

Special Issue

Impact of Ocean Plants on Atmosphere

Message from the Guest Editor

Global greenhouse gas concentrations (CO₂ and CH₄) have reached high levels. Coastal plant ecosystems (including seagrass beds, mangrove, salt marsh, etc.) commonly referred to as 'blue carbon' have high primary productivity and act as carbon sinks. CO₂ will be bound to primary producers in blue carbon ecosystems and converted into body tissue biomass through photosynthesis, where it is then sequestered in sediment for a long period of time through a series of physical, chemical and biological processes. However, plants might enhance CH₄ emission due to their abundant organic matter input and the formation of an anaerobic environment in sediment. Further, the CO₂ and CH₄ flux between ecosystems and the atmosphere are influenced by many environmental factors, for e.g., tidal immersion, solar radiation, temperature, terrestrial river input, et. The significant lack of case studies on the greenhouse gas flux between blue carbon ecosystems and the atmosphere limits our capacity to formulate strategies to mitigate climate change.

Guest Editor

Dr. Songlin Liu

Key Laboratory of Tropical Marine Bio-Resources and Ecology, South China Sea Institute of Oceanology, Chinese Academy of Sciences, Guangzhou 510301, China

Deadline for manuscript submissions

closed (28 February 2024)



Atmosphere

an Open Access Journal
by MDPI

Impact Factor 2.3
CiteScore 4.9



mdpi.com/si/182523

Atmosphere
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
atmosphere@mdpi.com

[mdpi.com/journal/
atmosphere](https://mdpi.com/journal/atmosphere)





Atmosphere

an Open Access Journal
by MDPI

Impact Factor 2.3
CiteScore 4.9



[mdpi.com/journal/
atmosphere](https://mdpi.com/journal/atmosphere)



About the Journal

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!

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

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))