



## **Water Management Options to Mitigate Peatland Fire Risks in Indonesia**

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In the past two decades, tropical peatland forests in Indonesia have been converted into forest plantations and arable land. About 2 million hectares have been converted to forest plantations with oil palm, Acacia and Eucalyptus as main tree species. This has provided socio-economic benefits for business and communities, but peatland drainage also lead to negative environmental issues such as peatland and forest fires, soil subsidence, greenhouse gas emissions, exposure of acid sulphate soils and salt water intrusion. Uncontrolled fires and land degradation pose a major risk for future land use, local communities and during severe fires even for air quality in some major cities in the south-east Asia. Fires also pose a major risk to the pristine protected forests adjacent to drained areas. Recently, a new water table control regulation has been imposed. The objective of the presented work is to provide a state of the art review on current land uses, fire mitigation options and the hydrological conditions found in coastal peatlands of Sumatra. The work reviews recent research of fire risks and the hydrological setting to reduce the risks, and provide give policy advice on water table control and compliance methods to follow such control. Conditions are presented based on site visits, land cover mapping, soil surveys and hydrological monitoring.

Keywords: peatlands, fire risk, land degradation, hydrology, water management, paludiculture, mitigation.