

Hotspots of carbon confusion in Indonesia threaten to warm the world more quickly

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Indonesia has promised to become a world leader in reducing greenhouse gas emissions. In 2009, the president committed to a 26% reduction in greenhouse gas emissions by 2020 to below 'business-as-usual' levels. Of this total, 14% would have to come from reducing emissions from deforestation or forest degradation. Investments by foreign governments and other bodies are expected to raise total emission reduction from 26% to 41%.

While international negotiations on rules about how to reduce emissions and slow global warming are slow but ongoing, the Indonesian and Norwegian governments signed a letter of intent under which up to US\$ 1 billion is available to assist in setting up a 'stop [deforestation](#) and forest degradation' system that also addresses peatland emissions. Part of the agreement is that [Indonesia](#) will implement a moratorium or 'two-year suspension on all new concessions for conversion of peat and natural forest'.

Promising as this may sound, the devil is in the detail. A lot depends on how 'peat' and 'natural forest' are defined and how rights are agreed upon. Strong lobbies from the forest and tree-crop plantation industry argue that the economy will be harmed if 'business as usual' is interrupted. According to news sources, definitions of 'natural forest' and 'peat' differ between drafts prepared by the Indonesian Government's emissions reduction taskforce and by the Ministry of Forestry. There are several key issues that need to be resolved.

First, if the moratorium is limited to the 'kawasan hutan' (forest estate), one-third of current emissions from clearing or converting woody vegetation will remain unaccounted for. The institutional mandates and types of permits issued by the government differ between 'kawasan hutan' and the 'other land uses' category, however. Multi-strata agroforests managed by farmers used to cover approximately 10% of the country (or 20 million hectare) in 1990 but were reduced to about 17 million hectare by 2005, with further conversion continuing to this day. Part of this change is based on the economic incentives farmers perceive from conversion to monoculture farming and part is due to external pressure.

Second, the draft of the Ministry of Forestry aims to allow for new plantation concessions in logged forests, where tree planting or conversion to monocultural tree plantations is presented as forest improvement. The Ministry proposes a moratorium limited to protecting primary forests, and defines these as 'natural forests untouched by cultivation or silvicultural systems applied in forestry'. Part of Indonesia's logged-over (secondary) forest still has high carbon stocks and is important for biodiversity conservation. It would help if a map of Indonesia could clarify where the moratorium applies.

Third, peatlands are immense storage houses for carbon and their protection from drainage and fire play a crucial role in the reduction of carbon emissions. Peatlands occur both within and outside of the forest estate and are source of emissions whether forested or not. The Ministry of Forestry draft excluded any new concessions on peatlands deeper than three metre, but this is already illegal and yet still occurs. A further challenge is that existing maps of peat depth are not very accurate.

Fourth, laws, regulations and customary norms applied by different levels of government, the private sector and local communities have often conflicted in the past and continue to do so in the present. These

conflicts hamper the application of any scheme and will need serious attention to resolve.

These issues are hot in peatland-rich Central Kalimantan, which has been selected by the Indonesian and Norwegian governments as the primary pilot province for the proposed emissions reduction scheme. Over the past few decades in the province, shifting national policies have shaped the distribution of power and the actual use of peatland, with hundreds of thousands of hectare cleared of forest in a failed attempt to create farmland.

Expectations of payments for carbon emission reduction are currently shaping decisions over natural resource management. But any actions to reduce emissions will need to appreciate the institutional complexity. Different levels of government and the private sector are attempting to influence policy and exercise power, each interpreting history, facts, rules and norms differently in support of their own claims.

The World Agroforestry Centre's research shows that the contesting claimants used the current contradictions and inconsistencies of Indonesian laws, multi-sector policies and the articulation of local property and customary rights for their own purposes. Legal arguments were not necessarily decisive in settling disputes and the lack of respect for legality contributed to confusion, undermining authority.

Furthermore, carbon rights in the area were not clear. They are at least as complex as the laws, regulations, layers of government, NGOs and private sector players that interact during the process that starts with a natural forest and ends with a landscape with few trees, high emissions but still high carbon stock, that is, the peatlands of Kalimantan.

A letter from Yayasan Petak Danum (Water Land Foundation, an NGO in Central Kalimantan) published on 27 February 2011 on red-

monitor.org

(<http://www.redd-monitor.org/2011/02/27/community-concerns-with-the-kalimantan-forests-and-climate-partnership-no-rights-no-kcfc/#comment-111415>) highlights the impact of these complexities on indigenous people's groups involved with one of the pilot projects designed to help reduce emissions in the province, the Kalimantan Forests and Climate Partnership. The World Agroforestry Centre conducted research into tenure and other issues for the Partnership in the early days of the project, which has been encapsulated in ASB Policybrief 21, Hot spots of confusion: contested policies and competing carbon claims in the peatlands of Central Kalimantan, Indonesia (http://worldagroforestry.org/sea/publications?do=view_pub_detail&pub_no=PB0017-11).

All this is also pertinent in a place like the Tripa swamp along the western coast of Aceh, where a block of dense swamp forest on peatland, high both in carbon stock and orangutan population density, is threatened by conversion to oil palm.

Part of the permits for such conversion exist but conflicts remain between local communities, local and national governments and private companies. The land status was changed a decade ago from 'watershed protection' forest to 'other land uses'. The forest is, therefore, outside the proposed definition of 'forest' under the emission reduction scheme yet it is exactly the type of carbon stock that the world wants saved.

If conversion to oil palm takes place, it will be widely seen as a failure of the moratorium and the international commitment made by Indonesia.

Recent studies by the World Agroforestry Centre, Yayasan Ekosistem Leuseur and PanEco provide details on the case

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http://worldagroforestry.org/sea/searchpublication?pub_type=0&call_number=&author_editor=&pub_title=Human+livelihoods%2C+ecosystem+services+and+the+habitat+of+the+Sumatran+orangutan&pub_year=&search=Search).

Although it is a challenge to resolve all the above issues in a country the size of Indonesia, it can happen if a) the goal of reducing carbon emissions while supporting human wellbeing is kept in focus; b) the moratorium is clear and operational; and c) it goes beyond restating existing regulations that have not prevented 'business as usual'. This leads to several recommendations.

First, all forests, irrespective of their location and land status, should be included.

Second, logged forests should be included and protected under any emissions reduction scheme because they still contain high carbon stocks and substantial biodiversity.

Third, all peatlands should be included, irrespective of their depth.

Fourth, the definition of 'forest' should be made relevant to its purpose, which is to reduce carbon emissions by avoiding removing or decreasing woody vegetation.

Fifth, national and provincial governments are two among several contesting players and a negotiated settlement is needed rather than asserting a single legal authority.

Sixth, market-based implementation of an emissions reduction scheme will add confusion because unresolved carbon rights are an addition to the already complex layers of unresolved property rights. A 'co-investment' approach, in which all parties work together for human and

environmental benefit at local and global levels, can contribute to resolving disputes on property rights and see more transparent use of state authority.

For the moratorium, a simple rule could be that it applies to new concessions on all lands, except those with an aboveground carbon stock of less than 35 tonne of carbon per hectare, and it applies to all peatlands regardless of the amount of above-ground carbon. This would be relatively easy to map and monitor. It would set clear rules to move forwards for now. It would buy time to think through the issues that relate to the lands that are included in the moratorium and refine rules in future as needed.

Provided by World Agroforestry Centre (ICRAF)

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