

Editorial

# Monsoons

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Monsoon climates affect the daily lives of two-thirds of the world population. Monsoon precipitation is a key element in global water and energy cycles and a major driver for atmospheric general circulation. Therefore, monsoon prediction is the most challenging problem in climate science. Moreover, a number of studies in recent years have drawn attention to the increasing intensity of heavy rainfall events, heat waves, and severe droughts in monsoon regions. It is imperative that scientists who study monsoon circulations improve the prediction of their start date or onset, the monsoon intensity, and how these variables respond to climate change. However, changes in the regional monsoons cannot be fully understood unless we get them together in a climate system perspective. Therefore, more detailed studies have been needed to establish that how the regional monsoons are linked, and how their variabilities are demonstrated, and how the observed increases in extreme events are indeed due to climate change by human action and not part of natural variability.

The present issue aims to advance our understanding and provide reliable analysis and prediction for the regional monsoons and their changes in various time scales from the past to the future. We invited authors to submit original and review articles that aim to study the monsoons and their variability including extremes, such as drought, dry spell, flooding, heat waves, and so on, in monsoon areas. The 16 papers in this volume cover several regional monsoons including East Asia, South Asia and the South China Sea, Australian monsoon, and African Monsoon. In this Special Issue, Chen et al. [1], Olaguera et al. [2], Olaguera et al. [3], and Lin and Wang [4] demonstrate the important themes on changes in monsoons such as regional monsoons' decadal, multidecadal variabilities and abrupt change, Lau et al. [5], Kim et al. [6], Wu et al. [7], Ding et al. [8], and Wang et al. [9] have investigated physical processes responsible for monsoon extremes and changes. In addition, Diba et al. [10], Yang et al. [11], Li et al. [12], Shin et al. [13], Heo et al. [14], and Chen et al. [15] have performed prediction and projection studies of future monsoons, monsoon simulations and how monsoons will respond to climate change. Especially Islam et al. [16] showed that oceanic processes such as those forced ENSO or those in the Indian Ocean impacted the 2015 monsoon season. Lastly, the Guest Editor of this issue is grateful to all authors, reviewers, and the editorial office of MDPI.

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