

**Computer Models not ready for
Policy Making**

There is no Climate Emergency

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President of CLINTEL
The Hague, February 2020**



Threatening the living standards of new generations is the true climate emergency



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This essay is based on the text and the explanation of The World Climate Declaration

A global network of more than 800 prominent scientists and experienced professionals has signed Clintel's World Climate Declaration. The statements of the Declaration contain a clear message: 'There is NO Climate Emergency'.

In part I of this essay the Declaration is shown. In part II the Science behind the Declaration is explained.

In the current climate discussion the iconic parameter is the global average temperature at the Earth's surface. However, 95% of the heat energy in the climate system rests in the ocean. Therefore, CLINTEL advocates that the energy content of the ocean is a much better measure for diagnosing global warming or cooling. More and more scientists now support this change-of-metric proposal (Roger A. Pielke Sr, 2003). Unfortunately, the global average temperature still keeps dominating the public discourse about climate. The Paris Agreement even states that this temperature should not rise more than two degrees Celsius above pre-industrial.

Now, suppose the models are perfectly able to reproduce the global average temperature since 1850, what would that mean? The famous mathematician Von Neumann said: "The near perfect match between your model and your data doesn't tell you much though about how good your model really is. You can only learn that from a forecast."

Nevertheless, replacing validation by tuning is still being done in the climate community. Mainstream scientists tend to show graphs that give the impression that models come really close to the observations. CLINTEL emphasises that this is a misleading practice. Accuracy of predictions is the only proof that counts.

The essay ends with a message to the young generation.

The message that the 'science is settled' points at a lack of critical researchers in the climate community.

PART I: THE SIX STATEMENTS OF THE DECLARATION

1. Natural as well as anthropogenic factors cause warming

The geological archive reveals that Earth's climate has varied as long as the planet has existed (more than 4 billion years), with natural cold and warm phases. The Little Ice Age ended about 150 years ago. Therefore, it is no surprise that we now are experiencing a period of warming.

New in today's warming period is the possible influence of human activities. To answer this question we need to decompose global warming measurements into a nature-driven component and a human-made ('anthropogenic') component. Looking at the complexity of the Earth's climate system, accurate decomposition is a major scientific challenge that is far from solved.

2. Warming is far slower than predicted

The world has warmed significantly less than the rate to be expected on the basis of modeled anthropogenic forcing. The substantial gap between empirical measurements and computer predictions - a significant bias to high temperatures - tells us that we are far from understanding climate change. It appears that today's mainstream climate models have many shortcomings.

3. Climate policy relies on inadequate models

Poor predictions also tell us that climate models are not remotely plausible as policy tools. Model makers do not only exaggerate the effect of greenhouse gases, they also assume the influence of the sun-cloud-ocean system to be marginal. Hence, is the model output not just the conformation of what modelmakers themselves have put in?

4. CO₂ is plant food, the basis of all life on Earth

CO₂ is NOT a pollutant. It is a molecule that is essential to all life on Earth. More CO₂ is beneficial for nature, greening the Earth. Additional CO₂ in the air has promoted growth in global plant biomass. It is also good for agriculture, increasing the yields of crops worldwide. Why is the huge benefit of CO₂ for life on Earth always concealed for the public?

5. Global warming has not increased natural disasters

Climate models systematically exaggerate future global warming (output of IPCC's Working Group 1) and, based on this exaggeration, IPCC's Working Group 2 forecasts that natural disasters will increase*. However, when we look at reality, the statistics of natural disasters show a very different picture.

There is no evidence that global warming is intensifying hurricanes, floods, droughts and suchlike, or making them more frequent. Moreover, in the past 100 years there has been a sharp decrease in climate-related deaths due to adaptation.

** IPCC stands for Intergovernmental Panel on Climate Change. It is a UN organization. IPCC lead-scientists primarily select scientific papers that confirm the Anthropogenic Global Warming (AGW) theory.*

6. Climate policy must respect scientific and economic realities

There is no climate emergency. Therefore, there is no cause for panic and alarm. We strongly oppose the harmful and unrealistic net-zero CO₂ mitigation policy proposed for 2050. It is irresponsible to spend trillions of dollars on a mitigation policy that is based on inadequate computer models. In this policy the 'CO₂ control knob' destroys prosperity and increases poverty. It is opposite to what is needed:

The real world shows that in a prospering society men and women are well educated, birthrates are low and people care about their environment. Why pushing an ideology-driven climate policy if its outcome is lower prosperity?

Signatories' advice to political leaders is that science should strive for a significantly better understanding of the climate system, while politics should focus on minimizing potential climate damage by prioritizing adaptation strategies based on proven and affordable technologies.

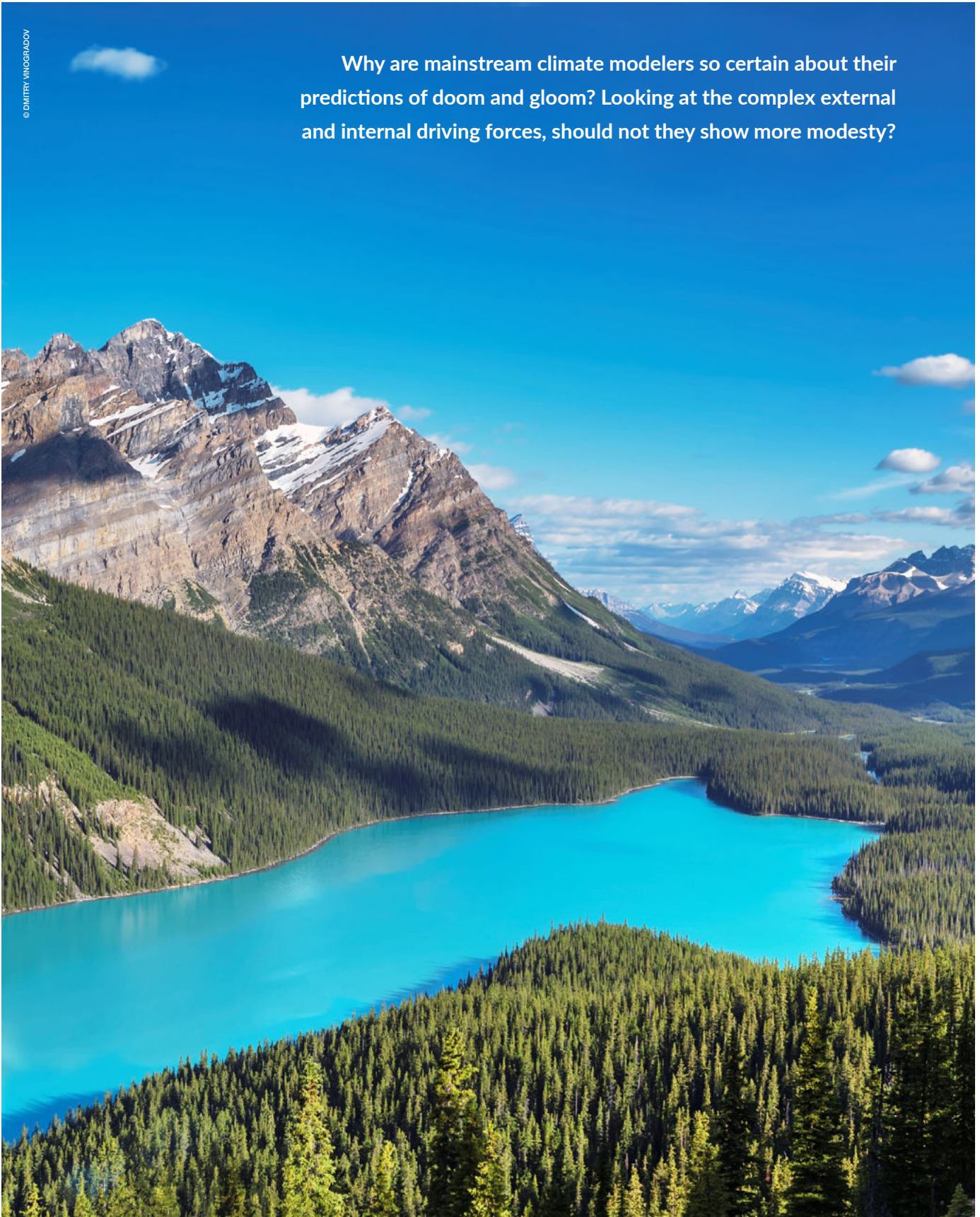
ON BEHALF OF MORE THAN 800 SIGNATORIES, THE AMBASSADORS OF THE DECLARATION:

Nobel Laureate Professor Ivar Giaever	Norway/USA
Professor Guus Berkhout	The Netherlands
Professor Reynald Du Berger	French speaking Canada
Terry Dunleavy	New Zealand
Viv Forbes	Australia
Professor Jeffrey Foss	English speaking Canada
Jens Morton Hansen	Denmark
Morten Jødal	Norway
Professor Demetris Koutsoyiannis	Greece
Rob Lemeire	Dutch speaking Belgium
Professor Richard Lindzen	USA
Dr Henri A. Masson	French speaking Belgium
Professor Ingemar Nordin	Sweden
Jim O'Brien	Republic of Ireland
Professor Ian Plimer	Australia
Douglas Pollock	Chile
Professor Alberto Prestininzi	Italy
Professor Benoît Rittaud	France
Dr Thiago Maia	Brasil
Professor Fritz Vahrenholt	Germany
The Viscount Monckton of Brenchley	United Kingdom

Ambassadors of the Declaration invite the UN to organize with them a constructive high-level meeting between world-class scientists on both sides of the climate debate in 2020. The meeting will give effect to the sound and ancient principle that both sides should be fully and fairly heard: *Audiatur et altera pars!*

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Why are mainstream climate modelers so certain about their predictions of doom and gloom? Looking at the complex external and internal driving forces, should not they show more modesty?



Policy makers must realize that controlling the Earth's climate requires correcting the orbit of our planet around the sun. Next, they need to repair the wobbly axis of the Earth. When that is fixed, they should continue with issues such as stabilising the cloud forming in the atmosphere, steering the heat flow in our oceans and stopping the land-marine volcanic eruptions. Dear policy makers, do you really think you can play God? Is it not wiser to go for adaptation?

PART II: SCIENCE BEHIND THE DECLARATION

Climate science should be less political, while climate policies should be more scientific. In particular, scientists should emphasize that their modeling output is not the result of magic: computer models are human-made. What comes out is fully dependent on what theoreticians and programmers have put in. Unfortunately, in mainstream climate science most of this input stays undeclared.

To believe the outcome of a climate model is to believe what the model makers have put in. This is precisely the problem of today's climate discussion to which climate models are central. Climate science has degenerated into a discussion based on beliefs, not on sound self-critical science. Should not we distance ourselves from the notorious trap of circular proof?

Misplaced belief in climate models

The Earth's Climate System (ECS) represents multiple phenomena that interact with each other in complex ways. These phenomena are the responses of external and internal driving forces. The short-term variability represents changes in the weather (process variability). The long-term variability represents changes in the climate (system variability).

Over short periods climate change may be very difficult to detect and the observed deviations are merely changes in the weather. Over long periods, the variations in the weather need be properly averaged out in order to expose changes in the climate.

Hence to accurately represent climate change, climate models must be able to simulate in a bias-free and aliasing-free* way the averaged-out weather over large observation windows, many milleniums at least. It is not surprising that long-term climate change and short-term weather changes are difficult to distinguish and therefore they are often confused.

** In data science aliasing is a well-known phenomenon that occurs if incoming data is too coarsely sampled, generally to keep the data volume manageable. It leads to time functions that may be very different from the real ones. The correct procedure is measuring finely sampled data first, followed by anti-aliasing filtering (smoothing) and sample dropping. Today's modeled and observed climate data is full of aliasing.*

In the ECS we have insufficient knowledge of the different driving forces, their interrelationships, as well as the system responses of those driving forces. These forces range from space (radiation) and inner earth (volcanism) to ocean oscillations and cloud forming. The sub-

The output of a model is completely dependent on what model makers have put in. Believing the model is trusting the makers*.

stantial gaps in our knowledge should keep us humble about claiming climate certainties.

Wrong input, wrong output

Modeling output is not the result of magic: computer models are human-made. What comes out is fully dependent on what theoreticians and programmers have put in: hypotheses, assumptions, relationships, parameterizations, stability constraints, etc. Unfortunately, we never discuss the input. We always talk about the output.

We see an interesting and relevant example in IPCC's report of 2018. If the CO₂ sensitivity is set to zero, the modeled global warming is marginal. This indicates that: **"In IPCC's models the modelers have pre-classified the global warming due to natural phenomena as a marginal effect"**. This is completely ignoring the past, where warming was always 100% natural. In other words, the modelers have explicitly assumed that global warming must come predominantly from anthropogenic (human-made) CO₂. Already in the 2013 IPCC report it was noted in Section 9.2 that there had been a hiatus in global warming, despite a significant rise in global carbon dioxide concentration.

Listen to Dr Judith Curry's informative US Senate testimony, highlighting the modest effect of CO₂ with respect to natural causes. Look also at the work of Prof. Koutsoyiannis.

** Can we trust IPCC's model makers if they try to silence scientists with alternative explanations?*

Stop using misleading computer models, let the data speak!



a. Approximately right



b. Precisely wrong

Illustration: Better to be approximately right by analyzing incomplete data volumes than to be precisely wrong by running erroneous computer models (free after Keynes). Precisely right solutions require intelligent data analysis applied to complete measurement volumes. Unfortunately, IPCC's research program suffers from the combination of 'modelling obesity' and 'measurement anorexia'. We need more observations in tuning windows (Von Neumann) and zero observations in prediction windows (no false play).

Tuning is not validation

The history of science tells us that the only way to discern the validity of a model is to compare the model-driven simulations with real-world measurements ('model validation'). If there is a material gap between simulations and measurements the model is immature and more work is needed. If the gap is very large it is advisable to start all over again.

During the validation process, we can tune the models' parameters (turn the knobs of the model) so that model simulations agree with the recorded measurements. This tuning however, is not validation. It is model fitting. It is only one of the numerical steps in the total validation process.

Bear in mind that **with many model parameters and a relatively small observation window a fitting exercise is always successful.**

The famous mathematician John von Neumann once said: with four parameters I can fit an elephant and with five I can make him wiggle his trunk. Later, scientists actually proved that this statement is true [Drawing an elephant with four complex parameters by Jurgen Mayer, Khaled Khairy, and Jonathon Howard, Am. J. Phys. 78, 648 (2010), DOI:10.1119/1.3254017].

Von Neumann meant that if you already know your data, it is not too difficult to come up with a model that can fit the existing data rather well. The near perfect match between your model and your data doesn't tell you much though about how good your model really is. You can only learn that from a forecast.

Successful fitting is the argument modelers often use to claim that they are right. However again, model fitting is not validation! For instance, if we extend the observation window – necessary for analyzing long-term system changes rather than short-term process changes – then immature models fail due to physical and numerical errors. Note here

the essential distinction between physical accuracy and calculation precision.

Quoting John Maynard Keynes (1883–1946): **“Better to be approximately right than precisely wrong.”**

The ultimate validity test we can do is to evaluate the prediction capability. For underdeveloped models, large differences between the predicted future and the actual future will occur. Scientifically, this difference is an indispensable source of knowledge: it contains the information to update the prevailing insights and to improve the model ('learning process'). On the other hand, the practical consequence of a substantial prediction gap is that the model is NOT ready for policy use and should NOT be relied upon for setting long-term policies.

Modeling is valuable in exploring new concepts and ideas, particularly by using today's powerful computers. But believing the predictions without thorough validation is misleading and can result in irresponsible policies. In that respect, note that a true scientist is driven by curiosity. He/she continuously learns by analyzing the difference between modeled and real measurements. For validation purposes a competent scientist changes the model; a fake scientist changes the measurements or even fabricates them.

Climate models are not fit for their purpose

In climate science we want to detect, understand and predict system changes. Therefore, it is an absolute must to obtain good insight in the relationship between the model parameters and the model output, particularly with respect to parameter sensitivity. It is also an absolute must to include the history of the Earth's climate. To be legitimate, climate models must be capable of accurately simulating this history. If we understand the past, we are ready to explain the present. With this rich reservoir of knowledge, it makes sense to then explore the future.

Linear/exponential prediction leads to a simple extension of current trends.

Hence, when we are in a warming period, these naive algorithms will **always** predict a very warm future. This is exactly what we see today.

Reconstructions of the remote past – based on (ice) core data and confirmed by astrophysical, geological and archeological knowledge – show that the Earth has experienced glacial and interglacial periods (Figure 1a). Even in more recent times (Figures 1b,c), the Medieval Warm Period (MWP) – around 850 AD – showed very warm seasons, while in the Little Ice Age (LIA) – around 1650 AD – the seasons were much cooler than today. Hence, it is no surprise that after the LIA the Earth is warming-up again to a next kind of MWP (Figure 1d). That has been the ever-existing natural sequence of warm – cold – warm periods. More specifically, Figure 1a shows the temperature cycles of the past 450,000 years, Figure 1b shows the past 12,000 years, Figure 1c shows the past 2,000 years and Figure 1d shows the past 150 years. The results are very consistent: temperatures have never been constant. On the contrary, the Earth's climate system is very dynamic with small and large natural cycles.

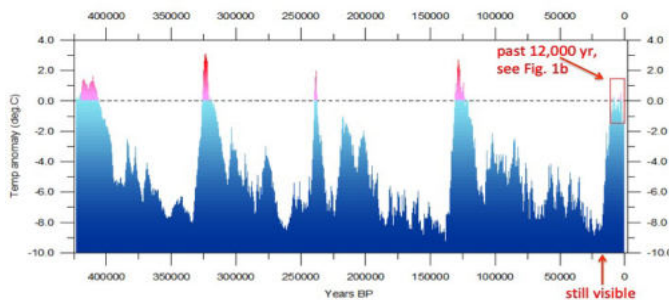


Figure 1a: A summary of the knowledge we have about the temperatures of the past 450,000 years. The message is that the Earth's climate is a dynamic system with a natural sequence of very cold and very warm periods due to long-term system changes.

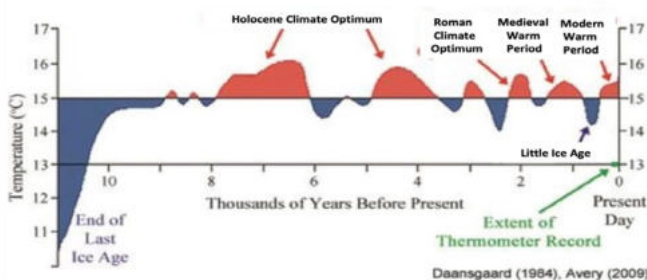


Figure 1b: A summary of the knowledge we have about the temperatures of the past 12,000 years. Here we see again that warm and cold periods are natural phenomena. Note the prominent warm period around 6500 before present day (warmer than today).

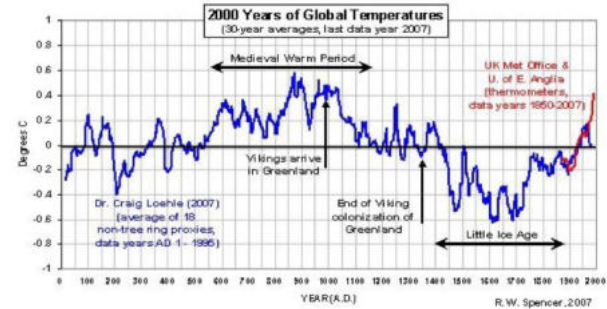


Figure 1c: A summary of the knowledge we have about the temperatures of the past 2000 years. Here we see again that warm and cold periods are natural phenomena. Note again the MWP around 850 AD and the LIA around 1650 AD, but now in more detail.

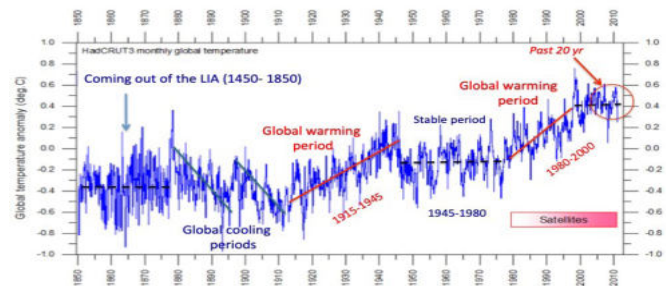


Figure 1d: A summary of the knowledge we have about the temperatures of the past 150 years (HadCRUT3 data). It shows the post LIA warming period at a very detailed scale. Linear extension of cooling and warming periods caused in the media all sorts of panic stories.

Note the very warm and very cold periods in Figure 1a; the cyclic long-term system changes – climate change – were entirely caused by natural phenomena. Figure 1b shows the smaller climate variations between the last glacial and today. Figure 1c shows the temperature graph of the last 2000 years and Figure 1d of the last 150 years.

It is interesting that in the IPCC reports the Medieval Warm Period was smoothed out, representing the temperature of the past 2000 years in the shape of a hockey stick. In Figure 1d the current global warming period is clearly visible (about 0.9°C in 150 years).

Note the large difference in vertical scale between Figures 1a and 1d (a factor of 7). On the system scale of Figure 1a, a system change in Figure 1d would be hardly visible. Current alarming climate warnings thus appear in a somewhat dubious light.

Figure 2a illustrates that the influence of anthropogenic CO₂ emissions on global warming is very questionable. In the left graph the CO₂ emis-



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The polar bear, favorite doom icon of climate alarmists, refuses to obey the IPCC. The population flourishes like never before.

So far, application of poorly validated climate models has led to the prediction of an apocalyptic future. It may be seen as the biggest scientific mistake of mankind in its recent history.

sions were small (about 10 ppm) but on the right graph they were much larger (about 70 ppm), as can be seen in Figure 2b. However, warming rates in the two records are very similar. Even more convincing, there is a stable temperature period in between (1945-1975) and afterwards (2000-present). However, note that - even if the correlation would have been strong - we must bear in mind that correlation and causation are two fundamentally different concepts. For instance, there is a strong correlation between CO₂ increase and global poverty decrease, but more CO₂ does not cause less poverty in the world. It is certainly not as simple as the correlation suggests.

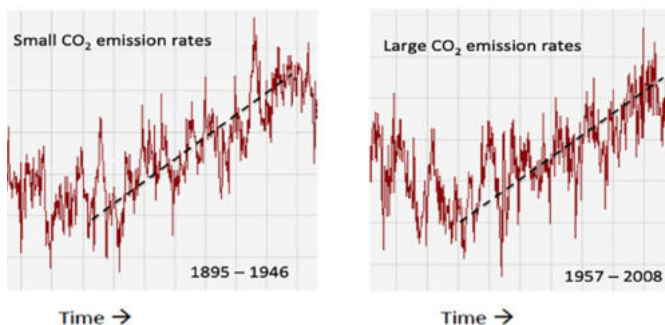


Figure 2a: A close up of the two warming-up periods in Figure 1d. At the left-hand side the period 1895- 1946 and at the right-hand side the period 1957-2008 is shown. In the first period the CO₂ emission rates are minor with respect to the second period (factor 7!), but the warming rates (see dashed trend lines) are very similar.

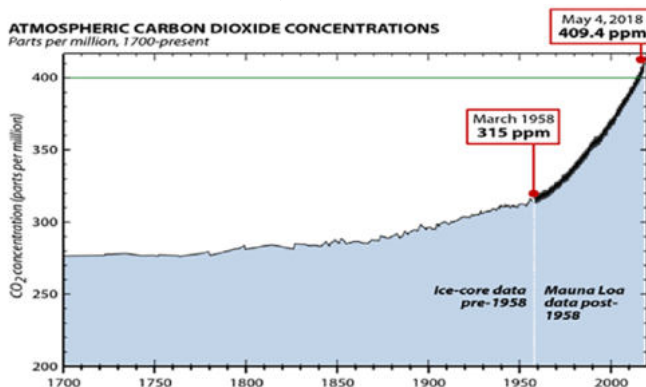


Figure 2b: After 1958 the CO₂ concentration in the atmosphere increased fast (from about 315 ppm to 410 ppm), i.e. 1.5 ppm per year. Note that the vertical axis starts at 200 ppm and ends at 410 ppm. In well isolated living rooms the CO₂ concentration is often higher than 2000 ppm.

A climate model that claims to represent climate change in a reliable way must be capable of explaining the sequences of warm and cold periods in the past as shown in Figures 1a - 1d. Only by extending the observation window can we study the system changes in the ECS (i.e. climate change). Mainstream climate models only focus on the minuscule period after 1850 AD. They peer through a keyhole at the climate system. How can we meaningfully tune these models thru such a keyhole? How can we accurately differentiate in such a narrow observation window between process dynamics (weather) and system changes (climate)?

FORECASTING WITH IMMATURE MODELS

Hind casting (looking back) is necessary, but certainly not sufficient to ascertain model validity. Models are only of value for policy making if they can reliably predict the future. However, so far climate models have consistently exaggerated future warming.

Figure 1d showed that if modelers use data in small windows, they get a sequence of false alarms. Figures 3a and 3b show that the temperature gradient of the predicted future does not follow the real temperature gradient but is guided by the CO₂ gradient. It indicates that the CO₂ sensitivity dominates all other factors. Figures 3a and 3b compare the Anthropogenic Global Warming (AGW) scenarios of the IPCC with real measurements. Note the very wide range of futures that IPCC shows. Note also the growing gap between the scenarios and the extrapolated real measurements.

It means that what the model makers have put in the model is very biased to high temperatures. Cooling is totally excluded.

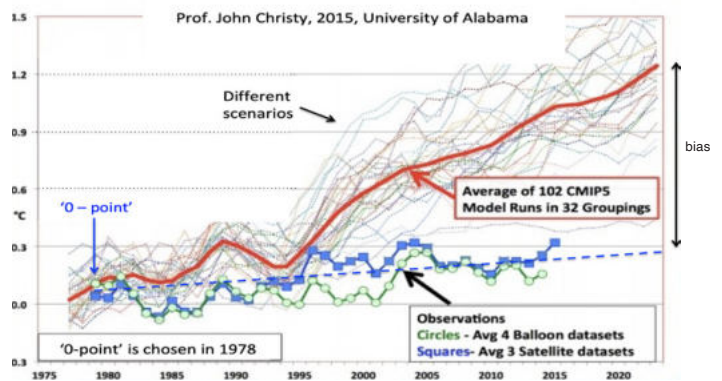


Figure 3a: CO₂-driven model predictions and extrapolated measurements show a large gap with increasing prediction time. It tells us that the science of climate change is very biased and far from settled. It also tells us that model predictions are not suitable for policy making.

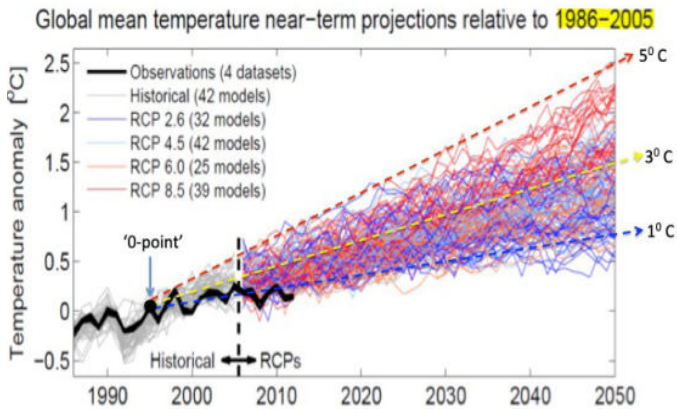


Figure 3b: CO₂-driven model predictions and extrapolated measurements show a large gap with increasing prediction time. In this graph IPCC did choose the '0-point' at 1995 (compare with 1978 in figure 3a).

In figure 3b linear trends are drawn to 1°C, 3°C and 5°C in 2100 to give the reader guidance in the jumble of predictions.

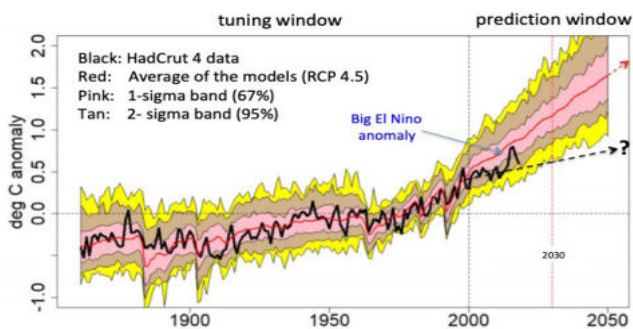


Figure 3c: Here we see again why forecasting is the decisive step in model validation (graph based on Figure 9.8 of the IPCC AR5 report). Over most of the past century the models seem to do a reasonably good job. However, this is mainly because they are tuned to do so (Von Neumann). After 2,000, when the forecast begins, measurements immediately start to enter the yellow 2.5 percentile band (despite the help of El Niño). Model makers have to admit that their models cannot be trusted.

It is remarkable that exaggeration of future global warming gets a favorable reception, while any alternative theory that predicts lower temperatures is fiercely attacked. Recently, the German climate professor Hans Joachim Schellnhuber predicted a global temperature raise of 6°C if the CO₂ concentration in the atmosphere would double. With his doom and gloom he got lots of positive publicity. Adulation of exaggerated prediction also occurs with Sea Level Rise (SLR). For example, about one third of the Netherlands is situated below sea level, but it is the safest delta in the world. For hundreds of years the Dutch have specialized in accurate measurement of the sea level near its coast as part of its adaptation strategy. It leads to a local SLR of less than 20 cm in 2100. That is far from the catastrophic predictions of several leaders.

For a meaningful prediction you need a proper metric and a macroscopic mindset.

The message is again that there is no Climate Emergency. The total Cryosphere (the frozen places of our planet) appears to be rather stable. If there is a reason for SLR concern, it is more likely caused by subsidence (land level fall) – often due to manmade groundwater extraction – not to climate change.

PREDICTING NATURAL DISASTERS

Natural disasters have always happened. We saw that climate models systematically exaggerate future global warming (output of IPCC's Working Group 1) and, based on this exaggeration, IPCC's Working Group 2 forecasts that natural disasters will increase. However, again when we look at reality, statistics of natural disasters shows a very different picture. No reason to panic!

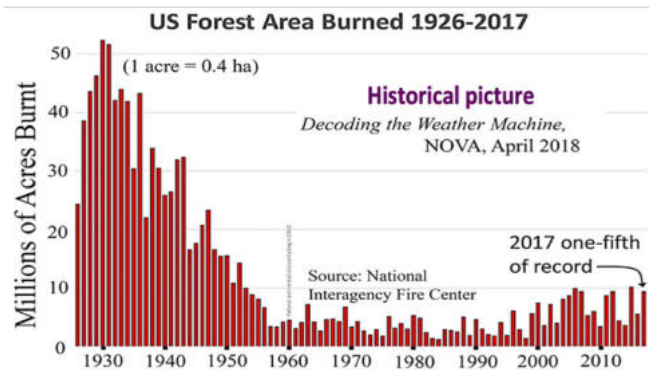


Figure 4: Statistics do not show that natural disasters are increasing. Here an example of wildfires is shown. Like we saw with the prediction of temperatures, disaster predictions are far from reality. Message: "There is no Climate Emergency".

Figure 4 gives one example: wildfires. It appears that IPCC builds assumptions (WG2) on assumptions (WG1), leading to a frightening future. Also, here we see: **the more frightening the future, the more fear in society and the more attention of policymakers.**

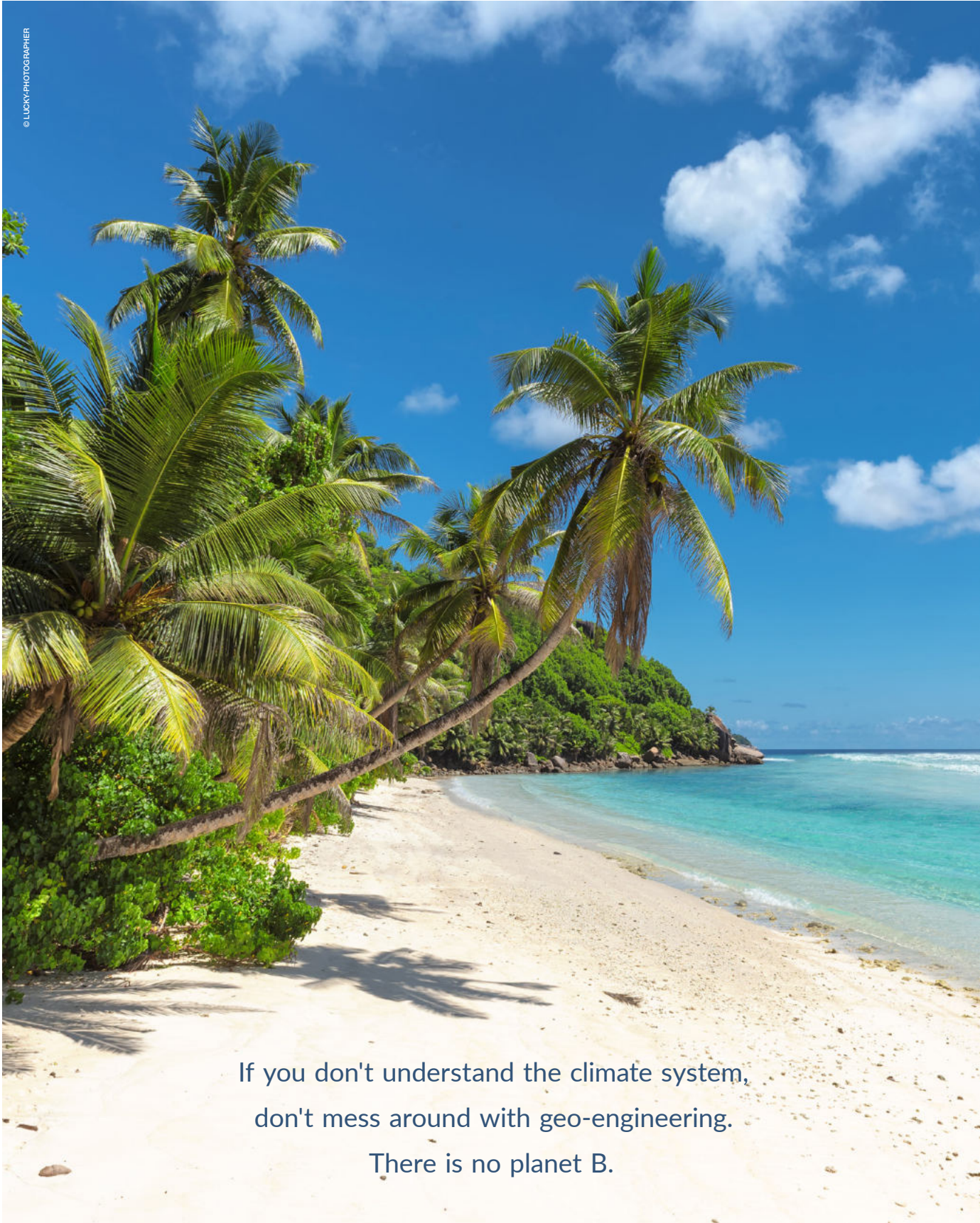
IRRESPONSIBLE MITIGATION POLICIES

Is it not irresponsible to spend trillions of dollars on a mitigation policy that is based on immature computer models? The advice that concludes our Declaration (part 1) is this: **"Go for adaptation instead of mitigation; adaptation works whatever the causes are"**.

Considering again the facts, mitigation has not saved one life so far, while adaptation has drastically decreased the casualties of natural disasters. For instance, in 1999 a cyclone of the highest category in India (Odisha) caused about 10,000 victims but in May 2019 a cyclone of the

Astronomists, geophysicists, archeologists and geologists use big volumes of advanced observations to reconstruct the past'. Lack of historical knowledge is a fundamental gap in today's climate models.



A vibrant tropical beach scene. In the foreground, a sandy beach is partially covered by the shadows of palm trees. Several tall palm trees with lush green fronds lean over the beach from the left. The water is a clear, bright turquoise color, with gentle waves lapping at the shore. The sky is a deep blue with scattered white clouds. The overall atmosphere is peaceful and idyllic.

If you don't understand the climate system,
don't mess around with geo-engineering.
There is no planet B.

In the past 150 years prosperity has increased and poverty has reduced. However, IPCC's computer models tell us that with a pessimistic 'business as usual scenario' we will be overrun by doom and gloom. Of course, these modelled catastrophic narratives certainly will come true if they are engineered by 'green deals'.

same category in the same area (with more people) caused 41 victims. Why? The answer is simple and clear: "Implementation of an adaptation policy." See Figure 5.

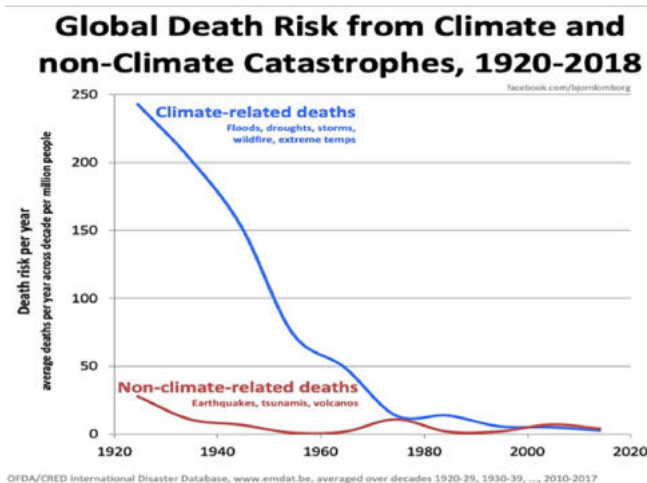


Figure 5: Mitigation policy has never saved a life, but statistics tell us that adaptation policy is very successful. For example, in the past 100 years there has been a sharp decrease in climate-related deaths.

Looking at today's panic, the mitigation target – 50% reduction of CO₂ in 2030 – is unrealistic and irresponsible. It involves an entire rebuild of the energy system with unproven technologies. However, prosperity requires plentiful low-cost, reliable energy. Today's mitigation policy means abandoning our proven low-cost, reliable energy system within a very short period. **That will inevitably lead to economic decline and increased poverty. Is mitigation not an immoral climate policy? Is climate adaptation not the fundament of development-aid?**

Finally, our second strong objection against mitigation is the fact that CO₂ is plant food, the basis of all life on Earth. Hence, CO₂ is not a pollutant but CO₂ is essential to all life on Earth; photosynthesis is a great blessing. More CO₂ is beneficial for nature, greening the Earth. Additional CO₂ in the air has promoted growth in global plant biomass (see Figure 6). It is also good for agriculture, increasing the yields of crops.

CO₂ is NOT a pollutant but the basis of all life on Planet Earth. Why is the huge benefit of CO₂ concealed for the public?

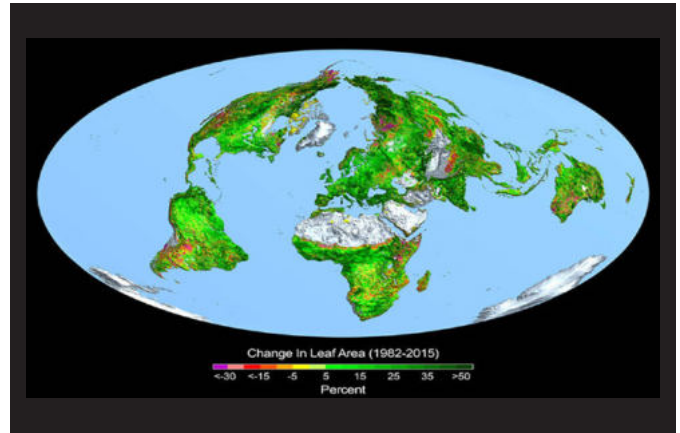


Figure 6: Using the fact that more CO₂ in the atmosphere promotes growth of plants, the Earth must be greening. This is exactly what is being observed.

TIME TO START ALL OVER AGAIN

Understanding short-term weather variations (process variability) and long-term climate change (system variability) is a substantial interdisciplinary scientific challenge and requires bringing together independent scientists from a wide range of fields. The title 'climate scientist' was invented ± 30 years ago, but it does not exist as a profession. No one understands the huge complexity of the climate system; no single 'climate scientist' can claim all-encompassing knowledge nor does he/she know how to distinguish reliably between weather and climate. Much that has been blamed on climate change is simply extreme weather.

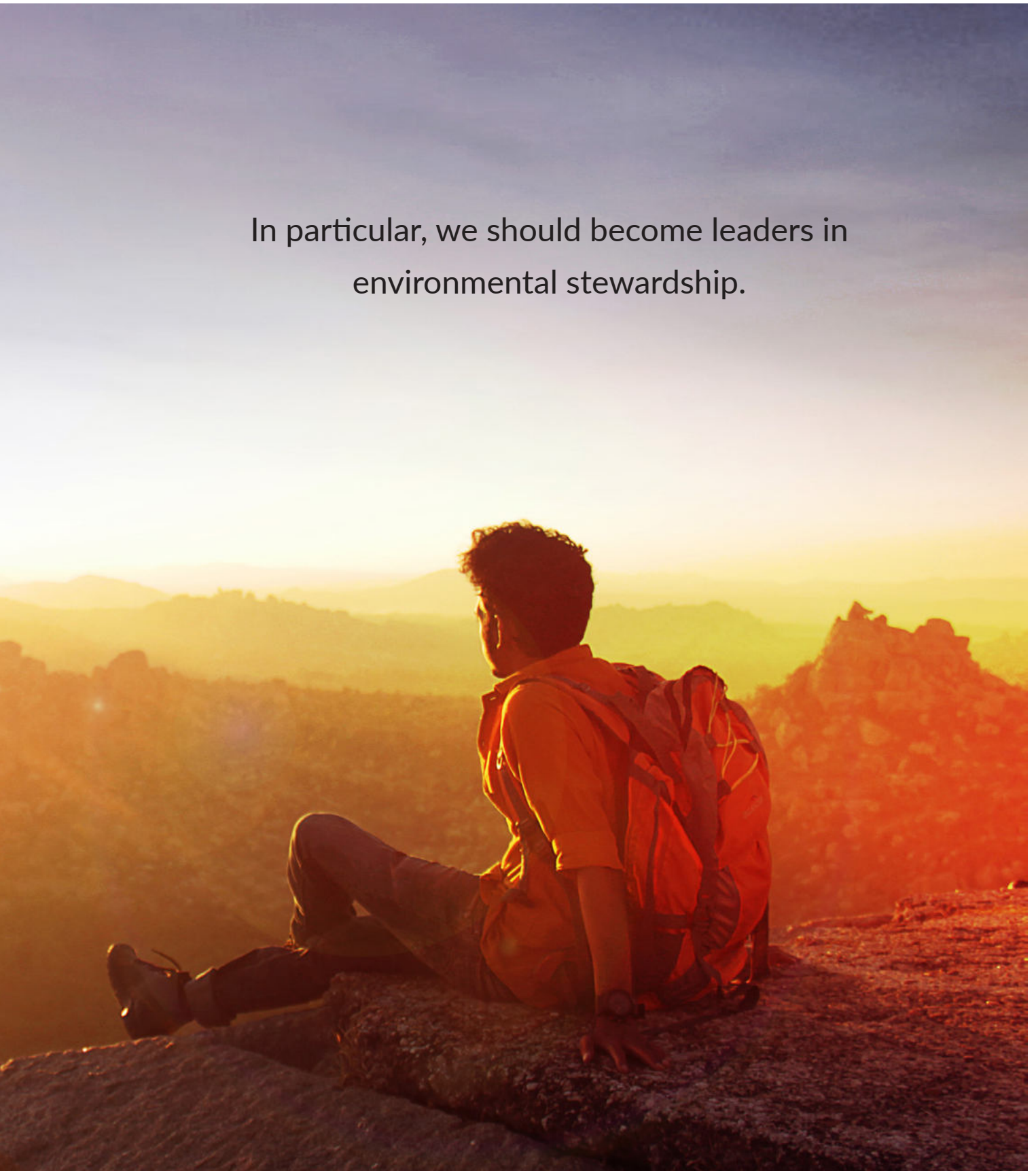
What does exist though are scientists who can bring-in their own piece of knowledge to solve the climate puzzle. Working together – independently of political pressure – they can provide all the important pieces of the puzzle necessary to reveal the big climate picture.

Microscopic and macroscopic

Over short periods the long-term climate changes are too small to be visible. The only observable changes are the short-term changes in the weather. Unfortunately, these short-term changes are extrapolated in an attempt to generate long-term 'climate change' results (Figure 1d). This is a mistake. To simulate long-term climate change, models must be able to reliably simulate data over geological time (30 years is just one climate sample). The combination of astronomy and geology tells us that the big changes in Figure 1a are natural and were caused by the variable influences of the solar system on planet Earth, particularly the Earth's orbital variability.

We should not aim at being champion in CO₂ mitigation,
but we should become leaders in climate adaptation.

In particular, we should become leaders in
environmental stewardship.



Since the Rio meeting of 1992, IPCC's lead-scientists primarily selected and published papers that confirm Anthropogenic Global Warming (AGW). Alternative views that point at the important role of Natural Global Warming (NGW) were not welcome. For the next IPCC report there are more than 700 authors, of which not a single geologist. This globally accepted UN policy is a black page in the history of science.

Measurement informs and updates models

Major advances in science start with better measurements. Much research money has been spent on advanced measurement: telescopes, electron microscopes and, very recently, the Large Hadron Collider that confirmed the existence of the Higgs boson, and the new Dutch LO-FAR antenna network that discovered some 300,000 galaxies. The more complicated the system we study, the more important are the measurements that provide inputs to the theoretical models as well as verifying their outputs.

In recent decades, the climate community has given priority to theoretical models. True, investments were also directed to satellite measurements in the atmosphere and to robot measurements in the oceans. But until now, the climate discussion remains obsessed with models. Since the 1992 climate convention in Rio de Janeiro, it has been assumed that humans are responsible for global warming and that equilibrium sensitivity to doubled CO₂ is 1.5-4.5 °C. After 25 years this range is still as wide as it was then. Meanwhile, the need for quality measurements is still undervalued; it is no surprise that there has been disappointingly little progress in the last 30 years (*Richard S. Lindzen, 2018, Global warming and the irrelevance of science*). **However, it is impossible to convince science and business people who profit from the generously subsidised IPCC policy.**

Verification, not merely confirmation

Following the Rio climate meeting of 1992 and the Kyoto climate treaty of 1997, IPCC's reports have focused on selecting information that conforms to their preconceived CO₂ theory, and on ignoring or even excluding information that calls it into question.

This prejudice has greatly increased the one-sidedness of decades in climate research, with a near-exclusive preference for research results that support the anthropogenic global warming hypothesis. But true scientific research is dispassionate. The aim of the IPCC program should have been to collect and analyze **all** relevant information.

Selecting only favourable elements weaken the ability of science to understand the real world. According to Popper it creates a culture of pseudo-science, where falsification is made impossible. Falsification is an indispensable part of the verification process to identify the weaknesses and limits of computer models. It is much more than model fitting (tuning). It must include verification of predictions, i.e. both confirmation and falsification. Continuing verification is the driving force behind scientific progress. However, in a community that resists all evidence against the UN Party Line, scientific stagnation ensues.

When science is sound, there is no need to restricting freedom of speech, silencing doubters, suppressing or altering contrary evidence, scaring the public, encouraging street rebellions and misinforming school children.

Aiming at confirmation and searching for possible falsifications is therefore diametrically opposed to each other. It's no surprise that contradictions soon arose between these totally different research cultures.

Theoretical and empirical

An effective solution of above issues is to let model development go hand in hand with the development of measuring systems. In many disciplines the interaction between the two has been given a new impulse by the current revolution in data sciences. Bringing the modeling world and the measuring world together has developed into an iterative scientific learning process. This is urgently needed in climate science.

Acknowledgement

The author is very grateful to the CLINTEL ambassadors for their valuable comments. He also would like to thank Marcel Crok for sharing his extensive knowledge of the many IPCC publications as well as the many misleading IPCC practices.

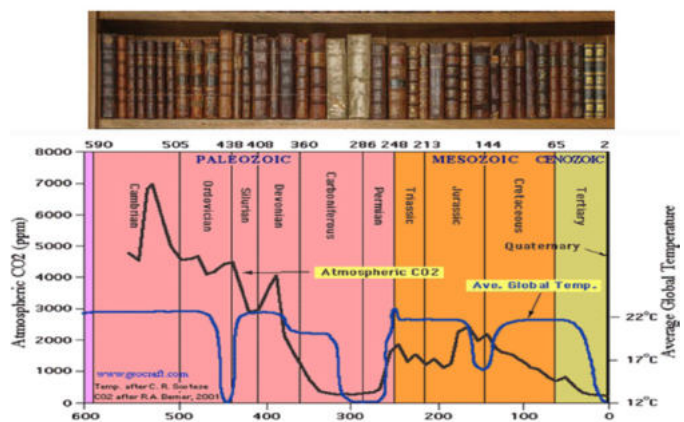


Figure 7: The geological archive points out that the correlation between average global CO₂ concentration and average global temperature was always very poor. It also shows that we are moving through a minimum in the present geological period (Quaternary). Today's average global CO₂ concentration is 410 ppm and today's average global temperature approaches 15°C. Historically, these are low values.

Loquendi Libertatum Custodiamus



Climate science is totally out of balance: model makers are running the show

A court of justice sentenced the famous scientist Galilei in 1612. Galilei showed with his new measurement instrument, the telescope, that the sun was not rotating around planet Earth but that planet Earth was rotating around the sun. His disruptive observation of the cosmos led to a serious conflict with the Church. In a court case Galilei invited the judges and the expert witnesses to look into the sky through his telescope. They flatly refused, using the argument that they knew already from their models how the world was organized.

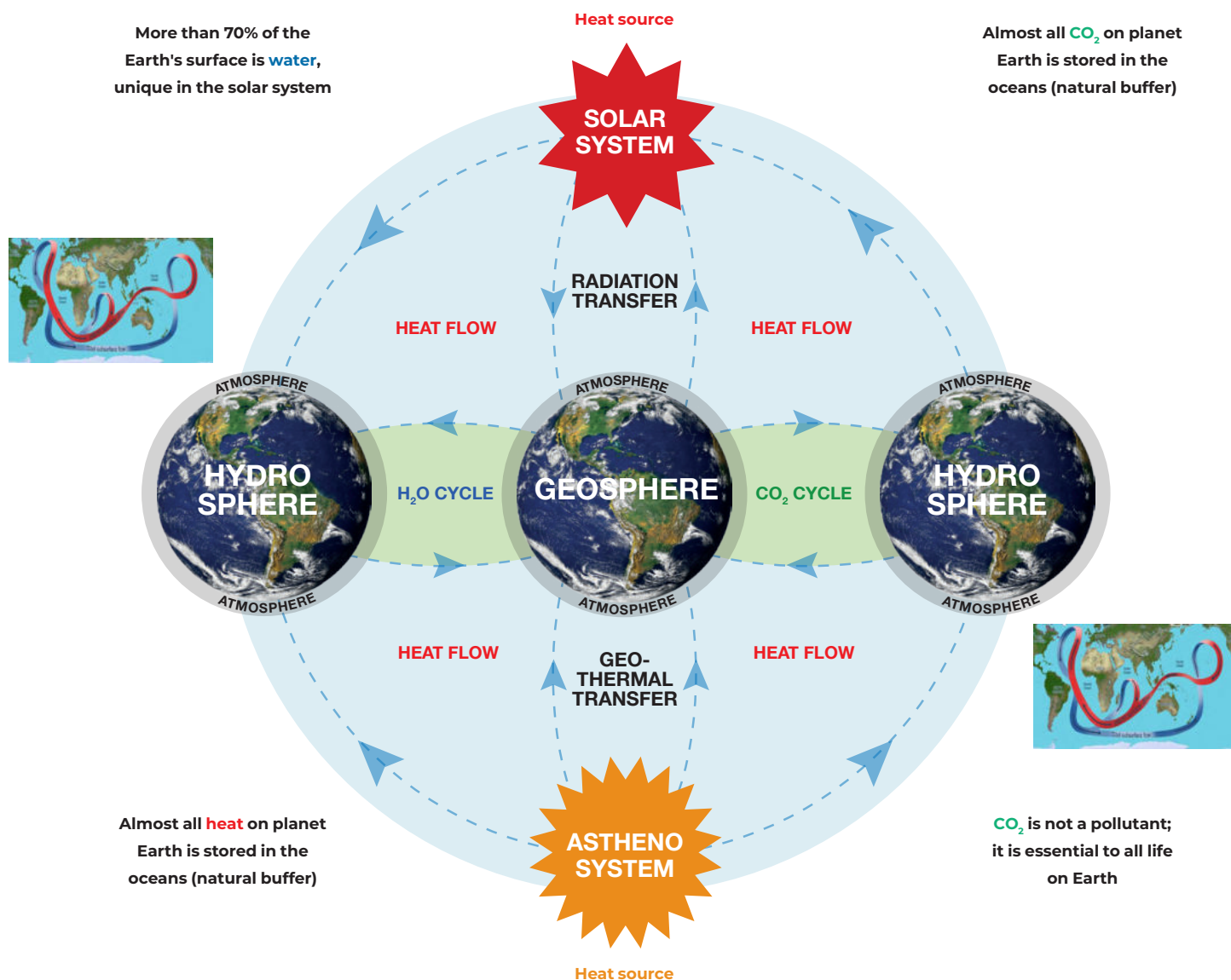
More than 400 years later, we see a similar tunnel vision is taking place. Today, the issue is whether the orbital changes of the Earth around the sun are major reasons for climate change or not. Most embarrassingly, we hear again that no further research is required because the science is settled: 'Today's climate change is not due to natural forces, it is human-induced'. Are we back in the dark ages of Galilei?

The history of science tells us over and over again that scientific progress did not originate from consensus, but from the statements of unconventional researchers who had the courage to put existing concepts to the test of reason and observation. It is in the interest of science and humanity that original thinkers are not silenced.

As a member of the Royal Netherlands Academy of Arts and Sciences (KNAW), I urge all Academies of Sciences to keep climate research out of the claws of political ideologies. After all, these Academies should be the guardians of the scientific profession! Bear in mind that IPCC already had to withdraw earlier claims on global warming ('Climategate'). If international scientific institutions of great repute, such as Academies of Sciences and Academies of Engineering, hold on to the view that "the science is settled", the eventual truth may cause significant damage to the credibility of science. as a whole.

I have personally invited UN Secretary-General Guterres to organize with CLINTEL a constructive high-level meeting between world-class scientists on both sides of the climate debate. Such a meeting complies with the sound and ancient principle that both sides should be fully and fairly heard. Audiatur et altera pars!

Scientific progress is not the result of a democratic process



The Earth's climate is determined by four phenomena: solar and cosmic radiation (from above), heat spots and volcanism (from below), radiation by the Earth's surface (land and water), storage and distribution by the oceans and the atmosphere, and the interaction between the cloud system. Changes in the Earth's climate are caused by long term changes in the two heat sources (above and below), changes in the two boundaries (surface and clouds) and changes in the ocean gulf streams. The science of climate change is extremely complex and far from settled.

Epilogue: A message to our children and grandchildren

Preaching doom and gloom is an irresponsible act against the young generation

The young generation, with Swedish Greta Thunberg as their hero, were repeatedly told by climate alarmists that their parents and grandparents are leaving a big mess behind. The result being catastrophic global warming (CAGW). If the youngsters would not reverse what the selfish older generation has brought about, our planet will collapse soon. No time to lose, we are in the middle of a climate crisis!

However, is this scaremongering story true? Let us look at the facts first. Hard facts show that the climate system is one of the most complex systems humankind tries to understand. Many Nobel Prizes will be awarded before we will celebrate that model predictions and real measurements appear in agreement. Keeping this in mind, how can students claim that they already know the answer? But there is more. Hard facts also show that the youngster's parents and grandparents worked extremely hard to built-up a society with an impressive high standard of living. The abundance of hardship of the older generation is unknown to the young people. Actually, the young generation starts in an unprecedented favorable position to further raise the quality of life on our planet. The opportunities for them have never been as positive as today. Yes, all thanks to their hardworking parents and grandparents.

Does this mean that the older generation has not made mistakes? Of course, they have made many wrong decisions, but that will undoubtedly happen to the new generation as well. Hopefully the new generation will learn from the past mistakes and hopefully they will do better than ever before. Such an ambitious intention is welcomed by all creatures great and small.

Continuing in this positive spirit, the author has a message for all young people who blame their parents and their grandparents for the 'emerg-

ing doom and gloom'. Don't behave like a parrot. Be critical against the many false prophets who try to misuse you and try to turn you against your parents. The information they tell you is one-sided and misleading. **Please, deepen your climate knowledge.** By doing so, you will find out that there is NO empirical evidence that points at any climate crisis. And, in particular, don't confuse global warming with environmental pollution! They are two entirely different issues. Global warming is largely nature-driven and environmental pollution is largely human-driven. By the way, have schoolteachers ever told you that CO₂ is a blessing for everything that lives on our planet?

The author would like to end this special message with an advice to all youngsters:

1. Climate change exists and is of all times, but don't worry, the current global warming period is gentle and only brought us prosperity: 'There is NO climate emergency'.
2. Global warming is best taken care of by adaptation. In nature 'adaptation to change' has always been the best strategy to survive, whatever the cause of change is.
3. Environmental pollution must be and can be stopped by establishing a circular and clean economy. Creativity, ingenuity and innovation are required from the new generation.

Finally, for all youngsters who were poisoned with fear for the future, forget about the preachers of doom and gloom and consider the above challenges as your mission in life.

Recommended reading material



A list of 80± informative books on the Earth's climate that gives the reader a more complete picture

http://wiseenergy.org/Energy/AGW/Sample_AGW_Books.pdf



Dr Judith Curry's US Senate testimony of January 16, 2014

<https://curryja.files.wordpress.com/2014/01/curry-senatetestimony-2014-final.pdf>



No Climate Emergency say 500 Scientists to UN

<https://youtu.be/GpVBH-HY5Ow>



Il n'y a pas d'urgence climatique

<https://youtu.be/ny5WLQAvaxE>

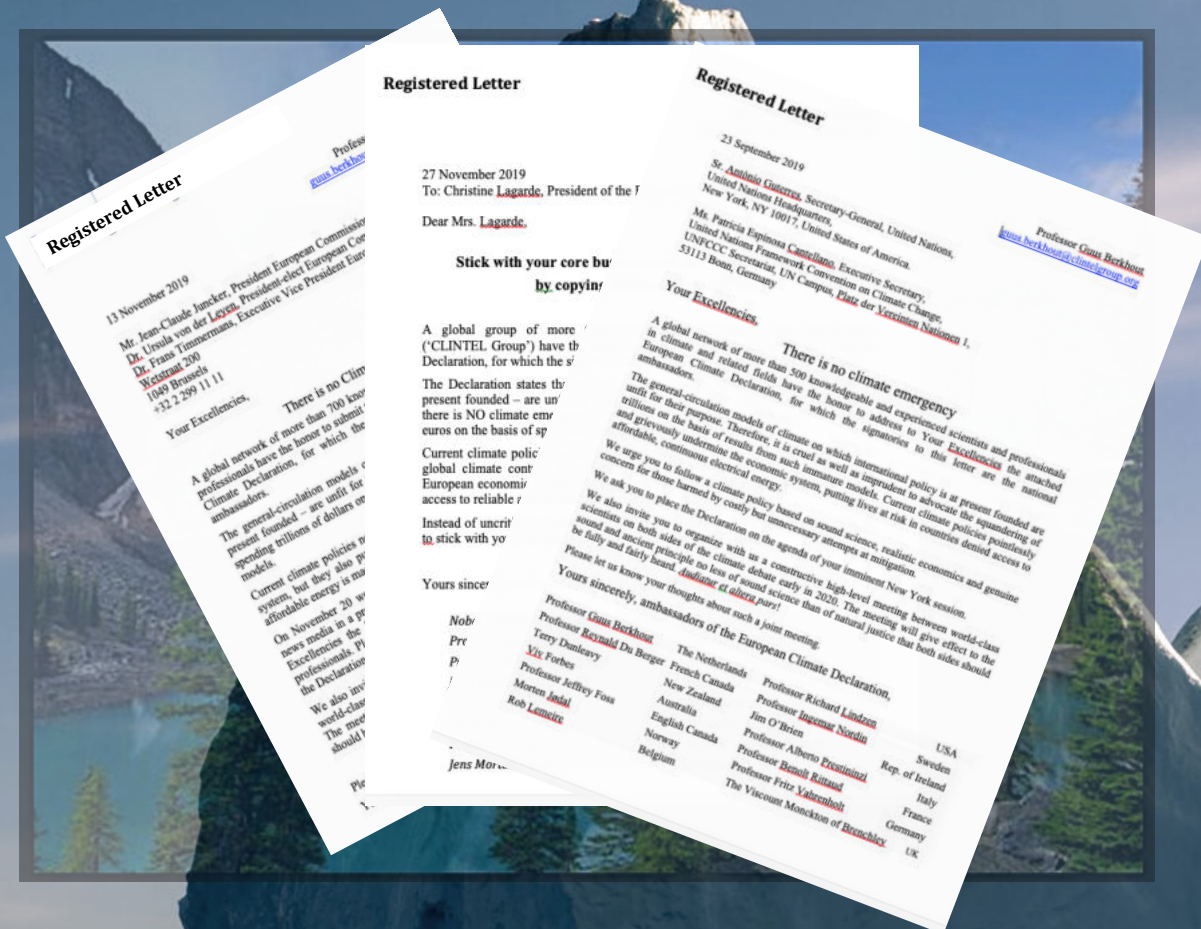


Non v'è alcuna emergenza climatica

<https://youtu.be/Q-tw25gi7TA>

Scan each QR-code with your smartphone's camera to watch

A Green Deal that rejects nuclear energy but subsidises (illegal) logging commits a crime against the remaining forests on our planet



Registered letters sent to the Secretary-General of the UN,
the President of the EU and the President of the ECB

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