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## A study of the effects of climate change in the Eastern Australia

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The objective of this research is to study the impacts of climate change in the eastern states of Australia: New South Wales, Queensland and Victoria, during November 2019 to March 2020 and do period-over-period analysis in order to raise awareness on the climate change impacts. Air quality and pollutant PM 2.5 data were collected on an hourly basis for 5 representative cities in New South Wales: Lower Hunter, Sydney East, Sydney North-west, Sydney South-west and Upper Hunter-Muswellbrook, 3 representative cities in Queensland: South Gladstone, Boyne Island and Rocklea, and 3 representative cities in Victoria: Churchill, Wangaratta and Moe. After that, the average data on each day in each city were plotted in graph for each month the previous year's comparisons were made to analyze the climate change impacts. The results show that the air quality and pollutant PM 2.5 in New South Wales, Queensland and Victoria, during the time of the study, are much higher than the previous years due to the Australia's most devastating bushfire season, resulting from climate change; the density of smoke exposure from bushfire can irritate the respiratory system. In this research, multiple factors affecting the destructive bushfire season were also analyzed compared to previous years. In addition, during the time of the study, there were storms, flash floods and thunderstorms after overnight hail in Victoria, indicating that hot and dry weather resulted in extreme climate change impacts in 2019 as a result of global warming.

### Biography

Since joining Rambhai Barni Rajabhat University as a professor, Sookpichaya has been involved with studies related to climate change. Sookpichaya is Climate Reality Leader and has participated in a number of relevant activities: Asia-Pacific Climate Week, World Congress on Environmental Education, etc.