

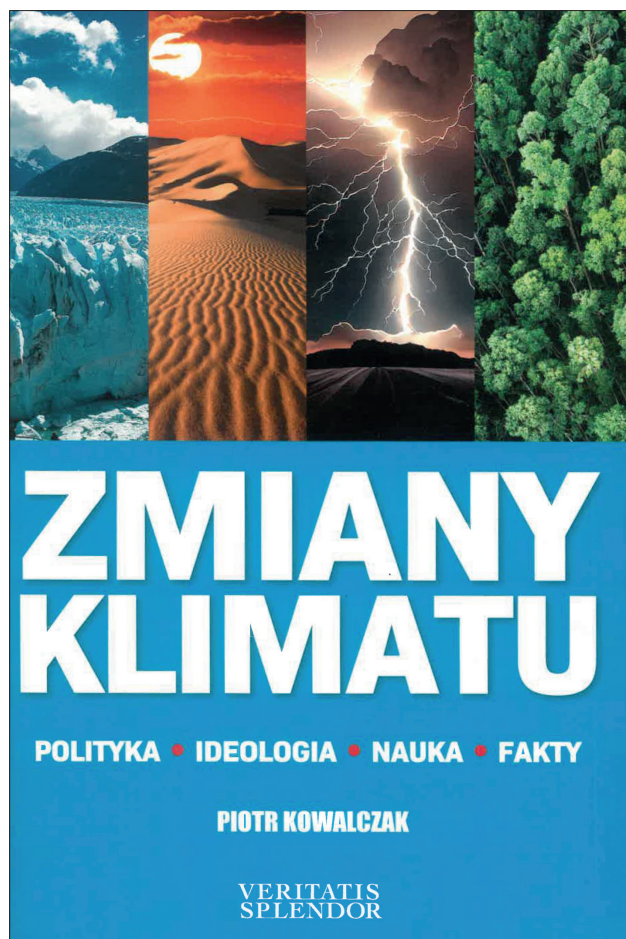
P. KOWALCZAK – Zmiany klimatu. Polityka, ideologia, nauka, fakty (in Polish). Veritatis Splendor 2024, Warszawa, 812 pp.

The public debate on climate change is more heated than that on the global temperature rise. Emotions reach not only people who are concerned with message, belief and impulse to action than with reliable knowledge, but they are also transmitted to the scientific community. They forget the rudimentary principles of scientific discussion, which allow for the presentation of arguments from both sides, factual debate and falsification of paradigms, and lose respect for the discussant/opponent. That is why it is so important to present the views in a comprehensive, scientific, fair and objective way, so that the recipients, based on them, could formulate their own opinions on this contemporary issue of such significance.

The book by Piotr Kowalczak is a Benedictine monograph (so much time and patience had to be invested in its preparation), which reveals the Author's erudition, curiosity, broad view of the problem described, and great didactic fervour. Indeed, the book is intended to influence the sides of the discourse by presenting facts and opinions that diverge from the mainstream debate of politicians, environmentalists or unconditional supporters of the thesis of human-induced global climate change. The Author is a retired scientist, a hydrologist with extensive scientific achievements. He was a long-time employee and Director of the Institute of Meteorology and Water Management, Chairman of the institute's Scientific Council, and Director of the Institute for Agricultural and Forest Environment of the Polish Academy of Sciences. In addition, he was an active participant in international expert and research groups, including the UN WMO Commission for Hydrology. Professor Kowalczak is author of many publications, including the books *Konflikty o wodę*, *Zmiany klimatu i ich skutki*. He is therefore a representative of science from inside the water management sciences, water balance, atmospheric weather phenomena, floods and droughts, or other natural phenomena.

Publications on climate change are numerous. The literature review in the book is impressive, citing more than 250 publications, ranging from short papers to monographs, IPCC reports, and study and expert reports. The vast majority of them are in English. Professor Kowalczak has offered the Reader a popular science book with a journalistic flair. This is a deliberate effort to make it interesting not only to specialists, but also to climate change enthusiasts. The structure of the book serves this purpose. In addition to the introductory sections (a note about the Author, an introduction), the book consists of 29 extensive chapters (with sub-chapters) and five short final several-page chapters like feature articles. The latter have the following titles: *Może optymistyczna wizja na przyszłość?*, *A co z tego ma zwykły śmiertelnik?*, *Dokąd zmierzamy?*, *Uwaga nadchodzi AR6*, *IPCC i co dalej?* They are followed by Bibliography, Index of geographical names and Index of authors.

The first substantive chapters of the book follow a certain logic. The Reader will quickly realize that the Author is sceptical about the publicly presented views on the causes and course of modern climate change. Chapter 1: Introduction, contains an intriguing subsection entitled Why Me? which, as the title suggests, introduces the Reader



to the Author's reasons for choosing the subject and writing the book. The author states, that *The practical lack of verifiability of IPCC projections and the major slip-ups of the most notable projections, e.g. Himalayas, Pentagon, Migrations, Africa and some cases in Poland, were the reasons for the Author's more thorough interest in IPCC projects.*

Chapter 2: Doubts, introduces that *Attempts to put the knowledge contained in IPCC reports into practice often fail (...). The biggest doubt is the lack of verifiable IPCC forecasts (projections).* Following this, the Author lists the most obvious errors in the IPCC projections. These include the projection of rapid melting of glaciers in the Himalayas and the disappearance (or very significant reduction) of water available to populations living along major rivers fed by glacier water, the so-called Pentagon Report on the occurrence of permanent and irreversible climate change, and Amazon Gate that determines the threat to the Amazon forest.

Chapter 3: A little bit of behind the scenes, addresses a number of issues, including the circumstances surrounding the introduction of the term Anthropocene and doubts about its correct use, as well as the propagation of theories about the extinction of polar bear populations (not supported by research).

The next three chapters deal with issues of climate research and its variability (4. Global climate variability, 5. Climate change in Poland, 6. Weather and climate).

Chapter 7: Doubts, provides an overview of information on the restrictions on free discussion of the causes and pace of climate change (some due to so-called political correct-

ness, some due to pressure from various powerful lobby groups). In addition, the Author cites publications by other scientists presenting their own assessments of changes and causes, and scenarios for future developments, and assesses the reliability of the reported data.

Chapters 8, 9, 10, 11, 12 and 13 deal with the history of the emergence and principles of operation of the existing institutional forms of research, as well as the debate on the development of civilization and its fate. Thus, they touch on the origins of the expert debate (Club of Rome reports), the political involvement of states and the UN (UN climate summits), and the monitoring of the course of changes (IPCC).

Chapter 14 provides information and measurement data on carbon dioxide concentrations and their impact on climate change. In turn, Chapter 15 (History) and Chapter 16 (History of press coverage) analyse the phenomena in a historical context, highlighting past and ongoing changes in the communication of information about global warming and climate change.

Subsequent chapters deal with the methods and reliability of ongoing measurement studies and modelling of future climate change (Chapter 17. On the world network of meteorological measurements and observations, Chapter 18. Corrections to air temperature measurements, Chapter 19. Climate modelling, Chapter 20. Analysis of IPCC documents).

The Author then presents the evolution of the views of prominent researchers of global climate change (21. Current views of the fathers of catastrophic predictions) and the views of representatives of the current of thought on climate change, called prophecy of doom (22. Prophecy of doom), and then comments extensively on the discussion of estimating the effects of climate change (23. On estimating the effects of climate warming).

The next two chapters discuss in detail the issues that deeply concern public opinion, i.e. the change and disappearance of coral reefs (24. Coral reefs), showing that they are not occurring as presented in the debate. The Author then discusses the causes, frequency and consequences of extreme natural phenomena (25. Extreme phenomena).

The next three chapters (26. Consensus, 27. Politicization, 28. Perspectives) are concerned with discussing what is evident in the public debate, namely the strong polarization of views between the politicians and environmental organizations, scientists, industrialists, and business representatives. The Author also addresses positive messages about the need for honest discussion, free of emotion and stigmatization of opponents or minority participants in the debate.

In Chapter 29, the Author presents information on the beneficial effects of increasing CO₂ concentrations on growing agricultural production.

The final chapters take the form of short feature articles, the titles of which are given in the first part of this review.

The book is undoubtedly needed by those who want to expand their knowledge of climate change and learn about different opinions and views on the subject. Reading it will certainly fulfil its role and objectify the views of the Reader. However, I have some reservations about the form and composition of this comprehensive and necessary book.

Firstly, the lack of colour in the figures is a serious obstacle in tracing the complex and intricate processes of climate change. This is probably due to the cost of preparing the book for printing. Certainly, it would have been possible to replace the colour of the graphs with a variation of the line style, but this would have required a completely new graphic design of the figures (thus increasing the time and cost of preparing the book for printing). Therefore, understanding the reasons why this was not done, I note that a number of the arguments raised by the Author would have been more clearly demonstrated by editing the figures with colours to distinguish between different scenarios of projected changes or research results.

Secondly, in the reviewer's opinion, a book of this size and length has shortcomings in the layout and content of chapters. I understand this, because working with such extensive material leads, for obvious reasons, to repetition, lack of coherence, and an inability to see the book as a whole. Certainly, some of the short chapters could have been combined into larger ones divided into subsections. In addition, it is not a good solution to have two chapters in the book with the same title (Doubts). Questions about the role and findings of the IPCC's work should be in the same chapter. The final chapters, which are like feature articles, should also be included in a single important final chapter presenting the Author's basic conclusions from past research, and predictions for the future global climate change. In spite of these reservations, the book is a very important publication that can stimulate public debate and encourage orthodox advocates of their own views to discuss them with those who have the experience, knowledge and courage to engage in a confrontation of views.

As always, time will show who is right in important scientific disputes. This has happened many times in the past. After all, the views of some researchers have been recognized as correct either during their lifetime or posthumously... to mention Galileo, Copernicus, Wegener...

Krzysztof Szamalek