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CANOPY

Your RIL Newsletter

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The Forestry Training Centre Incorporated (FTCI) is the result of a partnership between the Guyana Forestry Commission, the Tropical Forest Foundation (Virginia, USA) and the Forest Products Association of Guyana with funding from the International Tropical Timber Organization and the Department for International Development (UK).

The primary purpose of FTCI is to provide training in reduced impact logging in Guyana.

Such training will lead to improved planning of forest operations, more control over operational costs, better use of logging equipment, less accidents, and more attention to the quality of timber produced.

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“Reduced Impact Logging is a systematic approach to planning, implementing, monitoring and evaluating forest harvesting.”

Dr. Peter van der Hout

Understanding the Concept of Reduced Impact Logging by Dr. Peter van der Hout, Project Director, Forestry Training Centre Inc.

Introduction

Before World War II, logging operations in tropical forests were highly selective and unmechanized and impacted very little on the forest resources. The close of World War II caused a radical change in forest utilization resulting from an expansion in the world trade of wood products, increased local demand for sawn timber, advances in timber processing technology and the introduction of mechanised logging in the tropics. The scale and intensity of logging operations, and their impact on the environment changed significantly. Tropical foresters recognized that many industrial logging operations degraded forests and this led to the development and testing of forest management prescriptions that would minimize damage to residual forest stands and soils.

UNCED, 1992...

When the United Nations Conference on Environment and Development was held in Rio-de-Janeiro, Brazil in 1992, it became clear that in some instances the mechanisation of logging operations in the tropics posed a serious threat to long-term sustainability of the resource, both in terms of sustaining timber yields and, if added to the equation, the impacts on non-timber values (water quality, biodiversity, etc.). Since then new ways of managing forests in a more sustainable manner have been identified: for example *criteria* and *indicators* (C&I) covering economic, social and environmental aspects of forest management have been developed to address the new, broader concept of sustainable forest management..

GFC's Code of Practice

In response to the need to refine timber harvesting practices and techniques, the Guyana Forestry Commission published a Code of Practice for Timber Harvesting in 1996, to promote harvesting practices that improve standards of utilization and reduce impacts on the social and physical environment. The Code was revised in 2001 to include new practices and thinking, and it will remain a 'living' document as new ideas and practices emerge.

Reduced Impact Logging

Around the same time, the first publications were appearing in which the term reduced impact logging (RIL) was used (Pinard & Putz, 1996). Somehow this term and its acronym proved more broadly acceptable than 'environmentally sound timber harvesting', an alternative terminology that was being promoted by the FAO forestry department (Dykstra & Heinrich, 1992). In recent years, a great deal of attention has focused on RIL as one means of moving towards sustainable forest management. RIL is a systematic approach to planning, implementing, monitoring and evaluating forest harvesting. Although varying somewhat with the local situation, RIL in tropical mixed forests generally requires the following

- Pre-harvest inventory and mapping of individual crop trees and terrain
- Pre-harvesting planning of roads, skid trails and landings to provide access to the harvest area and to individual trees earmarked for harvest, while minimizing soil disturbance and protecting future crop and other valuable trees and water courses with appropriate crossings

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Minister Satyadeow Sawh (extreme left), Commissioner James Singh and Project Director Peter van der Hout, at the formal launching of the Forestry training Centre Incorporated in March 2003.

Understanding the Concept of Reduced Impact Logging (cont'd)

Pre-harvest liana cutting on trees targeted for felling;

The use of appropriate felling and bucking techniques, including directional felling, in a way that will maximise the utilisation of useful wood;

The construction of roads, skid trails and landings so that they adhere to engineering and environmental design guidelines;

Winching logs to planned skid trails and ensuring skidding machines remain on skid trails at all times;

Conducting post harvest assessments in order to provide feedback to the concession holder and logging crews and to evaluate the degree to which RIL guidelines were applied successfully.

"While considerable progress has been made towards some aspects of sustainable forest management in recent years, attitudes and practices on the ground have not changed"

Tree location maps

Numerous studies have shown that the mapping of individual trees is essential in tropical forests where only a small number of trees per hectare can be harvested commercially. Information on the locations of individual crop trees, can be used to locate roads, landings and skid trails so that the trees can be extracted not only without unduly disturbing the forests in areas where no trees are being harvested, but also to reduce the costs of extraction.

The Practice of RIL

While considerable progress has been made towards some aspects of sustainable forest management in recent years, attitudes and practices on the ground have not changed significantly over the years. Although initial experience with RIL in Guyana and the region - mainly based on small scale research by the Tropenbos-Guyana Programme (Van der Hout, 1999), CELOS in Suriname (Henderson, 1990) and Tropical Forest Foundation in Brazil (Holmes et al, 2000) - are promising, widespread adoption has a long way to go. It seems as if the awareness of RIL and the understanding of its concepts and components remain weak and many company representatives continue to insist that they cannot afford RIL.

Promoting RIL techniques

To enhance the understanding of RIL and to promote improved timber harvesting, the Guyana Forestry Commission, the Tropical Forest Foundation, the Forest Products Association of Guyana and the International Tropical Timber Organization have joined hands and embarked on a RIL training and demonstration programme for Guyana and the region. The Forestry Training Centre Incorporated has been established to implement this programme, which has as its key feature that hands on demonstration and training will be available in a real life timber harvesting operations setting. As the current director of this programme, I am convinced that awareness and understanding of RIL practices and techniques can only be enhanced if people experience such

operations at first hand and I would therefore like to invite all representatives of logging companies in Guyana and the region to come and visit our RIL operations, so that they can see for themselves that RIL does not stand for reduced income logging but can lead to reduced costs as well as environmentally sound timber harvesting...

"I am convinced that awareness and understanding of RIL practices can only be enhanced if people experience such operations at first hand..."

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Training of FTCI staff

In January 2003, FTCI recruited a number of experienced persons from the forestry and mining sectors and assumed the challenge of transforming them into professional trainers. Three major areas of activities were implemented in this regard.

Firstly, in January, an induction programme was implemented through which experts from Government agencies, the Forest Products Association of Guyana and NGOs active in the natural resources sector gave presentations on a wide range of matters associated with and impacting on the forestry practices. The objective was to ensure that staff were fully acquainted with the events and issues in the forestry sector. Agencies involved in the induction programme included the Ministry of Amerindian Affairs, the Ministry of Labour (OSH Division), the Geology and Mines Commission, and the Environmental Protection Agency. NGOs included Iwokrama and Conservation International.



FTCI Staff in theoretical training



FTCI Staff in practical training

Secondly, FTCI personnel spent two weeks in February 2003 at the Tropical Forest Foundation RIL training field centre in Pará, Brazil. The objective of the field tour was to allow staff to observe the actual teaching of RIL practices: the teaching methods in use, the resources used and the mode of collaboration with partners.

Finally staff were given a two-week Training of Trainers' Course, May 2003, by experts from URS Forestry, Australia. The objective of the course was to teach staff how to teach: lesson plan development, practical teaching methods, student evaluation and other practices were illustrated. The training was held in Guyana on the timber concession held by Barama Company Limited (see photos on this page).

Computer literacy, formal training in First Aid, and field tours to Pibiri and Kuruduni forest sites - where the Tropenbos-Guyana Programme did research on RIL (see Van der Hout, 1999, 2000), completed the basic training of the FTCI Instructors. All induction activities promoted team building and team spirit.

FTCI conducts training for Barama

During period 4 July to 21 August 2003, FTCI trained 22 employees of Barama Company Limited in the basics of reduced impact logging, at the request of the company. The training was conducted at a special facility within Compartment V of the concession area.

Training modules covered included: 100% pre-harvest inventory, data processing and map preparation, skid trail planning and alignment, tree marking, skid trail and log market



construction, directional tree felling, and skidding techniques. Considerable emphasis was placed on issues of occupational safety and health, and particularly the use of safety gear.

The teaching methodology used was simple: for each module taught, the participants were given a lecture, then they were divided into groups of four to six persons for the practical aspects of the training.

Demonstration sites for RIL Training in Guyana

One objective of the Forestry Training Centre Inc. is to provide hands-on training in RIL practices by actually developing and running a model logging operation.

To do this, the FTCI needs to set up a primary demonstration site, that includes facilities to accommodate up to 40 persons, training facilities, and a small workshop. A number of satellite sites are also necessary to address the geographical variation in forest conditions in Guyana.

With the assistance of the technical advisory committee (TAC), FTCI developed criteria to evaluate the various sites offered by forest concessionaires. The criteria included the level of access to the site, the prevailing forest types, the extent of virgin forests available and the capacity of the concessionaire to support the centre- in terms of the loan of equipment and tools, the preventive maintenance of FTCI's tractors, and the occasional provision of casual labour. The partner concessionaire may be considered as the *in-situ focal point* of the Forest Products Association of Guyana. The primary site selected is within compartment 5 of Timber Sales Agreement 4/85, held

by Toolsie Persaud Limited (TPL). This site will cater primarily for trainees from *Essequibo county*.

The two secondary sites selected by the TAC are:

- (1) The concession held by Variety Woods & Greenheart Ltd. (Charabaru District), upper Demerara river; this site would cater for forest workers in the Demerara and Upper Berbice districts.
- (2) the concession held by Ganesh Singh & Sons in the Upper Corentyne (Scatter rock) district; this site would cater for forest workers in the lower Berbice, Canje and Corentyne districts.

All three concessionaires have agreed in principle to host the site. FTCI has drafted formal Agreements regarding its relationship with the partner concessionaire. The agreements prescribe the responsibilities of each party, and those of the GFC and the FPA, regarding the use of specific areas on the concessions, support services, and among other things, the award of logs harvested during training to the partner concessionaire.



Beyond the sites identified above, FTCI may at its discretion conduct training within forests held by other forest enterprises, NGOs and community groups if suitable resources and conditions for training exist.

FTCI's new partners.....

Since the establishment of the Forestry Training Centre Inc., the agency has moved to set up strategic relationships with a number of agencies (beyond the donors identified in the Project document). Five of the agencies are mentioned below.

FARFAN & MENDES Ltd. (*Vendors of chainsaws and accessories; logging rigs, and lubricants*).

Farfan & Mendes has been very generous in its support for the FTCI. Apart from providing chainsaw service manuals and brochures, the company supported FTCI by giving discounts on a number of chainsaws and accessories. The company liaises with FTCI in the implementation of some of its extension activities. More importantly, the company has donated a number of teaching aids to FTCI: the provision of such aids will be an ongoing activity.

MAORP (*Vendors of Caterpillar tractors-including*

skidders, log-loaders and bulldozers).

MACORP hosted FTCI on a tour of its tractor maintenance facilities. FTCI will be using equipment manufactured by Caterpillar (through the auspices of the Tropical Forest Foundation) in its training programme. MACORP has offered to share training aids for its machinery with FTCI.

BARAMA COMPANY LTD. (The largest forest enterprise in Guyana).

Barama Company Limited (BCL) supported FTCI's *Training of Trainers* course by providing suitable field sites and the use of a few pieces of their heavy logging equipment. BCL is also the first forest enterprise to use the services of FTCI and the company continues to show an ongoing interest in contracting the services of FTCI.

WWF-Guyana (NGO)

WWF-Guyana has shown some interest in the work of FTCI because FTCI provides training that helps forest enterprises meet the requirements for forest certification. RIL training is compatible with the forest conservation objectives of WWF.

TOOLSIE PERSAUD LTD.

Since the TAC chose the concession held by TPL, TPL has allocated an area of 6,500 hectares of prime forests for the use of FTCI. To date, the company has been very generous in allowing FTCI the use of its transport and guest house facilities and several casual labourers. The company has funded the construction of a new building for the exclusive use of FTCI. FTCI expects to have a formal agreement with TPL in place by the completion of its field camp (around May 2004)..

Promoting Sustainable Forest Management through training in Reduced Impact Logging

In its promotion of Sustainable Forest Management through training in Reduced Impact Logging, FTCI offers training for forest managers, supervisors, harvest planners, block inspectors, inventory team leaders, chainsaw operators, skidder and other heavy equipment operators, students, representatives of forest based communities and Non-Governmental Organizations.

Training modules developed by FTCI

- Module 1: Forest Management Planning**
- Module 2: Reduced Impact Logging Concepts**
- Module 3: Introduction to surveying**
- Module 4: The planning & demarcation of blocks**
- Module 5: 100% pre-harvest inventory application in RIL**
- Module 6: Data processing**
- Module 7: Skid trail planning**
- Module 8: Tree marking & liana cutting**
- Module 9: Occupational safety and health**
- Module 10: Bulldozer**
- Module 11: Log market & skid trail construction**
- Module 12: Chainsaw safety**
- Module 13: Cross cutting**
- Module 14: Felling**
- Module 15: Skidder**
- Module 16: Skidding**
- Module 17: Wheel Loader**

Useful tools/aids for forest workers

The image displays a variety of tools and aids used in forestry. At the top, there is a GPS device, a compass, a clinometer, and a diameter tape. Below these are a notebook, a first aid kit, and a field map. Further down, there is a calculator, a safety helmet, a safety vest, and safety boots. On the right side, there is a sign that reads 'AUTHORISED PERSONNEL ONLY' with a red circle and slash over a silhouette of a person walking.

Come to FTCI and let us demonstrate how these aids contribute to higher productivity and worker welfare.

Are you getting good service from your skidder?

Skidders cost a great deal of money. Operator training and adequate maintenance procedures are essential to optimize the use of the skidder, prevent accidents and conserve the forest environment. Owners of skidders (and similar machines) may wish to consider the following questions:

1. Do you use preventive maintenance measures to schedule periodic inspection of the machine (s)?
2. Do you have an adequate record keeping system which tracks maintenance, repairs and inspection?
3. Are your mechanics and maintenance supervisors adequately trained? When? By whom?
4. Do operators conduct pre-trip and post-trip checks?

5. Are there established inspection and reporting procedures for operators?



Let FTCI help you set up systems that address these questions

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