Conversion of Indonesia's peatlands

In February of this year, the Indonesian Ministry of Agriculture issued a decree to allow peatlands less than 3-m deep to be converted to oil palm plantations (Figure 1), which effectively frees up 8% (~2 million ha) of the country's peatland area for development. This decree reverses President Yudhoyono's decision, in December 2007, to ban the conversion of peatlands to oil palm. While we recognize the country's sovereign right to secure more land for economic development, we argue that this decision is a monumental mistake for Indonesia's long-term economic prosperity and sustainability.

This decision is counterproductive for five main reasons: (1) the decree recommends drainage of peatlands to a depth of 60–80 cm, which will release enormous amounts of greenhouse gases that will exacerbate global climate change (Page *et al.* 2009); (2) although peat accumulation rates in the tropics (4–5 mm per year) are higher than those in temperate and boreal regions (< 1 mm per year), regeneration of peatlands post-harvest optimistically would still take at least several centuries, assuming underlying hydrological and soil conditions remain unchanged by oil palm development (Chimner and Ewel 2005); (3) swamp forests growing on tropical peatlands are some of the most biologically diverse – yet poorly studied – tropical ecosystems on Earth (Sodhi *et al.* 2004), so their conversion to oil palm plantations further compromises the faltering biodiversity and associated ecosystem services in Southeast Asia (Bradshaw *et al.* 2009); (4) haze from burning will threaten human health and increase related public health costs, both within and beyond Indonesia's borders (Lohman *et al.* 2007); and (5) the decision effectively undermines the prospect of REDD (reducing carbon emissions from deforestation and forest degradation) in developing countries to offset some of the opportunity costs of preserving peatlands, or to at least compensate for the diversion of planned oil palm to artificial, biologically impoverished grasslands. Indeed, REDD credits – given price parity with carbon credits traded in compliance markets – might allow such projects to yield up to US$6605 per ha on a 30-year basis, a value comparable to that earned by converting forest to oil palm (US$3835–$9630 per ha; Butler *et al.* 2009).

We propose the following three international policy changes to provide better long-term outcomes for Indonesia. First, Indonesia should postpone its final decision until after the next Conference of Parties of the UN Framework Convention on Climate Change (to be held in Copenhagen, Denmark, in December 2009), when REDD is expected to be recognized as a legitimate Clean Development Mechanism emission reduction activity. Such a delay would give more opportunity to model the profitability of REDD versus oil palm more accurately. Second, beginning this year, the Roundtable on Sustainable Palm Oil should stipulate that, as a criterion for certified sustainable palm oil, plantations may not be converted from peatlands. Finally, environmental scientists should immediately start mapping all peatlands in Indonesia to facilitate the identification and exposure of companies planning to develop oil palm plantations on peatlands, to the detriment of the country's long-term sustainability.

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Figure 1. *An oil palm landscape in Borneo.*

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