



Policybriefs

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WELCOME to the new series of policy briefs from the Alternatives to Slash-and-Burn (ASB) Programme. This first number in the series will introduce ASB and the issues it deals with. It will also explain what ASB hopes to achieve through the series.

HIGHLIGHTS

What is ASB?

Demystifying slash-and-burn

From analysis to action

ASB's Policybriefs series



● ASB Sites

■ Tropical and Subtropical Moist Broadleaf Forests

Source: WWF Global 200 Ecoregions (WWF 2001)

K. Sebastian, S. Wood

ASB is a global alliance of institutions tackling the interlinked problems of poverty and deforestation in the humid tropics. It is launching a series of policy briefs to identify and transfer policy innovations that will promote equitable development while protecting the environment.

What is the ASB global partnership?

ASB is a global partnership of over 50 institutions around the globe with a shared interest in two of the greatest challenges confronting the world today: conserving forests and reducing poverty in the humid tropics. The global programme unites research institutes, non-governmental organisations, universities and other partners, each of which brings different strengths to the analysis of problems and the development of solutions. Its aims are to:

- provide fora for exchanging information, developing consensus and managing conflicts at the local, national, regional and global levels
- identify and test innovations that will help eradicate poverty while simultaneously curbing the environmental problems associated with deforestation
- build capacity of the national ASB consortia to promote equitable and sustainable rural development

ASB national consortia conduct research at benchmark sites which span the humid tropics (see map) in Peru, Brazil, the Philippines, Thailand, Indonesia and Cameroon. Although the benchmark sites represent similar agro-ecological

environments characteristic of the humid tropics, the varying socio-economic and political conditions found at each site make for valuable comparative analyses and cross-site learning. The partners at each site use participatory methods to understand land users' problems and evaluate opportunities for alleviating them. They also engage in dialogue with local and national policy makers to explore their perceptions of needs. The aim is to develop innovations that will resolve conflicts over resources and promote their more sustainable and productive use. These innovations may be policies, institutional reforms or technologies—or more often a combination of the three.

Through thematic working groups that link research across different sites, ASB researchers also explore issues of broader global significance. Four such groups address biodiversity (above and below ground), climate change mitigation and sustainable land-use mosaics. A fifth synthesises the consortium's findings and draws out the global implications.

Demystifying slash-and-burn: the problem and the alternatives

Tropical forests serve the needs of a complex hierarchy of different groups whose interests sometimes coincide, but more often conflict. The most disadvantaged group is indigenous forest dwellers, whose traditional way of life based on hunting and gathering is increasingly disrupted by the influx of other, more destructive forest users. The largest of these immigrant groups is smallholder farmers, each of whom typically clears a small area of forest in order to survive by growing crops, raising livestock, or a combination of the two. Fewer in number but destructive on a larger scale are the big, profit-oriented companies and other interests in the private or public sector to which governments allocate large areas of forest as logging concessions or for conversion to ranches or plantations. Outside the forests altogether stands the international community, which wishes to conserve as much forest as possible in the interests of saving biodiversity and storing atmospheric carbon to stave off global warming and stabilise weather patterns.

Most people associate the slashing and burning of forest with the second of these groups, smallholder farmers. However, ASB research has confirmed that this practice is used by virtually everyone who converts forest to other uses, for the simple reason that it is cheaper and more effective than any other method.

Slash-and-burn gives rise to three major environmental problems, two of them global in their effects and one local or regional. It releases carbon dioxide, the major greenhouse gas contributing to global warming. It entails the loss of biodiversity—the myriad plants and animals that inhabit the forest, sustain its ecosystems and harbour potentially valuable genetic diversity. And it produces smoke, causing respiratory diseases and the loss of productive working time in addition to a host of other problems such as disrupted travel schedules and reduced income from tourism.

Slash-and-burn is often associated with the production of annual crops in what is known as a shifting cultivation

system—one in which farmers reap good harvests at first but must move on to new areas after a few years as their yields collapse under the combined onslaught of weeds, insect pests, diseases and declining soil fertility. Improving the productivity and sustainability of these systems is an important route out of poverty for millions of people in the humid tropics. However, it is debatable whether or not it will reduce the overall amount of slash-and-burn practised. Why? Because if farming becomes more profitable, more people will be attracted into it, increasing the numbers migrating in search of new forest areas to clear.

All this means that slash-and-burn is likely to remain with us for the foreseeable future. If its negative environmental effects cannot be avoided altogether, can they at least be reduced? And, if slash-and-burn is to be practised, are there ways of ensuring that the production systems that follow it are agronomically sustainable and contribute to poverty reduction?

ASB researchers have studied the major production systems that manage or replace natural forests and quantified them in terms of potential contributions to household food security, local livelihoods, sustainable growth, biodiversity conservation and carbon storage. The results show that, while none of the systems studied can substitute for primary forests in terms of biodiversity and carbon storage, some systems do strike a reasonable balance between conservation and development objectives. Smallholder tree-based systems and community-based forest management, in particular, can achieve equity and growth objectives while at the same time storing more carbon and conserving more biodiversity than do annual cropping systems.



T. Tomich

From analysis to action

ASB is currently working on ways to promote the adoption of these more beneficial production systems. This effort is one of several new initiatives designed to achieve impact by applying the knowledge gained from the programme's past research. It will be accompanied by increased support for the formulation and implementation of relevant policy and institutional innovations. ASB will also fill information gaps regarding local environmental services at the landscape level such as erosion control and water supply. Finally, it will place more emphasis on empowering local groups to monitor their changing environment and manage resource conflicts at various levels.



T. Tomich

ASB's Policybriefs series



D. Looßen

ASB's work has shown that the policy environment critically affects the outcome of efforts to reduce poverty and deforestation in the humid tropics. The consortium supports decision making by policy makers in two major ways: by developing tools and methods that allow dispassionate analysis of the issues associated with forest conservation and conversion; and by disseminating the knowledge and experience gained in dealing with these issues.

The methods already used by ASB to disseminate knowledge and experience include workshops and detailed project reports focusing mainly on specific countries. But until now the consortium has had no vehicle for distilling the lessons derived from experiences at the local or national levels for a broader, international audience. This new series will be that vehicle.

What topics will be covered and how? Examples include the quantification of carbon storage and the trade-off between biodiversity and profitability in different land-use systems, the relationships between property rights and land use, and the measures that can be taken to control smoke from land clearing. In each case, the approach taken will be to integrate environmental and developmental perspectives and to combine biophysical knowledge with insights into social and economic realities.

Our aim is to deliver relevant, concise reading to key people whose decisions will make a difference to poverty reduction and environmental protection in the humid tropics.

ASB's Policybriefs series



Agency for Agricultural Research and Development, Indonesia

AARD coordinates, manages and conducts agricultural research and development in accordance with policies of the Ministry of Agriculture and national development programmes.



Empresa Brasileira de Pesquisa Agropecuária, Brasil

Embrapa provides feasible solutions for the sustainable development of Brazilian agriculture by generating, adapting and transferring knowledge and technology that benefit Brazilian society.



Instituto Nacional de Investigación Agraria, Perú

INIA aims to generate and transfer technologies, so as to contribute to the sustainable development of the agrarian sector and to increase agricultural productivity in Perú.



Institut de Recherche Agricole pour le Développement, Cameroon

IRAD conducts basic and applied research to increase Cameroonian food security and welfare by improving agricultural production and productivity while conserving biodiversity and protecting the environment.



Philippine Council for Agriculture, Forestry and Natural Resources Research and Development, Philippines

PCARRD ensures that research and development policies, programmes and activities of the Philippines benefit the people and the industries dependent on agriculture and forestry for their income and livelihood, and that they are environmentally sustainable.



Royal Forest Department, Thailand

RFD's mission is to manage the natural resources of Thailand in an ecologically sustainable manner with the cooperation and participation of local people and communities.



Centro Internacional de Agricultura Tropical

CIAT is a nonprofit, nongovernment research organisation dedicated to alleviating hunger and poverty in developing countries in the tropics through collaborative research that improves agricultural productivity and natural resource management.



Center for International Forestry Research

CIFOR contributes to the sustained well-being of people in developing countries, particularly in the tropics, through collaborative strategic and applied research and related activities in forest systems and forestry, and by promoting the transfer of appropriate new technologies and the adoption of new methods of social organisation for national development.



World Agroforestry Centre (ICRAF)

ICRAF aims to reduce rural poverty, increase food and nutritional security and enhance ecosystem resilience in the tropics through improved agroforestry systems.



International Food Policy Research Institute

IFPRI's mission is to identify and analyse policies for sustainably meeting the food needs of the developing world, concentrating on economic growth and poverty alleviation in low-income countries, improvement of the well-being of poor people, and sound management of the natural resource base that supports agriculture.



International Institute of Tropical Agriculture

IITA's mission is to enhance the food security, income and well-being of resource-poor people, primarily in the humid and sub-humid zones of sub-Saharan Africa, by conducting research and related activities to increase agricultural production, improve food systems and sustainably manage natural resources, in partnership with national and international stakeholders.



Tropical Soil Biology and Fertility Institute

TSBF aims to contribute to human welfare and the conservation of environments in the tropics by developing adoptable and sustainable soil management practices that integrate the biological, chemical, physical and socio-economic processes that regulate soil fertility and optimise the use of organic and inorganic resources available to land-users.

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ASB was founded in 1994 as a system-wide programme of the Consultative Group on International Agricultural Research (CGIAR). It is convened by the Nairobi-based World Agroforestry Centre (ICRAF) and is governed by a global steering group of 12 representatives from participating institutions.

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