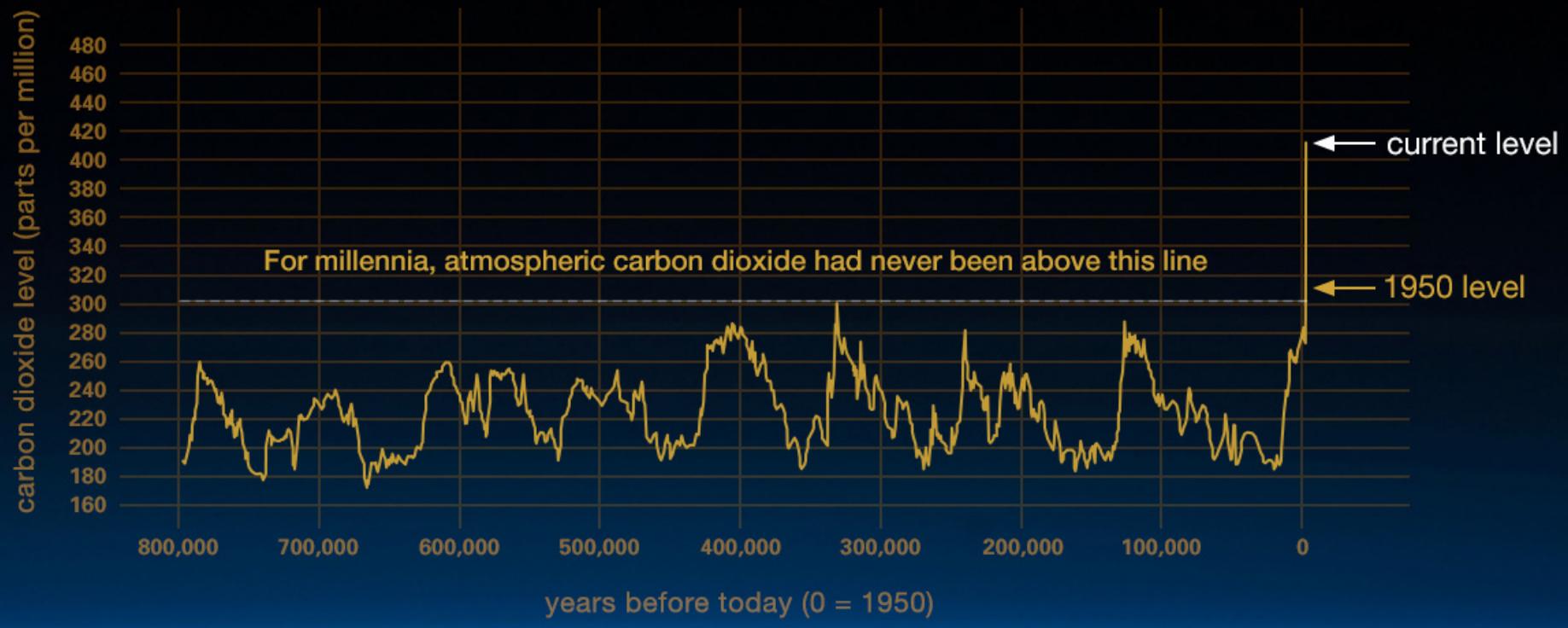
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1. Looking at earth's past climate? Paleoclimatology.
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3. Recent GHG emission and it's relationship with global temperature change

## Atmospheric CO<sub>2</sub> at Mauna Loa Observatory



## Global CO<sub>2</sub> Level

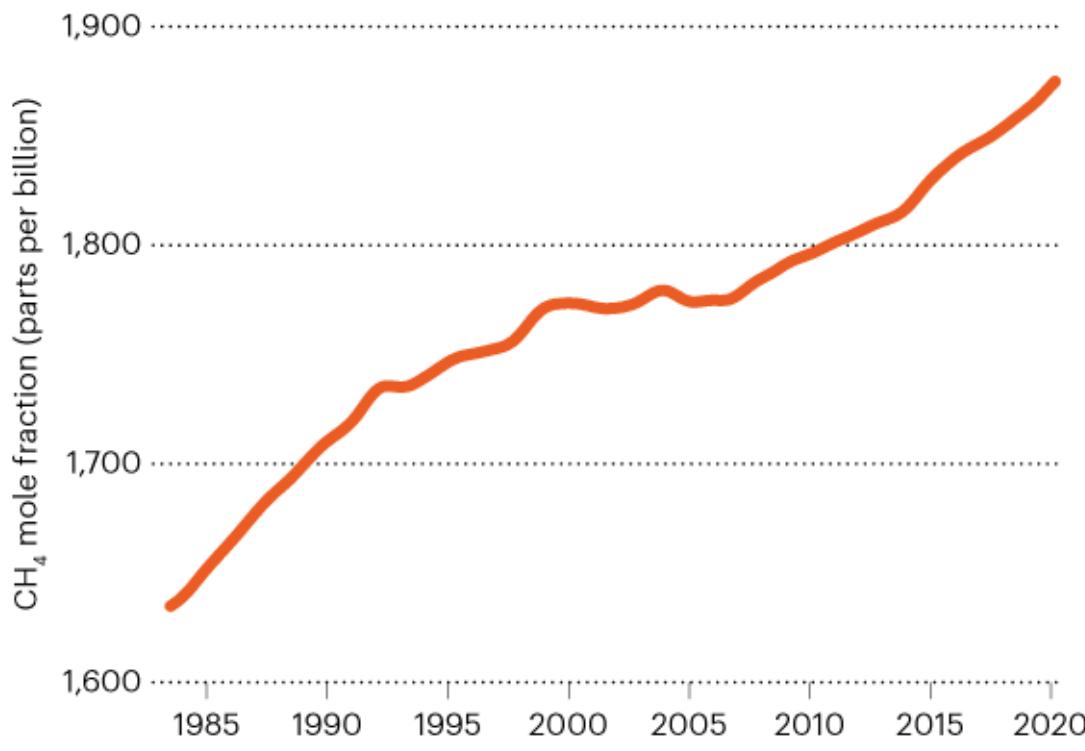


<https://climate.nasa.gov/>

# Global Methane Levels Soar to Record High

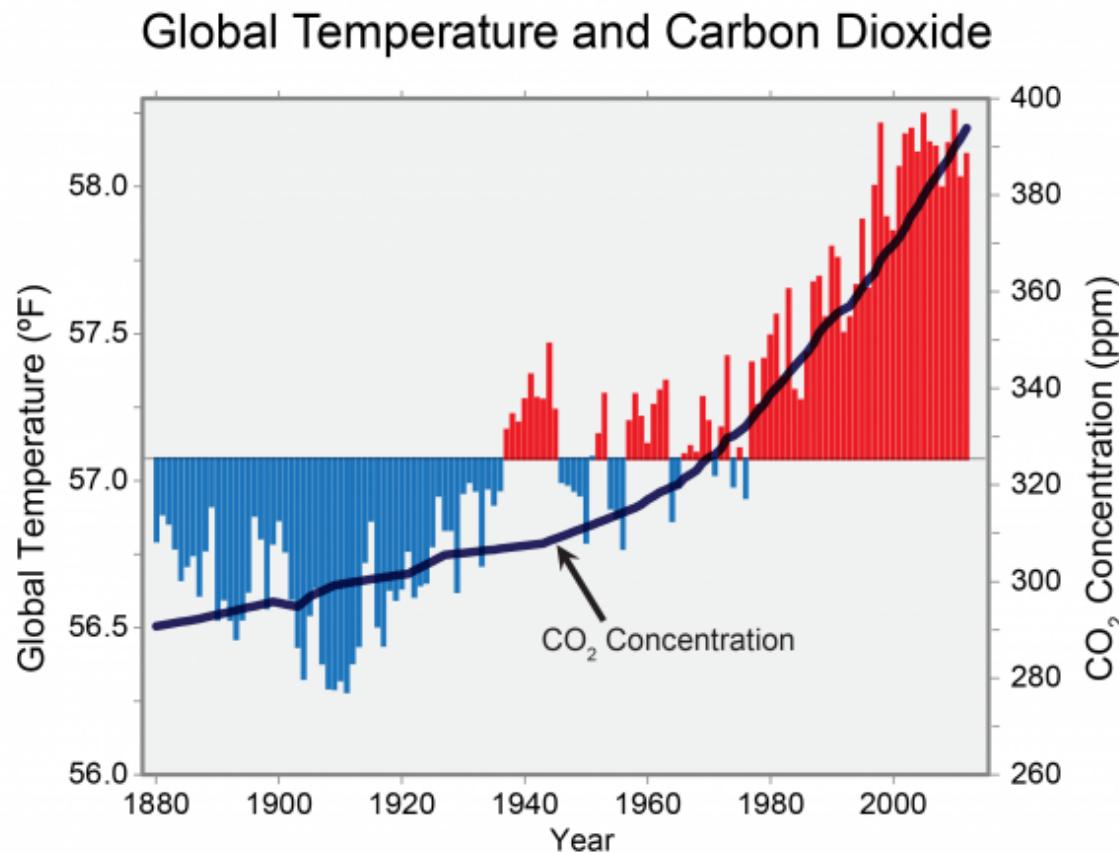
## RECORD HIGH

Global emissions of methane have risen by nearly 10% over the past two decades, resulting in the highest-ever atmospheric concentrations of the greenhouse gas.



©nature

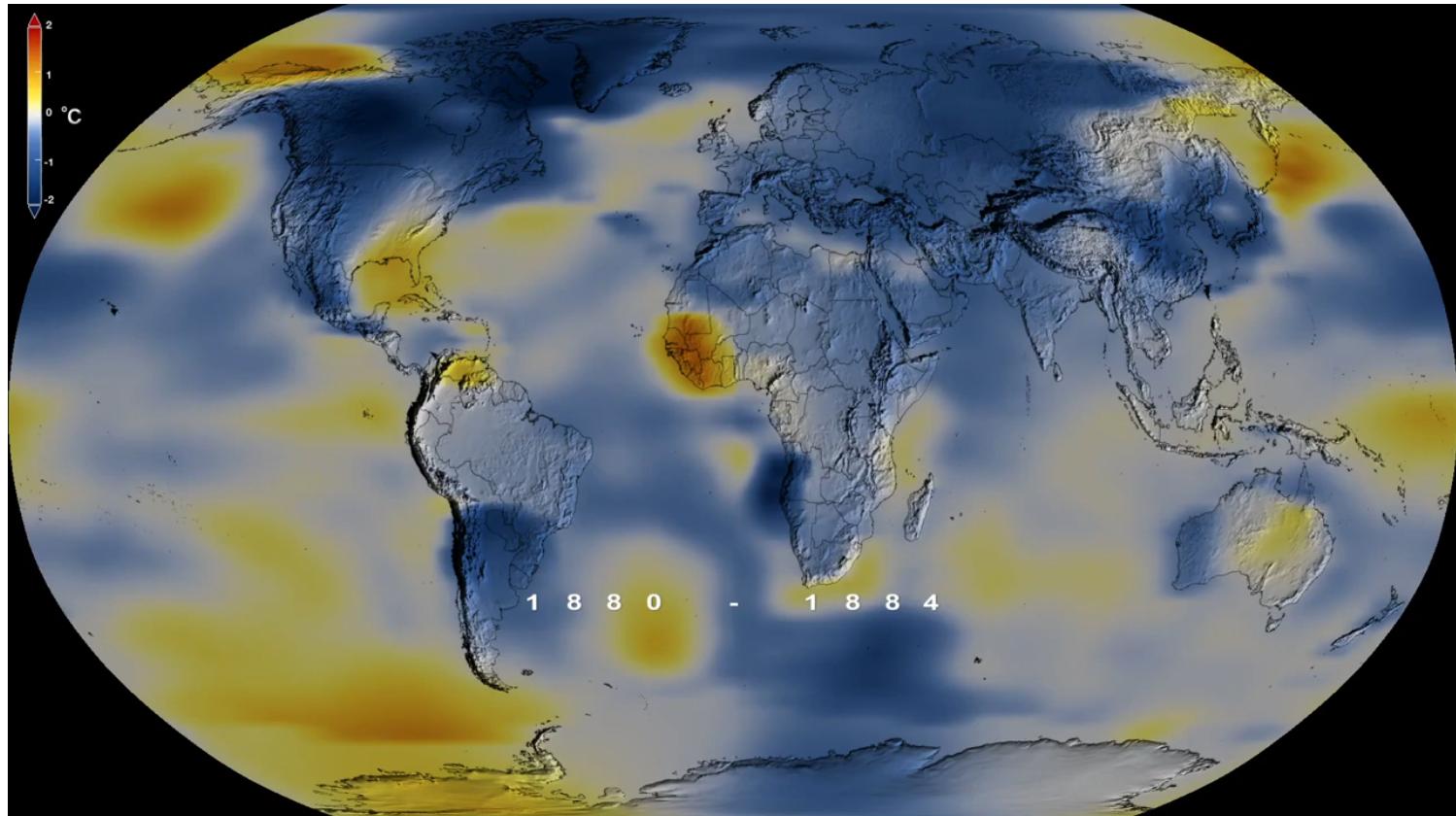
The present level of atmospheric CO<sub>2</sub> concentration is almost certainly unprecedented in the past million years, during which time modern humans evolved and societies developed.



**What are the evidences that climate is changing,  
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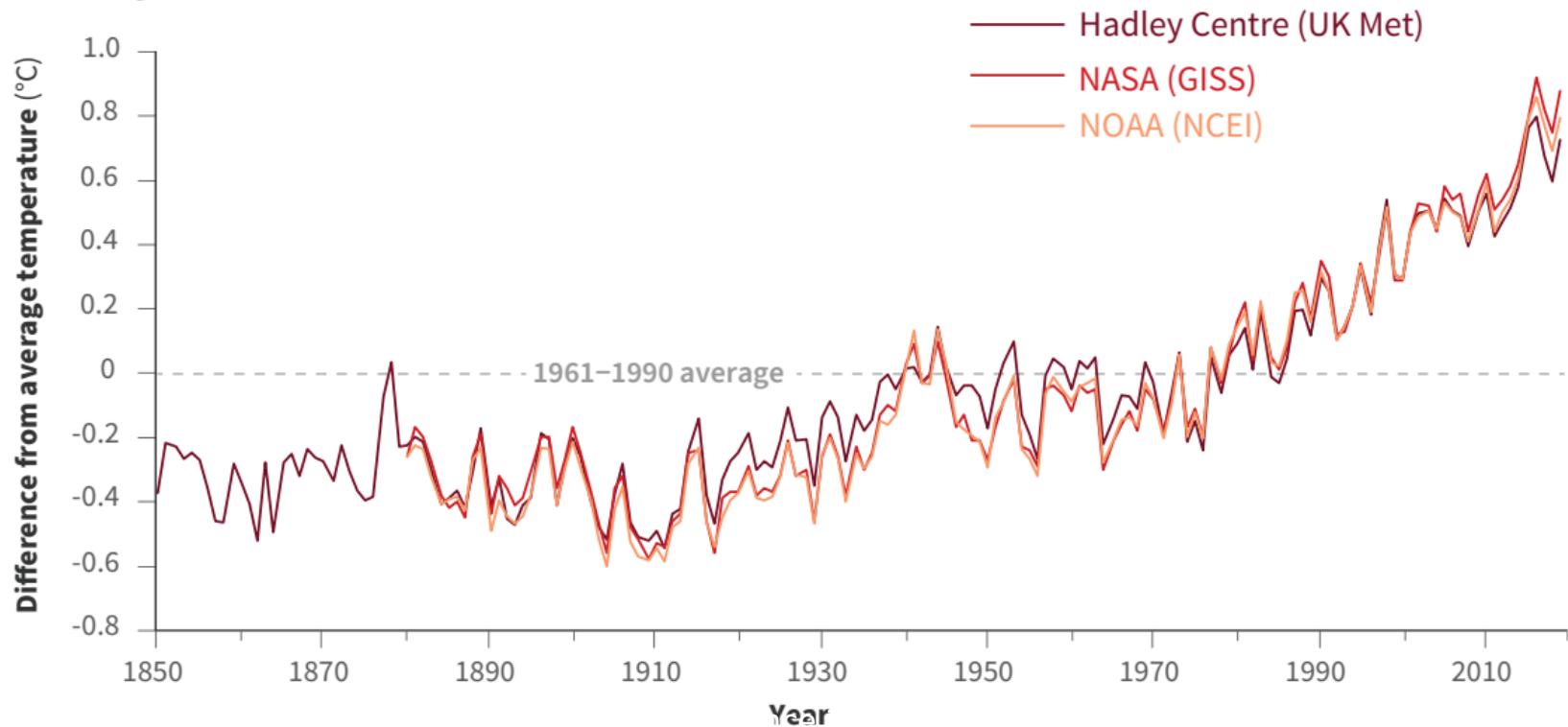
1. Looking at earth's past climate? Paleoclimatology.
2. Measuring sun's energy and its relationship with global temperature change
3. Recent GHG emission and it's relationship with global temperature change
4. Unprecedented temperature recorded during last 150 years

## Global Warming from 1880 to 2020

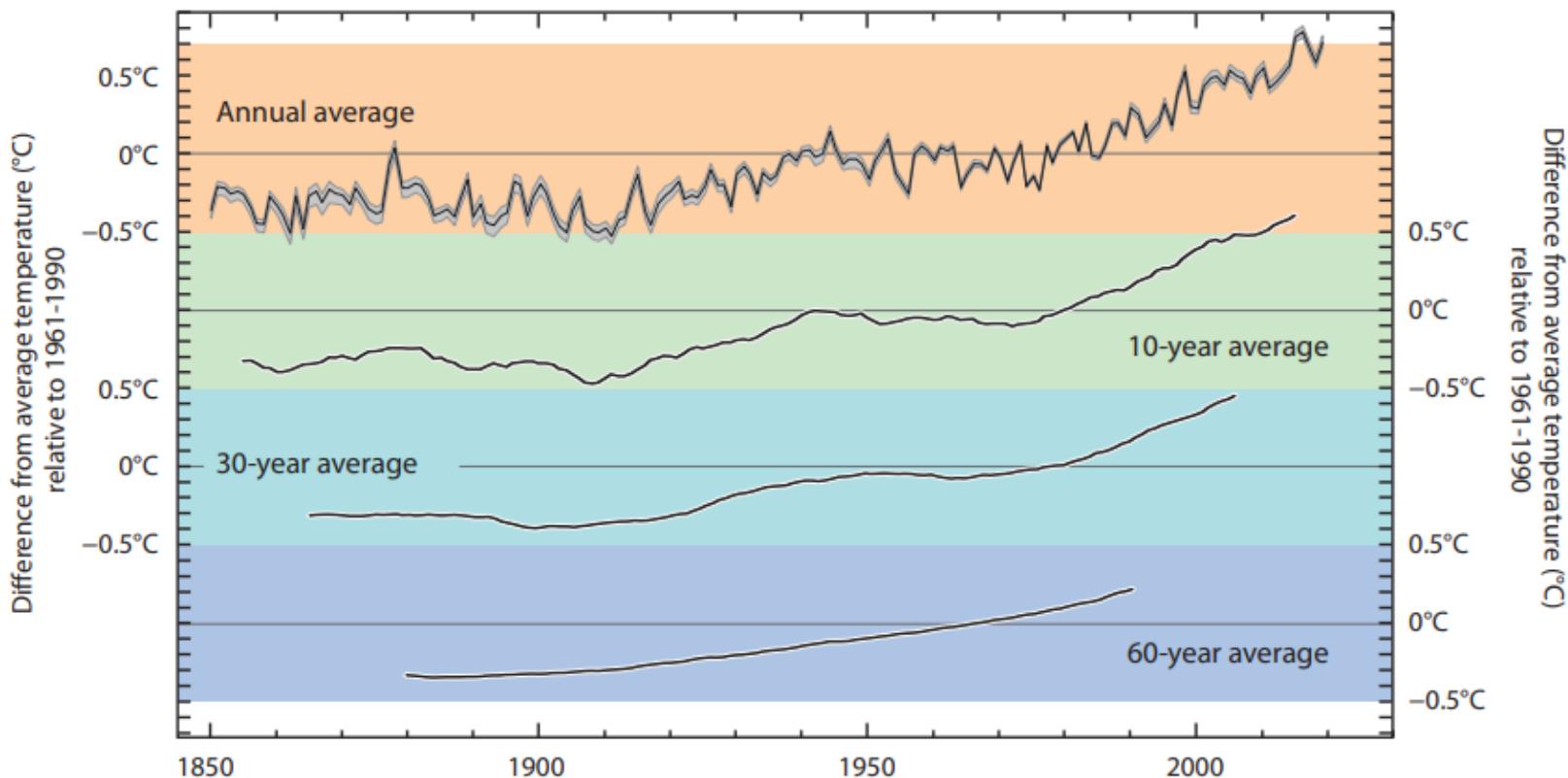


## Annual global surface temperature (1850–2019)

Annual global surface temperature (1850–2019)



# Global Temperatures 1850 – 2020

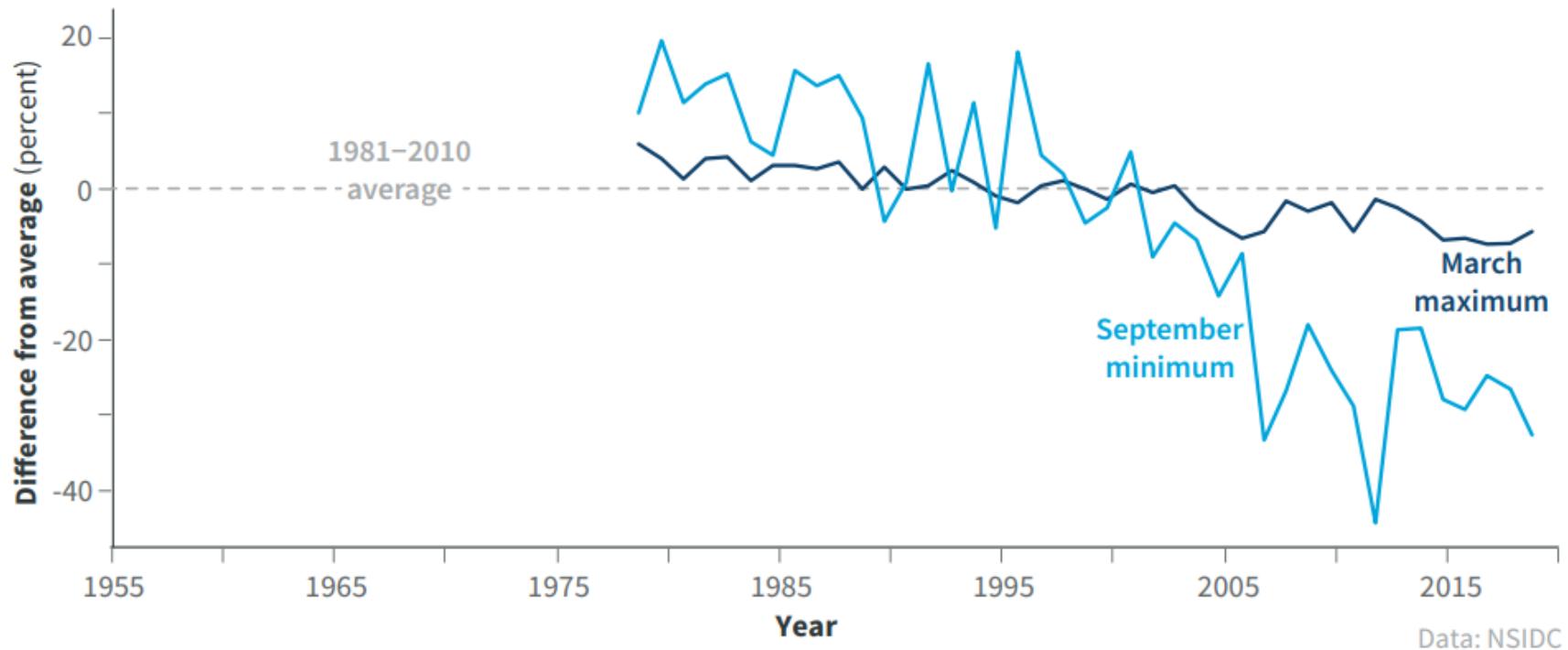


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2. Measuring sun's energy and its relationship with global temperature change
3. Recent GHG emission and it's relationship with global temperature change
4. Unprecedented temperature recorded during last 150 years
5. Global decline in ocean ice and glacier

## Evidences of Climate Change: Arctic sea ice extent in winter and summer (1979–2019)

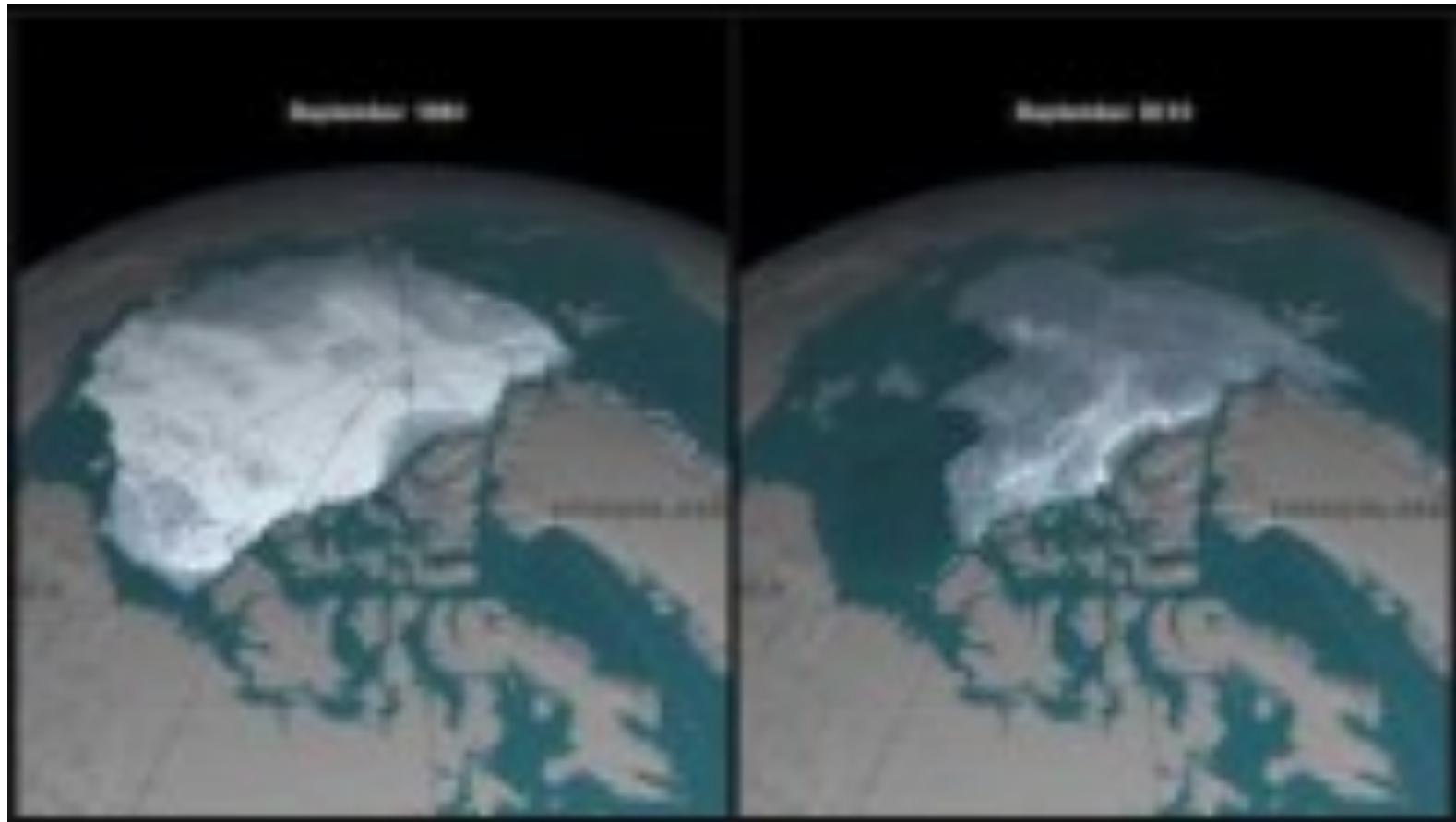
### Arctic sea ice extent in winter and summer (1979–2019)



## The Arctic

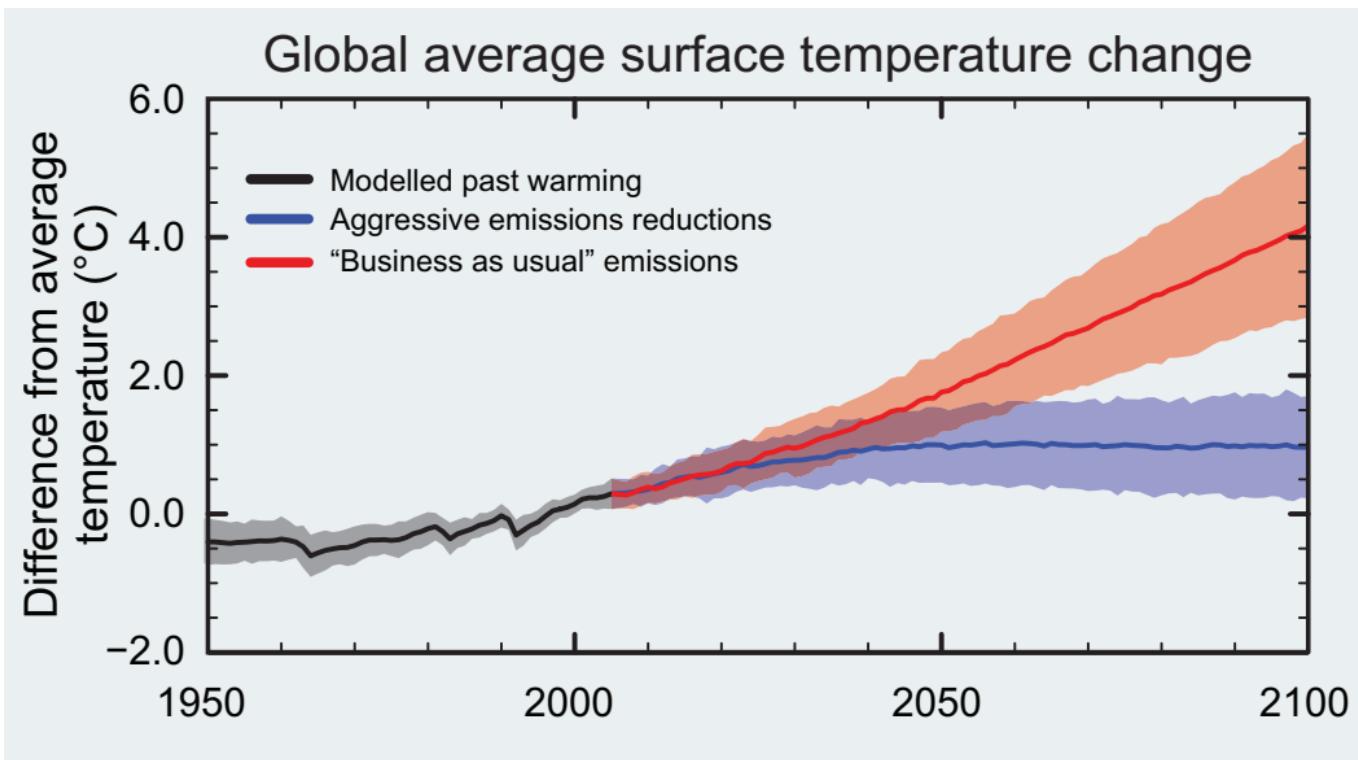


## Evidences of Climate Change: Disappearing Arctic sea ice



**What are the evidences that climate is changing,  
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4. Unprecedented temperature recorded during last 150 years
5. Global decline in ocean ice and glacier
6. Computer modelling



**Scientists use mathematical climate models to try to predict what will happen to Earth's temperature in the future. The math is very complicated, so scientists use computer programs to do the calculations.**

# Global Warming & Climate Change Myths and Skeptics

- Climate's changed before
- It's not bad
- Models are unreliable
- Hurricanes aren't linked to global warming

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

<https://skepticalscience.com/argument.php>

<https://www.newscientist.com/article/dn11462-climate-change-a-guide-for-the-perplexed/>

“The climate system is complex, as are its interactions with humanity, and beyond these ‘big picture’ forecasts lie many more specific questions. How much will sea level rise, and how quickly? How will forests respond to increased CO<sub>2</sub> and changing precipitation patterns? Will life be able to adapt to the changing conditions? Research into the nuances of these and similar questions sometimes yields unclear or conflicting results. The answers may vary geographically and be confounded by natural variability, so that attribution of certain events to climate change is difficult. Future answers to these questions are typically calculated from models based on mathematical representation of processes or statistical regression of past data, both of which have limitations. Predictions are also uncertain because human and societal actions are unknown.

All of this makes precise predictions of impacts and timelines challenging. Yet, exactly these are highly relevant for informing mitigation policies and deciding how to react to the varied consequences of climate change.”

