

全球暖化 1.5°C和 2°C之下台灣的氣候變遷

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摘要

在 2015 年聯合國氣候變遷會議(COP21)通過「巴黎協議」後，政府間氣候變遷專門委員會(IPCC)受邀並於 2018 年發布《全球暖化 1.5°C特別報告》。報告中指出全球平均溫度相較於工業革命前上升 1.5°C時，全球各地將面臨的氣候變遷，同時比較當溫度上升 2°C時對氣候變遷的影響之差異。本研究以 IPCC 特別報告的結果作為依據，並使用 CMIP5 氣候模式資料推估全球平均氣溫相較於工業革命前上升 1.5°C和 2°C的時段，應用 TCCIP 計畫產製的統計降尺度日資料，評估當全球暖化 1.5°C和 2°C時台灣將面臨的氣候變遷，包含平均氣候狀態以及極端氣候事件的改變。

關鍵字：氣候變遷、全球暖化 1.5°C

Climate Change over Taiwan Under 1.5°C and 2°C Global Warming

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Abstract

At the United Nations Climate Change Conference (COP21) in 2015, the great majority of countries of the world adopted the Paris Agreement. Meanwhile, the Intergovernmental Panel on Climate Change (IPCC) was invited to provide a Special Report on Global Warming of 1.5°C (SR15), and published in 2018. This report points out the effects of climate change worldwide when global mean temperature is 1.5°C warmer than pre-industrial levels, and compares the difference between 1.5°C and 2°C of warming. This study follows the IPCC special report and defines the periods of 1.5°C and 2°C global warming based on projected global surface air temperature from CMIP5 model data. Then we apply the 1.5°C and 2°C periods to the TCCIP statistical downscaling daily data to assess climate change over Taiwan, which includes the changes on mean climate and climate extremes.

Keywords: climate change, global warming of 1.5°C