

News Updates

New interdisciplinary edited book on the Indian Ocean to be published in spring 2024

The Indian Ocean and Its Role in the Global Climate System,

Eds. Caroline C. Ummenhofer, Raleigh R. Hood, Elsevier, 2024

ISBN: Paperback-9780128226988, eBook-9780128232866,

<https://shop.elsevier.com/books/the-indian-ocean-and-its-role-in-the-global-climate-system/ummenhofer/978-0-12-822698-8>

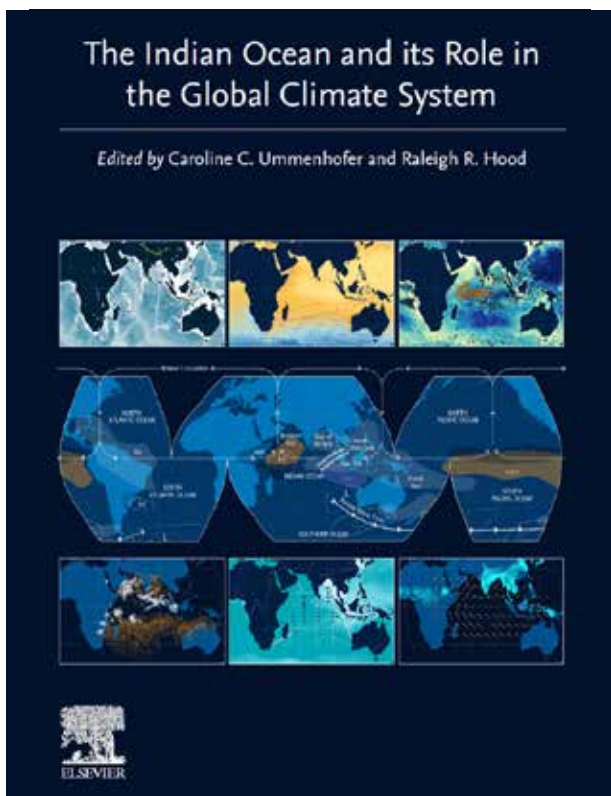


Fig. 1: Image of front cover for the edited interdisciplinary book on the Indian Ocean, *The Indian Ocean and Its Role in the Global Climate System*, to be published by Elsevier in spring 2024.

Given the unique characteristics of the Indian Ocean and the fact that it has historically been understudied, the understanding of the Indian Ocean as a holistic system is still limited. A new book to be published by Elsevier in 2024 provides a rare interdisciplinary synthesis of recent advances in the knowledge and understanding of the physical climate system of the Indian Ocean (geology, hydrology, atmosphere, oceanography), interlinked with interactions with its biogeochemistry and ecology, and impacts on human and natural systems in surrounding countries. The monsoon systems, Indian Ocean circulation, and connections with other ocean basins and climatic phenomena are detailed from seasonal, interannual to multidecadal timescales. Recent trends and future projections of the Indian Ocean, including warming, extreme events – both in the physical as well as biogeochemical realm – such as marine heatwaves, climate and weather extremes, ocean acidification, and deoxygenation are examined. The book also identifies and highlights recent new understanding and technologies to provide stakeholders with relevant knowledge for more informed decision-making, as well as highlighting knowledge gaps to encourage students, practitioners, and researchers to help overcome these.

With a total of 20 peer-reviewed chapters, and more than 175 figures, 3,000 references, 100 educational resources and links directing readers to more in-depth information, and 100 glossary entries of key concepts, the book delivers a comprehensive overview of our current understanding of the Indian Ocean from an interdisciplinary perspective. Contributions by a total of 92 authors from around the world with expertise across a wide range of fields (e.g., atmospheric and climate science, biogeochemistry, ecology, environmental science, fisheries, geology, history, meteorology, microbial ecology, numerical modeling, all fields of oceanography, paleoclimate, remote sensing, statistics, and weather forecasting, among others) underpin the content of this textbook. Furthermore, all chapters were peer-reviewed by at least two experts in the field: the constructive and valuable feedback by a total of 39 reviewers ensured that the material in the individual chapters and the book as a whole provides a comprehensive, interconnected, and up-to-date review of Indian Ocean science. The time and efforts of all members of the Indian Ocean research community that have helped with the completion of this book are gratefully acknowledged.

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21st Annual Meeting of the Asia Oceania Geoscience Society (AOGS2024)



Asia Oceanis Geosciences Society (AOGS) was established in 2003 to promote geosciences and its application for the benefit of humanity specifically in Asia Oceania region is particularly vulnerable to natural hazards, accounting for almost 80% human lives lost globally. AOGS is deeply involved in addressing hazard related issues through improving our understanding of the genesis of hazards through scientific, social and technical approaches. AOGS holds annual consumptions providing a unique opportunity of exchanging scientific knowledge and discussion to address important geo-scientific issues among academia, research instituion and public. Recognizing the need of global collaboration AOGS has developed good co-operation with other internation geo-science societies and unions such as the European Geosciences Union [EGU], American Geophysical Union (AGU) International Union of Geodesy and Geophysics (IUGG), Japan Geo-science [JpG], and Science Council of Asia [SCA].

The 21st Annual Meeting of the Asia Oceania Geoscience Society (AOGS2024) will be held in Pyeongchang, Gangwon-do (Home of Winter Olympics), South Korea during 23 to 28 June 2024. More details: <https://www.asiaoceania.org/aogs2024/public.asp?page=home.asp>

Session(s)

OS - Ocean Sciences (Primary), AS - Atmospheric Sciences