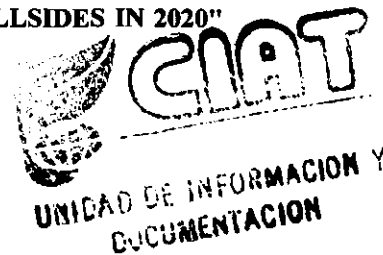


**NO NEED FOR STRAWDOGS: COMMENTS ON "LIVING ON THE EDGE:  
CRAFTING LAND USE POLICIES FOR THE TROPICAL HILLSIDES IN 2020"  
(FOCUS ON CHAPTERS 4, 5)\***

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MICROECONOMY OF CHANGING HILLSIDE LAND MANAGEMENT (Chapter 4 by Templeton and Scherr). The chapter's very useful and accurate basic idea is that, "...population growth leads to land enhancement in some instances and to land degradation in other instances" (p 97). The authors' pervasive but not persuasive argument, however, that there is a "conventional wisdom" equating increased population *per se* with land degradation. This latter argument is perhaps overstated and an unnecessary straw dog.

Clifford Geertz and other pre-Boserupians highlighted how population increases allowed for land use intensification--albeit in richer environments; and the authors might find a load of nice surprises in "Farmers of Forty Centuries" (King 1911), which documents intensification and population growth in China, Korea, and Japan at the turn of the century. Some of our work in Asia described intensification with population growth--e.g., in the Philippines and in Java in areas having young volcanic soils and fairly accessible markets for perennial crops.

On the other hand, population growth and land degradation have been linked in Asia, but--exactly as the authors have done in latter parts of their chapter--via other intervening factors. Examples--again from our experience in Asia--include population growth - shortened fallows - nutrient depletion (northern Laos); or population growth - deforestation for fuel and fodder - increased conversion of land to cropping - degradation (Terai of Nepal). Fujisaka and Sajise (1986) were cited as a case in which population was named as a cause of land degradation in the Philippines (p 81). Although population growth was identified as a factor, it was, in fact, identified as a cause of

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\* *Comments on the paper "Living on the edge: drafting land use policies for the tropical hillsides in 2020" presented at the workshop on "Land Degradation in the Developing World: Implications for Food, Agriculture, and the Environment to the year 2020" sponsored by the International Food Policy Research Institute (IFPRI) held 4-6 April 1995 at the Loew's Annapolis Hotel in Annapolis, Maryland, as a part of IFPRI's initiative "A 2020 Vision for Food, Agriculture, and the Environment"*

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shortened fallow periods and consequent nutrient depletion.

It has clearly not been "conventional wisdom" that population growth has been the main cause of deforestation in Latin America. More common have been the ideas that: a) deforestation has reflected policies related to road building, logging, the frontier as a strategic national area, credit, land tenure and values, the rural poor and colonization, cattle ranching and ranch formation, and prices; b) deforestation has most often been followed by conversion to pasture (by both small and large holders); c) many of the pasture areas have become degraded; and d) and even if not degraded, pastures provide fewer or inferior ecological functions compared to forests. The "hamburger hypothesis" was a much more exciting myth for the Amazon than "population"--especially given the (comparatively) low populations in Latin America compared to Asia.

The heart of the paper is perhaps the section "The microeconomy of hillside land management" (some 25 pages). Although the section is well written and organized, it appears to be a series of (good) class lectures on microeconomic theory applied to the hillsides. There are complete arguments and nice documentation of--as the authors repeatedly distinguish--case studies and microeconomic analyses. In the end, however, it would have been useful to know not only that population does not necessarily equal degradation, but how might the various microeconomic factors (from "opportunity costs of labor" to "intrinsic biophysical conditions" be combined, weighted, and evaluated to both explain ongoing land degradation and to predict--in some senses--further sensible paths in the development of sound innovations.

The policy and related conclusions should serve very well as points of departure for further discussion. These include that: a) hillside depopulation will probably not take place; b) policies to decrease rates of population growth are desirable; c) government price policies are important; d) some (e.g., for perennial crops and some wood products) but not all subsidies might be justified; e) technical research might best start with indigenous knowledge; and f) land reform and property rights are highly relevant.

In terms of style, it is probably not necessary to single out authors as having offered "pseudo-scientific piece[s] of evidence" (p 87), especially in light of the economists' many *ceteris paribus* appearing throughout the paper.

Finally, many references in the text are not cited in the bibliography (including four of my own!).

POLICIES TO SUPPORT SUSTAINABLE HILLSIDE MANAGEMENT (Chapter 5, Sara Scherr). This

chapter--with perhaps two points of contention--is insightful and very well organized and argued. A first point of contention is that, again, a "straw dog" is unnecessarily paraded out: "Rather than orienting policy primarily to watershed protection, for the benefit of lowland populations, with development goals for export agriculture, they need to promote income generation and environmentally-compatible increases in crop, tree and livestock production" (p130-31).

I think that many of the needed policies are already on the books. Many countries with hillsides have policies--e.g., "social forestry" policies in Asia--oriented towards environmental protection combined with the enhanced well being of uplanders. The problem for the countries--and therefore for the paper--is the difficulty of enforcing these policies.

Enforcement problems have taken various forms. The recommendation to "recognize diversity" has been tried by many governments under the guise of land use planning--quite often with little success. Land and forest rights have been reconsidered by several SE Asian countries--with clever and rapid circumvention of new policies by local elites being among the effects.

Second, the paper recommends decentralization and new roles for government (e.g., "conflict mediator", "catalyst", and "guarantor of contracts") while at the same time it would have government (remain?) involved in such things as immigration restrictions in sensitive areas, encouragement of investments in land improvements and maintenance, reduction of production and marketing costs, promotion of strategies which reduce inherent risks of hillside agriculture, influencing labor mobilization, and contributing research on "perennial components of land use". This is a desire to have the cake and eat it too.

These minor quibbles in no way detract from the succinct and excellent listing of needed policies to support sustainable hillside management. Chapter headings for national policy support may be worth repeating as a way to organize discussion: a) craft development strategies to reflect population characteristics, b) revise policies which encourage new settlement, c) revise property rights in the hillsides, and d) encourage land-improving investments.

**COMMENTS ON CHAPTERS 1, 2, AND 3. Land Use Intensification in the Hillsides: A Crisis in 2020?** (Scherr and Jackson). Although the version offered may benefit from specific modifications and additions, the hillsides typology is needed and important. Some minor comments follow:

1. If "One quarter to one third of the 200 million people living in tropical America live in hillside zones" (p2) and if about 70% of the LA population is urban, then almost all of the rural population lives in the hillsides.

I don't think so.

2. I am not certain whether tropical hillside soils can be characterized as "typically highly weathered" (p3).

3. Some of the citations and discussion imply that the altiplano and mountainous areas of the Andes are included as "hillsides". Is this correct?

4. One-hundred percent of Bhutan's population does not live in the hills. A substantial percent live in the Terai and in inter-mountain valleys.

**Migration and Settlement in Tropical Hillsides** (Jackson and Scherr). The evolutionary scheme implied (p 19) should be offered with care. The posited development in Asia of intensive hillside systems where there were volcanic soils combined with a lack of lowland development because of poor acidic soils can be questioned. Many lowland rice paddy soils were developed in areas of "poor" soils because the aquatic environment (provided by leveling, bunding, and soil puddling) was more important than initial fertility. On the other hand, the argument would not apply as well to where soils are light (and puddling is difficult) and poor (e.g., low CEC, low P) as in NE Thailand. Even in NE Thailand, however, lowland paddy rice cultivation developed rather early--apparently in spite of such constraints.

**Alternative Land-Use Strategies for Tropical Hillsides** (Jackson and Scherr). The table regarding landuse options for tropical upland watersheds--although subject to modification--is useful and needed. The land use principles, however, are quite well known. The trick is in developing innovations (based on the principles) which farmers can actually adopt and use.

A few minor points: Over the past 10-15 years research has shifted from mainly "productivity" to much more "maintenance". Deforestation has substantially decreased in Brazil over the past 10 years. That upland forests protect against **all** soil erosion and flooding in the lowlands is, of course, myth. Its quite likely that no one holds this extreme view; and it (the myth) is probably a(nother) straw dog.