



## Alternatives to Slash-And-Burn

Tropical forests in Asia, Africa and Latin America are being rapidly transformed through slash-and-burn. Traditionally, slash-and-burn is a system for land use — shifting cultivation — based on alternating food cropping periods with periods of regrowth of vegetation (fallow). Increasing population pressure has shortened the fallow periods dramatically, making the system unsustainable in many areas.

Slash-and-burn is also a technique to convert forests into permanent agricultural land, or into other land use practices, including large-scale tree crops (rubber, oil palm, timber). In Asia, shifting cultivation is becoming less common and much of the slash-and-burn is related to permanent conversion of forests by smallholders, large operators and government-sponsored resettlement projects.

The consequences of this are devastating, in terms of climate change, soil erosion and degradation, watershed degradation and loss of biodiversity. The Alternatives to Slash-and-Burn Programme is built around two issues — the global environmental effects of slash-and-burn and the technological and policy options to alleviate those effects. The programme assumes that the development of agroforestry-based forms of intensified landuse as an alternative to slash-and-burn can help to alleviate poverty and improve human welfare. By identifying alternatives to slash-and-burn and providing options from which farmers can choose, the ASB programme aims to provide benefits at a range of scales, from household to global.

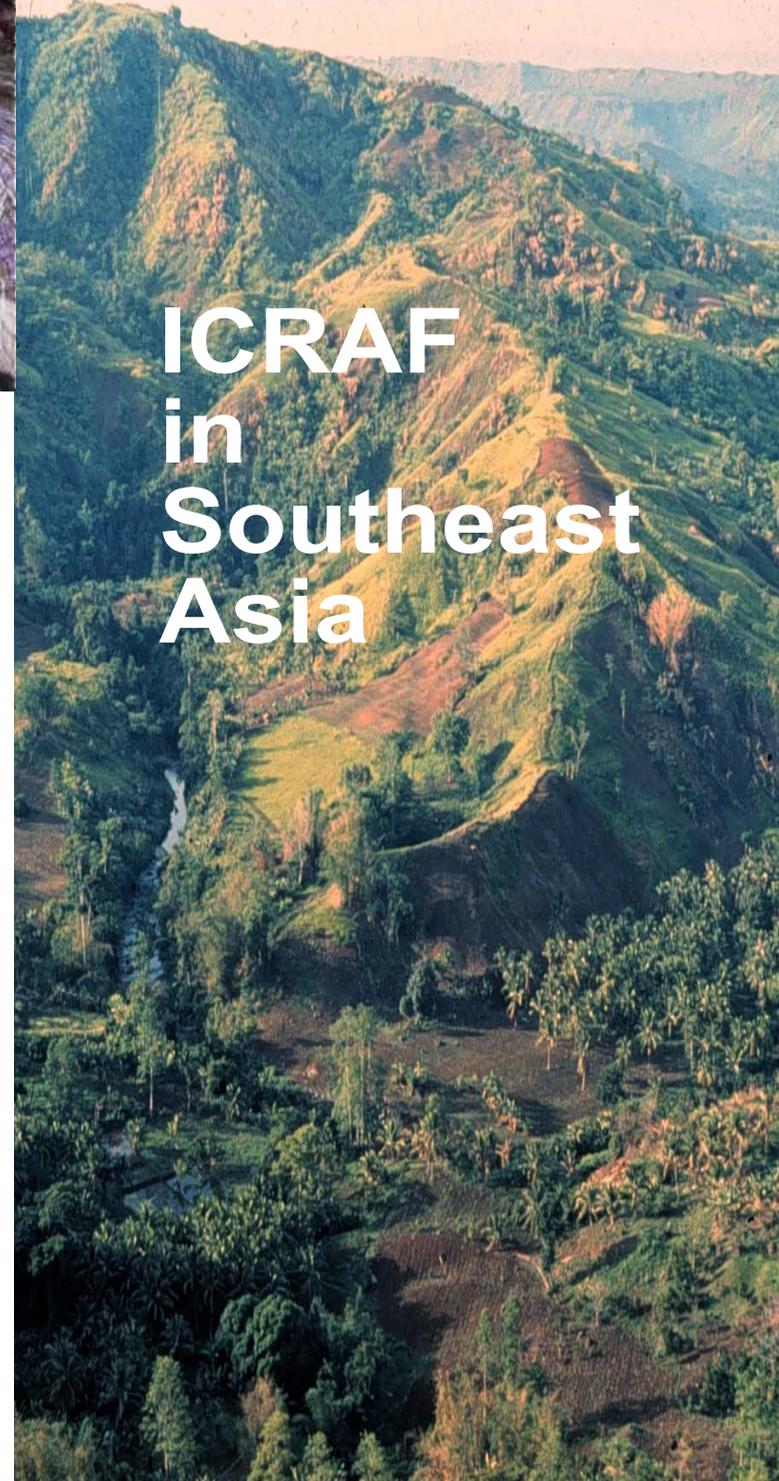
ASB is a system-wide initiative of the Consultative Group on International Agricultural Research. Since it began in 1992, the programme has developed into a consortium of nine international research centres and 62 national research institutes, universities and other government and non-government organizations. ICRAF is the convening centre for ASB because there is a close link between agroforestry options and alternatives to unsustainable slash-and-burn practices. ICRAF's contributes to the ASB Programme in its research in the three humid ecoregions of Latin America, Southeast Asia and the humid lowlands of west Africa.



In Indonesia the peneplain zone of Sumatra is ASB's focus of interest, with research sites in Jambi (low population density, forest margin) and North Lampung (high population density on similar soil, degraded lands). Associated research is carried out in West Lampung (Krui) and West Kalimantan. The Mae Chaem watershed in Thailand, and Claveria and Lantapan in the Philippines, were also chosen as ASB benchmark sites.



# ICRAF in Southeast Asia



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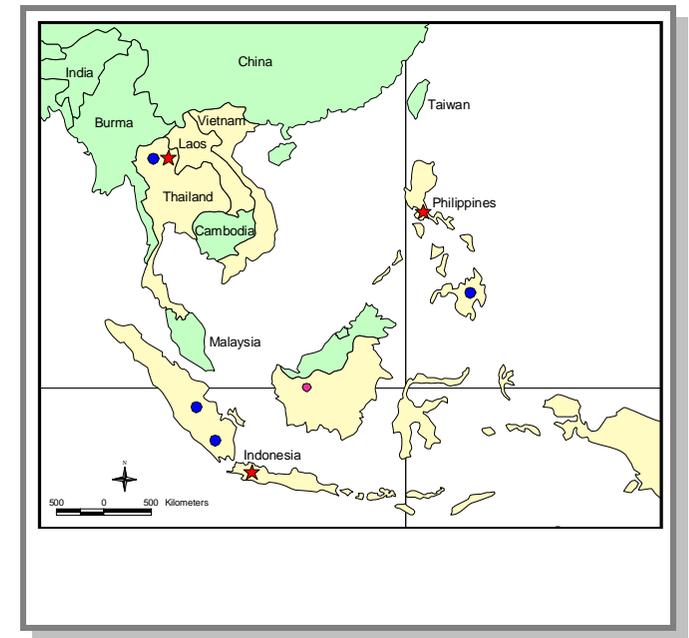
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#### Have you checked our website?

ICRAF now has its own home page.  
The address is <http://www.cgiar.org/icraf>  
And have you subscribed already to ICRAF's magazine *Agroforestry Today*?



THE INTERNATIONAL CENTRE FOR RESEARCH IN AGROFORESTRY



## What is ICRAF?

The International Centre for Research in Agroforestry, ICRAF, is an autonomous, non-profit organization. Our mission is to improve human welfare and enhance environmental resilience in the tropics through improved agroforestry systems.

## What is agroforestry?

Simply put, agroforestry is growing trees on farms. This practice is an ancient one: for millennia, farmers have nurtured trees on their farms and pastures and around their homes. ICRAF has worked at turning this ancient practice and skill into a science — a science now recognized around the world. In addition, ICRAF is working to satisfy the great demand from farmers for techniques and information about propagating and cultivating suitable trees.

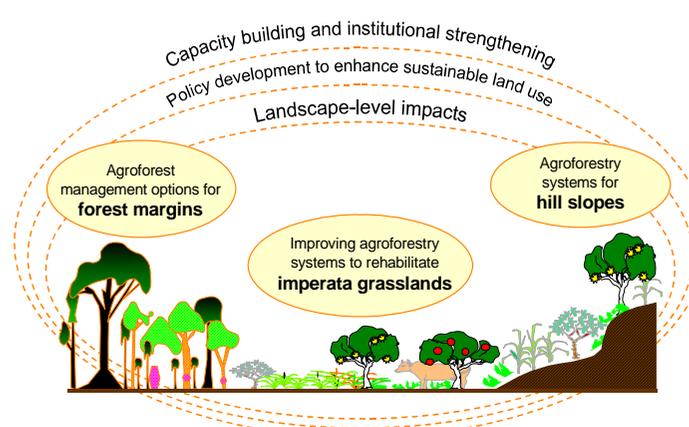
## ICRAF's mission in SE Asia

ICRAF initiated a regional research programme in Southeast Asia in 1992. With its regional headquarters in Bogor, Indonesia, ICRAF's *Southeast Asian Regional Research Programme* is developing alternatives to unsustainable slash-and-burn agriculture and ways to rehabilitate degraded land. We work with many partner institutions, including government research centres in forestry and agriculture, universities, and non-government institutions. Our target ecosystems are:

- **forest margins** or zones of current forest conversion; here we focus on 'complex agroforests' as a sustainable land use,
- **imperata grasslands**, where small-scale agroforestry methods contribute to reclamation of currently underutilized land, and
- **hill slopes**, where natural vegetative strips and other contour hedgerow practices provide a foundation for agroforestry to sustain farming on sloping land.

ICRAF's research and development in SE Asia is undertaken in connection with five themes:

- *National policy constraints to agroforestry and upland resources management* — we elucidate constraints to farmer-led development of agroforestry systems and discusses with policy makers how such constraints can be alleviated
- *Managing landscape-level impacts of land use change* — we determine how interactions between land-use systems in a landscape contribute to overall resource conservation and utilization and how local institutions can address such issues
- *Mitigate land degradation* — we analyse the agroforestry systems that smallholders use to rehabilitate and improve the utilization of degraded lands and we help to develop new options for farmers
- *Agroforests management options* — we analyse and develop options for farmers to improve the profitability of rubber, damar and other types of agroforests
- *Capacity and institutional strengthening* — we build human and institutional resources in agroforestry research, development and educational organizations, through training, information, and a regional agroforestry education network



ICRAF Southeast Asia regional themes

## Where does ICRAF Southeast Asia work?

ICRAF Southeast Asia staff are based in Indonesia, the Philippines and Thailand. Field sites in Indonesia are in Lampung (Krui, Tulang Bawang) and Jambi (Muara Bungo) provinces on the island of Sumatra. Rubber agroforestry research is also undertaken in Sanggau, West Kalimantan. In the Philippines research is undertaken in Claveria and Lantapan on the island of Mindanao. On mainland Southeast Asia ICRAF works in the Mae Chaem watershed of northern Thailand.

Recently, capacity building activities have started in Vietnam and Lao PDR in collaboration with our partners, through ICRAF's Development Division.

## Who benefits from ICRAF's work?

The ultimate beneficiary is the farmer. ICRAF works on government policy reform as well as on enlarging farmers technical options in direct collaboration with NGOs, universities, regional and national research and development institutes. In all field sites ICRAF collaborates with national partners. Through its global coverage ICRAF contributes and has access to a global knowledge base and can offer solutions proven to be successful elsewhere.