Forest loggers join world's biggest ecology experiment



Updated 12:24 18 October 2011 by Rowan Hooper

If you can't beat 'em, join 'em. Ecologists from around the world are working with the very people who would seem their sworn enemies – rainforest loggers. A massive deforestation programme is going ahead anyway, so the aim is to exploit it to conduct one of the biggest ecological experiments in the world.

Yayasan Sabah – the Sabah Foundation, a Malaysian state-owned company – is felling 75,000 hectares of primary rainforest on the island of Borneo and converting it to lucrative palm oil plantation. A team led by Rob Ewers at Imperial College London is working with the loggers to make sure that the deforestation has a silver lining for ecological research. For them, some of the tree felling will be an experiment into the ecological effect of habitat fragmentation, and they hope it will give them clues on how to design landscapes to support multiple demands – ecological and commercial – at a minimal cost to the ecosystem.

"We're being pragmatic. You can bang a drum about fighting these companies but I would hope that we can learn more by working with them," says Ewers, who runs the Stability of Altered Forest Ecosystems project (SAFE).

Working to Ewers's experimental design, the loggers will leave patches of rainforest of

different sizes, and at different distances from other patches of rainforest, to determine the effects of different levels of deforestation. The Borneo rainforest is a particularly biodiverse region, and is most famously home to the only Asian great ape, the orang-utan. Around 8000 hectares of the plantation will be given over to the experiment, starting in December.

Plantation plans

Coordinating the ecologists' experiments with the felling work is Glen Reynolds of the South-East Asia Rainforest Research Programme at Danum Valley Field Centre in the Malaysian state of Sabah on Borneo. Reynolds is also a member of the international Roundtable on Sustainable Palm Oil. "Yayasan Sabah has had long-standing plans to convert about 20 per cent of its 1-million-hectare area to plantations," he says. "This plantation – along with the existing Sabah Softwoods plantations – will get it to about the 20 per cent figure."

Andy Hector of the University of Zurich, Switzerland, runs the Sabah Biodiversity Experiment on forest restoration and says that the SAFE fragmentation project is part of wider ecological projects in Borneo. "Together with a 50-hectare permanent plot in the Danum valley conservation area and the Sabah Biodiversity Experiment, the SAFE project means that we can now study the entire gamut of land use in the region, from pristine forest to fragmented forest and restored forest, to oil palm plantation. It is vital that we work to understand this unique ecosystem while we have the chance."

Journal reference: *Philosophical Transactions of the Royal Society*, DOI: 10.1098/rstb. 2011.0049