



## The Complex Scenarios Causing CO<sub>2</sub> Increase in the Atmosphere

Guest Editors:

**Dr. Roberto M.R. Di Martino**

**Dr. Fátima Viveiros**

**Dr. María Clara Lamberti**

**Dr. Felipe Aguilera**

Deadline for manuscript  
submissions:

**closed (31 March 2022)**

### Message from the Guest Editors

Dear Colleagues,

Earth outgassing, ecosystems' respiration, and human-related CO<sub>2</sub> emissions occur at the solid-earth-to-gaseous-envelope boundary. Geological CO<sub>2</sub> emissions occur from volcanic and tectonic zones. Industries, farmlands and mobility by car deliver various gases, aerosols and solid particulates into the atmosphere. Recent studies have attempted to improve the estimations of CO<sub>2</sub> delivered by geological sources, but several areas are still underestimated, even if data are available from various surveillance programs. The model-based evaluation of CO<sub>2</sub> released in both urban and natural zones is not yet satisfactory for quantifying the effects on global climate change.

This Special Issue of *Atmosphere* focuses on the CO<sub>2</sub> emissions in various ecosystems. We invite researchers to submit original research manuscripts on this topic, including case studies in cities, natural zones, forests, and seismic and volcanic zones. We welcome papers focusing on techniques, methods, applications, and models for fostering knowledge on both the sources and fate of atmospheric CO<sub>2</sub>. The possible effects of CO<sub>2</sub> outgassing and consequent risk assessment are also welcome.





an Open Access Journal by MDPI

## Editor-in-Chief

### Dr. Daniele Contini

Institute of Atmospheric Sciences  
and Climate (ISAC), National  
Research Council (CNR), Str. Prv.  
Lecce-Monteroni km 1.2, 73100  
Lecce, Italy

## Message from the Editor-in-Chief

Continued developments in instrumentation and modeling have driven atmospheric science to become increasingly more complex with a deeper understanding of concepts, mechanisms, and interactions. This is the field that innovation built and it has led to a better appreciation for the complexity with atmosphere. Human life is intertwined in this complexity as we strive to better understand our atmosphere. Climate change is constantly stretching the limits of our thinking and forcing new ideas and concepts to be played out. Welcome to the Anthropocene!

## Author Benefits

**Open Access:** free for readers, with article processing charges (APC) paid by authors or their institutions.

**High Visibility:** indexed within Scopus, SCIE (Web of Science), Ei Compendex, GEOBASE, GeoRef, Inspec, CAPlus / SciFinder, Astrophysics Data System, and other databases.

**Journal Rank:** CiteScore - Q2 (*Environmental Science (miscellaneous)*)

## Contact Us

---

Atmosphere Editorial Office  
MDPI, Grosspeteranlage 5  
4052 Basel, Switzerland

Tel: +41 61 683 77 34  
[www.mdpi.com](http://www.mdpi.com)

[mdpi.com/journal/atmosphere](http://mdpi.com/journal/atmosphere)  
[atmosphere@mdpi.com](mailto:atmosphere@mdpi.com)  
[X@Atmosphere\\_MDPI](https://twitter.com/Atmosphere_MDPI)