

Scientists call for urgent rethink of tropical peatland palm oil and drainage-based agriculture

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Credit: University of Nottingham

An honorary associate professor at The University of Nottingham Malaysia Campus (UNMC) is among scientists campaigning to dispel the myth that palm oil and other drainage-based agriculture can be developed on tropical peat soils through current agricultural practices.

In two recently published articles in the journal, *Global Change Biology*, the academics challenged the concept that palm oil producers can label any product as sustainable when planted on the unique and globally important tropical peat soil ecosystems found in Southeast Asia.

Dr Stephanie Evers, from UNMC, is lead author to one of the recent articles that also highlights the problems facing industry and governments in developing or adhering to effective policies to manage the unique peatland eco-system- despite overwhelming scientific evidence on the unsustainability of current deforestation and drainage practices.

The practices are in fact having globally significant impacts on greenhouse gas emissions through peat decomposition and peatland fires and could lead to irreversibly altered, dysfunctional landscapes through flooding and sea water inundations, leading to likely loss of homes.

Dr Evers, who has spent the last five years researching in Malaysia (at UNMC), describes a 'horrendous annual 'haze season' affecting the entire region'. Current estimates are that fires from dried peat have caused over 100,000 premature deaths, economic losses over \$16bn to Indonesia and have exceeded the average daily emissions from all of the U.S.

Dr Evers, who is now Senior Lecturer at Liverpool John Moores University based at the School of Natural Sciences and Psychology and retains an honorary associate professorship with UNMC, said: "Failing to recognise the devastating far-reaching consequences of the way in which peatlands are being managed and failing to work together to address them could mean that the next generations will in fact have to deal with an irreversibly altered, dysfunctional landscape.

"Truly sustainable peatland agriculture methods do not exist, but as research to find a solution continues, we need to restore natural drainage levels, halt further expansion and prioritise development of alternative, non-drainage agricultural farming systems in combination with conservation of remaining forests in order to mitigate ongoing rates of peat loss under existing plantations. Not only is this of global importance in the fight against climate change, it is also key to ensure future economic wealth in tropical peatland rich regions.

"To achieve this however, we also need to consider Southeast Asia's development agendas together with promotion of scientifically-driven environmental sustainability goals. The needs of local communities and farmers to generate incomes must go hand in hand with environmental mitigation measures."

Provided by University of Nottingham

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