

## **The need for a fire and haze early warning system for equatorial Southeast Asia**

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### **Abstract**

Smoke haze from biomass burning is among equatorial Southeast Asia's most serious environmental problems. Under sufficiently dry conditions, fires lit to clear vegetation waste can lead to uncontrollable burning of drained peatlands. The resulting emissions represent a singularly large source of greenhouse gases at a global scale and severely degrade air quality at a regional scale. Research over the last decade has led to a reasonable understanding of the human and climatic causes of these fires. Subsequently, meteorological agencies in Indonesia and Malaysia have developed operational fire danger rating systems to monitor for dangerously dry conditions. These systems are being steadily adopted by land management agencies to trigger fire prevention and pre-preparedness measures. However, given the immense effort required to mobilize resources, current fire danger rating systems are hampered by the absence of operational forecasting. The potential therefore exists to capitalize on gains made in seasonal climate prediction, particularly for precipitation.

In this talk, I will review the causes and impacts of biomass burning in equatorial Southeast Asia, the current status of operational systems, and the potential for linking a fire and haze early warning system at the APCC to the standard operating procedures of local land managers.