



Heat Wave, Bush Fire and Air-Quality: Impacts on Respiratory Health

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Message from the Guest Editors

A heatwave is a condition where there is a considerable increase in temperature which lasts for a prolonged period of time, mostly for two to three days. The cause of air trapping is a temperature difference of the atmosphere. With a broader viewpoint, the primary reason for both bushfires and heatwaves is high temperature. Emissions from bushfire smoke significantly affect the air-quality, and bushfire smoke contains ultrafine particular matter 2.5 (PM2.5), which when inhaled is able to penetrate the deeper lungs compared to larger particles such as PM10. Ultrafine particles in lung can cause inflammation in the respiratory system and may also enter the bloodstream. People with existing respiratory health conditions such as asthma are at an even higher risk of exacerbating their quality of life. This special issue aims to construct a precise understanding of how heatwaves, bushfires associated air quality impact on public respiratory health.

This Special Issue is open to any subject area related to the topics of heatwave, bush fire, air quality and associated public respiratory health. The listed keywords suggest a selection of subject areas.





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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!

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