



**Promoting Reduced-Impact Logging in  
Tropical Developing Countries:  
A Success Story of Technology Transfer**

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# Outline of Presentation

- ❖ It all began with UNCED ...
- ❖ Tropical vs. temperate forests
- ❖ What *is* reduced-impact logging?
- ❖ Evidence of success for RIL adoption
- ❖ What is driving adoption of RIL?
- ❖ Concluding remarks

## UN Conference on Environment and Development (1992)

Conference	United Nations Conference on Environment and Development (UNCED), Rio de Janeiro, 3-14 June 1992
Informal name	The Earth Summit
Host Government	Brazil
Number of Governments participating	172, 108 at level of heads of State or Government
Conference Secretary-General	Maurice F. Strong, Canada
Organizers	UNCED secretariat
Principal themes	Environment and sustainable development
NGO presence	Some 2,400 representatives of non-governmental organizations (NGOs); 17,000 people attended the parallel NGO Forum

- ❖ Strongly influenced the work of UN Agencies such as FAO
- ❖ Emphasized control of deforestation
- ❖ The FAO Forest Harvesting Branch started a program on “Environmentally Sound Forest Harvesting in Tropical Forests” in 1991
- ❖ Over time, “Environmentally Sound Harvesting” has evolved into “Reduced-Impact Logging”

# Tropical Forests vs. Temperate Forests



- ❖ Many tree species per hectare
- ❖ Few stems per hectare of commercial species (0.1-20)
- ❖ Low volumes per hectare of commercial trees (1-100 m<sup>3</sup>)



- ❖ Few tree species per hectare
- ❖ Many stems per hectare of commercial species (200-300)
- ❖ High volumes per hectare of commercial trees (200-500 m<sup>3</sup>/ha)

# What *is* Reduced-Impact Logging?



# What *is* Reduced-Impact Logging?

- ❖ Pre-harvest inventory and mapping of individual crop trees



# What *is* Reduced-Impact Logging?

- ❖ Preparation of accurate, operational maps for harvest areas
- ❖ Comprehensive harvest planning



# What *is* Reduced-Impact Logging?

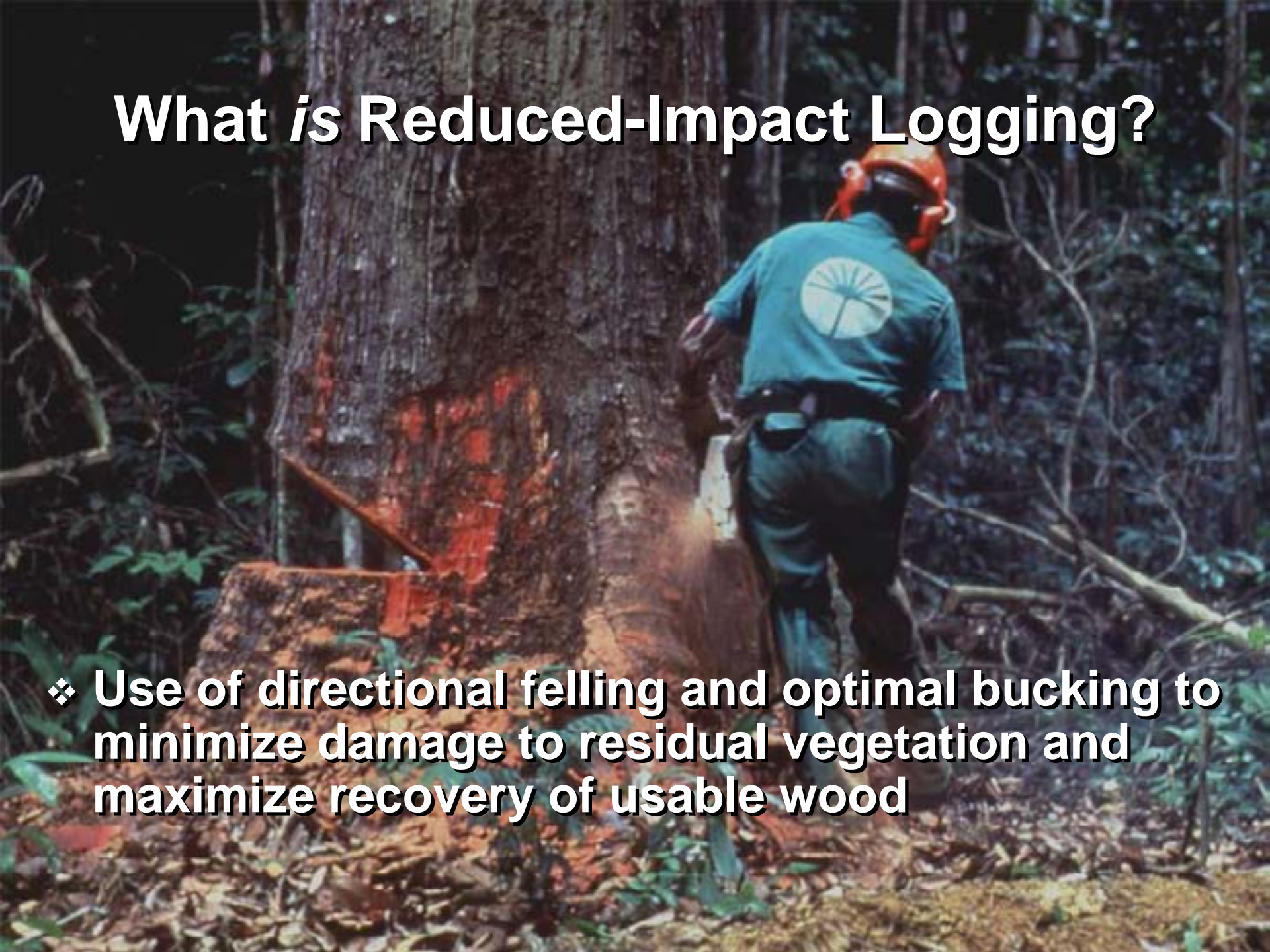
- ❖ Pre-harvest vine cutting where necessary

# What *is* Reduced-Impact Logging?

- ❖ **Planning and construction of roads, landings, and skidtrails to provide optimal access while minimizing soil disturbance and protecting waterways**

# What *is* Reduced-Impact Logging?

- ❖ **Use of directional felling and optimal bucking to minimize damage to residual vegetation and maximize recovery of usable wood**



# **What *is* Reduced-Impact Logging?**

- ❖ **Winching logs to pre-planned skidtrails; limiting the operation of heavy equipment to roads and skidtrails**

# What *is* Reduced-Impact Logging?

A photograph showing four men in a boat on a river, surrounded by dense green forest. They are gathered around a large map or document spread on the boat's surface. One man in a white shirt and glasses is on the left, looking towards the map. Another man in a purple shirt and a green and white cap is pointing at the map. A third man in a pink hat and sunglasses is also looking at the map. A fourth man in a light blue shirt is seen from the back, looking towards the map. The boat has a blue interior and a white exterior.

- ❖ **Conducting post-harvest assessments to provide feedback to owners and logging crews, and evaluate the degree of success in applying RIL technologies**

# Evidence of Success with RIL

- ❖ Report by ITTO on adoption of RIL in Brazil; “sea change” in attitudes occurred between 1998 and 2003
- ❖ Specification of RIL as a requirement for forest certification
- ❖ Mention of RIL by the Director-General of FAO in his declaration at WSSD in Johannesburg, South Africa, 2002



The image shows a screenshot of the Johannesburg Summit 2002 website. The page features a blue header with the United Nations logo and the text 'Tropical' and 'JOHANNESBURG SUMMIT 2002'. Below the header is a navigation menu with links such as 'HOME', 'BASIC INFO', 'WHAT'S NEW', 'CALENDAR', 'PREPARATORY PROCESS', 'DOCUMENTS', 'MAJOR GROUPS', 'MEDIA INFO', 'SUSTAINABLE DEVELOPMENT IN ACTION', 'LINKS', and 'CONTACT US'. The main content area is titled 'BASIC INFORMATION' and contains sections for 'WHAT IS JOHANNESBURG SUMMIT 2002?', 'WHY NOW?', and 'WHEN & WHERE WAS IT?'. The 'WHAT IS JOHANNESBURG SUMMIT 2002?' section describes the summit as the World Summit on Sustainable Development, which brought together tens of thousands of participants, including heads of state and government, national delegates, and leaders from non-governmental organizations (NGOs), businesses, and other major groups. The 'WHY NOW?' section explains that the summit presents an exciting opportunity for today's leaders to adopt concrete steps and identify quantifiable targets for better implementing Agenda 21. The 'WHEN & WHERE WAS IT?' section states that the summit took place in Johannesburg, South Africa, from 26 August to 4 September 2002.

Inside > reduced impact logging > outcomes  
of the latest Council session > more ...





**“reduced impact logging”**

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Results 1 - 10 of about **14,300** for **“reduced impact logging”**. (0.26 seconds)

### Reduced-Impact Logging

... goal of widespread implementation of **reduced-impact logging** by the year 2000  
... as these offer a general basis for **reduced-impact logging** practices, ...  
[www.cifor.cgiar.org/publications/html/AR-90/RIL.html](http://www.cifor.cgiar.org/publications/html/AR-90/RIL.html) - 7k - [Cached](#) - [Similar pages](#)

### Buying Carbon to Promote **Reduced-Impact Logging**

... and that **reduced-impact logging** is more costly than “conventional” logging  
... Can **reduced impact logging** technologies be applied in ways that reduce ...  
[www.cifor.cgiar.org/docs/\\_ref/publications/areports/english1996/carbon.htm](http://www.cifor.cgiar.org/docs/_ref/publications/areports/english1996/carbon.htm) - 33k - [Cached](#) - [Similar pages](#)

### Applying **Reduced Impact Logging** to Advance Sustainable Forest ...

... **Reduced impact logging**: concepts and issues - Dennis P. Dykstra. 3. Impediments to the adoption of **reduced impact logging** in the Indonesian corporate ...  
[www.fao.org/DOCREP/005/AC805E/AC805E00.HTM](http://www.fao.org/DOCREP/005/AC805E/AC805E00.HTM) - 9k - [Cached](#) - [Similar pages](#)

### .....USDA Forest Service: INTERNATIONAL PROGRAMS: POLICY ...

... **Reduced impact logging** (RIL) is a method of harvesting trees with minimal residual  
... The policy implications of **reduced-impact logging** include the ...  
[www.fs.fed.us/global/aboutus/policy/tt/logging.htm](http://www.fs.fed.us/global/aboutus/policy/tt/logging.htm) - 46k - [Cached](#) - [Similar pages](#)

### .....USDA Forest Service: INTERNATIONAL PROGRAMS: AROUND ...

... E) International Conference on the Application of **Reduced Impact Logging** to Advance ... **Reduced impact logging** is one tool that can be used to lessen ...  
[www.fs.fed.us/global/globe/asia/welcome.htm](http://www.fs.fed.us/global/globe/asia/welcome.htm) - 75k - [Cached](#) - [Similar pages](#)

### Financial costs and benefits of **reduced impact logging** relative to ...

TPH001: Holmes, TP, GM Blate, JC Zweede, R. Pereira, Jr, P. Barreto, E. Holtz



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## SPECIAL ISSUE:

Editor's introduction

### PAPERS

Reduced impact logging in the tropics: objectives, principles and impact of research  
P. NIST

Logging in South Cameroon: current methods and opportunities for improvement  
W.H.J. JONKERS and G.J.M. VAN LEERSUM

RIL for real: introducing reduced impact logging into a commercial forestry operation in Guyana  
S. ARMSTRONG

Testing the applicability of reduced impact logging to greenheart forest in Guyana  
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Lessons learned from the implementation of reduced impact logging in hilly terrain in Sabah, Malaysia  
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# Forest Harvesting Bulletin

Promoting Environmentally Sound Forest Practices Worldwide

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Demonstration of reduced impact logging techniques in the FTTC, Flona, courtesy of FTTC

## Training in reduced impact logging in Guyana The experience of the Guyana Forestry Training Centre

Peter van der Hout and Godfrey Marshall

There has been an increasing interest at the global level for the adoption of reduced impact logging (RIL) as one means for moving towards sustainable forest management. The primary reason for this is that the increased awareness of the negative impacts of ill-planned forestry operations by stakeholders at the national and international levels has put pressure on governments to impose stricter controls on timber harvesting. Furthermore, international markets now require timber products from well-managed forests. In this respect, forest certification is emerging as a major driving force for the adoption of RIL.

Considerable progress has been made towards some aspects of sustainable forest management in the Guiana region. Research experiences in Suriname, Guyana and Brazil – mainly based on research by CELOS in Suriname (Hendriksen, 1990), Tropicos in Guyana (Van der Hout, 1999, 2000), and research, demonstration and training by Fundação Floresta Tropical (FFT) in Brazil (Holmes *et al.*, 2000) – have demonstrated unambiguously that RIL reduces logging damage while remaining financially attractive for logging companies in most cases. Nevertheless, forestry operations in Guyana and Suriname remain generally poorly planned and supervised; the operations remain characterised by low productivity, high costs, and excessive environmental modifications.

So why are the demonstrated benefits of RIL not translated into improved practices on the ground?

### Understanding the potential benefits of RIL

Frequently, the decision on whether or not to adopt reduced impact logging is taken at head offices of forest enterprises. Just as often, the decision depends on personal perceptions of what RIL is and not so much on a realistic understanding of the RIL concept and its pros and cons. In any case, a clear understanding about what really constitutes RIL is often lacking. Specifically, this refers to a number of essential measures to achieve noticeable financial and environmental benefits and the training and the organizational changes that need to be put in place to effect the necessary improvements (Klassen, 2002).

Convincing company management of the benefits of RIL is not enough. Field managers should be supportive of the necessary changes as well. Coordinating the correct implementation of the RIL components demands better supervision and communication, this may mean a fundamental change to a logging company's organizational structure (Jonkers 2002, Klassen 2002).

Issue 2, February 2003:  
Reduced-Impact Logging

Training is key: The Fundação Floresta Tropical provides onsite training for foresters and forestry instructors at all levels—from tree identifiers to landowners. Technology transfer, extension, research, and publication programs round out the Fundação Floresta Tropical's activities.

Building on its success, the Fundação Floresta Tropical is transforming itself into a permanent forest management and training center based on partnerships among the Brazilian government, industry, and nongovernmental organizations.

Today, by changing the face of logging in Amazonia, the people of Brazil can see the rainforest while still preserving its myriad benefits for future generations.

Johan Daniels is the director of Fundação Floresta Tropical, the Brazilian subsidiary of the Tropical Forest Foundation, in Belém, Pará, Brazil.

## WHAT'S INSIDE?

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The Basics of Certification

Guidance to Forest Managers

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### Initiatives and Tools for Forest Managers, Including Stepwise Approaches

Forest certification can be achieved through a stepwise approach. A **stepwise approach** can help forest managers focus their efforts into a series of manageable phases, one step at a time. This way, assessment of progress towards certification is made easier and buyers can differentiate products from forest in transition to certification and those from poorly or illegally managed forests. Click on the following ITTO report and MIV toolkit for more information on Stepwise Approaches to certification:

- [ITTO Report on the Potential Role of Phased Approaches to Certification to Promote Sustainable Forest Management](#)
- [Modular Implementation and Verification \(MIV\) Toolkit](#)

#### Related Topics

- [Comparing Certification Schemes/Systems](#)

#### Related Documents

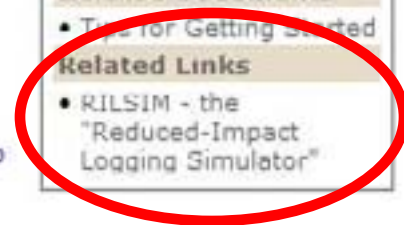
- [Tips for Getting Started](#)

#### Related Links

- [RILSIM - the "Reduced-Impact Logging Simulator"](#)

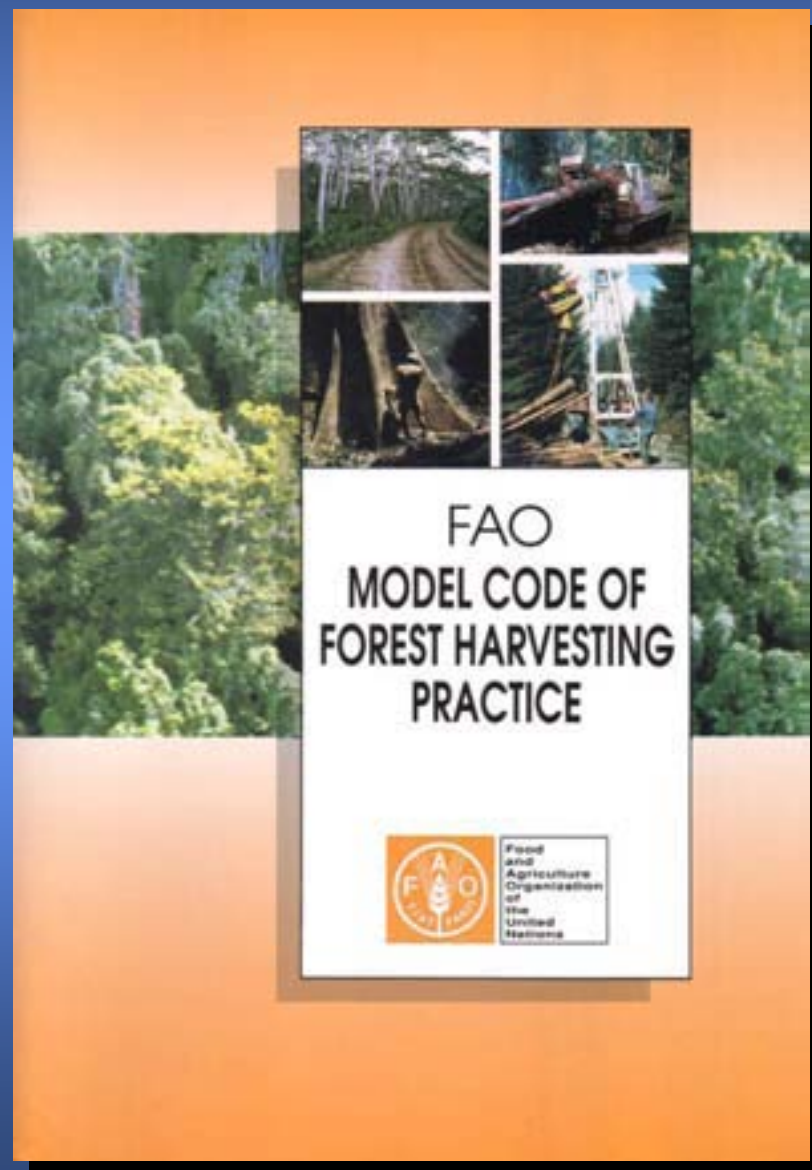
#### Reduced-Impact Logging Tool

This tool is a financial modelling software designed for forest managers. It can rapidly compare financial costs and returns expected from reduced-impact logging with those expected from conventional logging, under identical local site conditions. See the "related links" box to access the website and to download the software free of charge.



# What is Driving Adoption of RIL?

- ❖ Long-term, consistent support by FAO, including publication and promotion of a “Model Code of Forest Harvesting Practice” in four languages; support for development of regional and national codes of forest harvesting practice



# What is Driving Adoption of RIL?

- ❖ Complementary efforts by FAO, ITTO, ILO, World Bank
- ❖ **Efforts by regional organizations such as the Asia-Pacific Forestry Commission**
- ❖ Work by international research institutions such as CIFOR, CIRAD-Forêt, Tropenbos, and many national research agencies and universities
- ❖ **Development of practical training, especially by TFF**
- ❖ Implementation of RIL projects by donor agencies
- ❖ **Active promotion by international environmental NGOs**
- ❖ Acceptance by influential industry associations
- ❖ **Support by governments with large endowments of tropical forest**

# Concluding Remarks

- ❖ The success of RIL cannot be attributed to any individual person or organization
- ❖ Factors that have been especially important in facilitating the adoption of RIL:
  - Champions representing a wide range of viewpoints
  - Strong policy-level support from international agencies and environmental NGOs
  - Acceptance of RIL as essential for forest certification
  - Development of effective, low-cost training programs
  - Lack of significant controversy