

My experience as a climate expert advising policymaking, and the role of IPCC (Intergovernmental Panel on Climate Change)

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Panel « Seeking Guidance from Experts », EGPA (European Group for Public Administration) Conference « Resilience and Agility of Public Institutions in Times of Crises », ULB, Brussels, 9 September 2021

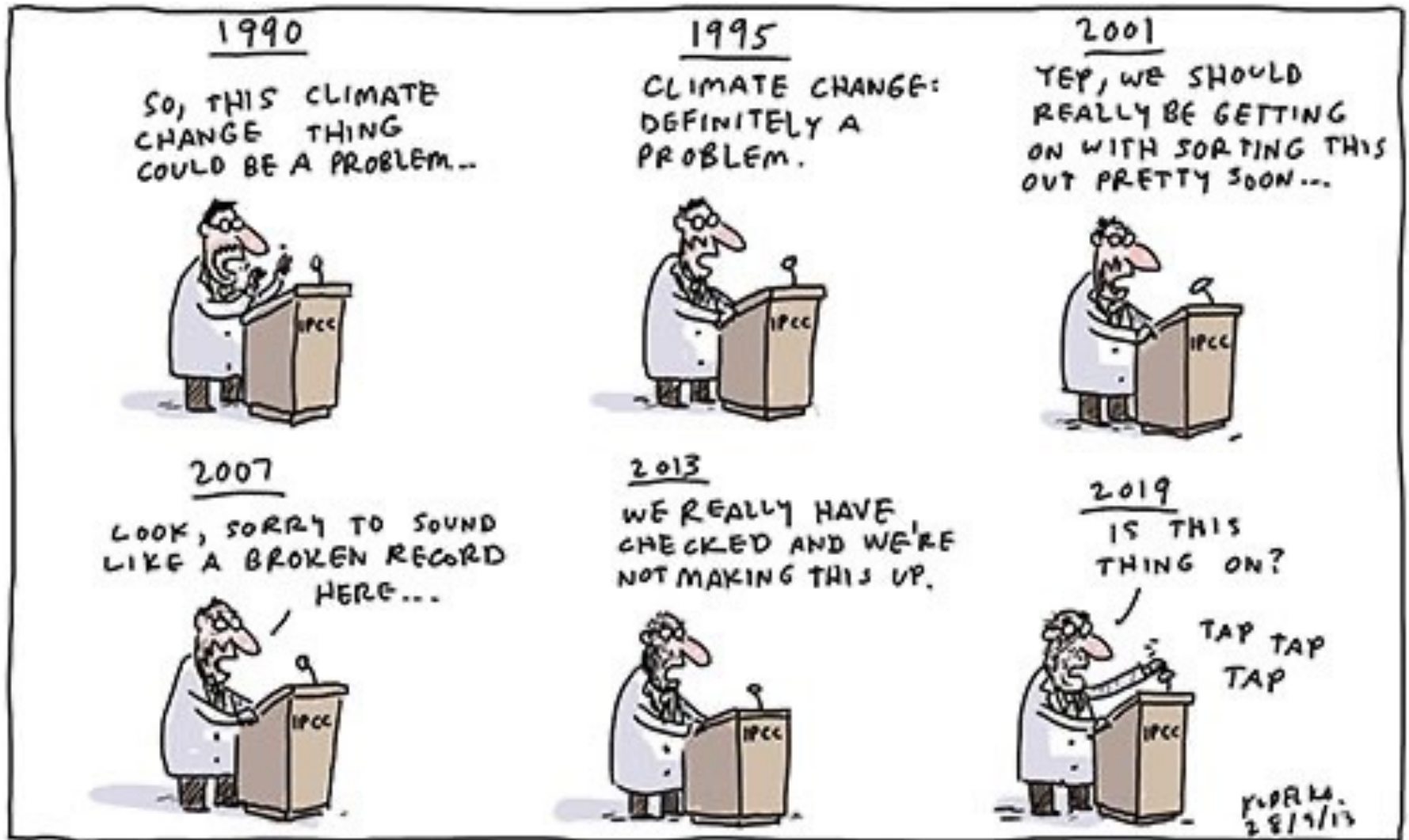
Thanks to the Government of Wallonia, supporting the [Walloon Platform for IPCC](#) and to my team at the Université catholique de Louvain

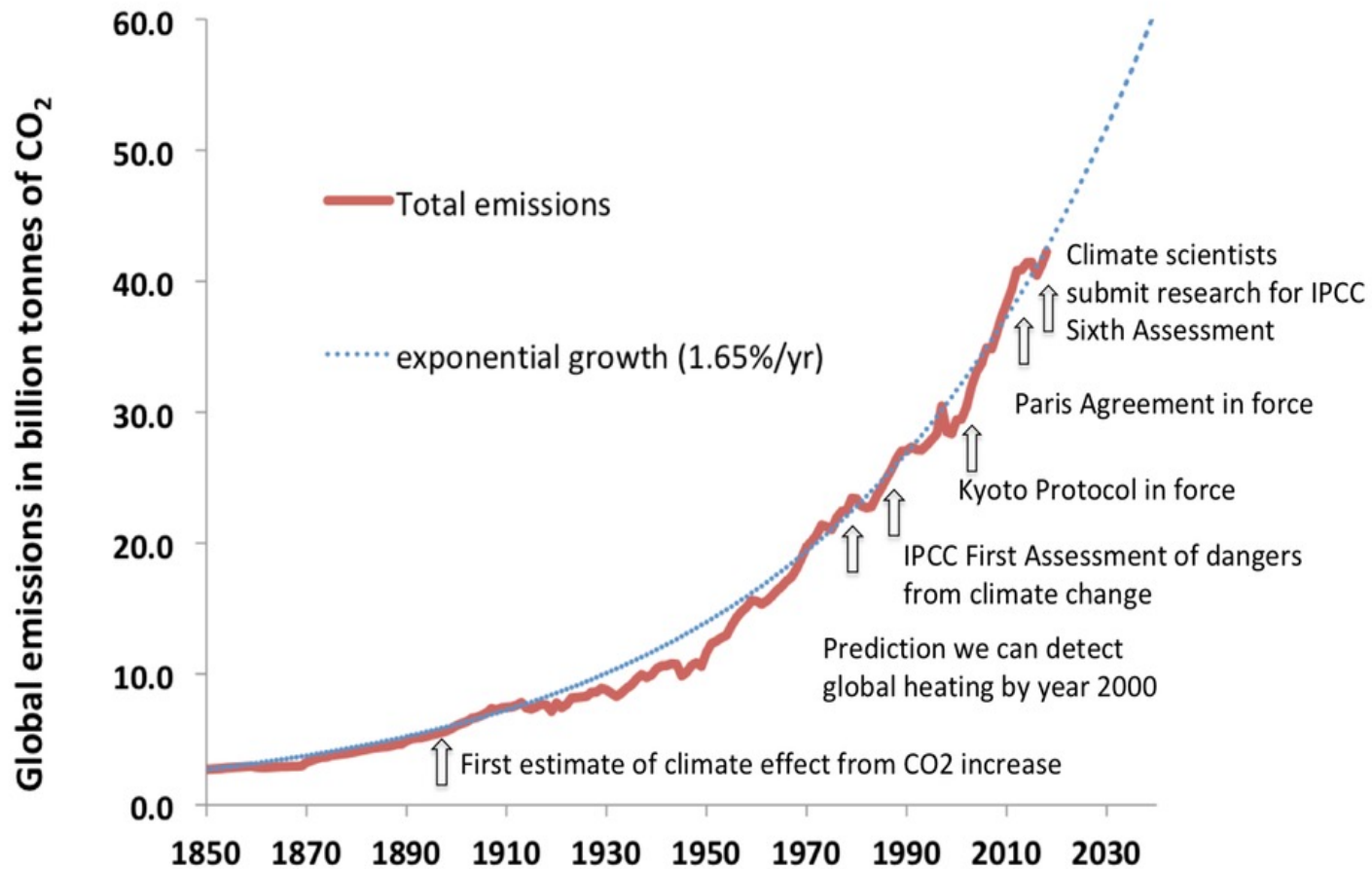


Source: @StatisticallyCartoon

@JPvanYpersele

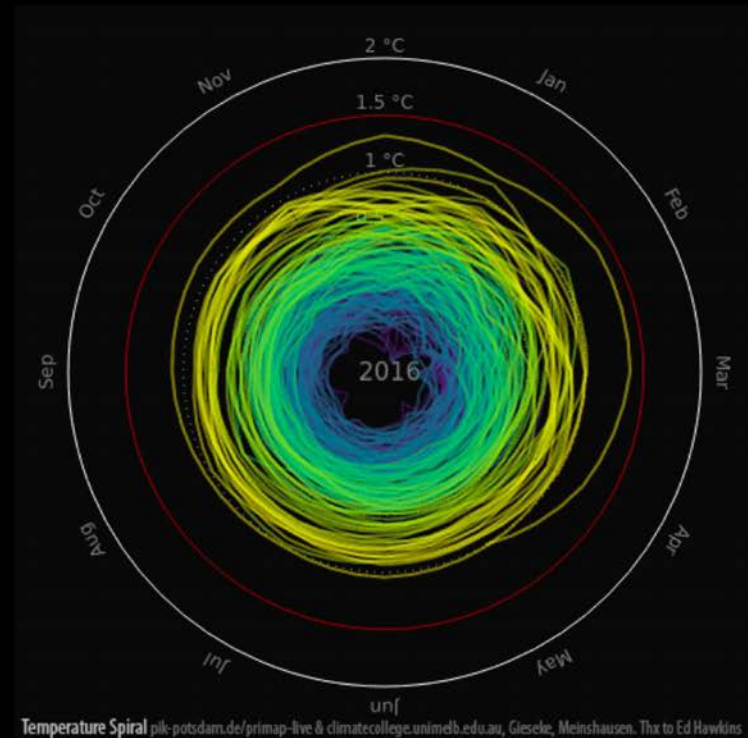
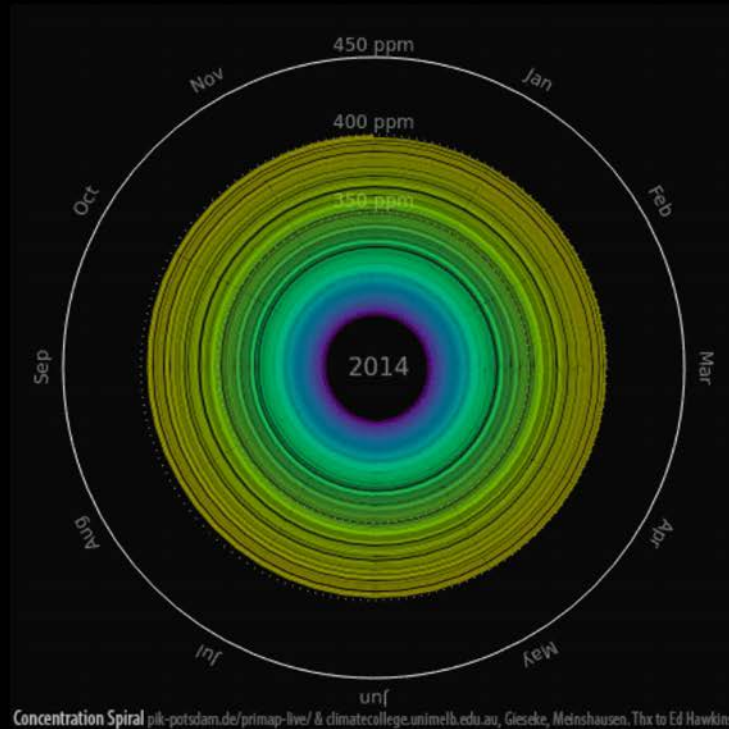
None So Deaf





Source: Wolfgang Knorr, in The Conversation (2019)

CO₂ Concentration and Temperature spirals



CO₂ Concentration since 1850 and Global Mean Temperature in °C relative to 1850 – 1900
Graph: Ed Hawkins (Climate Lab Book) – Data: HadCRUT4 global temperature dataset
Animation available on <http://openclimatedata.net/climate-spirals/concentration-temperature/>

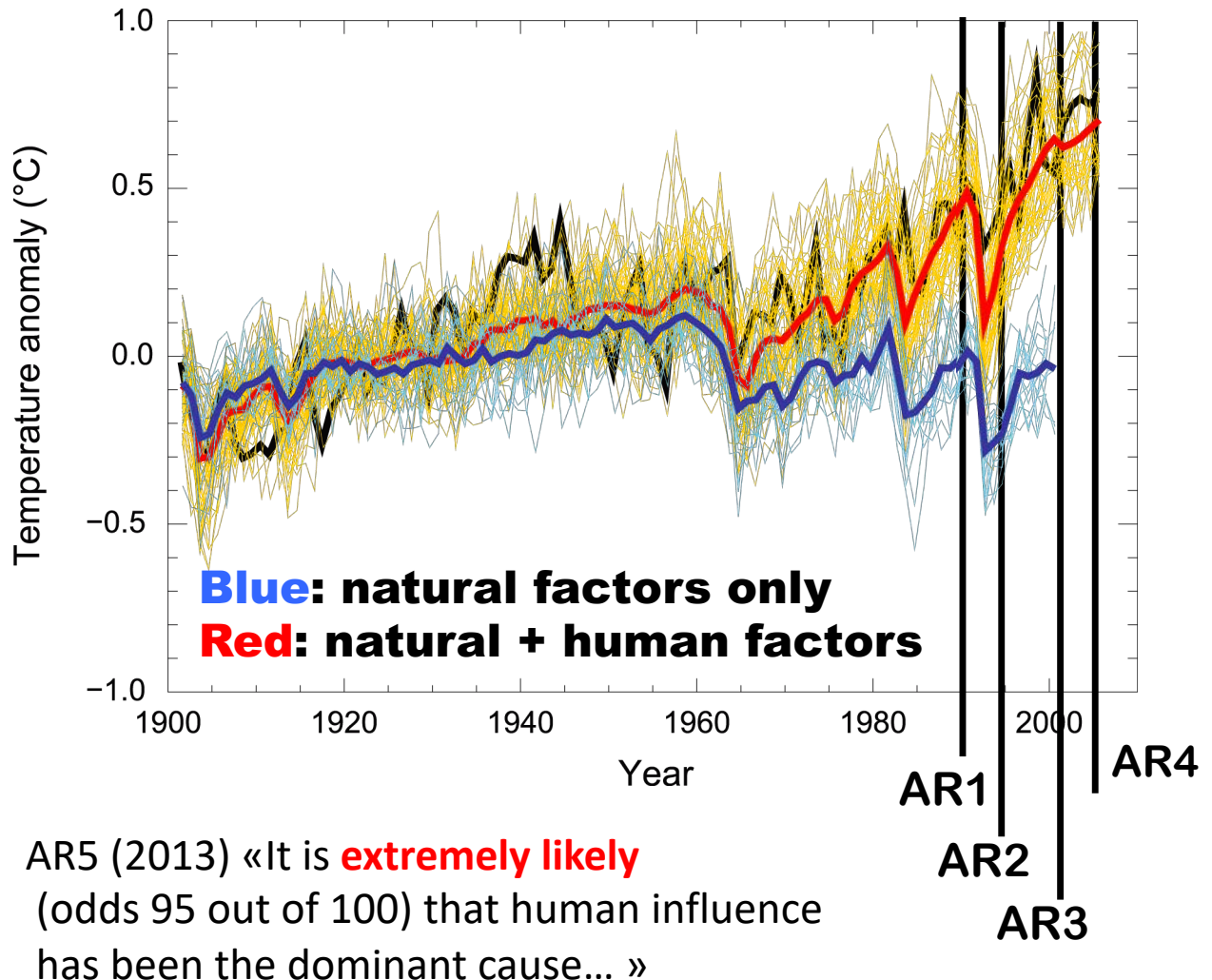
A Progression of Understanding: Greater and Greater Certainty in Attribution

AR1 (1990):
“unequivocal detection
not likely for a decade”

AR2 (1995): “balance
of evidence suggests
discernible human
influence”

AR3 (2001): “most of
the warming of the
past 50 years is **likely**
(odds 2 out of 3) due
to human activities”

AR4 (2007): “most of
the warming is **very
likely** (odds 9 out of 10)
due to greenhouse
gases”



The Essential Truth About Climate Change in Ten Words

The basic facts of climate change, established over decades of research, can be summarized in five key points:

IT'S REAL
IT'S US
EXPERTS AGREE
IT'S BAD
THERE'S HOPE

Global warming is happening.

Human activity is the main cause.

There's scientific consensus on human-caused global warming.

The impacts are serious and affect people.

We have the technology needed to avoid the worst climate impacts.

Source: @JohnfoCook

Why the IPCC ?

Established by WMO and UNEP in 1988

to provide **policy-makers**
with an **objective source of**
information about

- causes of climate change,
- potential environmental and socio-economic impacts,
- possible response options (adaptation & mitigation).

WMO=World Meteorological Organization

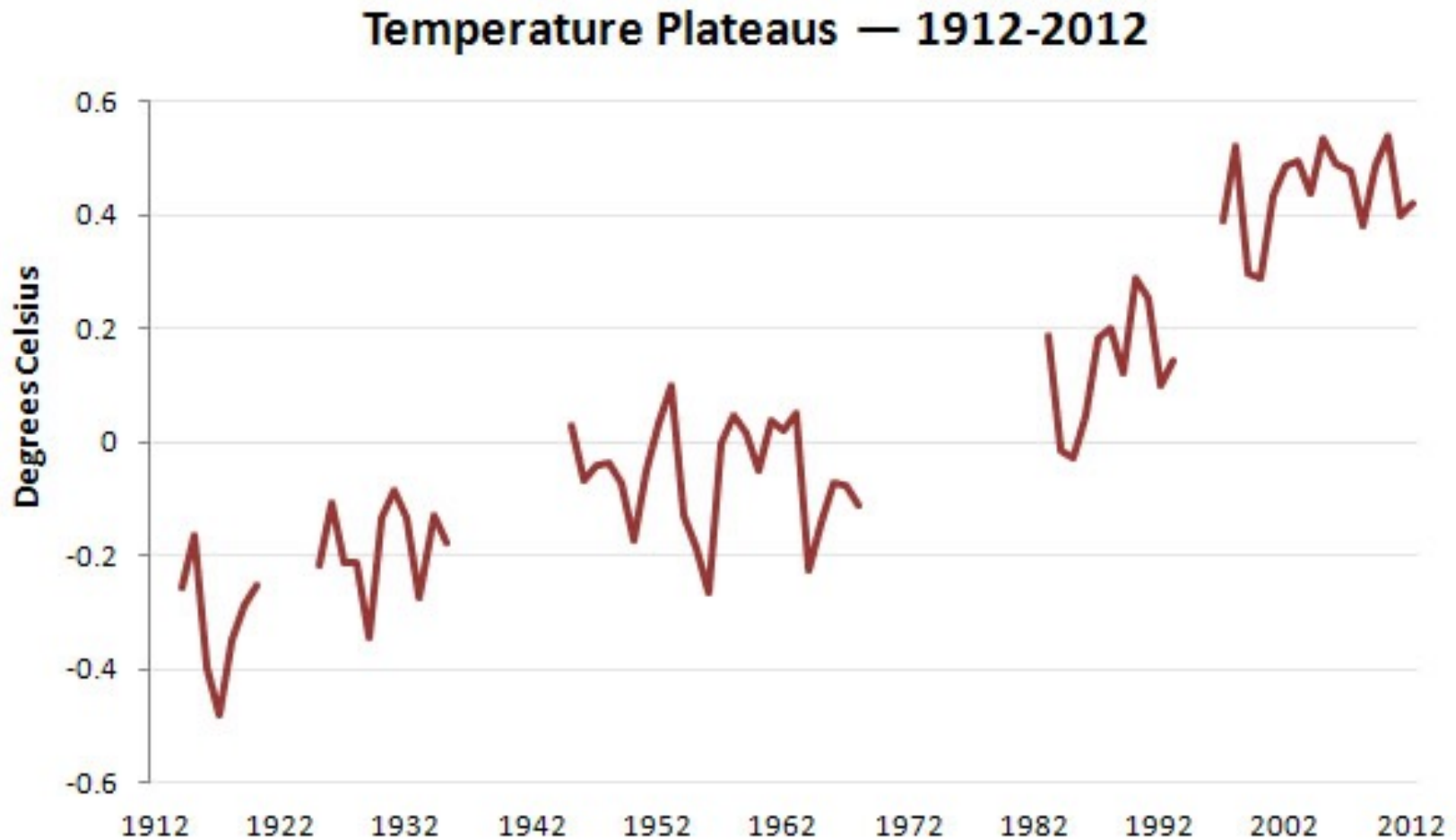
UNEP= United Nations Environment
Programme



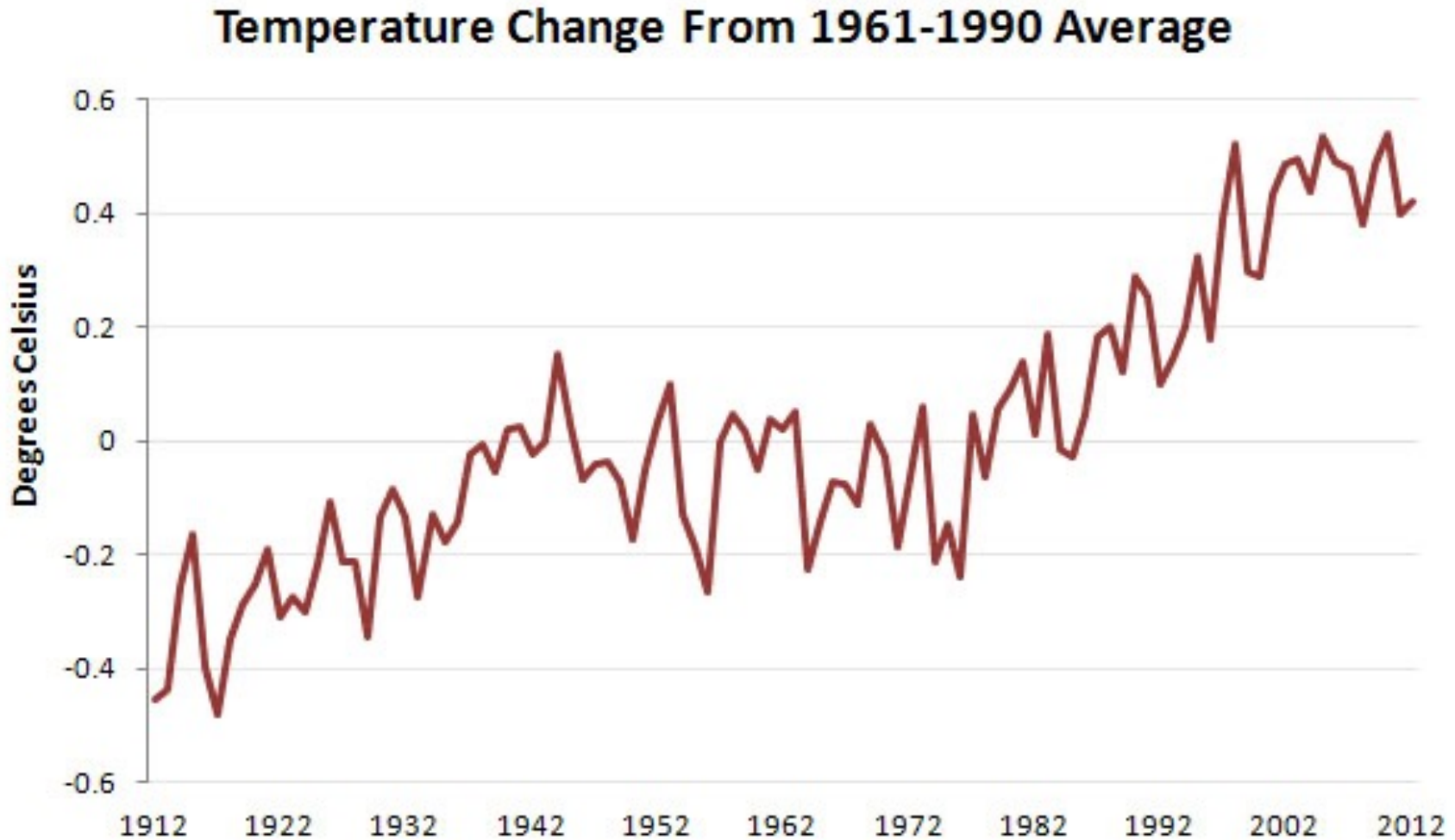
Temperature Change From 1961-1990 Average



Lying With Statistics, Global Warming Edition



Lying With Statistics, Global Warming Edition





Donald J. Trump 
@realDonaldTrump



Suivre

The concept of global warming was created by and for the Chinese in order to make U.S. manufacturing non-competitive.

 Voir la traduction

RETWEETS

99 789

JAIME

63 394



11:15 - 8 nov. 2012



100 k



63 k



Falsely argues that because we don't know everything, we know nothing.

False: In the 1990s, scientists had already formed a consensus that humans were causing global warming.

Just because climate has changed naturally in the past does not mean it's natural now.

Unsettled Science

Knowing that weather forecasts are reliable for a few days at best, we should recognize the enormous challenge facing scientists seeking to predict climate change and its impact over the next century. In spite of everyone's desire for clear answers, it is not surprising that fundamental gaps in knowledge leave scientists unable to make reliable predictions about future changes.

A recent report from the National Research Council (NRC) raises important issues, including these still-unanswered questions: (1) Has human activity already begun to change temperature and the climate, and (2) How significant will future change be?

The NRC report confirms that Earth's surface temperature has risen by about 1 degree Fahrenheit over the past 150 years. Some use this result to claim that humans are causing global warming, and they point to storms or floods to say that dangerous impacts are already under way. Yet scientists remain unable to confirm either contention.

Geological evidence indicates that climate and greenhouse gas levels experience significant natural variability for reasons having nothing to do with human activity. Historical records and current scientific evidence show that Europe and North America experienced a medieval warm period one thousand years ago, followed centuries later by a little ice age. The geological record shows even larger changes throughout Earth's history. Against this backdrop of large, poorly understood natural variability, it is impossible for scientists to attribute the recent small surface temperature increase to human causes.

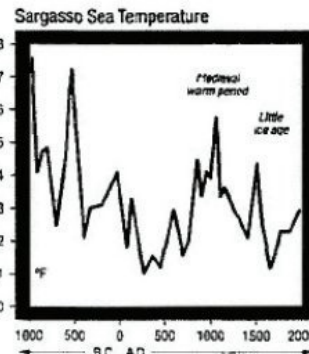
Moreover, computer models relied upon by climate scientists predict that lower atmospheric temperatures will rise as fast as or faster than temperatures at the surface. However, only within the last 20 years have reliable global measurements of temperatures in the lower atmosphere been available through the use of satellite technology. These measurements show little if any warming.

Even less is known about the potential positive or negative impacts of climate change. In fact, many academic studies and field experiments have demonstrated that increased levels of carbon dioxide can promote crop and forest growth.

So, while some argue that the science debate is settled and governments should focus only on near-term policies—that is empty rhetoric. Inevitably, future scientific research will help us understand how human actions and natural climate change may affect the world and will help determine what actions may be desirable to address the long-term.

Science has given us enough information to know that climate changes may pose long-term risks. Natural variability and human activity may lead to climate change that could be significant and perhaps both positive and negative. Consequently, people, companies and governments should take responsible actions now to address the issue.

One essential step is to encourage development of lower-emission technologies to meet our future needs for energy. We'll next look at the promise of technology and what is being done today.



ExxonMobil

Cast doubt on the scientific consensus on climate change.

Contradicts themselves: they already talk about 1 degree warming.

Uses the same delay argument as the tobacco industry: "Let's wait before we act".

Figure 4: ExxonMobil 2000 advertorial in The New York Times.
The fossil fuel industry implemented their plans to promote climate denial in the 1990s-2010s.

Source: @GeoffreySupran

Facsimile Cover Sheet**TO:** John Howard**Office:** CEQ**FAX:** 202.456.2710**Telephone:** 202.456.6540**FROM:** Randy Randol**Company:** ExxonMobil - Washington Office**FAX:** 202.862.0267 (Backup: 202.862.0268)**Telephone:** 202.862.0220 (Backup: 202.862.0223)**E-Mail:** arthur.g.randol@exxon.com**A. G. (Randy) Randol III, Ph.D.**
Senior Environmental Advisor**ExxonMobil****Date/Time:** 6 Feb 2001, 10:00 a.m.**Pages including Cover:** 18**Exxon Mobil Corporation**
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202 862 0220 Telephone
202 862 0267 Facsimile
arthur.g.randol@exxon.com**Regarding:** Bush Team for IPCC Negotiations

Attached is a brief memo outlining the issues related to the on-going IPCC negotiations on the Third Assessment Report. I have also attached other material that may be useful to you.

I will call to discuss the recommendations regarding the team that can better represent the Bush Administration interests until key appointments and re-assessments are made.

Randy

Issue: Can Watson be replaced now at the request of the U.S.?

Issue: Have Bierbaum and MacCracken been removed from their positions of influence?

**In the USA alone, organizations
which sow doubt about climate
change spend almost a billion
dollars/year! (Brulle 2014, average numbers for
2003-2010)**

The European Union fares a little better, but
many Brussels lobbyists try to dilute the EU
environmental efforts (see the car industry...)

The « merchants of doubt » have evolved in their arguments:

- Existence of global warming
- Human responsibility in the warming
- Uncertainties around the science
- More research needed before taking measures
- Cost of decarbonization
- Drawbacks from alternatives

(recent example: so-called enormous needs of cobalt for electric mobility reported on CNN; see critical analysis on <https://www.desmogblog.com/2018/05/02/cnn-wrongly-blames-electric-cars-unethical-cobalt-mining>)

Mandate of the IPCC

“The General Assembly [...] endorses action of the World Meteorological Organisation and the United Nations Environment Programme in jointly establishing an Intergovernmental Panel on Climate Change to provide **international coordinated scientific assessments** of the magnitude, timing and potential environmental and socio-economic impact of climate change and realistic response strategies [...].”

United Nations General Assembly
43rd session resolution, 6th December 1988


Role of IPCC



"The IPCC does not carry out research nor does it monitor climate related data or other relevant parameters. It bases its assessment mainly on peer reviewed and published scientific/technical literature."

(source: www.ipcc.ch)

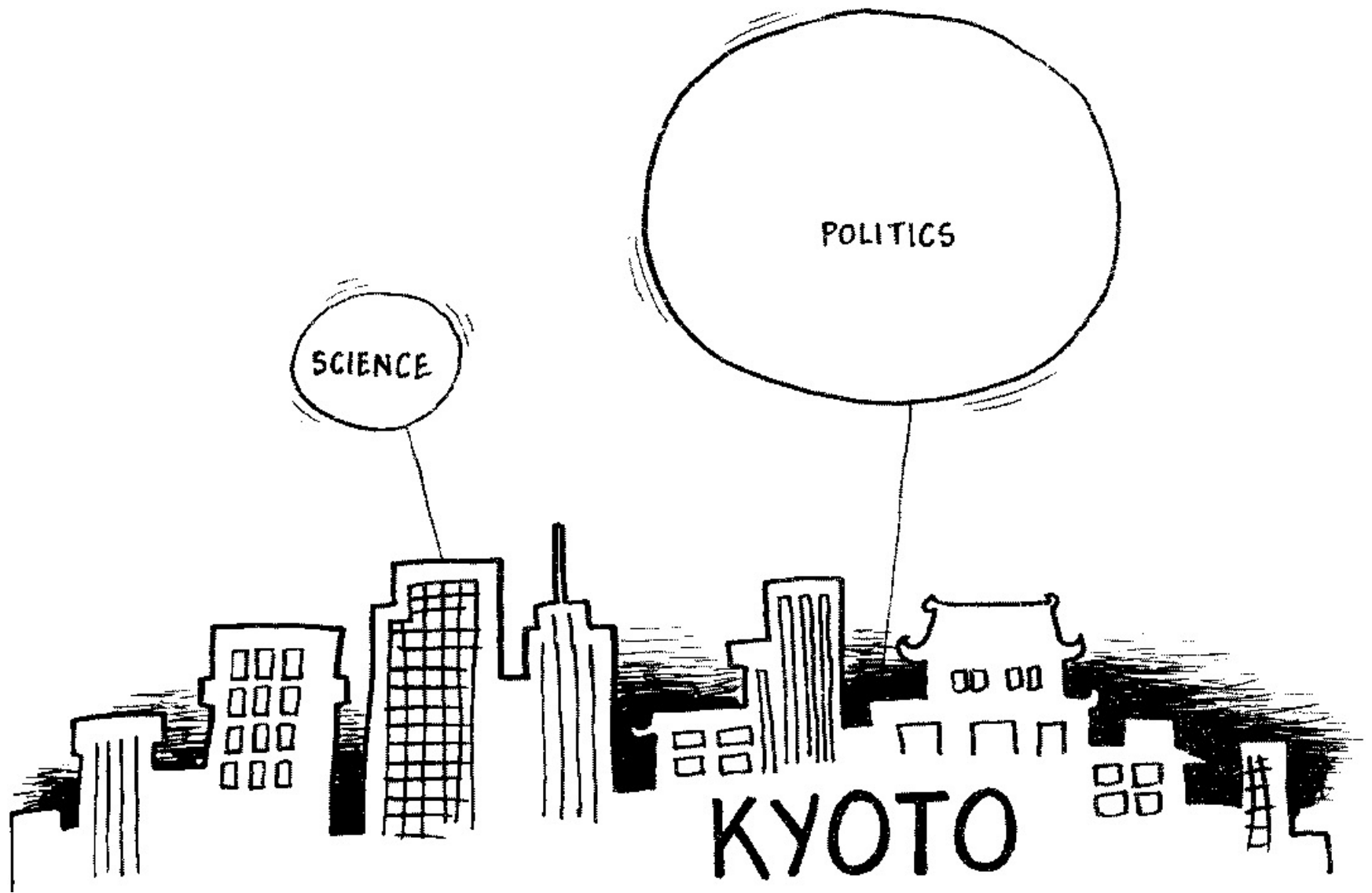
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IPCC Reports are
policy-relevant,
NOT
policy-prescriptive

The IPCC assessments have influenced global action on an unprecedented scale

1. The First Assessment Report (FAR, 1990) had a major impact in defining the content of the **UNFCCC**
2. The Second Assessment Report (SAR, 1996) was largely influential in defining the provisions of the **Kyoto Protocol**
3. The Third Assessment Report (TAR, 2001) focused attention on the **impacts** of climate change and the need for **adaptation**
4. The Fourth Assessment Report (AR4, 2007) informed the decision on the ultimate objective (**2° C**) and is creating a strong basis for a **post Kyoto Protocol** agreement
5. The Fifth Assessment Report (AR5, 2013-14) has informed the **review of the 2° C objective**, and the preparation of the **Paris 2015 agreement**
6. The Sixth Assessment Report (AR6, 2021-22) is informing the **update of the Paris Agreement commitments**

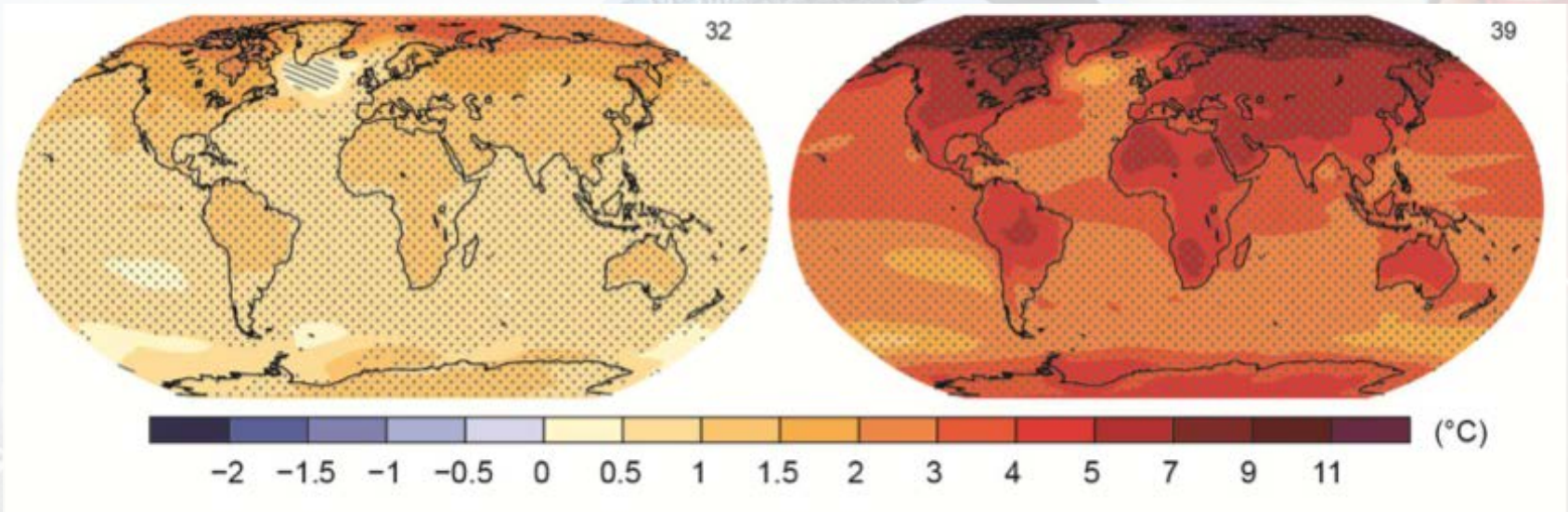


Agarwal et al., 1999

Humanity still has the choice

With substantial
mitigation

Without additional
mitigation



Change in average surface temperature (1986–2005 to 2081–2100)

AR5 WGI SPM

Conclusions (1)



- **Interdisciplinarity matters**
- **Scientists need to learn about policymaking and communication**
- **Knowledge about the climate problem and its solutions is more than enough to lead to the urgent action needed**
- **IPCC has an essential role to inform citizens and policymakers**

Conclusions (2)



- **Science and knowledge are not sufficient, as social & political forces work sometimes against the recommendations based on science**
- **Climate confusers efforts, including those funded by fossil fuel lobbies, are slowing things down**
- **Yes, we can!**

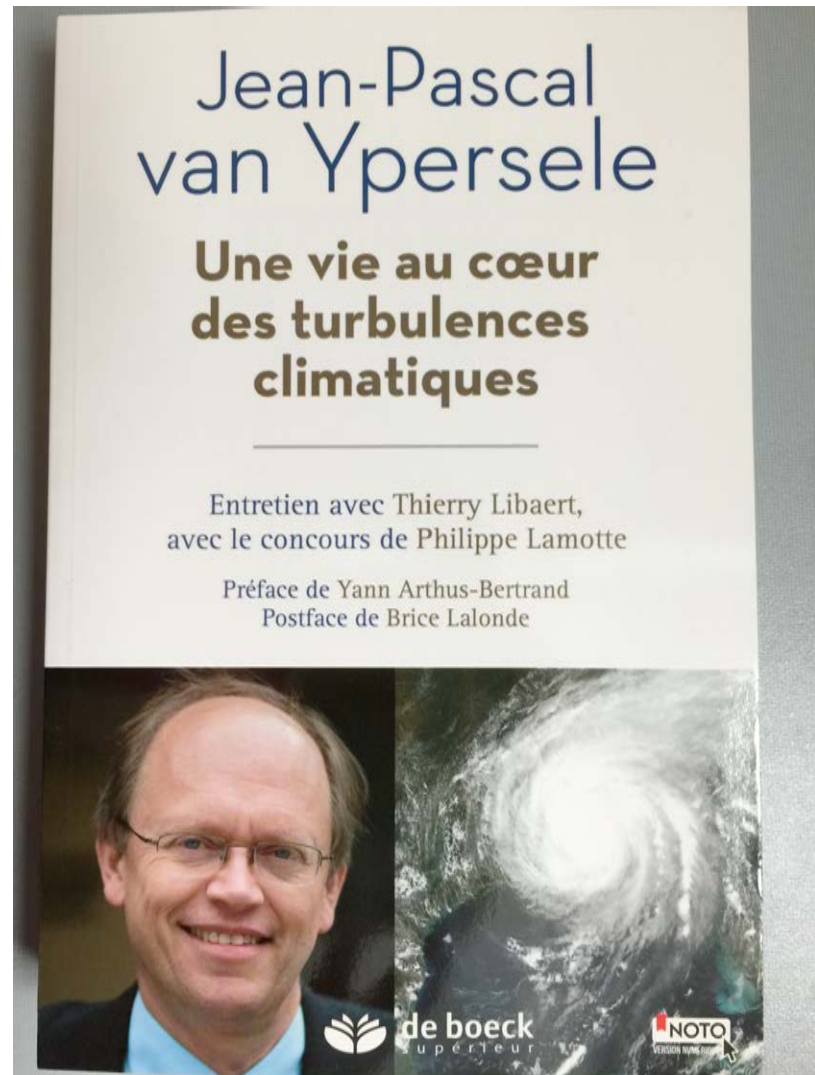
Pour en savoir plus:

**Lisez mon livre, où
j'aborde tous ces sujets**

**Publié chez De Boeck
supérieur**

**Préface: Yann Arthus-
Bertrand**

Postface: Brice Lalonde



Om meer te weten:

Bij EPO (2018)

**Voorwoord:
Jill Peeters**



Additional book references

- Oreskes, N. & E. Conway (2010) "The Merchants of Doubt - How a Handful of Scientists Obscured the Truth on Issues from Tobacco Smoke to Global Warming." Bloomsbury Press.
- Schneider, S.H. (2009) "Science as a contact sport – Inside the battle to save Earth's climate", National Geographic Society.
- Bolin, B. (2007) "A History of the Science and Politics of Climate Change -- The Role of the Intergovernmental Panel on Climate Change", Cambridge University Press

Ecrit pour les
jeunes (et moins
jeunes), avec des
liens vers des
ressources utiles



Disponible gratuitement, 6X/an: www.plateforme-wallonne-giec.be

To go further :

- www.climate.be/vanyp : my slides (under « conferences)
- www.ipcc.ch : IPCC
- www.realclimate.org : answers to the merchants of doubt arguments
- www.skepticalscience.com : same
- www.desmogblog.com: analysis of contrarians strategies
- www.plateforme-wallonne-giec.be : IPCC-related in French, Newsletter, free subscription
- **Twitter: @JPvanYpersele & @IPCC_CH**

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