



Globalization, Forest Resurgence, and Environmental Politics in El Salvador

SUSANNA B. HECHT

*School of Public Affairs and Institute of the Environment,
UCLA, Los Angeles, USA*

SUSAN KANDEL, ILEANA GOMES,
NELSON CUELLAR and HERMAN ROSA *
PRISMA, El Salvador

Summary. — Globalization is often viewed as a driver of deforestation, but there are contexts where it promotes forest recovery. This is the case in El Salvador. In spite of population densities in excess of 200 people per km², the country, which has been seen as a Malthusian parable of population and ecological catastrophe, is now increasingly wooded. This reflects the impacts of globalization (new flows of labor, capital, commodities, and ideas) which profoundly affected the rural economy, as well as local processes such as civil war (which constrained the agricultural frontier), structural adjustment policies, and agrarian reform.

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1. INTRODUCTION

In the popular consciousness, El Salvador is notorious for its extensive deforestation and land degradation. Numerous articles assert that only 2–5% of its forests remain, giving the impression of a blasted landscape with barely a tree in sight (FAO, 2001; MARN, 1999; Terborgh, 1999). This view is faulty, and is an outcome of (1) extrapolating deforestation trends from earlier periods whose dynamics no longer hold given the enormous social and economic changes of the last decades; (2) ignoring the widespread anthropogenic and regenerating woodlands that are significant in their total area, and in their ecological and social impacts; (3) a lack of awareness of processes that now encourage forest recuperation. Deforestation continues throughout Latin America, but there is also a strong countertrend of forest resurgence, now identified in several countries (Aide, Zimmerman, Pascarella, Riveira, & Marciano-Vega, 2001; Klooster, 2003; Moran, Brondizio, Tucker, MacCracken, & Falesi, 2000; Rudel, Bates, & Machinguiashi, 2002). While the

dynamics of these cases differ, the pervasive occurrence of forest regeneration is intriguing and suggests outliers of more general socio-economic changes at many scales that may pre-empt broader environmental shifts. This article outlines the dynamics of forest recovery in El Salvador as a result of the processes of globalization, new national policies, local politics,

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and changes in the ideologies of environment and environmental practices.

2. FOREST SYSTEMS OF EL SALVADOR: DISTURBANCE HISTORY, DIVERSITY, AND ANTHROPOGENIC WOODLANDS

El Salvador falls entirely within the “Hot-spot” of Mesoamerica, where some 7% of the globe’s biodiversity resides. Highly endemic biota are found throughout the region, outcomes of El Salvador’s highly dissected relief, its location in the contact zones between the great biogeographic domains of North and South America as well as Holocene climatic change (Daugherty, 1969, 1972; Dull, 2001).

(a) *Biodiversity in El Salvador*

Lacking international attention, with little emphasis on local natural resources training due to years of civil war, and the preference of many foreign natural scientists for “wild landscapes,” there is a ubiquitous impression that El Salvador is depauperate in biodiversity. While often derogated for a lack of biological richness (FAO, 2001; Terborgh, 1999) and portrayed as a Malthusian nightmare, recent ecological research in several fields contradicts this inaccurate, and unfortunately, oft repeated impression (Berendsohn, 1995; Komar, 1998; Ramirez, 2001).

Current studies, partial though they are, give a different sense. Komar (1998, 2003), documented more than 508 species of birds, in addition to 121 mammals, 130 reptiles and amphibians, and over 2000 plant species. Recent studies of trees (Berendsohn, 1995; Ramirez, 2001) have reported many unrecorded species, and others are being discovered regularly. The diversity of habitat types, and the array and resource rich structure of anthropogenic forests have undoubtedly contributed to the maintenance of overall biodiversity. Rustic shade coffee farms suit many generalist species, including international migrants because of the permanent nature and complex structure of the crop (Perfecto, Rice, Greenberg, & van der Voort, 1996; Perfecto & Vandermeer, 2001). The widespread planting of hedgerows, fruit trees, and extensive domestic agroforests provide resource islands throughout the landscape. In addition, secondary vegetation and arboreal diversity in abandoned pastures suggests a role in the maintenance of El Salvador’s biotic complexity.

The diversity of El Salvador is especially impressive given the prevalent view that it has almost no “worthwhile” forests. While most discussions of forest diversity in Central America emphasize the structure of old growth stands, an emerging body of research focuses on the biodiversity and conservation value of “countryside” landscapes (Daily, Ceballos, Pacheco, Suzan, & Sanchez-Azofeifa, 2003; Daily, Ehrlich, & Sanchez-Azofeifa, 2001; Harvey & Haber, 1999; Vandermeer & Perfecto, 1997). These studies, largely from Costa Rica, show significant use and colonization of anthropogenic formations by rainforest species of birds, butterflies, animals, and plants. About 57% of tree species in pastures were primary ecosystem species, and roughly 50% of avian and butterfly species regularly used anthropogenic systems. Indeed, the recent research on coffee ecosystems reveals that they are often more diverse than local old growth fragments (Perfecto *et al.*, 1996). Successional landscapes are also widespread and rapid absorbers of CO₂ (Castro, Sanchez, & Rivard, 2003), and socially and economically important as they provide a range of subsistence and market goods to households (Bray *et al.*, 2003; Chazden & Coe, 1999).

(b) *Disturbance landscapes*

While conservation science often fetishizes “virgin” forests, there is some question in a region as geologically and biologically dynamic as El Salvador whether the idea of “undisturbed” ecosystems applies. El Salvador is regularly buffeted by earthquakes, mass movements, volcanic eruptions, fires, hurricanes, floods, and tsunamis (Rose, Bonner, Lopez, Carr, & Major, 2004). In much of Central America, it is not clear whether it makes any sense at all to speak of “natural” *versus* “cultural” forests given the antiquity of intensive occupation and the ubiquity of human impact over at least eight millennia (Bush *et al.*, 1992; Daugherty, 1969; Dull, 2001; Pohl *et al.*, 1996; Sharer, 1978; Sheets, 1979, 1984, 2002). Its vegetation is adapted to geophysical and human perturbation.

There are more than 800 significant archeological sites in El Salvador, or a documented average of one for every 2500 ha in this country of a mere two million hectares. The region was well integrated to Olmec and Mayan empires through its production of the Amazonian domesticate, cacao, as well as obsidian and

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