Global Warming is Exacerbated by Australian Wood Heaters

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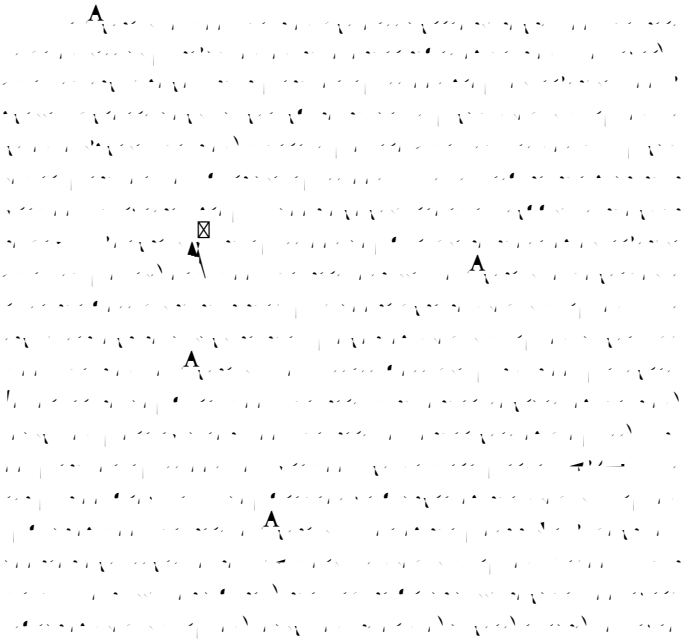
Abstract

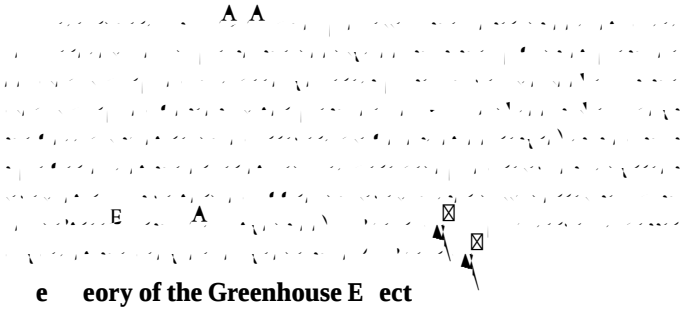
If the carbon dioxide released when burning the wood is taken up by new trees, the production of frewood is frequently regarded as being CO2-neutral. However, burning frewood in the household heaters that are now accessible in Australia results in the production of methane and black carbon particles, which contribute to global warming. The purpose of this study was to calculate the amount of global warming caused by wood heating in Australia and assess potential solutions. According to estimates, the average wood heater in Brisbane, Perth, or Sydney emits methane that contributes to global warming at least as much as 160 m2 of centrally heated home heated by gas. Additionally, it is believed that a wood heater in the living room combined with additional heating in other rooms will contribute to more global warming in Canberra and Melbourne's colder climates than either gas or reverse cycle air conditioning. If the 4.5 to 5 million tonnes of frewood currently burned in domestic wood heaters were to be substituted for coal in power plants and domestic wood heaters were to be replaced by gas or reverse cycle air conditioning, Australia's annual contribution to global warming would be reduced by at least 8.7 million tonnes of CO2-equivalent [1-5]. A switch to pellet heaters will also lessen the impact of PM2.5 emissions on global warming and the projected $3,800 annual health cost associated with each wood heater. Reviewing the debate about how to attribute global warming between the IPCC and non-governmental IPCC While NIPCC emphasises natural variability, the IPCC maintains that anthropogenic activities—rather than natural variability—are the primary cause of today's global warming. Since the middle of the 20th century, surface temperature observations have supported the idea that human activity has had an impact on the planet's climate. However, over the past century or so, natural forcings like solar activity, volcanic eruptions, and variations in the thermohaline circulation have also had a signifcant impact on the planet's climate, especially on interdecadal timescales. Evidence also points to a strong connection between the solar activity over the previous 1,000 years and both the Little Ice Age and the Medieval Warm Period.

Keywords:

Introduction



Greenhouse Gases



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Model simulations

Citation: