



Alternatives to Slash-And-Burn

Slash-and-burn stands for a **technique** used in converting forests into agricultural use, as well as for a **system of land use** ('shifting cultivation') based on an alternation of food cropping periods and periods of regrowth of vegetation ('fallow'). Slash-and-burn as a technique is used for the major part of tropical deforestation in Asia, Africa as well as Latin America. Shifting cultivation based on annual food crops is less common in parts of Asia and much of the slash-and-burn now is related to conversion for other land use practices, including tree crops (rubber, oil palm, timber) by smallholders or large operators, or for government-sponsored resettlement projects.

The consequences of this, in terms of climate change, soil erosion and degradation, watershed degradation and loss of biodiversity are devastating. The Alternatives to Slash-and-Burn (ASB) programme is built around two issues-the global environmental effects of slash-and-burn agriculture and the technological and policy options to alleviate those effects. The programme also operates under the hypothesis that the development of agroforestry-based forms of intensified land-use as an alternative to slash-and-burn can help to alleviate poverty and improve human welfare. By identifying 'best-bet alternatives' to slash-and-burn and a menu of 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 systemwide initiative of the CGIAR (Consultative Group on International Agricultural Research). Since its conception in 1992, the programme has now developed into a multi-institutional research consortium of 9 international research centres and 62 national research institutes, universities and other governmental and non-governmental organizations. ICRAF was selected as the convening centre for ASB due to the very close link between agroforestry options and alternatives to unsustainable slash-and-burn practices. ICRAF's contribution to the ASB Programme is all of its research in the three humid ecoregions of Latin America, SE Asia and the Humid Lowlands of West Africa.

In Indonesia the penneplain zone of Sumatra was chosen as a 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 in West Kalimantan. In Thailand the Mae Chaem watershed, and in the Philippines Claveria and Lantapan, were chosen as ASB benchmark sites.



Who benefits from ICRAF's work?

The ultimate beneficiary is the farmer. ICRAF works on governmental policy reform as well as on enlarging farmers technical options in direct collaboration with NGO's, universities, regional and national research and development institutes. In all fieldsites 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.



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Have you checked our website?

ICRAF now has its own home page with a lot of useful information. Have you subscribes already to ICRAF's magazine Agroforestry Today?
Homepage: <http://www.cgiar.org/icraf>



What is ICRAF?



We are
The International Centre for Research in Agroforestry



A World Centre for Trees on Farms

What is ICRAF?



The International Centre for Research in Agroforestry, ICRAF, is an autonomous, non-profit organisation established in 1977. ICRAF is a member of the Consultative Group on International Agricultural Research (CGIAR). It is governed by an international Board of Trustees and funded from voluntary contributions from a host of bilateral, multilateral and private donors.

ICRAF's goal is to help to alleviate tropical deforestation, land depletion and rural poverty through the development and promotion of improved agroforestry systems.

ICRAF is highly decentralised: 51% of our staff are based at headquarters in Nairobi and 49% are outposted in 13 countries; of the 150 professional staff members, 105 are in Africa, 23 in Southeast Asia and 7 in Latin America.

ICRAF carries out research in 6 ecoregions in collaboration with *National Agricultural Research Systems (NARS)*, one of which is the humid tropics of Southeast Asia. These 6 regions represent a range of environmental and socio-economic conditions that contribute to improved agroforestry systems and extrapolate research results to other geographical areas.

ICRAF is organised in two divisions:

The research division is organized in three programs:

1. **Natural Resource Strategies and Policy:** determines how farmers' management of natural resources in agroforestry systems interacts with markets, government policies and the physical environment, working towards a more favourable policy framework for agroforestry.
2. **Domestication of Agroforestry Trees:** develops ways to manage and improve the tree germplasm used in agroforestry systems.
3. **Ecosystem Rehabilitation:** focuses on the tree-soil-crop interactions in agroforestry systems and landscape functions of agroforestry.

The newly established development division has two tasks:

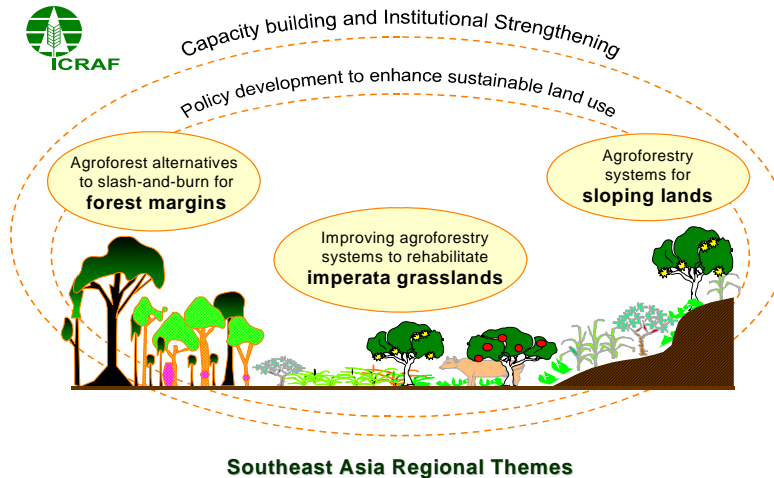
4. **Systems Evaluation and Dissemination:** compares existing and 'improved' versions of agroforestry systems and through a process of on-farm testing, helps disseminate them to farmers everywhere.
5. **Capacity and Institutional Strengthening:** aims at strengthening of local human resources and institutions involved in agroforestry training and education.



ICRAF's mission in SE-Asia

The Centre initiated a regional research programme in Southeast Asia in 1992. The objective is to implement ICRAF's mission in the unique agroecological and institutional circumstances of the nations of Southeast Asia. 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 degrading uplands. We engage in this mission with many partner institutions, including government research centres in forestry and agriculture, universities, and non-governmental 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.

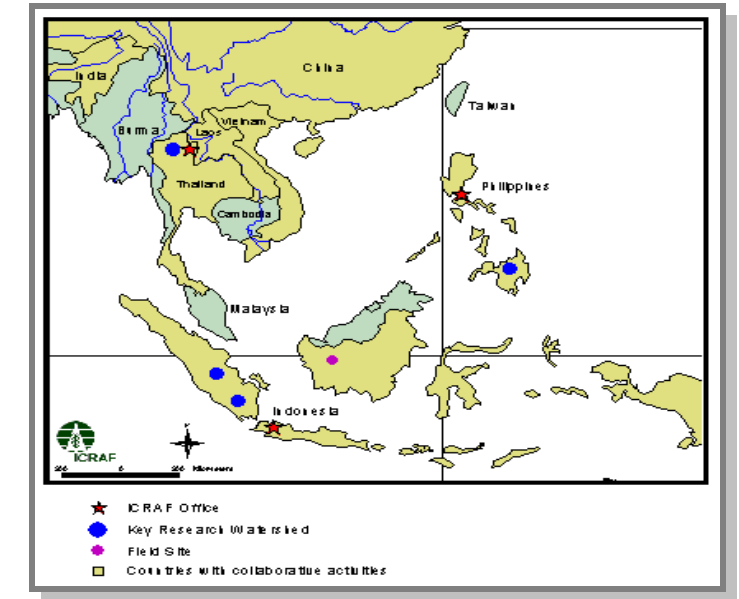


Research and capacity-building is undertaken in connection with all of ICRAF's global programmes. These themes include policy development for sustainable land use, strategic research on understanding the impacts of agroforestry systems at the watershed level, the domestication of agroforestry tree species that provide income to farm families and environmental services, and a range of other technical research related to improved agroforestry systems.



Where does ICRAF SE-Asia work?

ICRAF SEA staff are based in Indonesia, Philippines and Thailand. Fieldsites in Indonesia are located in Lampung (Krui, Tulang Bawang) and Jambi (Muara Bungo), both 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 in Northern Thailand.



Recently capacity building activities started in Vietnam and Lao PDR in collaboration with our partners, through the Centre's new Development Division. Offices, fieldsites and collaboration countries are illustrated on the map above.

