



Smallholder rubber; rapid tree growth at low cost management

PROJECT TITLE	: SMALLHOLDER RUBBER AGROFORESTRY SYSTEM (SRAS)
PROJECT CONTACT	: LAXMAN JOSHI
TIMEFRAME	: APRIL 2004 TO JUNE 2008
FUNDING	: COMMON FUND FOR COMMODITIES
AMOUNT	: \$2.37 MILLION US (\$1.38 MILLION US FROM CFC AND \$993,000 US CO-FUNDING)
LOCATION	: WEST KALIMANTAN, WEST SUMATRA, JAMBI AND SOUTH SUMATRA, INDONESIA AND NORTHERN AND SOUTHERN THAILAND
PARTNERS	: INDONESIA RUBBER RESEARCH INSTITUTE, PRINCE OF SONGKLA UNIVERSITY (THAILAND), UNIVERSITY OF HELSINKI (FINLAND), CENTRE DE COOPERATION INTERNATIONALE EN RECHERCHE AGRONOMIQUE POUR LE DÉVELOPPEMENT (CIRAD), KASETSART UNIVERSITY (THAILAND)

This project is testing and promoting technologies which have the potential to improve the productivity of smallholder rubber agroforestry systems without conversion to monoculture and while maintaining biodiversity.

Indonesia has the world's largest area planted in rubber; some 3.3 million hectares. Currently, the rubber industry is dominated by the smallholding sector which has lower productivity compared to monoculture plantations. Many of the smallholding's rubber plantations are in jungle rubber and farmers lack the management techniques and technologies to improve production.

The project is investigating how improved traditional rubber agroforestry systems, which have low to medium inputs and allow for diversity of farm

income through the use of rubber clones and associated perennial crops, have the potential to be as productive as those of monoculture plantations.

Demonstration/training plots have been established on farmers' fields to develop and test different technologies for improvement using high yielding clones under traditional practice. The technologies include: an environment similar to jungle rubber; rubber intercropping with food crops; different fruit and timber trees; and rubber planting in grasslands using cover crops and fast growing tree species to control weeds.

Through the budwood garden programme, farmers have access to information on improved rubber planting and training in nursery management and grafting techniques. This enables them to affordably



*Non-rubber seedling cultivation (*Shorea macrophylla*) which will be planted among rubber plant*



Rubber cultivation at field



First year of Rubber and dry-paddy intercropping in RAS 1

produce high quality planting material for valuable fruit, timber and other useful species.

The use of tree growth simulation models help determine efficient crop combinations, optimum cropping densities, patterns and practices suitable for different socio-environmental contexts.

Rubber agroforestry, as a non-timber forest production system, is well recognised for its value in conserving biodiversity. One component of this project is to identify how biodiversity can be managed to enhance productivity as well as increase household income.

The adoption of recommended technologies by farmers and any obstacles to adoption has been assessed and cost-benefit analyses carried out for different management techniques and practices. This close monitoring and repeated evaluation has helped fine-tune rubber agroforestry technologies and approaches to ensure optimum benefits to smallholder farmers.

The findings of the project are being disseminated broadly in a range of ways, including practical extension materials in local languages, reports, articles and workshops. The involvement of farmer networks, research and extension professionals has also greatly assisted in the rapid dissemination of results. Findings are made available to local institutions, researchers and national and international organisations amongst rubber producing member countries of the Common Fund for Commodities.

World Agroforestry Centre
ICRAF Southeast Asia Regional Office
Jl. CIFOR, Situ Gede
Sindang Barang, Bogor 16115
PO Box 161 Bogor 16001, Indonesia
Ph: +62 251 8625415, fax: +62 251 8625416
Email: icraf-indonesia@cgiar.org
For addresses of our offices in
Thailand, Philippines, China and Vietnam, see:
www.worldagroforestrycentre.org/sea

