

## INFORMATION BRIEF FOR POLICY-MAKERS

# Reduced-Impact Logging to reduce forest degradation and minimize carbon emissions



*Many tropical forests are under threat of degradation due to unnecessarily destructive logging.*



*Well-planned and carefully implemented timber harvesting causes only minimal environmental impacts and the carbon removed is rapidly replaced by vigorous regeneration and growth of retained trees.*

### *How does logging affect global carbon?*

Carbon emissions from selectively logged forests vary with harvesting intensity and logging practices, but most of the carbon remains in standing trees in the residual stand. Nevertheless, logging is globally a substantial source of atmospheric heat-trapping gases.

### *What is reduced-impact logging and can it reduce forest degradation?*

Reduced-impact logging (RIL) is the careful planning and control of timber harvesting operations to minimize the environmental impact and waste that result from conventional forms of logging. RIL is implemented through codes of practice that describe the acceptable approaches to management activities including management planning, road construction, tree felling, and log extraction.

Use of RIL minimizes the deleterious impacts of logging on forest growth, hydrology, soils and biodiversity while improving worker safety. RIL can increase the commercial volume for the next harvest by 25 to 75% by avoiding unnecessary damage to the growing stock and by fostering regeneration.

### *How does RIL influence forest carbon balance?*

Implementation of RIL reduces carbon emissions from selectively logged forests by as much as 40% compared with conventional logging. RIL's carbon benefits derive from minimizing stand damage in harvested areas and from protecting forests along streams and on steep slopes.

Another carbon benefit of RIL is that by causing less stand damage and maintaining more canopy cover, forests retain moisture and hence are less prone to wildfires.

By protecting more of the growing stock and causing less soil damage, timber volume recovery is accelerated and rates of carbon sequestration increase after RIL compared to forests logged at the same intensity but using conventional practices.

### *Can the carbon gains from RIL be readily measured?*

**Yes;** standard forest inventory methods can be used to estimate forest carbon stocks and to monitor the losses and gains from harvesting and post-logging regeneration



*Reduced-impact logging is a critical component of sustainable forest management that helps maintain a range of economic, social, and environmental benefits for present and future generations.*

### *What hinders RIL uptake in tropical forests?*

Despite development of RIL guidelines in many countries, RIL adoption is still limited. Factors responsible for this slow uptake include weak institutional capacity, inadequate political commitment, concerns over the financial costs of RIL, and lack of financial incentives to capture the environmental and social benefits of RIL.

### *What can be done to promote the broader uptake of RIL?*

Research and operational experience over the last 20 years show that the following actions are successful in promoting RIL uptake:

- Accessible demonstration areas
- Training and education programs for local communities, forest managers, logging companies, and forest workers
- Development of national standards for sustainable forest management that include commitment to implement RIL
- Development and adoption of regulatory frameworks for implementation of RIL and for monitoring and reporting on the operational standards achieved

### *What else needs to be done to reduce forest degradation and promote sustainable forest management?*

RIL is important but attention is also needed to other elements of sustainable forest management. For example, efforts are often needed to ensure sufficient natural regeneration, to restrict logging rates to a sustainable level, and to implement the measures needed to protect biodiversity and to respect local people's rights.

### *Should RIL be accepted as a mechanism to reduce forest degradation under REDD+?*

Yes, RIL is a central component of the sustainable management of forests that helps maintain the environmental, economic, and social values of managed forests.

### *Where can I get more information about the benefits of RIL and its role in reducing forest degradation and carbon emissions?*

The following websites and publications provide further information about RIL

Reduced Impact Logging in Tropical Forests (FAO)

<http://www.fao.org/docrep/007/j4290e/j4290e00.htm>

Reduced Impact Logging (International Tropical Timber Organization)

<http://www.itto.int/feature15/>

Report from the May 2012 Asia-Pacific Workshop, Kota Kinabalu, Malaysia

<http://www.leafasia.org/library/reduced-impact-logging-challenges-opportunities-and-strategies-emerging-forest-carbon>

Applying Reduced Impact Logging to Advance Sustainable Forest Management (International Conference Proceedings, Kuching, Malaysia 2001)

<http://www.fao.org/docrep/005/AC805E/AC805E00.HTM>

Reduced-impact logging: Challenges and opportunities (Putz, FE, Sist, P, Frederickson, D and Dykstra, D (2008)

<http://naldc.nal.usda.gov/download/21098/PDF>