

# The New Rurality: Globalization, Peasants and the Paradoxes of Landscapes

## A nova ruralidade: globalização, camponeses e os paradoxos das paisagens

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### ABSTRACT

Deforestation captures most of the headlines, but there are also processes of forest expansion that are widespread in Latin America. This paper explores why this process is so invisible and some of the theories that have been used to understand woodland recovery. The article then examines a series of case studies. Globalization plays an increasingly important role in structuring rural economies. This paper analyzes how global integration of many types, ranging from remittances, state transfers, skilling, markets, and ideologies of identity and territoriality produced forest recovery in peasant landscapes.

*Key words:* globalization; tropical forests; forest recovery; peasant economies; forest transition.

### RESUMO

O desmatamento ocupa a maior parte das manchetes da imprensa, mas também há processos de expansão florestal espalhados pela América Latina que não têm a mesma visibilidade. Este artigo explora o porquê deste processo ser tão invisível e discute algumas das teorias utilizadas para se entender a recuperação florestal. O artigo também examina uma série de estudos de caso. A globalização desempenha um papel cada vez mais importante na estruturação das economias rurais. O trabalho analisa, ainda, como as várias formas de integração global, desde remessas, transferências do estado, capacitação, mercados, até ideologias de identidade e territorialidade, produziram recuperação florestal em paisagens rurais e camponesas.

*Palavras-chave:* globalização; florestas tropicais; economias agrícolas; transição florestal.

### *Introduction: forests and the new world order*

How does globalization affect forest trend? The answer is an important one since many people involved in environmental issues have worried that global integration

would prove devastating to tropical forests, and indeed in many places it has (CURRAN et al., 2004; HECHT, 2005; FEARNSIDE, 2005; AGGARWAL, 2006). There are extensive processes of forest resurgence throughout the tropics. Many rural areas are showing the expansion of many types of

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anthropogenic and successional forests. In Latin America, studies from Mexico (KLOOSTER, 2003), El Salvador (HECHT et al., 2006; HECHT; SAATCHI, 2007), Honduras (NAGENDRA; SOUTHWORTH; TUCKER, 2003; SOUTHWORTH; TUCKER 2001), Puerto Rico (RUDEL; PEREZ-LUGO; ZICHAL, 2000; GRAU et al., 2003, 2004), Costa Rica (CHAZDON, 2003), Amazonia (BEBBINGTON; BATTERBURY, 2001; PINEDO-VASQUEZ et al., 2001; RUDEL; BATES; MACHINGUIASHI, 2002; PERZ; SKOLE, 2003a; SUMMERS; BROWDER; PEDLOWSKI, 2004) report trends of forest recovery in populated landscapes. Indeed, El Salvador, former poster child for Malthusian processes of environmental destruction has gained significant forest area (HECHT; SAATCHI, 2007). The dynamics in these cases differ, the processes are not well known, and the very widespread occurrence of woodland regeneration and expansion suggests that more attention to regional socio economic changes is necessary for informing rural policy in the upcoming decades.

This paper explores 1) the features that underpin invisibility of this heartening forest trend by analyzing ideas about the tropics and forest conservation; 2) the theories of forest resurgence as understood through the Environmental Kuznets Curves (EKC) and Forest Transition Theory (FTT) models; and 3) reviews case studies that illuminate the ways that these peasant landscapes can be integrated into global economies ( and this set is by no means meant to be exhaustive), and how this has led to woodland recovery and/or expansion.

### ***Forests, frontiers and analytic fault lines***

Why should the question of woodland recovery be so invisible? It is after all an optimistic and scientifically interesting development in a planetary scenario of global change that is quite dismal. There are several reasons that woodland recovery remains unseen, and these fall into several classes of problems. These involve conceptual frameworks, geographical contexts, the complexity of successional/agroforest woodland types, and problems in the data sources. First, the semantic problems and powerful imagery about tropical forests influence what people mean by “forest”, and what forests “count”. For the most part, high biomass humid tropical forests are the “gold standard” that is used to designate “high value forest”. These stands are largely the target of conservation and research efforts, and

are a type of “sacred grove” in contrast to many other forests types, and have been institutionalized into an internationally universalized set tenurial and policy frameworks.

A long history of depictions of the forests of the New World tropics has portrayed them as largely empty and wild, in spite of relatively high populations and complex forest intervention in the past (HECKENBERGER et al., 2007; BALÉE; ERICKSON, 2006) and in many forested areas today (BRAY et al., 2003). This idea of “the untrammelled” has fueled Malthusian assumptions that human intervention in tropical forests produces only ruin, and thus forests with populations are often considered degraded zones” (HECHT, 2005). This may or not be the case, since areas with human intervention may in produce the complexity so sought after by conservationists, and in some cases, diversity indices may be higher than in old growth (VANDERMEER et al., 2004; PERFECTO; VANDERMEER, 2002). In addition, large biomes that have been affected by anthropogenic disturbance over millennia, such as the cerrado woodlands of Brazil, have conservation value that may be ignored, and deemed a kind of sacrifice zone. The cerrado was not initially included in its national patrimony and thus in spite of its high species diversity and ecological complexity, virtually no conservation efforts were put in to place until the late 1990s (KLINK; MACHADO, 2005). A preference in tropical ecological studies for old growth or “ancient” or “authentic” forests has largely diverted research emphasis away from the complexities of lower biomass and more open forest formations and anthropogenic landscape ecologies, a research area of singular concern as tropical regions figure more importantly for mediating processes of global change (VANDERMEER; PERFECTO, 2007).

Most deforestation occurs on economic frontiers. These are areas of maximum global deforestation. There are good reasons to study such sites, but this emphasis has produced blind spots about the recuperative and sustaining woodlands in areas that have been inhabited for long periods of time and that include anthropogenic forest in productive landscapes (WHITMORE; TURNER, 2001; FEDICK, 1996; BRAY et al., 2003; PADOCH, 1999; SANTOS-GRANERO; BARCLAY, 1998). Conservation science has largely focused on the dynamics of forest fragmentation in frontier areas, used matrices such as pasture or water as controls (LAURANCE et al., 2006), systems that differ profoundly in structure and ecological infrastructure from the complex anthropogenic forest matrices in tropical working landscapes. The complexity

of the matrix has enormous implications on the impacts on fragmentation (HARVEY; VILLALOBOS, 2007; FLEISHMAN et al., 2002). A simplified matrix while convenient for experimental design, may obscure the more complex, less catastrophic processes of forest dynamics.

The successional pathways and ecological structures of secondary forests and anthropogenic woodlands are highly variable. These can involve woodlands that range from virtual monocultures to formations that are more complex and diverse than old growth stands. Anthropogenic systems vary from ones that are simply abandoned to those that are highly manipulated. The “nature” of these woodlands is still a large empirical question with very complex parameters (CHAZDON et al., 2007; CHAZDON, 2003; SCHROTH 2004; TURNER; DAILY, 2008).

Next, the data used for analyzing forest change is often inaccurate. Since these are often based on FAO data, recent analysis of the trends from this data have shown that there are major problems with this widely used data base (GRAINGER, 2008). Beyond these questions of national level analyses, even as local secondary successional monitoring is improving with remote sensing techniques, there still remains a tendency to over aggregate anthropogenic landscape types. Woodland recovery is invisible in part because a great deal of it occurs in small farmer or peasant landscapes at small scales, under the stewardship of a population that has been repeatedly identified as forest destroyers (MYERS, 2000).

### *Peasants and the managed matrix*

For a number of historical and economic reasons, the “peasant question” as issue of access to land and citizenship has lost resonance and political space in Latin American politics as tropical environmental movements have gained in strength (see for example Bebbington 1999, 2003; Petras; Veltmeyer, 2001; De Janvry, 1991; Bebbington, 1999). Analyses of inhabited, “peasant” landscapes are especially critical given their increasing role as a in mediating social inequalities in the wake of neoliberal policies, the large land area they control, their location in many sensitive ecosystems and their potential environmental contributions. The preference of conservationists for “empty” landscapes, and the relative indifference of national states to non-indigenous, small scale farmer populations means that these

small farmers and the substantial environmental resources that they sustain, are often given short shrift in policy debates about rural areas and denied the potentially powerful role in rural development and resource management that they could play. This issue is especially important in light of the forest recovery currently occurring in many areas.

To contextualize these processes theoretically, we briefly review the dominant models used for explaining forest resurgence in development theory – the Environmental Kuznets Curve (EKC) and Forest Transition Theory (FTT). The next section of the article reviews unfolding of processes of globalization and advances a preliminary framework – the New Rurality – for understanding the forces that shape the emergence of these new woodland landscapes.

### *Forest recovery in theory*

#### *Deforestation and the Environmental Kuznets Curve (EKC)*

The Environmental Kuznets curves are based on the idea that as countries develop and increase their national GDPs, their environmental indicators improve because people are more willing to pay for environmental goods, such as pollution regulation and clean water. Initially focused on industrial externalities, the term has been expanded to embrace a number of natural resource questions including deforestation. Trends in forest cover are explained using a range of variables including population, population density, GDP, debt, institutional configurations (such as democracy, corruption) and policy factors to test whether the curves exist, and at what per capita income level the inflection point – the place where environmental trends shift in a positive direction – occurs (see Koop; Tole, 2001; Ezzati et al., 2001; Bhattarai; Hammig, 2001; Stern et al., 1996; Usivuori et al., 2002; Culas, 2007). Forest EKC modeling efforts, generally rely on FAO panel data that are often questionable and do not easily assess successional and anthropogenic forests and thus the questions of forest trend used in these studies are very ambiguous (GRAINGER, 2008; PERZ, 2007a). For example, the data sets used resource analysis and mapping for the Meso-American biological corridor recognize some 133 native vegetation

types, but conflate all anthropic landscapes ranging from cotton fields, agroforestry, to successional pasture into one category, making the array of regenerating woodlands largely “invisible” (HECHT, 2004).

The results of the deforestation models are contradictory: Bhattarai and Hammig (2001) focusing on the institutional dimensions of clearing and EKC, find that a deforestation EKC exists for Latin America, but its inflection point occurs with a per capita income of \$6,600, well above the mean income for Latin America of \$ 3,500, and substantially above that of poorer rural populations whose incomes are often less than \$1,000/year. The inflection point developed in their model is not supported by field data. Forest resurgence occurring in national geographies where populations earn lower incomes (El Salvador, Mexico, Ecuador, Honduras, for example).

Bhattarai and Hammig (2001) further emphasize that national political institutions (in this case presence or absence of a black market in natural resources and the percent of debt) were the key for explaining the emergence of an environmental Kuznets curve for deforestation. The impacts of population (density and rates of growth) in their model were not significant. This population finding, though hardly novel, is still useful given the prevalence of Malthusian assumptions underpinning deforestation models. Usivuori et al. (2002) also assert the existence of a an EKC but links this to low population density and correlates it with per capita income, placing the inflection point at around 2,500 dollars, although with many caveats. Again, the empirical data do not support this analysis for low population nor for the income levels, since areas of high population density, such as El Salvador and parts of Mexico, and more densely inhabited rural areas of some parts of Amazonia report significant forest resurgence at incomes below the inflection.

Koop and Tole (2001), on the other hand, find no EKC for Latin America – arguing that policy contexts and other factors affecting land use differ so much as to defy useful comparisons. With the exception of Koop and Tole, most models also have a Malthusian component that links declines in deforestation with regional out-migration and rural population loss.

Critiques of the EKC point to problems with the data base on which assertions are made (GRAINGER, 2008), problems in comparability between countries and between types of ecosystems, and the statistical methods used to

address the questions (GRAINGER, 1995; KOOP; TOLE, 2001; EZZATI et al., 2001, among others). Another problem with the deforestation/EKC is that structural change is implicit, but not specified, and is presumably reflected in the rise in income. That is, the processes that lead to the per capita GDP, whether growth, redistribution, windfalls (oil income) institutional change, forms of governance etc, remain a “black box”. There is some interesting evidence that suggests a fair degree of variability in EKC patterns depending on these “black box” processes (CULAS, 2007; DINDA, 2004; MAGNANI, 2001; BHATTARAI; HAMMIG, 2004), but these have fallen out of the models.

### *Forest Transition Models*

The next historical model, that of the “Forest Transition” (FTT) is a variant of the EKC and is really the flip side to the more widely known phenomenon of the urban transition. Its early analysts (cf. Mather; Needle, 1998) argue that as countries become more urbanized, small holders abandon their agriculture and move to cities. Largely based on the history of the US and Europe, the forest transition is intimately tied to ideas of long term structural change in the economy with permanent rural outmigration, where more marginal agricultural areas revert back to forest. This structural change results in a “scouring out” of the countryside due to urban migration, and a deflection of agriculture into more industrialized or productive areas.

### *Critiques*

The EKC and transition models have a useful historical sweep, stimulate questions about the processes that produce “inflection” and forest resurgence. These models, however, suffer from two general classes of problems. The first really reflects problems of over aggregation and data quality, a significant lack of attention to secondary vegetational formations and the questions of “net” forest cover since real world forests dynamics include both clearing and recovery. The models are fundamentally limited by a lack of contextualization of macro-political frameworks, and how local economies that use forests are inserted in these broader regional economies. Thus frontiers and settled places are not differentiated from each other, even though their dynamics are very divergent.

These models are also constrained by the implicit epistemological problems inherent in modernization theory (PERZ, 2007). These include the ideas that the transitions from one state to the next are “frictionless” discontinuous processes; that the changes occur over longer time periods – spans of many decades or even centuries, as has been the case of European and American “forest transitions” in instead of the rapid shifts characteristic of Latin American development (cf. Mather; Needle, 1998; Mather et al., 1999). These theories also posit a universality the outcomes of development with the third world reproducing the itself in the image of the North. As in modernization theory’s “take off into growth” (ROSTOW, 1971), the history of the European and American forest transitions are meant to prefigure that of the South. Development analysts and post Colonial theorists of many types have been at pains to point out the profound structural, conjunctural and historical differences between the worlds of the North Atlantic and the contexts of the tropics in the processes of economic change (see Escobar, 1997; Gupta, 2000) and that there may be a myriad of reasons for a more complex set of trajectories.

The “deforestation” Environmental Kuznets Curve and forest transition both privilege endogenous processes and emphasize how national state policies, national structural change, regional processes of urbanization transform land uses. In essence, these theories rely economic modernization and its rural to urban migration dynamics as the axis around which their analysis of forest dynamics revolves. These models depend implicitly on Malthusian frameworks for understanding human impacts on forests – and so see out migration and declining rural populations as key to forest recovery. The models are limited (or silent) about their conceptualizations of political economies.

### *The global question*

None of deforestation models explicitly examine globalization in processes of the forest transition. In contrast to the general “modernization” transition framework, current forest resurgence has been associated with sharp economic and political disjunctures, have quite unique historical characteristics that bear little relation to the reversion of forests in, for example, the northeastern United States, and have been driven less by internal than by largely international processes that are mediated by, but

not determined by states and localities. Globalization has had enormous impacts on the rural tropics and significantly shaped land uses (AIDE et al., 1996; BARDHAN, 2006; NEPSTAD; STICKLER; ALMEIDA, 2006; HECHT et al., 2006; RUDEL, 2002; BEBBINGTON; BATTERBURY, 2001). Yet globalization, as policies and practices define development contexts.

### *Globalization*

Beginning in 1985, large scale transformations occurred in Latin American macro-economies that facilitated the processes of globalization involving accelerations in international flows of labor, commodities, capital, ideas and enhanced transportation, information and communication networks. Neoliberal policies sought to facilitate trade through free trade policies, elimination of tariffs and subsidies, and modifications of banking systems. Structural adjustment programs (SAPs) focused on transforming the influence of the state in the economy by emphasizing the centrality of uncontrolled markets in national development, privatization of public companies and fiscal austerity. Fiscal reforms to stabilize currencies, and reduction in state employment were all part of SAPs. In addition, administrative decentralization and democratization were viewed as central to development and enhanced economic performance. In this context, elites often welcomed a less restrictive economic arena, while popular groups – after a generation of authoritarian regimes and war, embraced democratization and decentralization as elements of an emergent civil society.

Environmental analysts have not consistently taken on the significance of globalized forms of structural change, although there is an emerging literature (MERTENS et al., 2000; BROSIUS; TSING; ZERNER, 2005; HECHT, 2005, 2006; STEININGER et al., 2001; KAIMOWITZ; THIELE; PACHECO, 1999; NDOYE; KAIMOWITZ, 2000; WOLFORD, 2005; RUDEL, 2002; BEBBINGTON, 2001; AIDE; GRAU, 2004). The impact of globalization requires situating the interaction of larger scale processes with local arrangements, assets, “moral” (or immoral) economies and a wide array of ethnographic and household factors that shape resource use. Further, observed resource management, strategies of sustainability and household security can reflect not just a response to globalization “from above” but also the dynamics of global transformations “from below”. Rural income formation



in global contexts can involve an enormous range of strategies including international and national migration, remittances, state transfers, contraband economies, wage labor, engagement in new markets, novel forms of “skilling” among other processes. Rural development and conservation debates must increasingly address how the interaction of large scale and local forces, agrarian and non agrarian livelihoods, formal and informal economies, national and international processes interact to produce actions and politics that produce the observed forest trend.

### ***Globalization and the New Rurality***

The globalization of labor, discourses, knowledge, capital and new emergent markets provide an evolving optic for better understanding the paradoxes of landscape recovery that are not captured by current EKC or FTT theory. Inserting globalization into the analysis helps expand the analytic tool kit, and more accurately describes the socio-economic context that rural resources users confront. These questions can be usefully situated by understanding the new ways that rural areas are being conceptualized in both development and conservation.

During much of the last 150 years, tropical agrarian landscapes were largely viewed as production sites for domestic food crops and a few traditional export goods like coffee and cacao. Forest areas were largely viewed as “land banks” for agricultural expansion and for agrarian reform. Peasantries, whose revolutionary histories in Latin America did much to define the modern Latin American states, were understood in terms of class politics even though they often had formidable ethnic traditions (DE JANVRY, 1991; PETRAS; VELTMAYER, 2002; BARKIN, 2002). In many cases, the state itself was the interlocutor for small farmers in terms of policy development (such as Cuba, Mexico, Bolivia, Brazil among others). During the cold war, authoritarian period rural unrest was met not only with repression but also welfare and support policies to garner legitimacy for the various dictatorships and as part of a larger anticommunist strategy. Small farmers were a central element of development policy.

This version of the rural and peasantries changed profoundly during the Neoliberal period with the retraction of the idea of a redistributive state, decline in state services, the rise of markets as drivers of development, rising basic food imports, ascendance of global environmentalism and environmental justice movements, green markets, markets for environmental services, globalized skills in certain sectors, and an accelerated dynamic of global international migration and a remittance economy that now hovers near 300 billion dollars a year (CONWAY; COHEN, 1998; ACOSTA et al., 2006, 2008). These changes were reflected in profound shifts from a discourse pertaining to peasants as a class and protagonists of development to an environmentalized ethnic politics, markets and issues of efficiency. Forests in this context became less linked to commodity production and much more to nature and cultural conservation, the provisioning of global and local environmental services and green goods.

At the same time, biotechnology changes, expansion of global commodity markets and new production technologies made it possible for traditional temperate zone products to be double and triple cropped. Tropical areas as sites of agro-energy crops also gained ascension (NEPSTAD; STICKLER; ALMEIDA, 2006; SOARES et al., 2006; SANTILLI et al., 2005; HECHT, 2006, 1993, 2005). For most peasant produced commodities, price declines or hyper volatility was the norm making farming an increasingly questionable alternative in spite of long agrarian histories. Rural livelihoods took on far more complex forms face.

At the risk of oversimplifying, and for heuristic reasons it can be argued that today there are four overarching types of tropical rural spaces in Latin America: The environmental, the “socio-environmental”<sup>1</sup>, the agro industrial and peasant landscapes. These each have their own territorial and political evolution, economies (national and international) and discourses. They each have different logics that frame their positions.

The immense conservation areas whose configurations require them to be largely devoid of human populations (with the exception of some indigenous peoples) is perhaps the “rurality” most familiar to those in the temperate zone. Derived from US conservation models, elaborated and

<sup>1</sup> This comes from the latin American term “socioambiental” which basically integrates the social with the environmental. Its emphasis is on the cultural unlike sociobiology, where the emphasis is on the biological.

implemented through franchises of international NGOs, or local interlocutors, these organizations have been exceptionally important in shaping the way the impacts of human occupation in the Latin American tropics have been understood. This environmental discourses emphasizes set asides, and the urgency of large parks as the only possible means of salvaging landscapes in the face of both relentless population growth, the huge economic transformations now unfolding throughout the tropics and in the face of global climate change (BAZZAZ, 1998; BUSH; SILMAN; URREGO, 2004; JACOB, 2005; PERES, 2005).

The next large scale structuring of rural areas involves inhabited reserves whether these are indigenous reserves or *ejidos* that depend on the deployment of difference and history. Separate ethnicities, historical territories languages and in some cases (such as native reserves in Colombia, or the Zoque of Oaxaca), separate sovereignty are invoked to make large scale claims on landscapes. Rooted in earlier indigenous rights movements, the approach now involves the international and national discourses and politics of human and territorial rights, specifically the additions to the ILO charter especially conventions 107, 169 which accord collective rights to cultural and ethnic minorities and require nation states to protect their indigenous communities.

The perceptions of such populations includes ideas about their “special relations to nature” that are informed by complex religious systems and native knowledge which can indeed prevail to different degrees among different members of these populations (POSEY; DUTFIELD, 1996; POSEY; PLENDERLEITH, 2004; HECKENBERGER, 2005; DE LA PENA, 2005; ELLEN; PARKES; BICKER, 2000; YASHAR, 2005). Locally, assessment of these populations may involve derogatory racial stereotypes and generalized anti-indigenous feeling (PERREAULT, 2001).

Increasingly the “peasant question” more generally has been transformed into one of ethnicity. The “reconfiguring” of national rural politics within an increasingly indigenous register reflects the use of an international idiom of identity and rights for making national claims. Thus some “peasant” movements, such as the CONAIE (the national Indigenous Peoples Council of Ecuador) or Chiapas’ Zapatistas increasingly take on the mantle of the indigenous identity in their politics (COLLIER; QUARATIELLO,

1999; PETRAS; VELTMAYER, 2002; OTERO; JUGENITZ, 2003; REED, 2003; YASHAR, 2005; BRASS, 2005). These emphasize authenticity and focus on protection of traditional land claims, cultural and biodiversity rights, as well as other forms of local sovereignty and governance (APPELBAUM; MACPHERSON; ROSEMBLATT, 2003; DE LA PENA, 2005; GIORDANI; SNIPES, 1995; GOSNER; OUWENEEL, 1996; LAURIE; ANDOLINA; RADCLIFFE, 2005; LITTLE, 2001; MONTEJO, 2005; OTERO; JUGENITZ, 2003; PERREAULT, 2001; POSTERO; ZAMOSC, 2004; REED, 2003; SCHWARTZ, 1999; STOCKS, 2005; VARESE; CHIRIF, 2006; WARREN; JACKSON, 2002; YASHAR, 2005). The classic questions of indigenous claims of territory, culture and language have now been supplemented by another set of contentions that use the reserve concept to expand access to land for what in other historical moments would have been described as “peasantries”.

“Traditional people’s rights” is actually a kind of “post modern” strategy that builds on the success of cultural identity in the recognition of territorial rights. These kinds of reserves include extractive reserves, quilombos (run away slave communities), fisher communities and Caboclo<sup>2</sup> reserves and peasant based on customary tenuous configurations associated with forest activities like rubber tapping, nut collecting, fishing etc. The “reserve” model of land holding is now largely known under the rubric of “socio-environmental” (*socioambiental*) regimes (SCHWARTZ, 1999; Warren; Jackson, 2002). Such groups are able to mark out a kind of ethnic/cultural terrain with legal recognition and often, alternative property regimes in a context of environmental and human rights (SANTILLI, 2005; COMAROFF; COMAROFF, 2007). They include traditional elements of knowledge, culture and institutions that form part of a critique of modernization, but interact strongly with national and international interlocutors about issues of rights, resources and territoriality invoking a history of place and practice (ADGER et al., 2003; BROWN; ROSENDO, 2000). The discourses engage social justice but often include a kind of essentialism about their benign relations with nature and include the ideas of multiculturalism and environmental rights. These populations emphasize autonomy, often including local territorial sovereignty, and as such engage a critique of the role of the modern nation state vis a vis their own interests. These populations however can emphasize a

<sup>2</sup> Caboclos are the traditional backwood folk of the Amazon. Historically in Brazil, a caboclo was conceptually thought of as a hick. It also has a racial connotation: initially it meant natives, but later was seen more as a cross between northeasterners and natives (NUGENT, 1993).

more hybrid stance vis a vis development practice within the contexts of these “landscapes of sustainability” or socio-ambiental forms of development (BRAY et al., 2002; HECHT, 2007). Increasingly such communities produce niche items, including non timber or agroforestry products for relatively segmented green markets (SUNDERLIN et al., 2005; DANDY, 2005; BRAY et al., 2004; SCHERR; WHITE; KAIMOWITZ, 2003) and increasingly focus on their potential as players for payment for global environmental services (SANTILLI et al., 2005). Recognition of these territories has in many cases removed them from some external deforestation pressures.

In contrast to these forest Arcadias, the last 15 years has seen an explosion in mechanized landscapes, where powerful, technically sophisticated agroindustrial farming (mostly for soy, corn sunflower and other oil crops) oriented to global markets has transformed vast areas of production in Mexico, Argentina, Colombia and especially Brazil, where more than 60 million hectares of savanna and transition forests have been converted into soy and pasture (BROWN et al., 2007; KLINK; MACHADO, 2005; HECHT, 2005; NEPSTAD; STICKLER; ALMEIDA, 2006; JEPSON, 2006a). Linked to global markets, expanding dynamics of technical innovation, the extraordinary productivity and economic returns to this globally oriented form of agriculture has transformed the conceptualization of the “rural” in many areas from images of backwardness to the icons of the sleekest high tech modernism in national economies (JEPSON, 2006b; NEPSTAD; STICKLER; ALMEIDA, 2006; HECHT, 2005). Rooted in ideologies of productionism, focused on international commodities and global markets with international quality controls, using modern methods of capital generation, firm organizations and information flows, these systems dominate large regions as landscapes of agroindustrial production.

## From historical protagonist to odd man out

These contractions of political and economic space for peasantries, and the exhaustion of a class and party based national politics profoundly affected the function of peasants as a constituency. These structural changes meant that the Agrarian Question, one that had mobilized Latin America for centuries now seems to have an antique air, with rural questions pertaining to social justice largely superseded by palliatives of “sustainability” and “poverty alleviation” projects in lieu of any over arching structural

analysis or distributive programs. Between the wild, traditional and transnational models of occupation, peasantries as they have been historically constituted emerge as weak players, relatively poorly organized and neither adequately “authentic” nor sufficiently modern or post modern to carve out the necessary ideological or economic space in the modern landscapes of the tropics.

The international and national environmental economies represent significant flows to Latin America in park acquisition, management and infrastructure, and national environmental institutions charged with the larger natural resource management. The prospects of the “environmental economies” seem buoyant as transfers for carbon sequestration increasingly form part of Kyoto accords, carbon trading regimes, certification programs, and other potentially large scale payments for environmental services to mitigate climate change and reduce biodiversity loss (SANTILLI et al., 2005; GRIEG-GRAN; PORRAS; WUNDER, 2005; ALIMONDA, 2002; HALL, 2000; FEARNside; LAURANCE, 2004). The indigenous and traditional people’s economies largely piggy back onto environmental markets and niche markets for socially and ecologically certified products, or fair trade products if they engaged in international commodity circuits. These “socio-environmental” economies are the main sites of rural investment for less capitalized small scale rural producers (ANDERSON, 1996; FIABANI, 2005; SILBERLING, 2003; SUMMERS; BROWDER; PEDLOWSKI, 2004; BROWN et al., 1992; DANDY, 2005; GOESCHL; IGLIORI, 2006; RUIZ-PEREZ et al., 2005; SALAFSKY; DUGELBY; TERBORGH, 1993; BRAY et al., 2004; HOSTETTLER; RESTALL, 2001).

At the other end of the spectrum are the large scale agribusiness and livestock enterprises that receive most of the state credits, research subsidies and most benefit from transport infrastructure. Although their audience is largely national, these kinds of farmers articulate their role as essential to market led development, and are active promoters of many elements of neoliberal agenda with its free movements of commodities, capital, labor and information. The role of agribusiness, in this context, is of an “engine” of national development in light of the new comparative advantage in technologically advanced agriculture that characterizes such agroeconomies as in Brazil, Argentina and Bolivia. Rather than a supplementary sector to an emergent industrial economy – the traditional role that agriculture was to play – elaborated industrialized agroexports are now the backbone of many Latin American economies, such as Brazil, Chile, and Bolivia.



High quality and cheap grains from globalized sources reduced peasant returns for these crops by half to two thirds of their previous value over the last decades (BARKIN, 2002; ROSA et al., 2003). This single economic fact summarizes the myriad aspects of the “peasant crisis” and has destabilized small farm production throughout Latin America. This process, coupled with a relatively low labor absorption capacity in urban areas, and the general erosion of state welfare programs as part of adjustment austerity initiatives has oriented rural livelihood strategies, toward a wider portfolio of possible activities. Between nature, natives and large scale capitalists, today’s peasantries can neither compete on the terrains of authenticity or in scale economies in global commodity markets, their emerging alternatives involve a complex mix of activities, often based activities that reduce pressure on forests or require management of them, since forest economies coupled with the broader income portfolios now increasingly defines their rural options. It is this reality that helps explain to dynamics of forest resurgence in Latin America where agricultural retraction of peasant economies has produced successional landscapes as small scale farming has become more problematic, where new markets for woodland products or the creation of environmental services now are among the more viable of peasant alternatives. Remittances, state transfers, emergent international and national markets for timber and non timber products, all contribute to the complexity of the “New Rurality”, landscapes less involved in the production of agricultural commodities than as a social refuge, producers of forest products for emerging markets and for organizing to capture environmental services in a complex portfolio of wages and natural resources in household reproduction. The next section reviews some case studies that show the forms the “new rurality” is taking, and how this enhanced woodland extension through financial transfers from below (remittances) from above (welfare payments) through global skilling and through green markets.

### ***Resurgence and insurgence: the case of El Salvador***

Salvadoran landscapes were largely deforested by the end of the 1970s with less than 6% of El Salvador’s natural forest considered undisturbed (LEONARD, 1987; UTTING, 1984). El Salvador’s rampant clearing and political

instability, driven largely by the expansion of large scale agroindustries, cattle, and small scale producers pushed ever higher into the mountains was often viewed as emblematic of the noxious interactions between people and ecologies. (ALEGRÍA; FLAKOLL; FLAKOLL, 1997; LANDAU, 1993; LAURIA-SANTIAGO; BINFORD, 2004). During the 1980s, like most of Central America, El Salvador was embroiled in civil conflict that lasted from 1980 to 1992. The war shaped a context that ultimately had several effects on the environment, on the political economy of the country, on policies that affected land uses. These produced an unusual dynamic of forest recovery in spite of rural population densities that are equal to those of the 1970s. The details of this complex story are described in more detail else where (HECHT et al., 2006; HECHT; SAATCHI, 2007).

### ***Of landmines and landscapes***

The civil wars of Central America were proxy battlegrounds of cold war super powers that were grafted onto centuries of inequalities that became sharper and more conflictive with rural modernization programs of the 1950s and 1960s. The warfare included carpet bombing, land mining and massacres, processes that halted the agricultural frontier for large and small producers as rural areas became extremely dangerous. The forest itself was a strategic defense of the rebels, and mountain zones hid hospitals, command posts and supply caches. Violence and terror stimulated urban migration and a surge of international flight as Salvadorans sought refuge, largely in the US. About one sixth of the population left the country, mostly for the US (KANDEL, 2002). The violent frontier and its deflected farming meant that pasture, agro-industrial and peasant cropping areas shifted into secondary successions. As the war continued, food imports substituted for local grains, and international provisioning networks developed, further reducing subsistence pressures on the landscape and on the remaining forests (HECHT et al., 2006).

Today, El Salvador’s expanding woodland landscapes are an outcome of forest remnants uniting with complex regenerating and anthropogenic systems that supports high levels of floristic and avian diversity, and high degrees of endemism (KOMAR, 1998). Indeed the complexity of the ecological matrix in these regions is such that species declines are not occurring as predicted by theory (GILLESPIE,

2001). Similar findings were noted in Costa Rica (DAILY, 2003; DAILY et al., 2003; HUGHES; DAILY; EHRLICH, 2002; LUCK; DAILY, 2003; MAYFIELD et al., 2005) and in Puerto Rico (AIDE et al., 1996; GRAU et al., 2003; RUDEL; PEREZ-LUGO; ZICHAL, 2000).

War and out migration interacted with several other policies and political ecologies: El Salvador's Peace Accords (1992) altered the role of agriculture and natural resources in the national economy as neoliberal policies were implemented emphasizing market rather state led forms of development, trade liberalization for food imports and sharply limited credit to rural areas, all of which undermined the markets, economic support and returns for small farmers (BARKIN, 2002; HECHT et al., 2006). The real returns to agriculture by 2000 had contracted to 27% of its value in 1970, causing a strong disincentive to produce, and making the cost of production for most crops exceed the profits that could be gained from them. The area in production of field crops also contracted (HECHT et al., 2006). Commodity prices clearly affected landuse, but if subsistence production was still key for household survival, there is no a priori reason that subsistence production would contract. There is however another factor that underpins the changes in forest cover and that is the impact of remittances.

### *Remittances and forest recovery*

The widespread transfer of monies from foreign workers to their home countries –the sending of remittances – is among the largest of global capital flows (ACOSTA, 2006; GAMMELTOFT, 2002), and occurs throughout Africa, the Middle East, Asia as well as Latin America. The implications of migration and the rise of remittance economies is a central topic for scholars of immigration policy and transnational studies, but very little research has focused on the empirical relationship of these monies to environment. Global annual remittances now exceed 160 billion dollars per year, of which about 40 billion went to Latin America (ACOSTA et al., 2006). Transnational migration has been especially marked in Central America, where remittance flows are substantial, often eclipse direct foreign investment, exceed official transfers and go directly to households (ACOSTA et al., 2006; KANDEL, 2002, HECHT; SAATCHI, 2007). Remittances were a much larger source of “foreign” capital than foreign investment in many Central American countries, often by

orders of magnitude, and are significant parts of the GDP. Indeed, in countries like Nicaragua, remittances comprise more than a third of the national income (ACOSTA 2006).

In El Salvador, the exodus of a sixth of the population created the conditions for transfer of funds from working expatriates to their family members who remained in the country. International remittances overwhelmingly from the US, and accounted for 66% of foreign exchange revenues of El Salvador (about 2.6 billion dollars). These were received in 25% of all rural households (KANDEL, 2002). These capital flows “from below” doubled incomes in migrants’ families. More than any policy, remittances were most responsible for poverty reduction in Latin America (ACOSTA et al., 2006). In El Salvador, where populations were still among the poorest in the hemisphere, remittances also enhanced forest cover.

Analysis of satellite imagery has allowed the testing of the relative impact of population and remittances on forest cover (HECHT; SAATCHI, 2007). Malthusian theory would predict that areas of greater population density in rural areas would correlate with less or no forest recovery or more deforestation. Our comparison however showed no significant correlation of forest cover with the population density, and a statistically significant positive correlation of forest resurgence with remittances. For every percentage point increase in remittances, there was a 0.25% increase in the percent of land with over 30% tree cover at Pearson correlation of  $R = 0.49$  ( $p = 0.02$ ). This correlation improved to 0.68 ( $p = 0.004$ ) in the 60% tree cover category. A similar correlation of forest change with remittances was obtained from the Landsat analysis.

Households with remittances also cleared less. The data suggested a negative correlation of  $R = 0.73$  ( $p = 0.002$ ) of forest clearing with increasing household remittances (HECHT; SAATCHI, 2007; HECHT et al., 2006). These findings have important implications for Central American development, environment and rural poverty.

If there are viable investments in farming, then remittances may flow to them and either increase clearing or intensify production. But when agricultural prices are low as they have been for grains, or volatile as they are in coffee, or high risk in non traditional sectors like berries and vegetables (these are the most classic of peasant crops now), remittances are often used for human capital investments like health, housing, food, education, small scale investments in commerce. Remittances and collapsing prices

are significant factors for explaining forest resurgence, a process seen widely in sites of international migrations (cf. Klooster, 2003; Bebbington, 2003)

### ***Globalization from below and above: State transfers***

Forest resurgence in El Salvador reflects the dynamics of warfare and the global mobility of labor, and small scale capital – small scale remittances – in contributing to woodland recovery. While prices are important explanations, remittances were key for recuperating landscapes, because food crops could be purchased rather than grown. The larger impacts of globalization and remittances is clearly complex and worthy of much more detailed studies, but external transfers of cash also seem to have been key in forest recovery in Puerto Rico.

The Puerto Rico case is among the best studied cases of forest resurgence because of the location of the Luquillo experimental forest, its long history of landscape ecology and tropical forest analysis (AIDE et al., 1996; GRAU et al., 2004; RUDEL, PEREZ-LUGO; ZICHAL, 2000). Here, forest recuperation reflected migration, and the impact of US government entitlement transfers in the form of social security and other payments to Puerto Rican citizens. The international commodity prices and volatility undermined agriculture, but the cash transfers reduced pressure on natural resources as well.

The El Salvador and Puerto Rican cases suggest that transfer payments can have positive effects on forest cover, a reality that has suggestive implications for the debates that currently inform payment for environmental services (GRIEG-GRAN; PORRAS; WUNDER, 2005; SUNDERLIN et al., 2005; WUNDER, 2001). While the specific successional forests may not exactly reproduce the diversity patterns of old growth forests, the complex matrices and fragments appear to sustain high levels of diversity in spite of dense human populations. These two cases reflect globalizing dynamics that undermined peasant economies that led to successional landscapes based on more complex local/ global economies and money transfers in to densely inhabited landscapes. The

next section focuses on how other forms of globalization enhanced production forests.

### ***After the deluge: timber booms and successional management***

The Amazon export timber economy is concentrated on six main species that supply global markets<sup>3</sup>. The conventional wisdom, one that is empirically verified in many of Amazonia's frontier settings, is that as timber operators come in, they cut the valuable species into local extinction, leaving a depauperate forest system, and one where logging roads will soon trigger in-migration and broad scale deforestation. While certainly this pattern is historically true and part of Amazonia's current frontier history (FELDPAUSCH et al., 2006; NEPSTAD et al., 2004; FEARNside, 2005; LAURANCE et al., 2004), these impoverishing processes are not the only ones in the region, especially in its more consolidated peasant economies where skills learned in the globalized sector can be applied into development and enhancement of local systems, shifting the dynamic from a predatory, to productive process.

Peasantries who fall outside the "socio-ambiental" economies in Amazonia increasingly find themselves increasingly engaged in management of forest resources of many kinds including secondary successional systems (PERZ, 2004; PERZ; SKOLE, 2003b; SUMMERS; BROWDER; PEDLOWSKI, 2004). This case study focuses on Amapá and the estuarine ecosystems of the Amazon, and is based on the results of the Amazon research team largely associated with Colombia University and the New York Botanical Garden (SEARS et al., 2007; PADOCH et al., 1999; PINEDO-VASQUEZ et al., 2001).

Until the 1980s, seven large export timber operations averaged a daily output of 22,000 m<sup>3</sup> of high value tropical timbers, and was a significant source of local employment for sawmill and logging management. Once the export quality timbers were cut, all commercial operators closed and moved elsewhere, a pattern typical of Amazonia's predatory high end timber economy. So far this appears like the usual story of a ravaging global economy leaving pillage in its wake. But this tale has unusual features that evolved from

<sup>3</sup> These include mahogany, etc., etc.

information transfers from waged workers in this global timber industry.

Some of the laborers who had worked in the sector left with the timber operations, but others remained, and built family run sawmills, of which there are now seven. These mills focused on locally grown, smaller timber, mostly faster growing successional species that form part of a complex of natural forest, successional and fallow enrichment, and home garden management involving at least 36 species that now contribute to regional markets for poles, building supplies and cabinetry. Historically the timber manipulation was strongly associated with post cropping successional systems but the agricultural component has increasingly dropped out of the mix with the collapse in crop prices (BRONDIZIO, 1999; SEWARD, 2007). Secondary forests are now the sites of intensive management.

Information from the globalized industrial sector fed into analysis of the commercial features of trees, management strategies for better quality timber and the technical elements of wood processing and mill management for timbers for local markets. These then were linked to small scale industrial timber systems that permitted the insertion of households into a reconfigured timber industry, but one based on international industrial standards (SEARS et al., 2007). This adaptation of local knowledge of forest species, their qualities, and ecological features to larger industrial processes was also coupled with local social networks for marketing.

This complex has produced a regionally integrated production and processing system that seems resilient and flexible, is highly diversified and is based on an array of local demands for timber, and non timber forest products. This dynamic was produced through the participation in a global export timber market that introduced the rural inhabitants to the technologies, knowledges and strategies inherent in such markets. This engagement of technically sophisticated processing, traditional social relations for marketing, and modified resource management systems expresses the dynamism of the rural sectors, but also reveals the influence of the transformations in commodity prices, as farmers crop less and manage wood more, and develop long term timber based ecological and economic strategies for local and regional markets.

As in our previous examples, the impact of declining commodity prices, participation in waged markets, and the integration into global circuits rather than producing the expected story of simple resource depletion has, instead, generated a more complex tale of hybrid “transnational” structures that actually promote rather than undermine forests, in the most vexed of all tropical sectors, the timber economy.

### ***Gastronomy, fashionable foods and agroforestry: elite markets and forest expansion***

Our last case also comes from Amazon estuary, a place of millennial habitation by rural populations. Almost anyone who has been to a major grocery or health food store cannot have helped but notice the ubiquity of Açaí juice (*Euterpe oleraceae*), also known as Amazon Palmberry. Extremely high in antioxidants, this ancient Amazon domesticate has made rapid inroads into American markets during the last five years. That global demand should shape land use into an intensified production systems is not in itself surprising, since most of the history of global commodities repeats this history. What is significant about this case is that it involves tighter integration, and intensification of production within an agroforestry framework of what is often considered a “wild” or “semi wild” tree species in an difficult Amazon flood plain environmental setting<sup>4</sup>, and its producers are mostly small farmers.

One of the nostrums about non timber forest product economies is that increased demand, especially global pressures can push system into unsustainable intensive extraction. This has been the case with many of Amazonia’s colonial extractive products such as turtles, caucho, rosewood, and most recently, Mahogany (ESCOBAL; ALDANA, 2003; POLLAK; MATTOS; UHL, 1995; SALAFSKY; DUGELBY; TERBORGH, 1993; BUNKER, 1985). In the situation here, “natural forests” and successional forests have been integrated into other floodplain and upland agroforestry systems in complex temporal and spatial forms to increase the production of Açaí. The basis of this integration are local knowledge systems. While the palm itself, managed through trimming and coppicing, has characteristics that make it amenable

<sup>4</sup> Reader unfamiliar with Amazonia may not appreciate that the estuary, through which about one sixth of the world’s freshwater passes, is subject to significant tidal as well as flood fluctuations.

to intensification within successional forest or agroforest systems, the expansion of Açaí forests and agroforests has been explosive (ZARIN et al., 2001; BRONDIZIO, 2004).

The volatility of a purely global market is buffered by the enormous local urban demand for Açaí, and indeed the international market, for good or for ill is placing upward pressure on local prices enhancing the efforts on longer term management of “domesticated” stands rather than unique dependence on predatory harvesting. Açaí and timber are now among the most valuable commodities produced in the estuary. Indeed the excellent market for the palmberry has consolidated and extended traditional and private claims on Açaí territories (RAFFLES, 2002) which increased the area of its production – more than 125% throughout the 1990s even when its market was still largely local (ZARIN et al., 2001; FUTEMMA; BRONDIZIO, 2003). Other regional markets for livestock and manioc or rice are present but neither exhibited the economic dynamism of the palm (BRONDIZIO, 1999, 2004), which with its employment characteristics, harvesting patterns and strong demand appears able to drive forest management rather than destructive extraction or conversion of forest to manioc fields or pasture, and indeed is even replacing these land uses (BRONDIZIO, 2004).

This system occurs in a region of traditional “caboclo” populations, areas with a significant repertoire of successional woodland management techniques and a complex economic portfolio including urban labor and remittances that assures both flexibility and resilience in the Amazon estuary environment (FUTEMMA; BRONDIZIO, 2003; HIRAOKA, 1995; MUNIZ MIRET et al., 1996). These two Amazonian cases reveal how local knowledge and production systems were influenced by processes inherent in globalization of markets, but with two quite different outcomes.

## Conclusions

### *Woodlands, wages, markets and tropical peasantries*

Peasants, that amorphous class of rural producers, are increasingly a residual category in modern rural politics.

Featured as a disappearing class in Marxist analysis and in modernization theory, the “vanishing peasant” narrative has been countered in Latin America with the populist model of the *via campesina*. Debates over peasant viability persistently point to their relative decline, even as their numbers, in absolute terms remain high. Historically castigated as forest destroyers, peasantries now find themselves limited in their capacities as producers of commodities dominated by agribusiness, and usually insufficiently “indigenous” or “ecological” to participate in environmental or socioambientalist markets. This impasse, which is discursive, political and economic, takes place in global fields of circulation where campesino economies increasingly depend less on crops and more on wages and woodlands in the construction of livelihoods and landscapes, especially in consolidated frontiers. This suggests that much closer attention to the spatial and temporal outcomes of globalization and their local configurations can illuminate a great deal about landscape dynamics in peasant dominated landscapes. The attention to environmental, indigenous and traditional lands is certainly important, but larger systemic dynamism in the Latin American tropics may well be unfolding in its “invisible forests” of the New Rurality.

### *Forest transitions and globalization*

The processes that produce forest resurgence in rural areas do not necessarily reflect a transition, or transformation from “pre capitalist” rural configurations to modern development, the argument that underpins much of the EKC and forest transition literatures. Forest recovery in some cases may be the result of endemic forces (ALDRICH et al., 2006; CALDAS et al., 2007; PERZ, 2007b), but for the most part, over the last 20 years there are significant global dynamics that condition what seem to be only local landscape outcomes.<sup>5</sup> For this reason conflation of the current Latin American transition with European model of the “EKC” needs to be reevaluated.

Contemporary patterns of forest resurgence in Latin reflect a complex history that is in many ways highly divergent from those of the Northern European and North American worlds, in part because many rural landscapes

<sup>5</sup> The studies of peasant frontiers in Amazonia that have emphasized peasant deforestation and the social determinants of secondary successions (see ALDRICH et al., 2006; CALDAS et al., 2007; PERZ; SKOLE, 2003a) have modeled systems that are mainly Chaynaovian in focus, and driven by internal processes. While globalization should not be understood as overdetermining local outcomes, the way endogenous processes are structured in these studies can overlook the external drivers.



remain densely inhabited. At the macro and structural levels woodland recovery or expansion is not an outcome of the elimination of precapitalist formations, rural depopulation and emergent urban industrialization – the model that underpins the Euro/American transition. Nor are the transitions of traditional rural economies into traditional ideas of a “uniform” modernity, but rather into a set of complex of systems where traditional forms meld global processes in ways that have enhanced forest cover.

Woodland recovery often place in consolidated peasant areas, and this should be understood as socio-environmentally distinct from frontier zones whose dynamics have so dominated the understanding of tropical peasantries in the Latin America. These populations have been integrated into complex globalized circuits of currencies, commodities and labor for hundreds of years, and certainly are participating today as producers, waged laborers and small scale “financiers” in well developed capitalist and globalized markets. This forest transition is not part of the “Great leap forward” as in the transition to capitalism that is argued and implicit in many discussion of the forest transition (cf. Rudel et al.; 2005; Mather; Fairbairn; Needle, 1999; Mather; Needle, 1998) nor necessarily part of the traditional modernization story as understood in the literature of the Environmental Kuznets curve but reflects accommodations to contemporary conditions of globalization, and the conceptual, political and ecological restructuring of the rural. These dynamics help explain the widespread occurrence of woodland recovery in many divergent contexts, thus the *via campesina* is increasingly likely to be the *via campesina forestal*. This changeover has occurred in a policy vacuum

and with very little support other than the transfers “from below” in the form of wages, remittances, modest state entitlements, knowledge and sales.

Peasantries merit more attention and policy support since they increasingly are part of a dynamic sector of woodland recovery, and are in sites where, unlike the static boundaries of parks and reserves, forest landscapes have the potential to expand. These rural inhabitants and tropical environments might well benefit from an approach that abandons the habits of thought that sees peasant producers as uniquely drivers of deforestation but also understands them as allies: the protagonists of political ecologies of forest transitions embedded in inhabited landscapes.

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