

## Global roadmap strives to find a balance

An ambitious [study](#) has created a ‘global roadmap’ for prioritising road building across the planet, to try to balance the competing demands of development and environmental protection.



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More than 25 million kilometres of new roads will be built worldwide by 2050. Many of these roads will slice into Earth’s last wildernesses, where they bring an influx of destructive loggers, hunters and illegal miners.

‘Roads often open a Pandora’s Box of environmental problems,’ said Professor William Laurance of James Cook University (JCU), the study’s lead author. ‘But we also need roads for our societies and economies, so the challenge is to decide where to put new roads – and where to avoid them.’

The study has just been published in the journal *Nature*. Professor Laurance and colleagues from Harvard, Cambridge, Melbourne, Minnesota and other universities worked for nearly two years to map the world’s most important ecosystems and biodiversity.

According to Professor Andrew Balmford of the University of Cambridge, UK: ‘It was a challenge, but we think we’ve identified the most environmentally vital real estate on the planet.’

After mapping the priority areas for conservation, the team then tried to decide where roads would have the greatest benefits for humanity.

Dr Nathan Mueller from Harvard University, USA, said the study focused on agriculture ‘because global food demand is expected to double by mid-century, and new or improved roads are vital for farmers’.

‘With better roads, farmers can have improved access to fertilisers, information, and markets for their crops – the whole economic equation changes, which can make farming more efficient and profitable,’ he said.

Another co-author, Christine O’Connell from the University of Minnesota, USA, said the study also showed that in large parts of the world, such as the Amazon, Southeast Asia, and Madagascar, the environmental costs of road expansion are massive.

The authors emphasise that there will be serious conflicts in the coming decades.

‘We’re facing a lot of tough decisions,’ said Irene Burgues Arrea of the Conservation Strategy Fund in Costa Rica. ‘For instance, there are huge conflict areas in sub-Saharan Africa, because it has vital wildlife habitats but a very rapidly growing human population that will need more food and more roads.’

Professor Laurance concluded: ‘So much road expansion today is unplanned or chaotic, and we direly need a more proactive approach. It’s vital because we’re facing the most explosive era of road expansion in human history.’

Source: JCU

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