

12 Climate change as an economic and political issue

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Content of the lecture

1. Current climate change situation
2. Terminological uncertainty
3. Uncertainties, risks and issues related to climate change
4. Climate change vs. finance
5. The matter of denial of current climate change
6. Climate change from a sociological perspective

Current climate change situation

- **Growing:**
 - globalization of economy and society (**fossil society**)
 - consumption
 - energy demands
 - world population
- **Accelerating** warming
- Increase in the frequency/intensity of climate change impacts
- **Lack** of action by humanity

Current climate change situation

Growing apathy towards tackling climate change on a daily routine basis

Cognitive dissonance: people becoming increasingly enclosed in social bubbles of virtual reality, solving only those problems they are capable of solving and refusing to solve relatively intractable problems



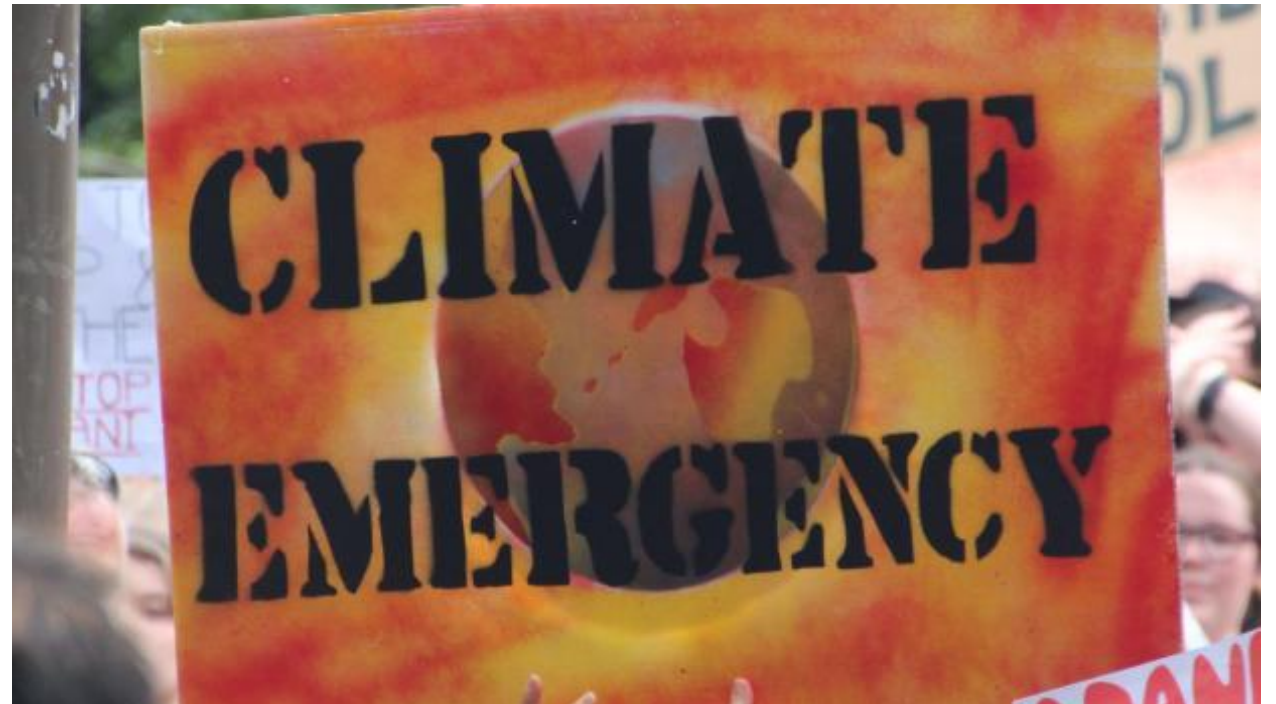
Terminological uncertainty

Question of terminology

- **Global warming**
 - a partial manifestation of climate change
 - occurrence as early as the 1950's, but spread only after 1975 (Wallace Broecker)
- **Climate change**
 - a comprehensive name for a series of changes involving global warming
 - spread since the 1990s with the release of the IPCC assessment reports
- **Climate emergency**

Climate emergency

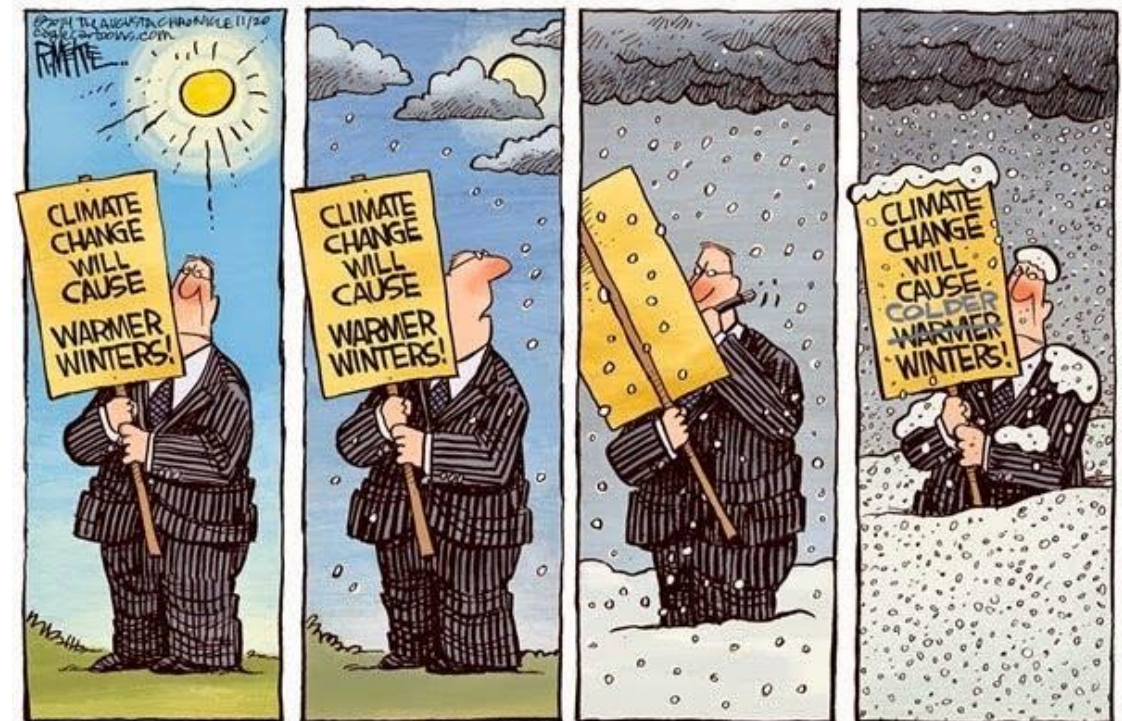
- Climate emergency
 - a situation in which urgent action is required to mitigate or stop climate change and to prevent potentially irreversible environmental damage resulting therefrom
 - proclaimed by a number of cities, regions and countries (Scotland, France, Canada)



Uncertainties, risks and issues related to climate change

Uncertainties associated with tackling climate change

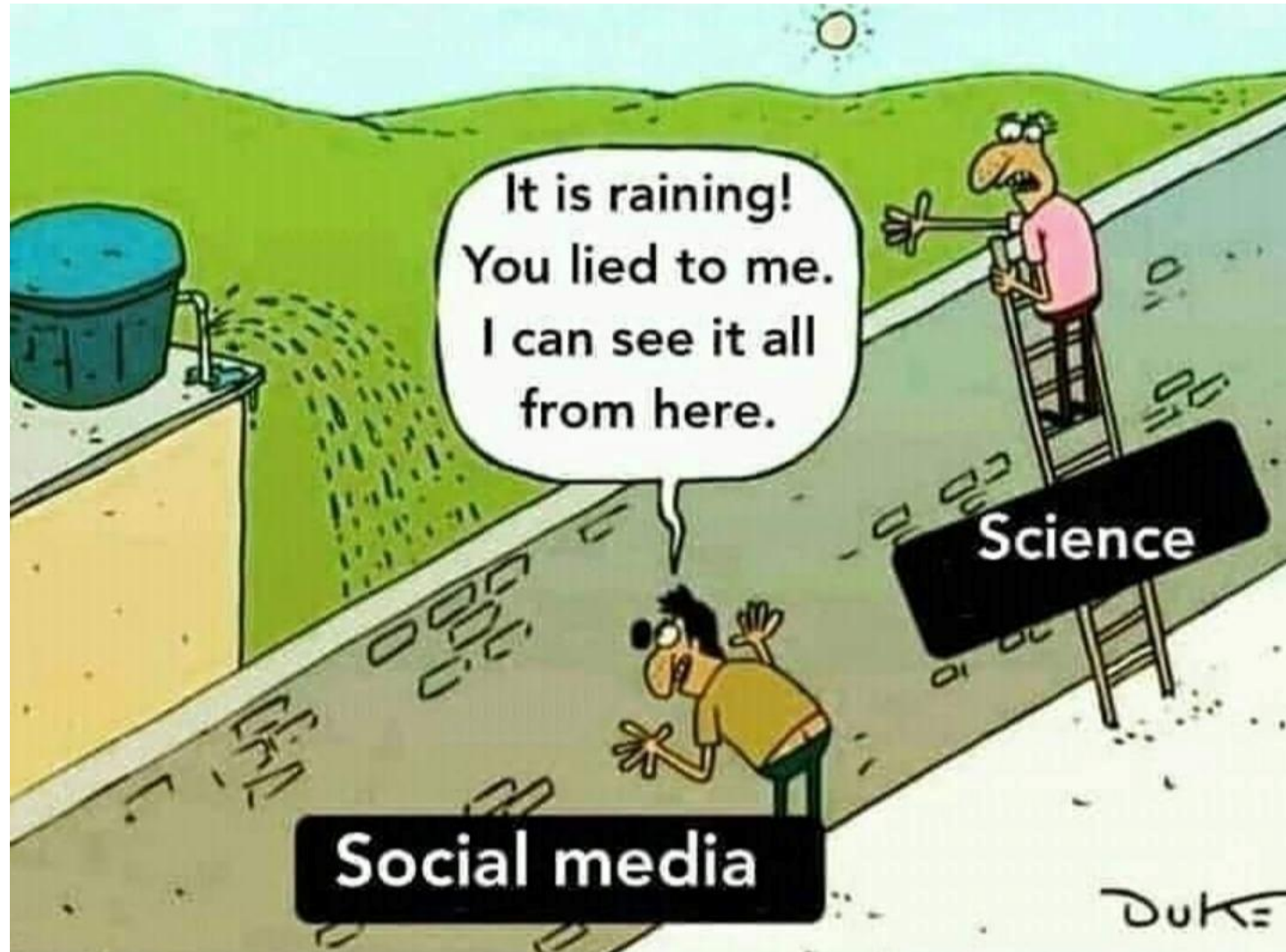
- Level of understanding of **feedbacks** in climate models
- CO₂ emissions from permafrost **not included in** models
- The assumption that the tundra will not be in the future to produce CO₂
- Validity of adaptation measures until **2 °C**
- Mitigation vs adaptation



Issues of tree growing in cities



The risk of social networks



The issue of deniers and climate sceptics



Misunderstanding by the media

Scientist: my discoveries are useless if taken out of context



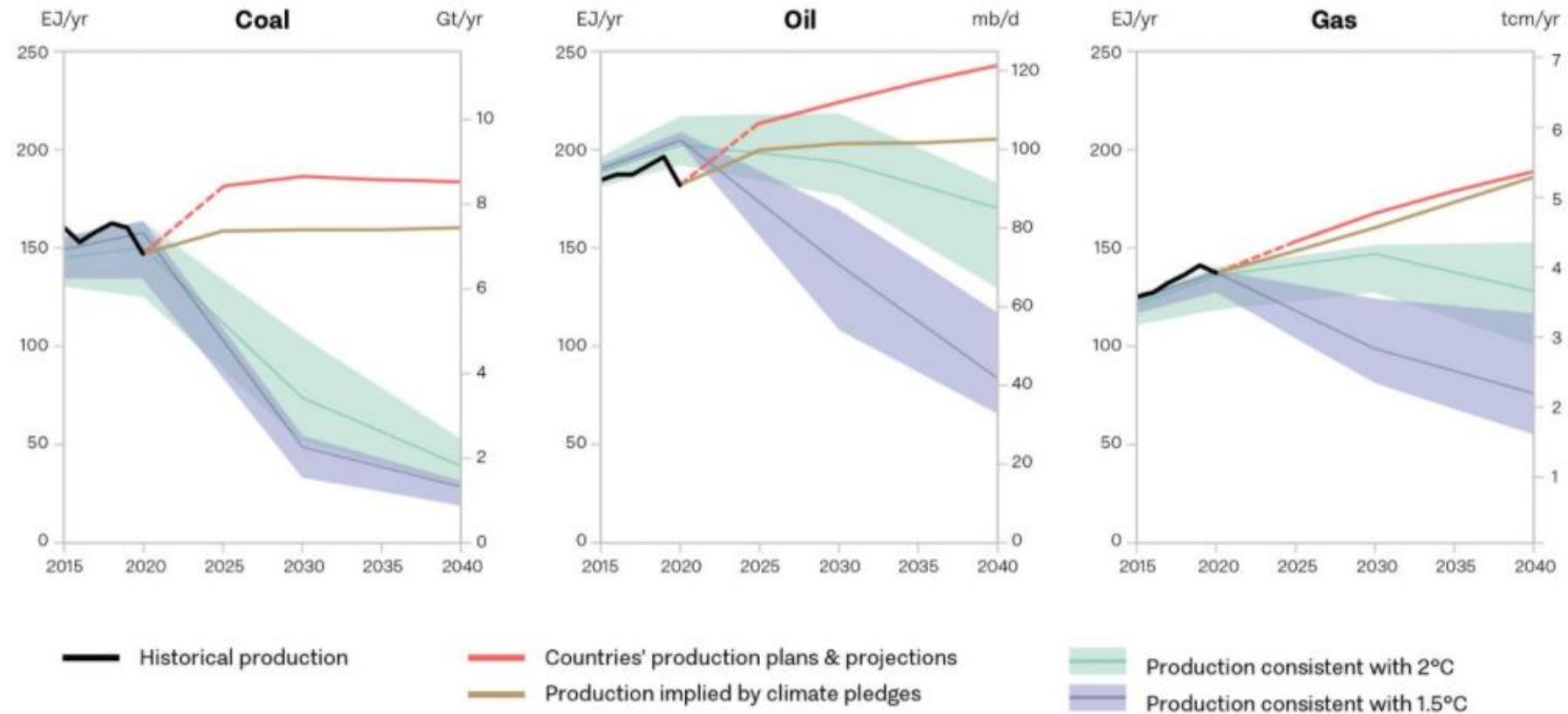
Media:

Scientist claim their discoveries are useless

Climate change vs. finance

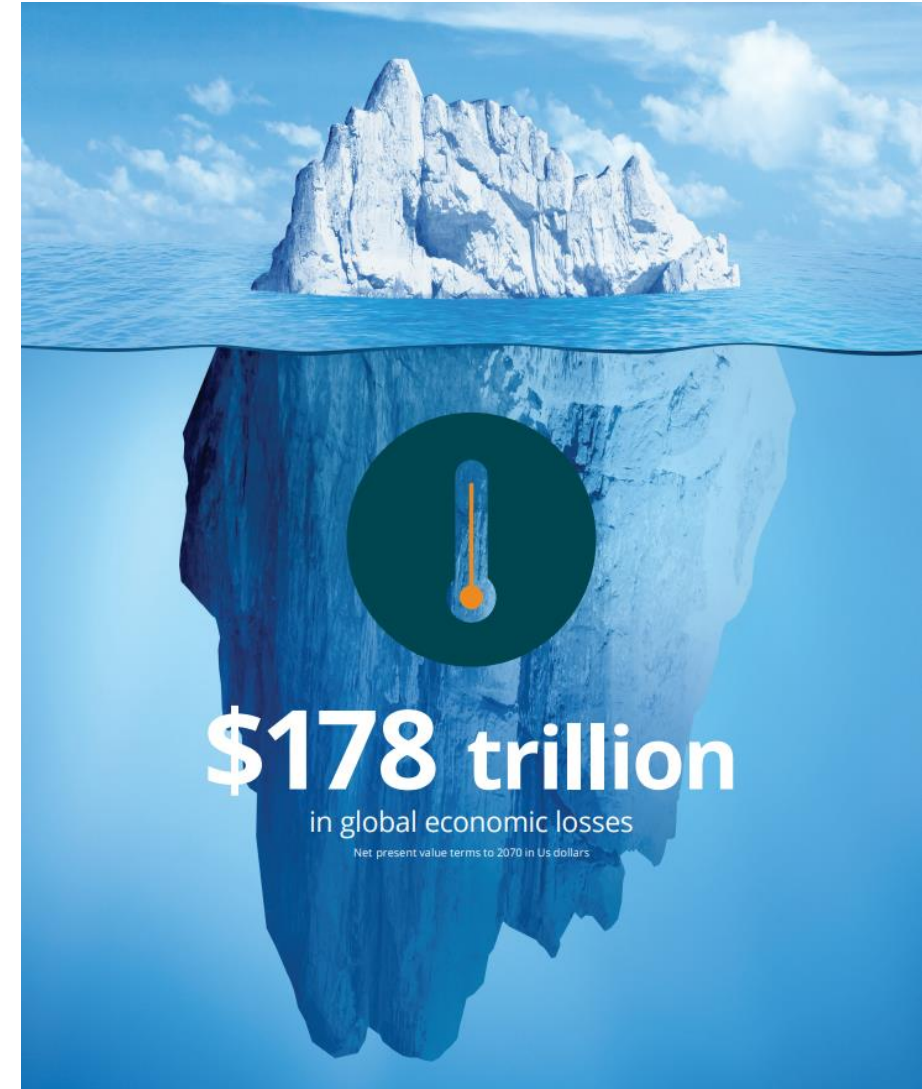
Climate change vs. finance

Plans for fossil fuel extraction by major producers



Climate change vs. finance

- **Economic losses due to climate change**
 - economic damages as a result of climate change in Europe between 2010–2020:
>145 billion EUR
 - with mitigation and adaptation measures, the damage will reach in 2021–2070 up to
178 trillion USD



Economic losses as a result of the climate change



Heat stress
Lost labor productivity
from extreme heat



Sea-level rise
Lost productive land, both
agricultural and urban



Damaged capital
Stalling productivity
and investment



Human health
Increased incidence of
disease and mortality



Lost tourism
Disrupted flow of
global currency



Agriculture loss
Reduced agricultural
yields from changing
climate patterns

The matter of denial of contemporary climate change

„Climate sceptics“

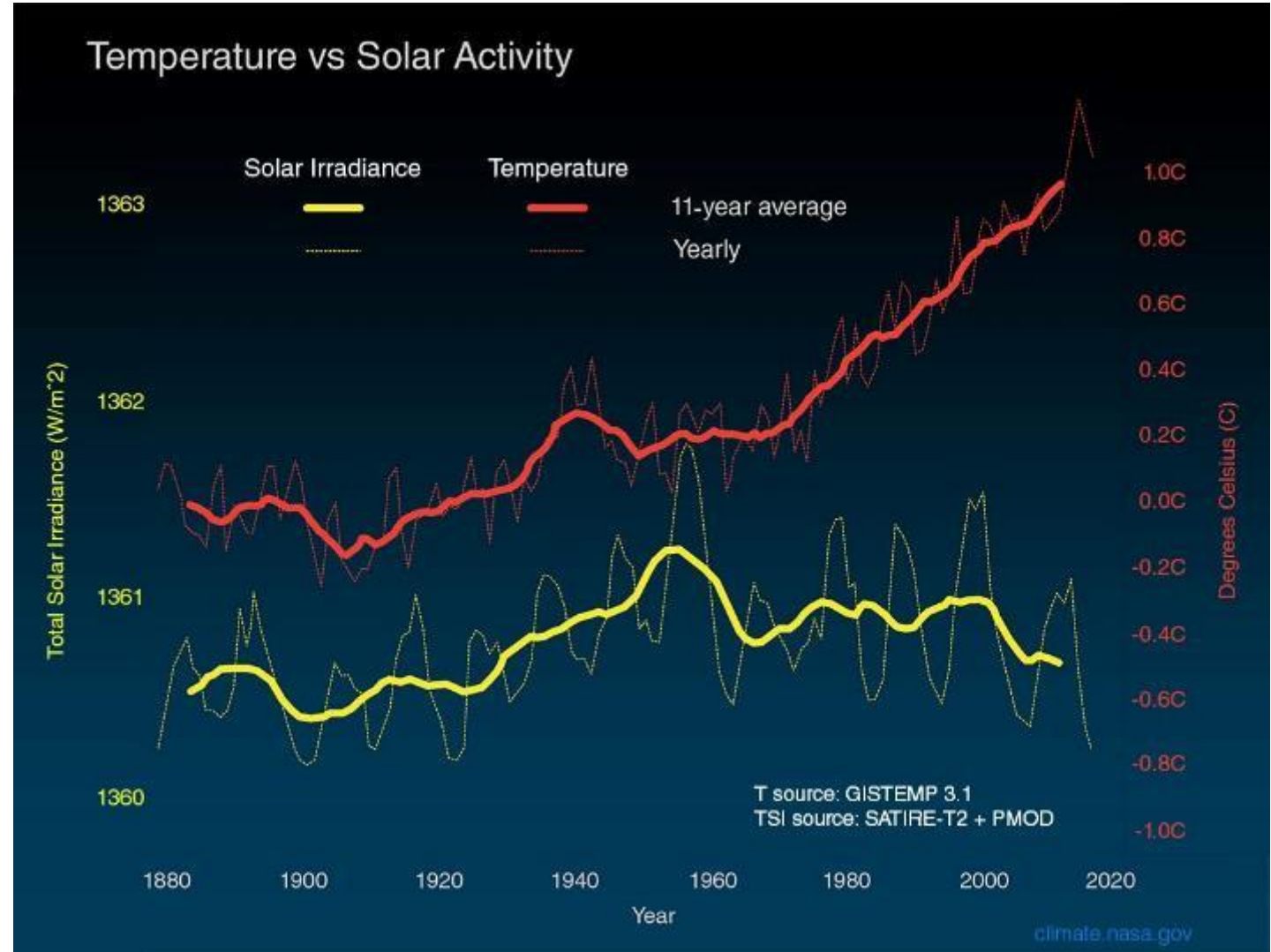
- Active, public, more or less organized questioning of the severity of climate change or its anthropogenic causes (Jacques 2009)
- Representatives of energy companies, think tanks, some scientists and politicians (e.g. B. Lomborg, D. Trump...
- **Developmental stages:**
 - climate change denial – failure to acknowledge human influence on climate change – deliberate strategy of misinterpreting real scientific data, refusal to fund adaptation measures
 - increase in number of climate change deniers

„Climate sceptics“

- **Current (untrue) claims:**
 - the climate agenda is dead
 - no chance of achieving carbon neutrality and impacts on workers
 - rising energy and fuel prices as a result of green policies
 - continued burning of fossil fuels and economic growth as the only options

Facts vs myths

- Fact:
 - the intensity of solar activity variations in an 11-year cycle is 0,1 %
- Myth:
 - warming is caused by the sun and the increasing number of sunspots



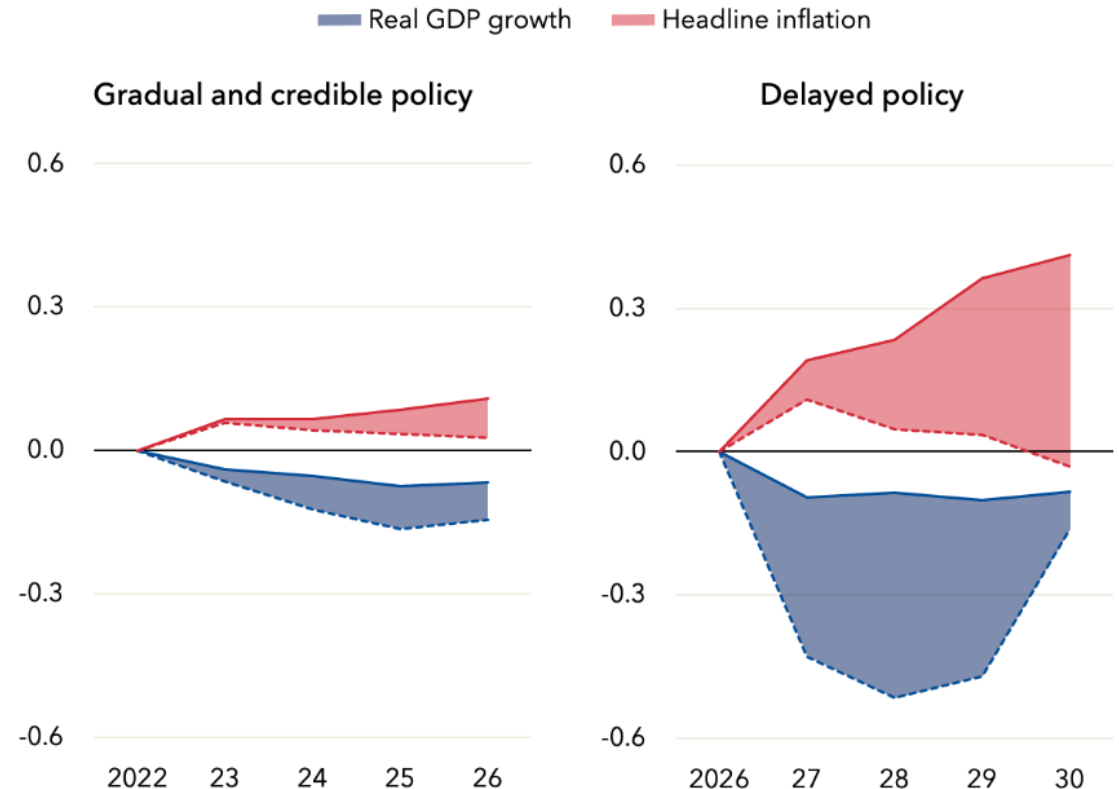
Facts vs myths

- **Fact:**
 - the later we start tackling climate change, the worse the consequences will be in the future
- **Myth:**
 - it's too late to do anything about climate change

Time to act

Delaying the transition to a low-emission economy significantly increases the costs to GDP.

(percentage points)

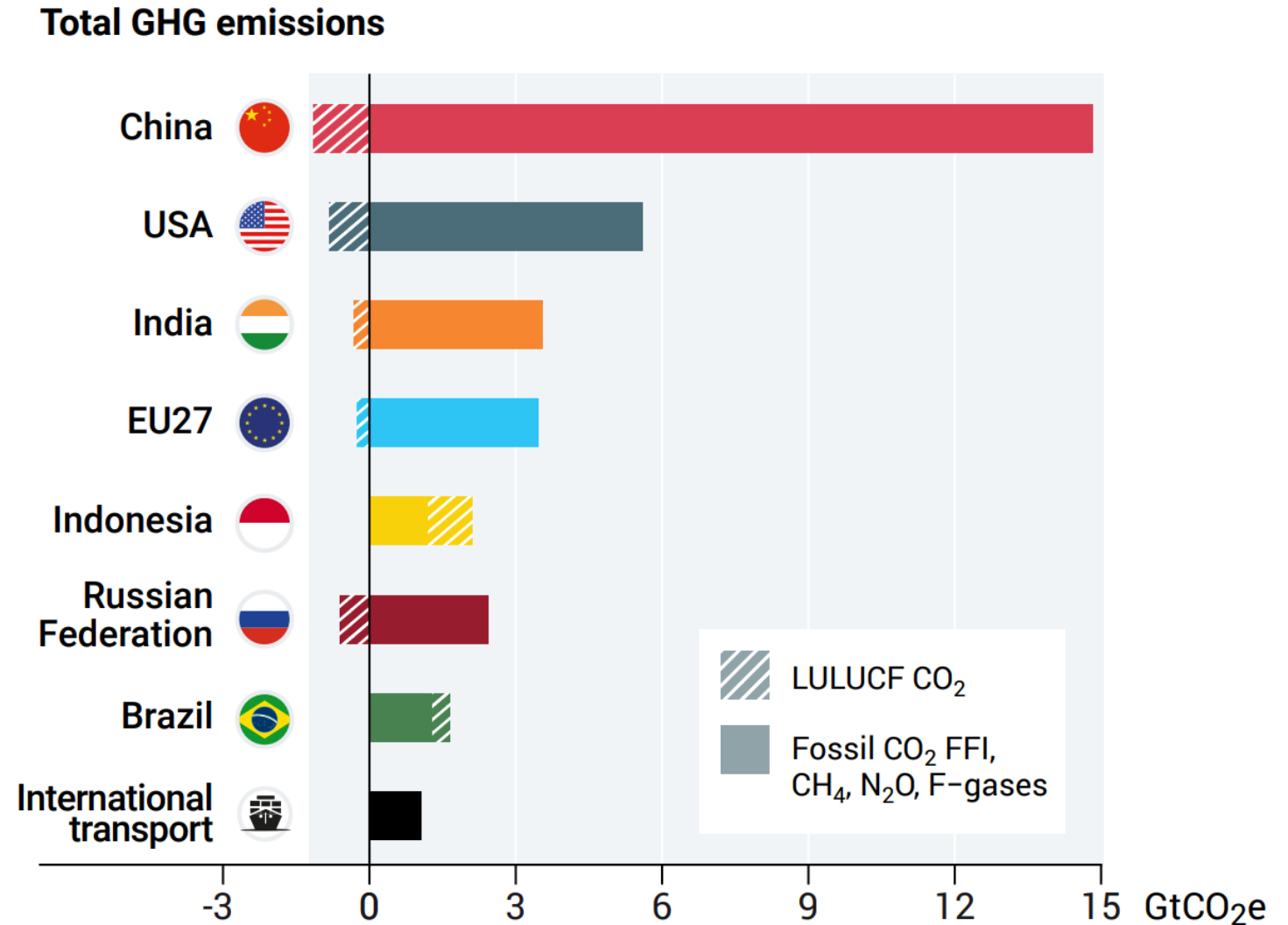


Source: Global Macroeconomic Model for the Energy Transition; and IMF staff estimates.

Note: The chart shows the range of values for growth and inflation for different monetary policy objectives in the United States; stabilizing an expanded core inflation index that includes GHG taxes (dotted line) is more costly in terms of growth.

Facts vs myths

- Fact:
 - the largest producers of CO₂ are China, USA, India, EU and Russia.
- Myth:
 - china and India are to blame for warming



Greenwashing

- **Misinformation** disseminated by a specific organisation to present an **environmentally responsible** public image of itself ("*green mythology*")
- A number of **non/intentional missteps** by companies and confusing the customer:
 - **failure to explain how the** product is organic
 - the product does not contain **freons** or **lead**
 - self-proclaimed **unreliable certifications**
- **Mystification about tree planting**
 - the value of the total CO₂ loss is given for the entire lifetime of the tree (about 80 years), with the hope of only 10–15% of planted trees surviving

"Alarmists"

- NGOs and environmental organisations, individual activists, think tanks, some politicians and 99% of climate scientists (e.g. Greenpeace, Greta Thurnberg, Al Gore, Obama...)
- **Aims:**
 - reduction of greenhouse gas emissions,
 - greener approach to nature
 - shift from fossil fuel-based energy to greater use of RES

How to communicate effectively with „*climate sceptics*“

- The person in question must be a communication **partner**, not an opponent
- Speak the **language of the person** concerned
 - not to use overly technical or vague terms
 - staying yourself during communication
- Present the **facts first**, then the myth, then explain, where the myth is wrong and finally repeat the facts

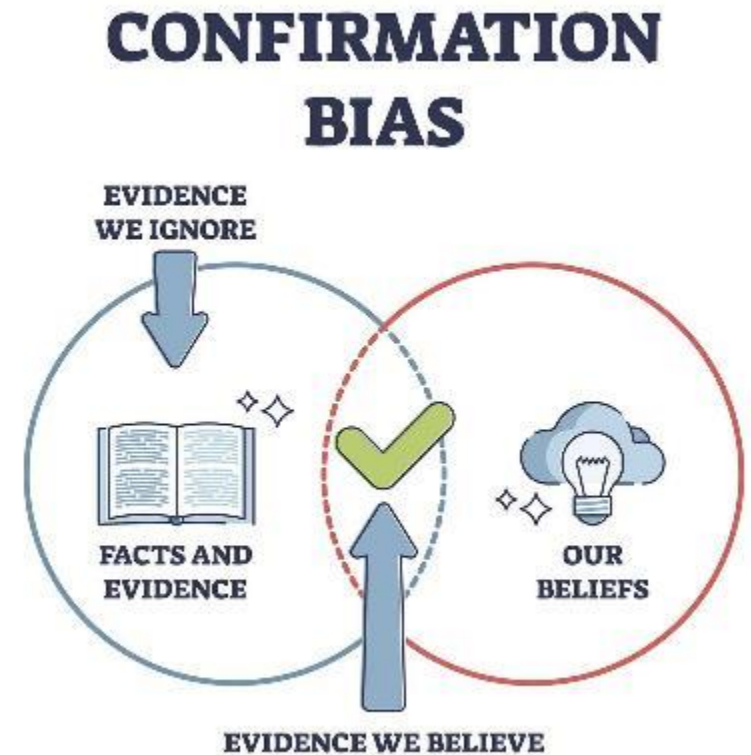
Causes of belief in one's own truth

- **The Dunning-Kruger effect:**
 - relationship of knowledge and confidence (ideally linear proportion)
 - **Reality:**
 - least knowledge = most confidence
 - the advent of humility = more knowledge, less confidence
 - experts = most knowledge, increase in confidence (but never equal to the amount of self-confidence people with the least knowledge)



Causes of belief in one's own truth

- **Confirmation bias:**
 - the tendency to search, interpret and disseminate information that supports the individual's beliefs
 - **correct form:** knowledge of all arguments supporting one's own arguments and rebuttal arguments of the second group



Causes of public misunderstanding of climate change

- The relationship between a country's economic well-being and belief in scientific results
- **„Climate sceptics“:**
 - **well-organised** and paid disinformation campaign (targeted and clear slogans)
 - **ideological and financial motivation of the campaign**
 - fears of restrictions on personal freedom, free market
 - oil and coal industry fears of falling profits
 - the disagreement of a small group of scientists with the prevailing view

Causes of public misunderstanding of climate change

- **The wrong questions in opinion polls**
 - "*Do you believe in climate change?*"
- **Authority bias** - more weight to the opinions of authorities and personalities than to general opinions
- Convincing a part of the public about the **inconsistent attitude of scientists**
- IPCC's **reputation diminished** after the 4th Assessment Report (2007) and the theft of email communications (2009)
 - little effort by the IPCC and climate scientists to refute the accusations

Causes of public misunderstanding of climate change

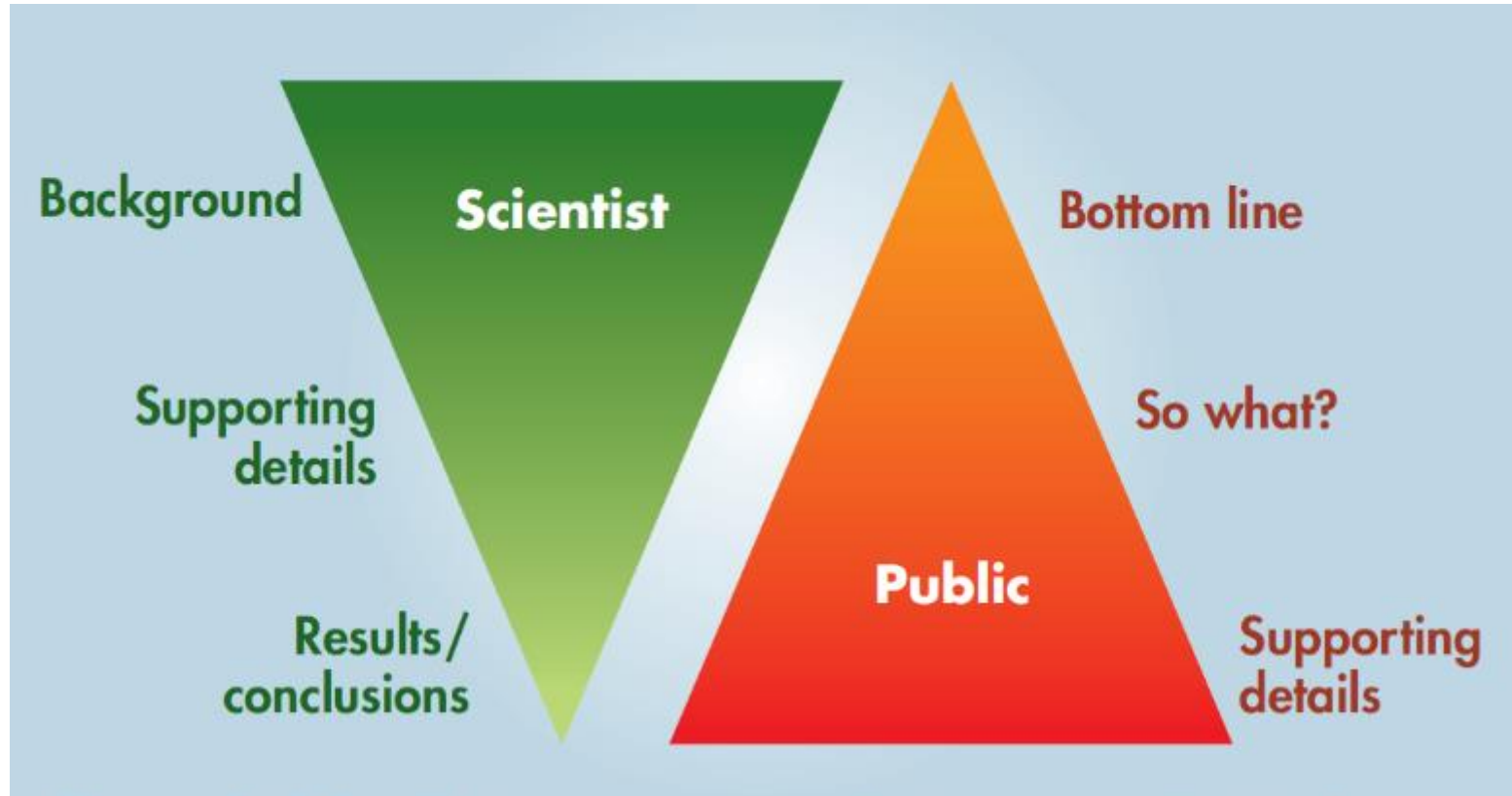


Figure 3. Scientists can communicate more effectively with the public about climate change by inverting the pyramid of their usual presentations to colleagues. That is, start with the “bottom line” and tell people why they should care.

Causes of public misunderstanding of climate change

Terms that have different meanings for scientists and the public		
Scientific term	Public meaning	Better choice
enhance	improve	intensify, increase
aerosol	spray can	tiny atmospheric particle
positive trend	good trend	upward trend
positive feedback	good response, praise	vicious cycle, self-reinforcing cycle
theory	hunch, speculation	scientific understanding
uncertainty	ignorance	range
error	mistake, wrong, incorrect	difference from exact true number
bias	distortion, political motive	offset from an observation
sign	indication, astrological sign	plus or minus sign
values	ethics, monetary value	numbers, quantity
manipulation	illicit tampering	scientific data processing
scheme	devious plot	systematic plan
anomaly	abnormal occurrence	change from long-term average

Climate change from a sociological perspective

Public opinion on the example of the Americans

- **November 2008:** 71% of Americans believe it's getting warmer
- **May 2011:** 64% of Americans believe it's getting warmer
- **November 2022:**
 - 25% consider climate change a hoax
 - 35% think that there is no consensus among scientists about the CC
 - 39% consider natural gas to be a climate-friendly energy source
 - 46% do not believe in significant human influence
- Global warming often confused with the ozone hole
- **Causes of climate change:**
 - ozone hole, spray aerosols, toxic waste, nuclear waste, space programme

Recommended literature



A word in conclusion



The biggest problem with climate change is the rate at which it is nature can't cope to cope in time

Current issues:

- How far are we willing to go?**
 - Where do we have to limit ourselves**
- (if we have to limit ourselves)?**

Literature

- Hulme, M. (2009): Why we disagree about climate change: understanding controversy, inaction and opportunity. Cambridge, Cambridge university press, 392 p.
- Moldan and Pixová (2020): Climate crisis - Myths and facts about the state of the planet
- Smith, P. and Howe, N. (2015): Climate change as social drama: global warming in the public sphere. New York: Cambridge university press, 242 p.
- Somerville and Hassol (2011): Communicating the science of climate change

Thank you for your attention throughout the course!