



SCC Publishing  
Michelets vei 8 B  
1366 Lysaker Norway

ISSN: 2703-9072

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Vol. 6.2 (2026)

pp. 14-17

# H<sub>2</sub>O, CO<sub>2</sub>, Climate Change

## A holistic refutation of “climate science”

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### **Abstract**

This paper is a summary of recent results of the author, documented in 14 peer-reviewed journal papers and other research items published in the last 5 years. A list of collected telltale signs makes it obvious that the officially proclaimed “climate science”, as represented by the IPCC and supported by many governments, is not science. The misguidance is illustrated by a few striking examples. The main scientific results, which altogether provide a complete refutation of the CO<sub>2</sub> hypothesis, are summarized 10 points, called a decalogue. The 10 points are open for discussion.

**Keywords:** Greenhouse effect; radiative forcing; climate science; causality

Submitted 2026-01-30, Accepted 2026-02-20, <https://doi.org/10.53234/scc202603/16>

### **1. Introduction**

This paper is an extended abstract of the keynote lecture, given by the author at the conference “Beyond the Climate Change Consensus” held at the Hungarian Academy of Sciences on December 8, 2025 (Koutsoyiannis 2025). The summary presented here includes: (1) telltale signs that today’s so-called climate science is sophistry, along with examples of misguidance, (2) the author’s recent scientific results in 10 points, called a decalogue, and (3) a few scientific and science policy conclusions.

### **1. Telltale signs and examples of misguidance**

Here are some telltale signs that “climate science” is not science:

- Mixing of scientific knowledge with politics.
- Hostility towards scientific dialogue.
- Endless predictions of catastrophes that are almost always proven wrong.
- Promotion of the idea of world salvation.
- Promotion of ambiguity and inaccuracy.
- Appeal to consensus.
- Censorship and silencing of dissenting voices.
- Labelling of dissenting scientific opinion as “denialism” and of those expressing them as “deniers”.
- Reversal of cause and effect.
- Preference of model outputs to observational data.
- Discrimination in research funding and banning of non-conforming ideas.
- Laughable “scientific” studies to instil fear of various fanciful climate impacts (e.g. kidney stones).

There are some striking examples of misguidance:

*Science of Climate Change*

<https://scienceofclimatechange.org>

- Ambiguous language and replacement of scientific terminology with political slogans.
  - This includes fundamental notions, such as “climate change” (as if climate has ever been unchanging) and “greenhouse effect” (as if the atmosphere resembles a greenhouse).
- Downgrade in the importance of H<sub>2</sub>O and clouds in climate.
- Elevation of minor agents in climatic processes — mostly of CO<sub>2</sub> as the climate control knob.
- Avoidance of stating time lags for atmospheric CO<sub>2</sub>.
- Construction of fallacious conceptions, such as:
  - The dependence of the CO<sub>2</sub> behaviour on its origin, with anthropogenic CO<sub>2</sub> staying longer in the atmosphere.
  - The “Suess effect”.
- Use of a blatantly erroneous response function of atmospheric CO<sub>2</sub>.
- Neglect of natural CO<sub>2</sub> dynamics.

## 2. The Decalogue

The climate decalogue (author’s main results of recent research, documented in 14 peer reviewed journal papers and other research items published in the last 5 years, e.g.: Koutsoyiannis 2021, 2024a-g; Koutsoyiannis, and Kundzewicz 2020; Koutsoyiannis et al. 2022a,b, 2023; Koutsoyiannis and Iliopoulou 2024; Koutsoyiannis and Vournas 2024; Koutsoyiannis and Tsakalias 2025):

No 1. *Climate change is real* — and climate crisis too (but only in politics).

- Climate change has been real throughout Earth’s entire 4.5-billion-year history.
- Climate crisis is a purely political issue, with no relationship to the real world.

No 2. There is *no greenhouse effect* (GHE), nor greenhouse gases (GHG), in the atmosphere.

- These are misleading terms, whose real meanings are “atmospheric radiation effect” (ARE) and “radiatively active gas” (RAG), respectively.

No 3. The ARE mostly depends on the *temperature gradient* in the atmosphere.

- At the equilibrium (an isothermal atmosphere) the ARE is zero.
- In case of temperature inversion, the ARE results in cooling, not warming of the Earth.

No 4. In the standard atmosphere (with gradient of 6.5 K/km) the *ARE is dominated by H<sub>2</sub>O* (water vapour and clouds).

- CO<sub>2</sub> is playing a very minor role (quantified at 4-5%).

No 5. *The century-long observations* of longwave (LW) radiation show no change in the ARE.

- The substantial increase of atmospheric [CO<sub>2</sub>] did not give a discernible signal.

No 6. There is **no proof** that the increase of atmospheric [CO<sub>2</sub>] *causes temperature increase*.

- On the contrary, paleoclimatic and modern observational data support the reverse causality as the increase of temperature happens before that of [CO<sub>2</sub>].
- Climate models suggest a causality direction opposite from that seen in the data.

No 7. The carbon balance in the atmosphere is *dominated by natural processes*.

- Human CO<sub>2</sub> emissions (by burning fossil fuels etc.) are only 4% of the total.

- The increase of temperature resulted in substantial increase of natural CO<sub>2</sub> emissions.
- No 8. The *isotopic carbon data* ( $\delta^{13}\text{C}$ ,  $\Delta^{14}\text{C}$ ) show changes in the isotopic synthesis of atmospheric CO<sub>2</sub>, but *no sign of human influence*.
- They show that the changes seen are driven by natural processes.
- No 9. The dynamics of atmospheric CO<sub>2</sub> can be recovered from *natural processes only*.
- Multiple evidence confirms a residence time of atmospheric CO<sub>2</sub> at 4 years, despite “climate science” longer estimates reaching thousands of years.
- No 10. Temperature increase in the 21st century is *consistent with changes in the solar* (shortwave—SW) *radiation* absorbed by the Earth.

### 3. Conclusions: What the evidence actually shows

- Human CO<sub>2</sub> as the climate control knob is empirically untenable once we properly account for:
  - (1) natural CO<sub>2</sub> fluxes (~25× larger);
  - (2) the effect of H<sub>2</sub>O (vapour + clouds, ~20× larger);
  - (3) the huge complexity of the climate system, including the biosphere's role.
- Climate models are in disagreement with observation while *reversing cause and effect*.
- In complex systems, data are sovereign — and the data have falsified the mainstream climate theory.
- The emission-centric paradigm was a *political project that conscripted science to provide authority*.
- “Climate science” is therefore not just corrupted science — it is purpose-built instrumentation *wearing the lab coat of science while abandoning its method*.
- *Scientists' job is to kill bad theories and rip science back from politics — not posture as saviours of the planet*.

### Funding

This research received no funding but was conducted out of scientific curiosity.

**Co-Editor:** Stein Storlie Bergsmark

### Acknowledgements

Special thanks are expressed to the Hungarian Academy of Sciences, and in particular to László Szarka, O.M., Initiator of the conference, and Gábor Náray-Szabó, O.M., Chair of the conference.

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