



The interactions of fire regimes, land management, vegetation dynamics and the atmosphere in northern Australian savannas

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The Australian tropical savannas burn with frequencies ranging from one in five to one in two years. Uniquely for an OECD country, these fires contribute substantially to accountable national greenhouse gas emissions. Concern about those emissions has led to the development of approaches to improve fire management to reduce emissions and increase carbon sequestration. Savanna dynamics are however, also determined by interactions with rainfall regimes. In this paper, we present an overview of fire regimes in northern Australia, their effects on the greenhouse gas emissions and how management of those fires interacts with climatic variability and likely climate change. Data will be presented from on-ground measurements of emissions, vegetation dynamics as well as interpretation of satellite imagery of fire scars.