

# Forest and Agroecosystem Tradeoffs in the Tropics

The Millennium Ecosystem Assessment (MA) is the most ambitious study ever undertaken of the relationship between the world's ecosystems and human well-being. The Alternatives to Slash-and-Burn Programme (ASB) was chosen as the only cross-cutting assessment working across regions in the tropics.

## ASB/MA Structure

### Part I. Overview

ASB/MA scope, context, and methods

Landscape mosaics at tropical forest margins

Users and synthesis of their needs

### Part II. Ecosystem services, Conditions and Trends

**Goods** - food, fiber, feed, etc

#### Services

Water supply  
Carbon sequestration  
Air quality  
Nutrient supply  
Regulation of pests and diseases  
Cultural and spiritual values

#### Resource base

Soil / soil formation  
Biological diversity  
Ecological knowledge

**Human well-being, sustainable livelihoods, and poverty reduction**

#### Ecosystem resilience

### Part III. Ecosystem Dynamics

**Driving forces** of land cover change

#### Scenarios

#### Responses

### Part IV. Synthesis

User perspectives, needs, aspirations

#### Tradeoffs

Winners and losers (with reference to user needs)

Responses (strategies and interventions in light of tradeoffs)

## ASB/MA Scope

ASB's proposed cross-cutting assessment will contribute to the MA at the following scales:

**Local:** Eight ASB benchmark sites in 6 countries: Peru (1), Brazil (2), Philippines (1), Indonesia(2), Cameroon(1), Thailand(1).

**National:** Six countries with existing ASB national consortia (Peru, Brazil, Cameroon, Thailand, Indonesia, and the Philippines).

**Continental:** The crosscutting assessment spans the tropics, including four continental units on three continents: Western Amazonia in the Neotropics; Central African forests of the Afrotropics; Insular Southeast Asia (Sumatra and Mindanao) and Montane Mainland Southeast Asia (centered on Northern Thailand).

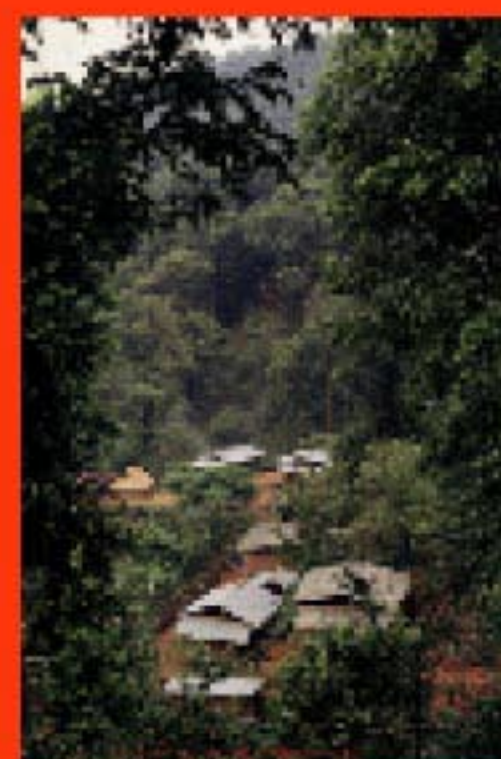
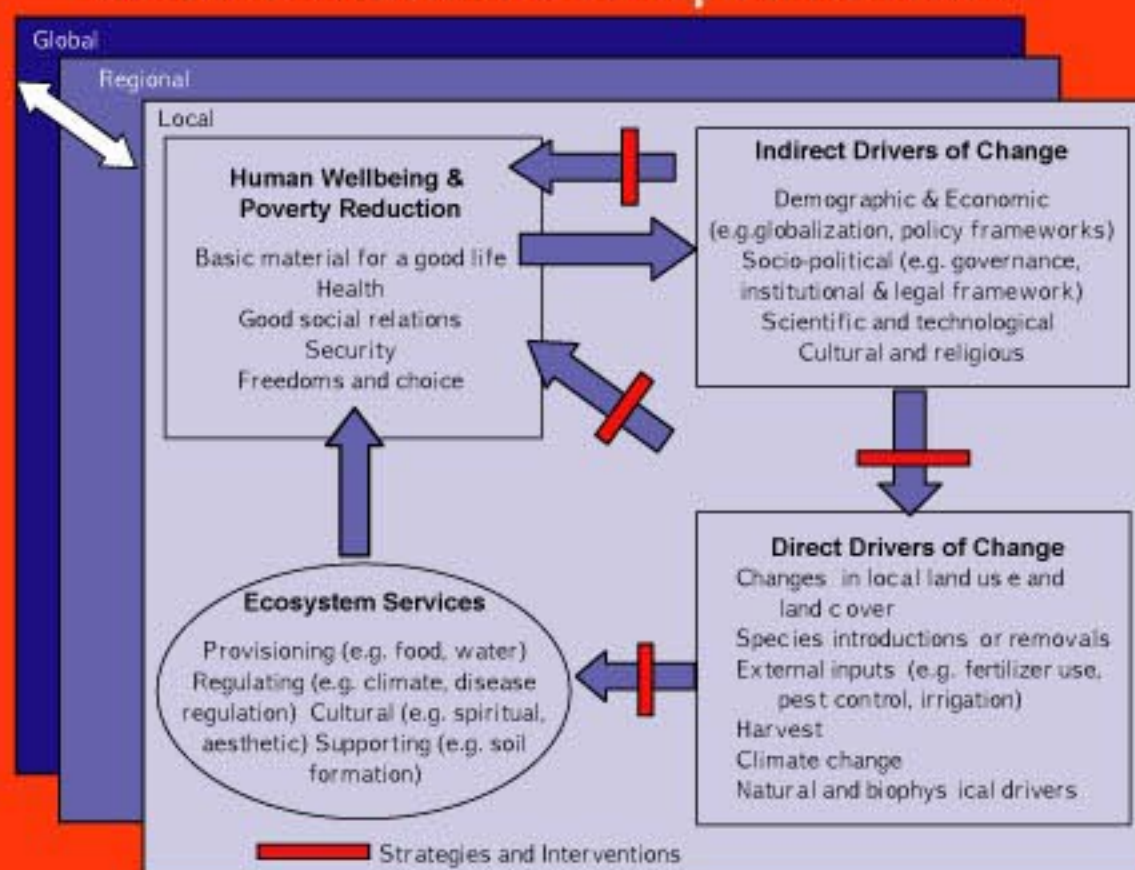
**Biome:** All ASB sites are located within the Tropical and Subtropical Moist Broadleaf Forest Biome, delineated in the Global 200 Ecoregions database of the WWF (WWF 2001), with a human population of some 500 million. The national and continental assessments will be restricted to areas within this biome.

As one among several sub-global assessments of the MA, the Alternatives to Slash-and-Burn System-wide Programme (ASB) is conducting a cross-cutting assessment entitled "Forest and Agroecosystem Tradeoffs in the Humid Tropics". This will entail a nested, multi-level, multi-user assessment of the interface between tropical forest ecosystems and forest-derived agroecosystems, focusing on the landscape mosaics that characterize the forest margins. The national ASB consortia, which include local user groups at the ASB benchmark sites, have the potential to become vehicles for participation by diverse groups within the countries concerned, and thus a platform for user-driven ecosystem assessment and ultimately for conflict management.

## Methodology

The ASB contribution to the Millennium Assessment will be based on ten years of research by ASB partners across the humid tropics. The analysis of results will be done using the MA conceptual Framework (see below).

## Millennium Assessment Conceptual Framework

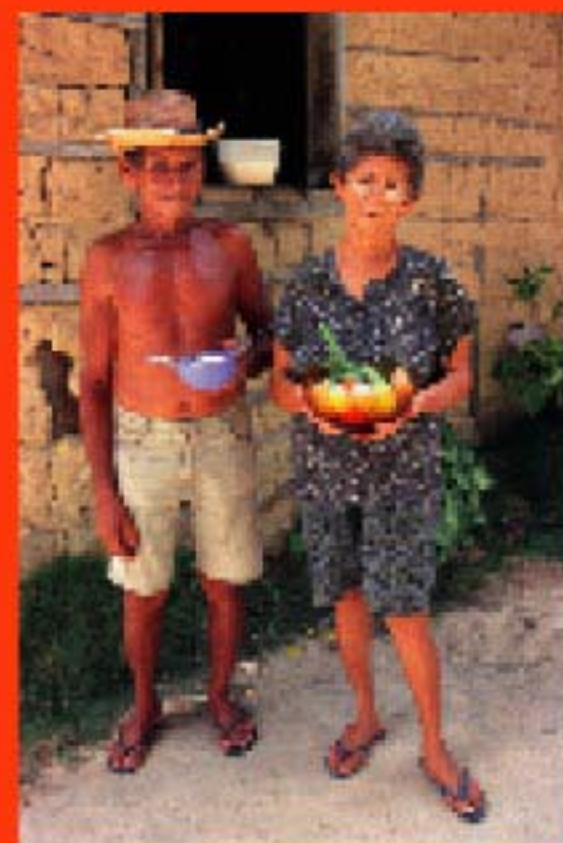


## ASB/MA components

Three components are intended for assessment at each scale of the MA: **Conditions (circa 2000) and trends (1995-2000)**. This includes assessment of driving forces of land cover change; identification of indicators of environmental, social, and economic impacts; assessment of winners and losers, with particular attention to poverty reduction, and valuation of goods and services.

**Scenarios (2000-2030)**. Capacity building for scenarios development on driving forces (e.g., migration and demographic transition, economic transformation, market integration, climate change) useful to ASB's partners.

**Response options**. The basic goal of ASB is to identify and test response options: combinations of policy, institutional and technological options that can raise productivity and income of rural households without increasing deforestation or undermining essential environmental services.



## Assuring credibility, usefulness and legitimacy

A comparative approach to local and national user needs assessment, based on protocols developed for the ASB/MA crosscutting assessment, will increase practical understanding of challenges at specific sites.

They will also lead toward generalizable insights regarding the most effective and efficient means to develop and support effective frameworks for participation by key local and national stakeholders in seeking solutions when there are conflicting interests regarding ecosystem services.

These activities are fundamental to ensuring the usefulness, credibility, and legitimacy of the ASB crosscutting assessment and also may provide valuable insights for future ecosystem assessments.

The first of a series ASB/MA user needs assessments was done in Peru (July 2003). These consultations will be replicated in Cameroon and Indonesia (2004).



[www.millenniumassessment.org](http://www.millenniumassessment.org)