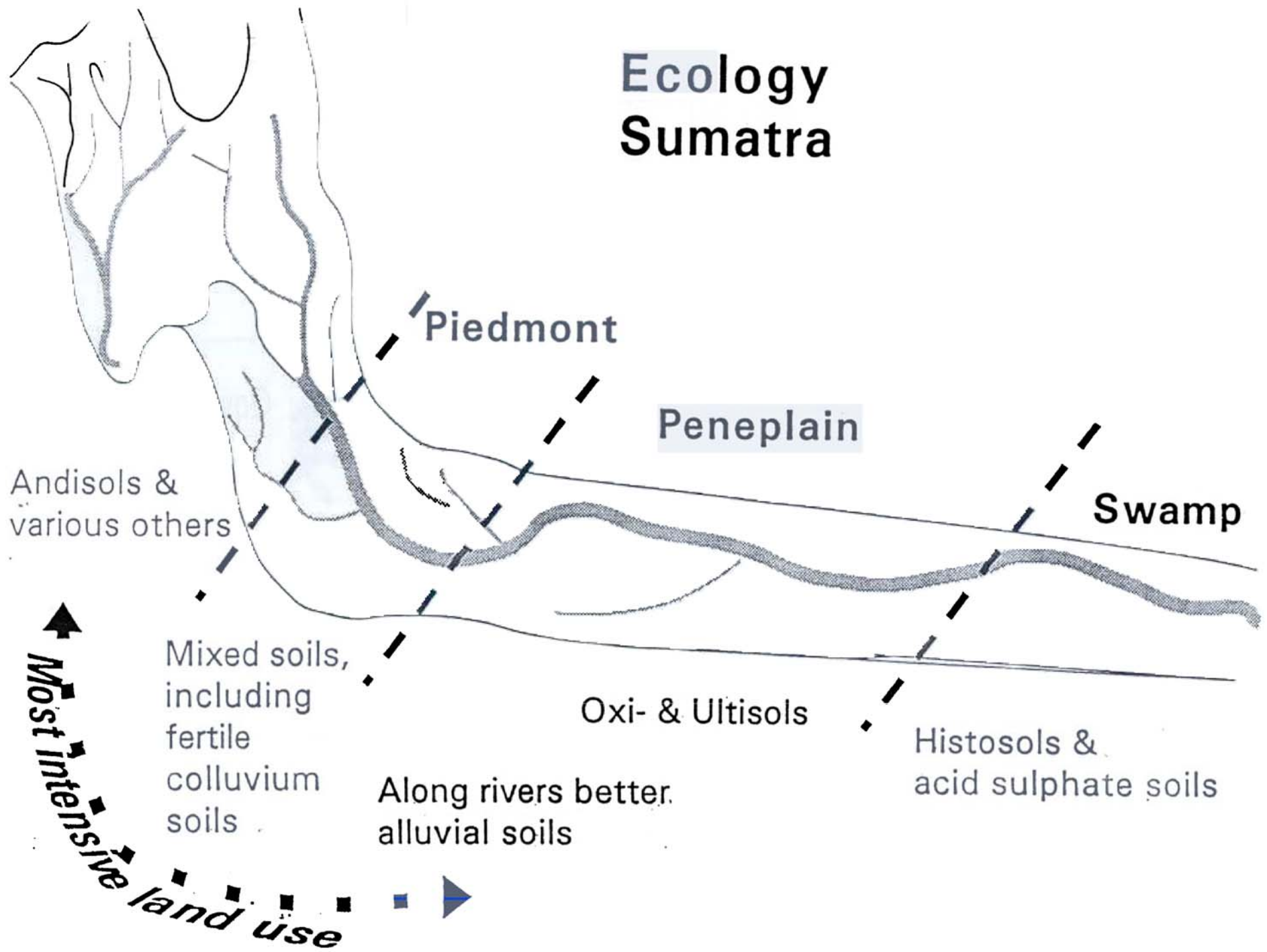
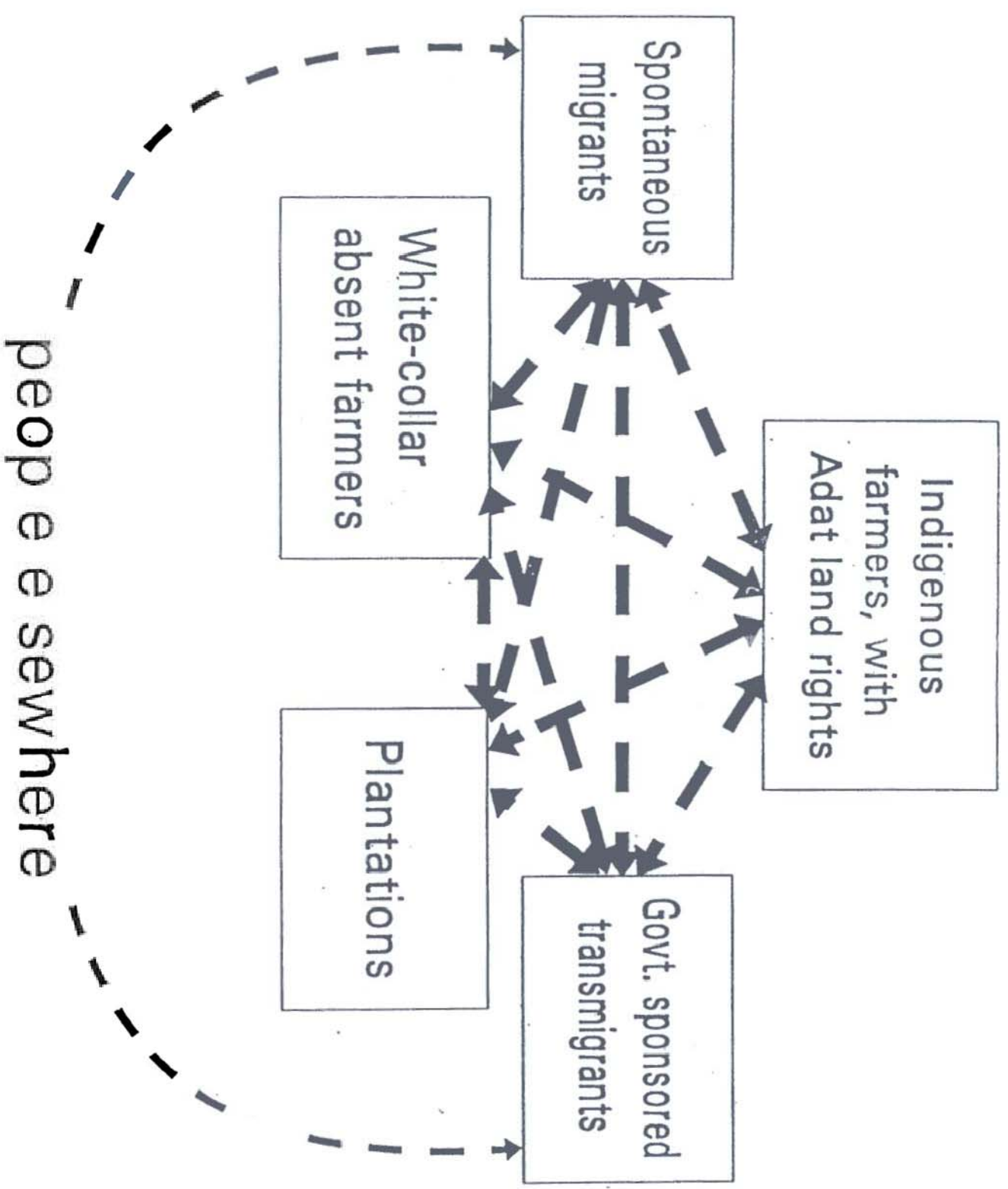
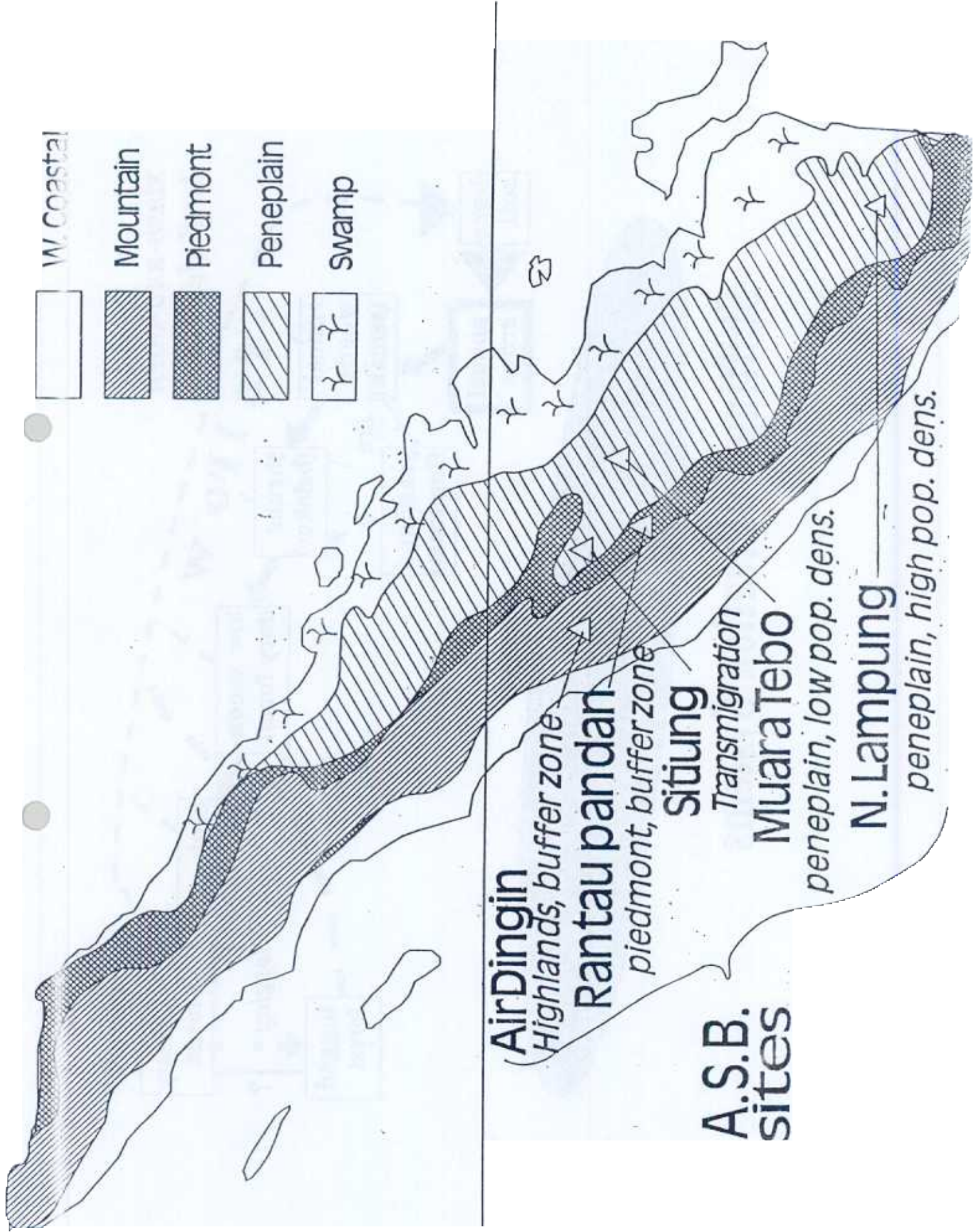


# Ecology Sumatra



*n the Slash and Burn project*





W. Coastal



Mountain



Piedmont



Peneplain



Swamp



**AirDingin**  
*Highlands, buffer zone*

**Rantau pandan**  
*piedmont, buffer zone*

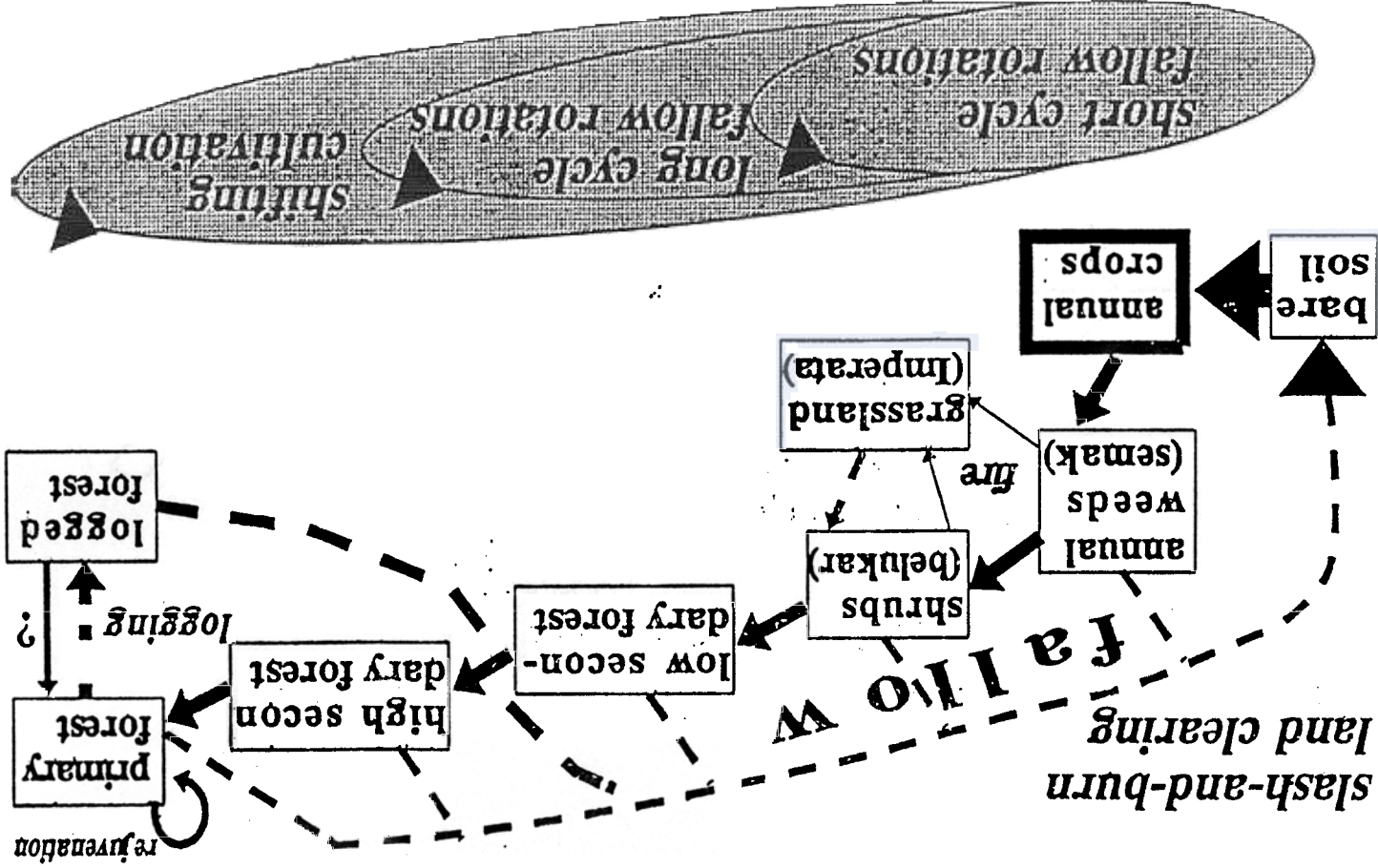
**Sitiung**  
*Transmigration*

**Muara Tebo**  
*peneplain, low pop. dens.*

**N. Lampung**  
*peneplain, high pop. dens.*

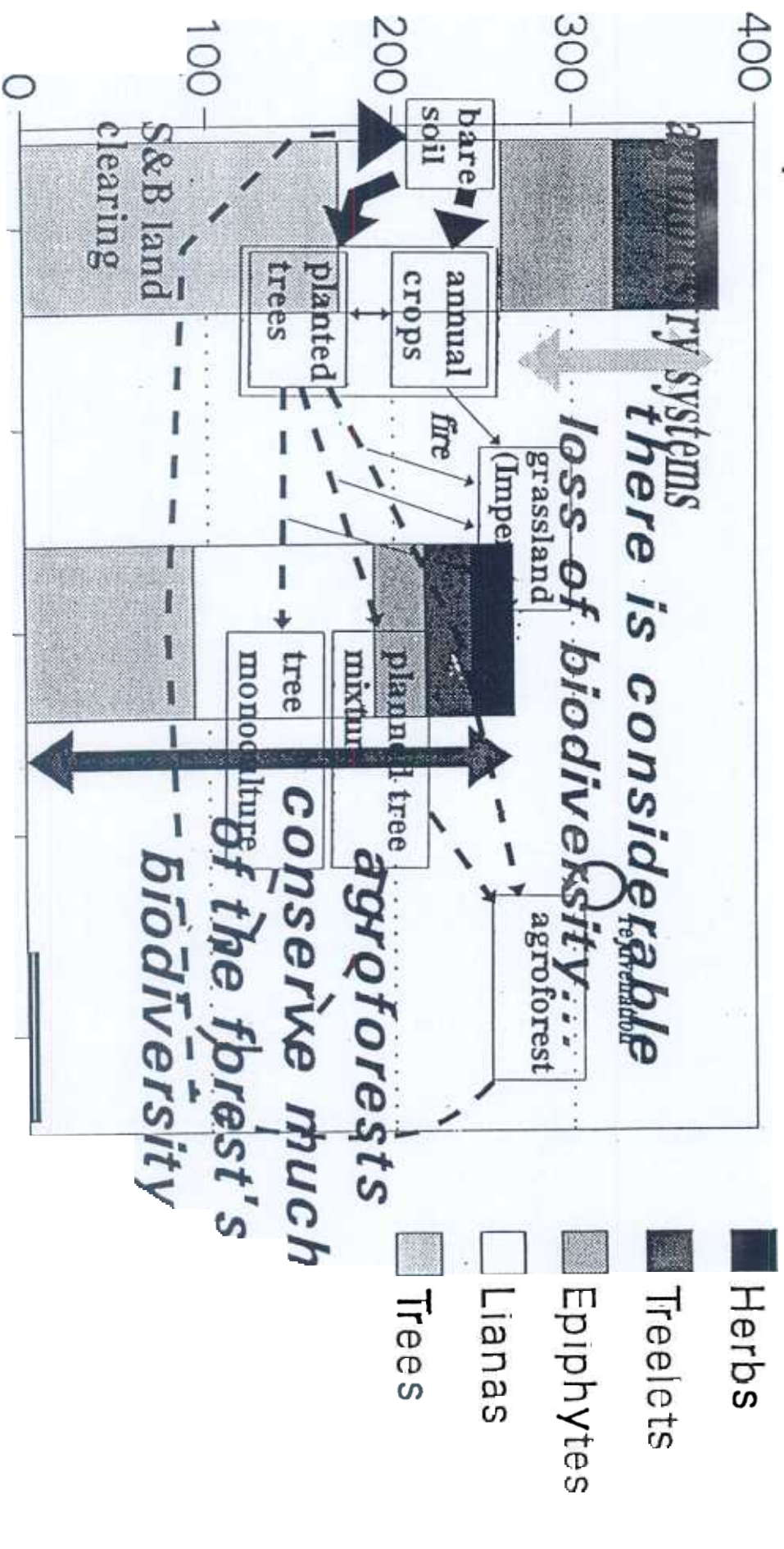
**A.S.B. sites**

# Shifting Cultivation Systems

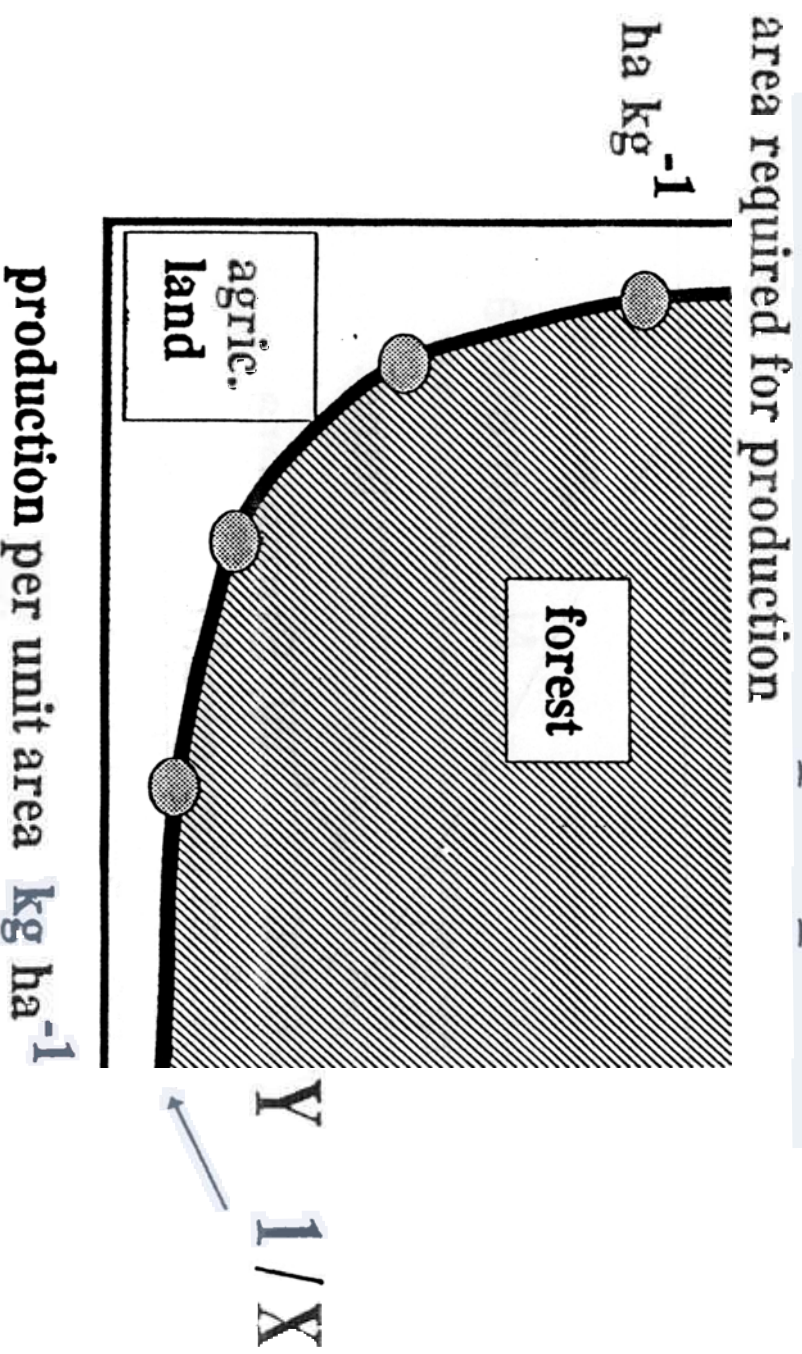


# Two perspectives on biodiversity of agroforests

Species richness

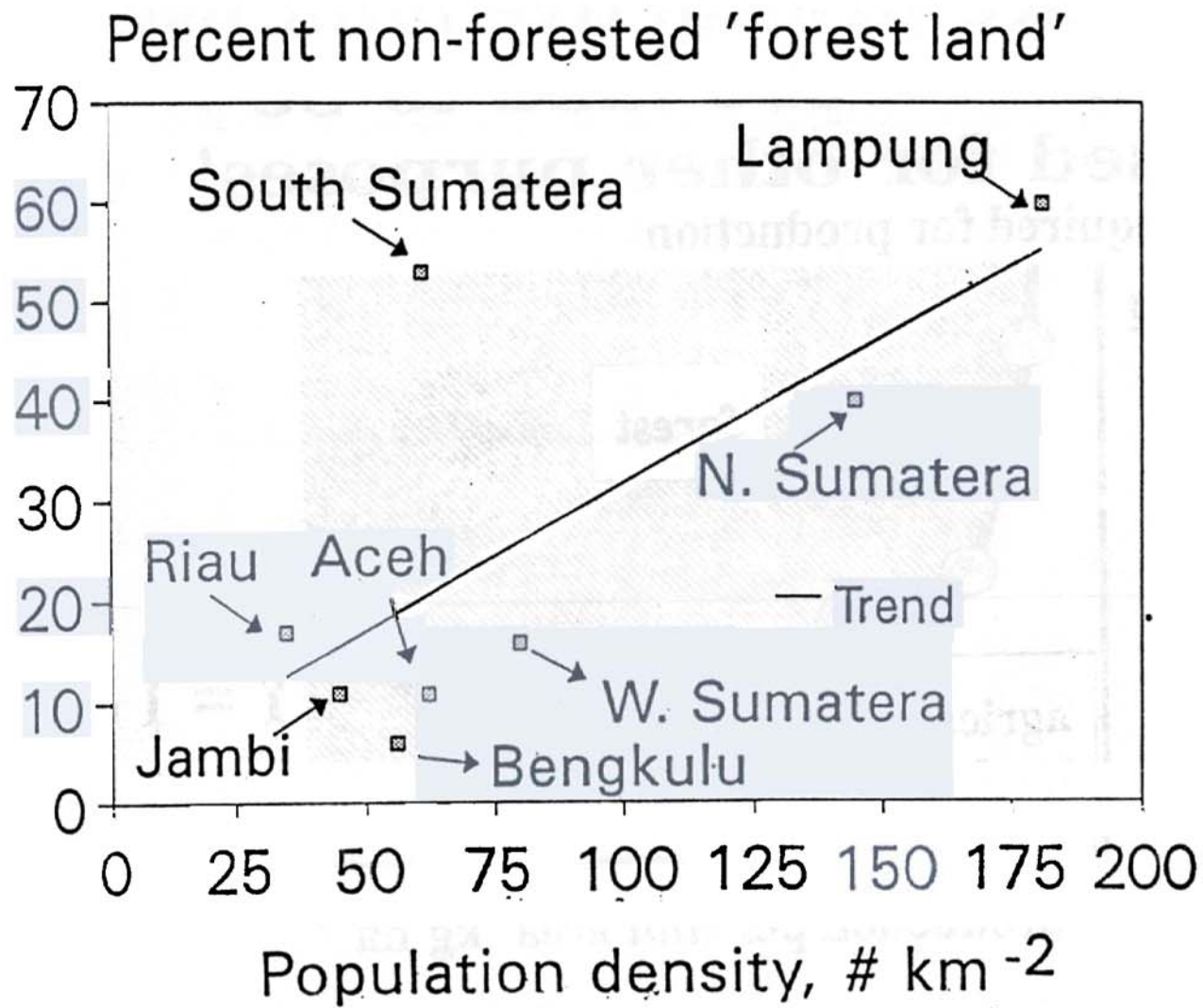


# 'More productive land use allows more land to be used for other purposes'

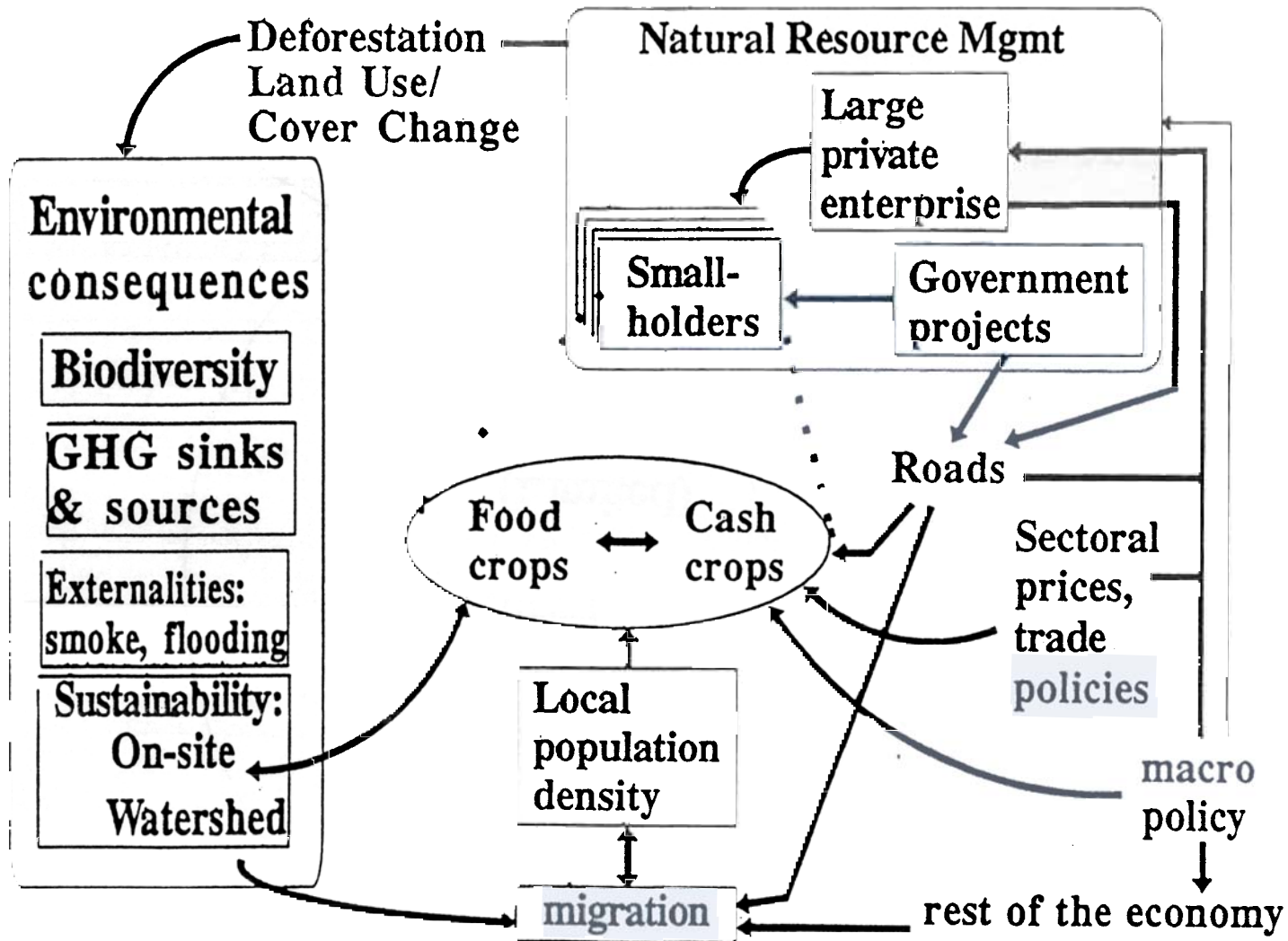


# Forest Damage in Sumatera

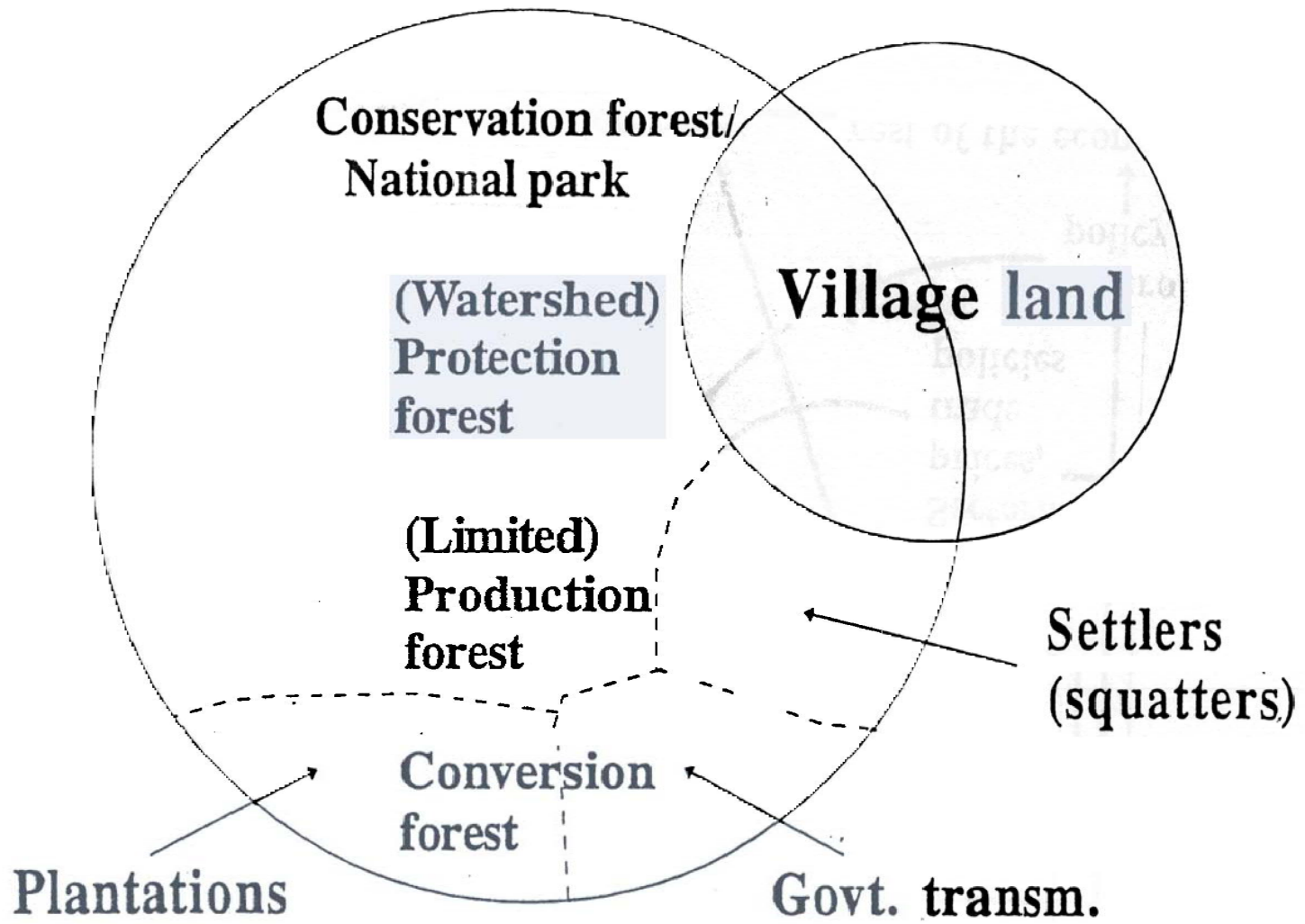
## All forest categories



Source: Hermian Haeruman (1992), RePPProT (1990)







**Table 1. Policy Research Agenda.**

Agenda Item	Scale	Policy Questions	Research Methods	Policy Instruments	Clients
Agroforestry systems	Field/ household	Are productivity increases economically feasible? If so, with what environmental consequences?	Analysis of: opportunities and constraints; failures in markets and policies.	Research and extension; trade and price policy; exchange rates.	Smallholders; NARS; ministries of agriculture, forestry, and finance; donor agencies.
Land and tree tenure	Community	What (if any) government interventions are feasible and desirable to improve incentives for natural resource management? (See Table 2 for specific policy domains.)	1. Process-oriented research on institutional reform. 2. Econometric models.	Institutional endowments (customary, formal, NGO); land use policy; specific programmes.	Smallholders; NARS; NGOs; ministries of internal affairs, agriculture, and forestry; donor agencies.
Public investment in infrastructure	Benchmark	What factors influence land use changes as a result of road construction?	GIS-based spatial econometric models of interactions.	Infrastructure investment; fiscal policy	Ministries of public works, planning, and finance; donor agencies.
Macro-micro links affecting migration and marketing	National	How do macro-economic and trade policies affect land use change?	Multi-market and/or CGE models.	Macro-economic and trade policies.	Ministries of planning and finance; donor agencies.

**Table 2. Forest Policy Domains.**

Policy Domain	Policy Problem
Buffer zones at the margins of national parks and nature reserves or at the margins of forests designated for conservation and protection.	Identify incentive structures and/or regulations that minimize costs of monitoring and enforcement of forest boundaries.
Margins of production forests, including village forests.	Identify policies and institutional mechanisms to create incentives for profitable and sustainable forest resource management.
Degraded forests and watersheds, including both <i>Imperata</i> grasslands and deforested highland hillsides.	Identify policies and institutional mechanisms to remove disincentives to reforestation.