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## [Palm oil expansion for agrofuels: Burning all hope of stabilising the climate?](#)

Two years ago, 5.3 million hectares across Indonesia were engulfed in flames in the worst fire season since 1997/98. Haze blanketed large parts of South-east Asia, hiding additional peat and forest fires in Malaysia. Over 75,000 fires burnt across Sumatra and Borneo. Peat expert, Professor Florian Siegert helped to analyse details from satellite images and concluded: "Most fires were set to clear land for plantations. Those burns often run out of control because the forests have already been damaged by illegal logging" (1). Similar fires now occur every year, though their scale varies depending on how long and dry the dry season is. Palm oil has become the main driver of peatland destruction, followed by tree plantations for pulp and paper.

According to Siegert, the carbon dioxide released by the 2006 peat and forest fires accounted for up to 15% of all global carbon dioxide emissions that year. This figure, however, gives only a glimpse of the true scale of the climate impacts associated with palm oil in South-east Asia.

South-east Asia peatlands account for 60% of the world's tropical peatlands and hold around 42 billion tonnes of carbon. Globally, peatlands play a vital role in stabilising the climate: As long as peat remains undisturbed and does not dry up as a result of climate change, it represents a permanent carbon store. Peat formation is one of the earth's ways of removing carbon dioxide from the atmosphere and thus an important 'global thermostat'. There is strong evidence that South-east Asia's peat swamps played a vital role in preventing more extreme and rapid global warming at the end of the last ice age. Nobody knows exactly why the warming at that time did not run out of control and cause a mass extinction, as had happened tens of millions of years ago. After all, warming automatically results in more carbon dioxide being released into the atmosphere, particularly by the oceans. Much of that carbon dioxide must have been absorbed by soil and vegetation and we know that peat accumulation accelerated at the time, when those peatlands were much larger, due to lower sea level (2). Left intact, we could expect South-east Asia's peat forests to absorb some of the carbon dioxide which has already been emitted by fossil fuel burning and to mitigate climate change. Their destruction is thus a double whammy to the earth's climate: Once the peat is drained and logged, all of the carbon in the peat will 'oxidise', which means they will react with oxygen to form carbon dioxide. This process can take several decades, but it is greatly speeded up by fires. There is little hope that even a catastrophic 2oC warming could be avoided if all the 42 billion tonnes of carbon in Indonesia's and Malaysia's peat goes into the atmosphere, regardless of any measures taken to phase out fossil fuels and end deforestation. Even worse, at a time of catastrophic climate change, one of the few ways in which the planet can eventually stabilise its temperature is being destroyed, putting the future of all life at even greater risk.

Already, 48% of the original 27 million hectares of peatlands have been intensively logged and drained and 3.7 have been completely destroyed. In theory, it should be possible to restore what remains of the drained peat, through re-flooding and reforestation. Several NGOs have begun a demonstration project, although anecdotal evidence suggests that this is not very successful due to a lack of community involvement. In reality, however, we can expect virtually all of the remaining peatlands to be destroyed, barring a u-turn in Europe's and other countries' bioenergy policies and

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the Malaysian and Indonesian governments' policies of promoting monocultures for agrofuel exports. In the past, Europe's use of rapeseed oil for biodiesel has been one of the main causes of palm oil expansion, since the food and cosmetics industry has responded by switching from rapeseed to palm oil. Palm oil use for heat and power, has been another serious factor. In future, it is likely that more palm oil will be used directly for biodiesel: Several large biodiesel refineries are being built specifically to use palm oil, including the world's biggest one, which Neste Oil is constructing in Singapore, while the US and Australia are increasing their imports for agroenergy.

According to Wetlands International, at least 15% of Malaysian and 25% of Indonesian oil palm plantations are now on peat. In Indonesia, over half of all new concessions for such plantations have been granted on peatlands. In Malaysia, the state government of Sarawak has recently allocated 400,000 hectares of peat swamp forests for plantations, mostly for palm oil (3). Peat forests are being targeted not least because virtually all of Sumatra's and most of Borneo's rainforests have been destroyed, hence the less accessible wood in peat swamps becomes attractive to loggers. Extra profits from the timber make oil palm plantations significantly more attractive and in some cases, palm oil and logging firms are part of the same company. Furthermore, government policies which promote palm oil for export, largely to serve Europe's growing demand for agrofuels, make it easy to obtain concessions to convert forests.

Peat forests are not the only frontier for Indonesia's palm oil expansion. Indonesia's last large continuous rainforests, in Aceh and West Papua are facing similar destruction. The Indonesian government has designated 9.3 million hectares of West Papua's forest for 'conversion', mostly for palm oil. So far, large concessions have been awarded but there are as yet relatively few productive oil palm plantations (4). As in Borneo and Sumatra, logging and plantation development go hand in hand in West Papua, too.

According to Watch Indonesia!, 40 million people in Indonesia depend directly on the forest for their livelihoods. They are today paying the price for a false 'climate solution' which, instead of mitigating climate change, is one of the most effective ways of ensuring, that warming will run out of control.

By Almuth Ernsting, Biofuelwatch, <http://www.biofuelwatch.org.uk> , e-mail: [almuthbernstinguk@yahoo.co.uk](mailto:almuthbernstinguk@yahoo.co.uk)

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