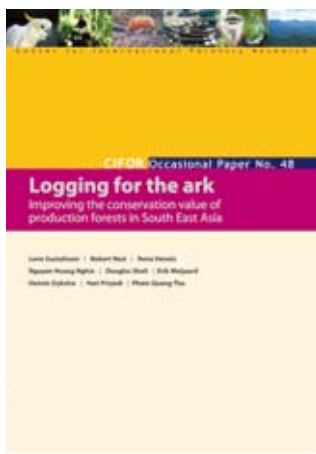




Two species threatened by logging: the douc langur, *Pygathrix nemaeus*, and the yellow-crested cockatoo (next page), *Cacatua sulphurea* (Benjamin Lee and Rosemary Low) .

Logging for wildlife



‘Our research suggests that quite small adjustments to forestry activities can make a big difference to fauna and flora.’
Hari Priyadi

A CIFOR study which explored the ways mammals and birds react to industrial logging in Indonesian Borneo provided logging companies with comprehensive guidelines how to reconcile timber production with conservation. The recommendations in *Life after Logging*, described in the 2005 Annual Report, have also helped to influence and guide a similar study involving the Swedish University of Agricultural Sciences, CIFOR and the Forest Science Institute of Vietnam. Its aim was to develop biodiversity guidelines for tropical forestry in South-east Asia, with a particular focus on Indonesia and Vietnam.

“As Indonesia was now relatively advanced in terms of the technical aspects of logging codes and reduced impact logging,” explains Douglas Sheil, one of the lead authors of *Life after Logging*, “and as there was a lack of information in the literature about the impact of logging on wildlife in Vietnam and elsewhere in the region, it made sense to build on the recommendations of *Life after Logging*.” This was done at a series of three workshops in Ho Chi Minh City, Bogor and Hanoi, held between 2003

and 2006. The findings, and recommendations, have been published in a CIFOR Occasional Paper, *Logging for the Ark*.

South-east Asia contains four out of the 25 global biodiversity hot spots. It is also suffering from high levels of habitat loss, which is why it has become increasingly important to manage production forests more sensitively. There are plenty of guidelines about sustainable forest management, but these tend to be vague when it comes to biodiversity. In countries like Indonesia, the benefits of reduced impact logging (RIL) are now broadly accepted, but the focus is largely on conserving and protecting soil and water. Little account is taken of flora and fauna.

CIFOR scientist Hari Priyadi, one of the authors of *Logging for the Ark*, points out that good practice is about far more than just implementing RIL techniques. “We have come up with recommendations which will enable forest managers to harvest and transport timber in a way which is less harmful to wildlife,” explains Priyadi. “Our research suggests that quite small adjustments

to forestry activities can make a big difference to fauna and flora.”

The authors place a strong emphasis on good planning, and suggest that environmental impact assessments should be carried out before any forestry operation is granted the right to operate. Some recommendations relate to planning and monitoring; others provide guidance about the sort of practices which benefit wildlife. For example, logging companies are encouraged to maintain habitat diversity and protect fruiting trees which provide food for mammals and birds. Other recommendations describe how logging companies could minimise indirect threats to wildlife from hunting, invasive species, domestic animals and road traffic. *Logging for the Ark* has 104 recommendations in all. Were forest managers to follow these, they would achieve profitable yields of timber, and at the same time create and maintain conditions which enable wildlife to flourish.

Some species are more sensitive to logging than others. The reasons why are explored in detail in a paper first published online in 2007 by the journal *Biotropica*, co-authored by CIFOR scientists Douglas Sheil and Robert Nasi, Erik Meijaard of The Nature Conservancy and Andrew Marshall from the University of California. The study was carried out as part of a project funded by the International Tropical Timber Organization (ITTO) and implemented by CIFOR and Indonesia's Forestry Research and Development Agency in East Kalimantan.

The analysis shows that older species which came into being over 5 million years ago tend to be less able to cope with the effects of timber harvesting than younger species which evolved later. Older species tend to be more specialised – anteaters are an obvious example – and less able to cope with habitat change. There is a perfectly good reason for this: they evolved at a time of great climatic and geological stability and occupy a narrow ecological niche. In contrast, younger species which evolved during the Late Pliocene and Pleistocene periods, a time of greater climatic change with numerous cooler and drier ice ages, are adapted to a wider range of habitats and diets. This is of more than academic interest, suggests Sheil. “Our findings mean that we can predict the sensitivity to habitat disturbance of lesser known species, and this has important implications for foresters and conservationists,” he says.

CIFOR's expertise in this field encouraged ITTO to invite Sheil and colleagues to help revise its guidelines for the conservation of logged forests. The new draft guidelines borrow heavily from the work in Indonesia, and the recommendations of *Life after Logging*. In 2007, CIFOR also published a guide to reduced impact logging in Indonesian: *Pembalakan Ramah Lingkungan: Konsep dan Implementasi di Indonesia*, by Agung Nugraha, Hari Priyadi, Hasbillah, Petrus Gunarso and Rahardjo Benjamin.

