

Climate Change, Torn between Myth and Fact

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By

Constantin Cranganu

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By Constantin Cranganu

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*Qu'on ne dise pas que je n'ai rien dit de nouveau,
la disposition des matières est nouvelle.
Quand on joue à la paume c'est une même balle
dont joue l'un et l'autre, mais l'un la place mieux.*

**Pascal, *Pensées*,
fragment 575, édition Sellier**

I dedicate this book to the skeptics—victims of bigotry without horizon and intellectual intolerance. They are the guiding lights of the human race. Because knowledge always starts with skepticism and ends with self-confidence.

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LIST OF ABBREVIATIONS

AGW	Anthropogenic global warming
APOC	Anglo-Persian Oil Company
BP	British Petroleum
CAGR	Compound annual growth rate
CMIP5	Coupled Model Intercomparison Project fifth phase
COP	Conference of the Parties
CPI	Climate Policy Institute
CRN	Climate Reference Network
CRS	Congressional Research Service
CRU	Climate Research Unit
EIA	[The U.S.] Energy Information Administration
EM-DAT	Emergency Events Database
GBR	Great Barrier Reef
GDP	Gross domestic product
GISS	Goddard Institute for Space Studies
GMS	Global mean sea level
GMT	Global mean temperature
HadCRUT	Hadley Centre/Climatic Research Unit Temperature
ICS	International Commission on Stratigraphy
IEA	International Energy Agency
IHME	Institute for Health Metrics and Evaluation
INDC	Intended Nationally Determined Contributions
IPBES	Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services
IPCC	Intergovernmental Panel on Climate Change
IRT	Instrumentally recorded temperature
ISO	International Organization for Standardization
IUD	Intrauterine device
IUGS	International Union of Geological Sciences
LIA	Little Ice Age
MGW	Modern global warming
MMTS	Maximum–minimum temperature sensor
MWP	Medieval Warm Period
NASA	National Aeronautics and Space Administration
NATO	North Atlantic Treaty Organization

NGO	Nongovernmental organization
NOAA	National Oceanic and Atmospheric Administration
PNAS	Proceedings of the National Academy of Sciences of the United States of America
PSMSL	Permanent Service for Mean Sea Level
RER	Rare earth elements
UN	United Nations
USHCN	U.S. Historical Climatology Network
WHO	World Health Organization
WMO	World Meteorological Organization

FOREWORD

At the end of the twentieth century, humanity faced severe natural phenomena that disrupted societies that had previously been prosperous, and full of ambition and remarkable achievements.

Hurricanes, tsunamis, coastal accidents, excessive rainfall alongside extremely dry seasons, the loss of Antarctic and continental ice masses, floods, landslides, and more began to endanger humanity like never before. Scientists began to study what was behind these natural hazards and realized that many had anthropogenic causes.

The United Nations (UN) was the first to raise the alarm. They insisted that urgent action must be taken if the observed climate change had causes other than natural ones. The First Climate Conference held in 1992 in Rio de Janeiro, as well the Conference of the Parties (COP) held in Berlin in 1995 other locations until the 25th conference in Madrid in 2019, spoke of the need to reduce greenhouse gas emissions. These emissions were generated in the industrial age in which humanity is still living. At each of these events, the number of participants continuously increased, with more heads of state and government attending each year. These meetings urged countries worldwide to commit to not letting the global temperature rise more than 1.5°C. At a high level meeting of December 11, 2020, the European Union adopted an agreement to decrease its CO₂ emissions by 55% from the 1990 level, by 2030. An agreement that imposed hard-to-respect obligations and huge costs, involving both wealthy and impoverished countries.

The beginning of the twenty-first century faced numerous dilemmas. The scientific community became divided over the issue of climate change. Part of the community began to write and talk about the large impact that natural processes have on climate changes, ignoring the weight of anthropogenic causes and human activities as a whole. On the contrary, the other side of the community insisted that the use of fossil fuels, coal-fired power plants, industrial activities, expanding air travel, and increased road traffic are the leading causes of increasing greenhouse gas emissions. A media, economic, geopolitical war has been triggered.

Arguments have been requested and are still requested: pros and cons, causes and effects . . .

Against this background of uncertainty, Constantin Cranganu, a Romanian professor at the City University of New York and an international expert in climate change, has committed to providing pro and con arguments about the current climate change debate.

His contributions, published initially on the Contributors.ro platform in Romania, are proof of his current rooting in reality and expression of his participation in the agora's life. A volunteering activity that honors.

Bookstores in Romania already have his volume *Climate Change—A (Sometimes) Politically Incorrect Guide* (Integral Publishers, 2020). Readers have received it with much interest, as proved by sales.

Cambridge Scholars Publishing is publishing a revised and improved form of that book to make it accessible in English to a much wider audience. This is that book.

This new book discusses:

1. **Climate change as a natural and/or anthropogenic phenomenon**, as well as its causes and effects.
2. **Climate change and forms of energy**, such as fossil fuels and renewable sources. This section also includes recommended climate policies from the UN and the European Union (EU).
3. **Limitation of global warming and climate agreements**, such as the Conferences of the Parties (COP). This section also includes information about climate change mitigation and adaptation, as well as revolutionary technologies in the fight against climate change.
4. **Climate change as a problem** or a problem similar to others.
5. **Evident discrepancies** between public opinion polls and official climate change policies.
6. **About the role of manipulations produced by the media**. This section discusses why and how the media manipulates information about climate change, and presents some significant examples.

The author's point of view, original and authoritative, is clearly expressed in the *Credo* chapter. Even its only reading can give us convincing conclusions about the problem of climate change. We selected a few paragraphs:

... climate science (climatology) is not a discipline per se. It is a multidisciplinary field of study in which meteorology, geology, geophysics, astrophysics, paleontology, botany, zoology, glaciology, atmospheric physics, physical, chemical, and biological oceanography, ecology, and cosmology are found.

... media describe climate change using the language of imminent dangers or catastrophes as if it were “the biggest problem facing humanity,” bigger than any other.

... such media reports distract the public attention from what science informs us credibly. Further, it diminishes many other ways of thinking, feeling, and knowing about the climate, which are essential elements in making personal and collective decisions.

Regardless of the climate change causes and their effects on the daily life of people everywhere, our position takes into account two aspects:

At the beginning of December 2020, during a program to promote debate on topics of acute actuality, the Romanian Academy (National Committee of Geologists of Romania) launched Prof. Constantin Cranganu’s book, *Climate Change—A (Sometimes) Politically Incorrect Guide* (Integral Publishers). The debate’s conclusion closely aligned with the Romanian Academy’s position posted on the institution’s website (www.acad.ro). This position recommends:

1. Strive to **mitigate** global warming by reducing greenhouse gas emissions, increasing energy management performance, reconsidering land use, controlling polluting industries, and more.
2. Work to **adapt to climate change** to limit the damage caused by it and find preventive measures through beneficial investments and constant communication with society as a whole.

In the same context, only a few weeks before, one of us (NA) had the opportunity to moderate a national debate in Romania about Prof. Cranganu’s book. The debate was attended by national leaders and policymakers from Romania who expressed a vivid interest in *Climate Change—A (Sometimes) Politically Incorrect Guide*.

Therefore, we consider Prof. Constantin Cranganu a top specialist on the topic of climate change. His ideas intertwine with the top issues of national and international debates on the subject.

The volume we present and recommend to readers contains the issues found in many public debates about climate change. On the platform Contributors.ro, you can also read (with translation) many appreciative reviews and comments about the author’s contributions.

Cambridge Scholars Publishing is launching this book that we hope will attract a considerable number of English-speaking thinkers to the discussion on climate change. The publisher discovered the author and thought that his writing could be both a challenge to old knowledge and creating new

challenges. People are waiting to understand the phenomena that the entire planet faces, and this book will provide answers for them.

Dear readers, we invite you to read, *sine ira et studio*, this exciting text, which has convinced us that today, in the world in which we live, we must know about climate change through both myth and fact ...

Nicolae Anastasiu

Professor Emeritus of Sedimentology
University of Bucharest
Member of the Romanian Academy

Emil Constantinescu

Professor Emeritus of Mineralogy
University of Bucharest
Former President of Romania

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For carefully reading, checking the references and making suggestions to particular sections or chapters, I thank Gill Pavey. Finally, my whole gratitude goes to my supporting family: my beloved children, Dan Crânganu and Andreea Nguyen (néé Crânganu), my amazing grandchildren, Samuel, Benjamin, Cate, Luke, and Ana, and my wonderful wife, Veturia Crânganu.

CREDO

I believe that humans, a transient, relatively new species of *thinking reed*, have a well-marked place in the synergistic mechanism of the following five “gears” of the complex and chaotic system called climate: lithosphere, hydrosphere, biosphere, cryosphere, and atmosphere. Therefore, climate science (climatology) is not a discipline per se. It is a multidisciplinary field of study in which meteorology, geology, geophysics, astrophysics, paleontology, botany, zoology, glaciology, atmospheric physics, physical, chemical and biological oceanography, ecology, and cosmology are found.

I believe that the physical manifestations of climate change and, consequently, local meteorological effects, vary in a large part due to the compositional modifications of the atmosphere. These are controlled by random dynamic changes, including human activities, such as anthropogenic greenhouse gas emissions, population growth, land-use changes, aerosol pollution, and more. These activities contribute to both regional and global climate change, where they overlap to dramatically change natural climate variability.

I believe that the risks of climate change must be taken seriously and acted on responsibly. Humanity will be much better off if we succeed in minimizing these risks by reducing the vulnerability of those exposed to them and minimizing future changes in the atmosphere’s composition.

I believe that the way the way climate change mitigation and adaptation have been presented in international conversations, in particular through the Kyoto Protocol, the International Panel on Climate Change (IPCC) reports, and the latest Paris Climate Agreement, is not the only solution. I do not think these approaches are the best, either. It bothers me that the media often describes climate change using the same language used for imminent dangers and catastrophes. The media claims that climate change is *the biggest problem facing humanity*, bigger than any other.

I believe that such media reports distract public attention from credible science. Further, they diminish other ways of thinking, feeling, and knowing about the climate, all of which are essential elements in making personal and collective decisions about climate change.