

## **Sustainability Education in Practice: Appropriation of Rurality by the Globalized Migrants of Costa Rica**

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### **Abstract**

An innovative framework for sustainability helps investigate the impacts of real estate development and educational attainment of newcomers; more specifically, landscape transformation due to 'amenity migration' into the Global South. We argue that sustainability research requires a de-categorization from mutually exclusive 'human' and 'nature' divisions, to refocus on intersections of multiple and complex socio-environmental processes, including the convergence of power relations inherent to development in the cultural landscapes of tropical mountains. Further, due to the explicit impact of amenity migration on the mountain environment, the ecological modernity of Costa Rica becomes less neatly categorical, requiring new educational frameworks linked with ecologically-minded social actors, which could be obtained by developing an educational pipeline for the humid tropics. Due to the normative nature of sustainability, we suggest that sustainability education is an essential component in influencing those value-laden choices central to environmental decision making, which are determined by well informed citizens and professionals trained with sustainability education approaches.

**Keywords:** Sustainability, Amenity Migration, Rurality, Farmscapes, Ecological Modernity, Global Change, Costa Rica.

## **Introduction**

This article summarizes and identifies gaps in the sustainability and social-environmental literature, especially those interactions in rural areas of the Global South resultant to real estate development triggered by amenity migration. We argue that sustainability research requires a de-categorization between ‘human’ and ‘nature’, in that we need to focus instead on intersections of multiple, complex socio-environmental processes, including power relations inherent to globalization in bio-diverse rural areas, suggesting that a thorough investigation into sustainability becomes less neatly categorical.

Our research question relates the fact that in rural landscapes of tropical mountains, such as in Costa Rica, much of the transformation of the landscape responds to drivers associated with cultural and economic activities, many times in the form of natural resource use and conservation management, which current narratives of sustainability education mostly emphasize as a trend of global warming due to abrupt climate change scenarios. We suggest that livelihood (in)security has already suffered, not from the climate alone, but mainly from ‘management’ approaches consequential to amenity migration, such as replacing the traditional cultivation of agricultural products for lawns, golf courses and tourist facilities; pastures for secondary forests; and fertile valleys for cemented surfaces, roads, houses and other urban development (Chipenuik 2008, Sarmiento 2008). In this paper, we concentrate on how both culture and nature in these areas are changing, transforming the landscape of rural Costa Rica into something different, to be defined by the new currents of conservation with a case study using critical geography in farmscape transformation to better understand the political ecology of rural environments in tropical mountains, using Santa Cruz de Turrialba as exemplar. The questions are how does real estate development for amenity migration affect the environment, economy, and culture? What is the aptitude and reality of lifescape sustainability, i.e., that of culture, lifestyle, and economic status of a community in Santa Cruz?

In Costa Rica, eco-tourism was just emerging only a decade ago. Its proximity to the United States, along with a peaceful image served as a major factor in catapulting Costa Rica to become a top destination among travelers of all ages. With tropical mountains, waterfalls, abundant ocean vistas and dense rain forests full of biodiversity – all within easy reach from San José’s Juan Santamaria International Airport – the rapid growth of tourism and amenity migration is no surprise. We define ‘Amenity Migration’ as the flow of people from urban areas towards the rural landscapes (c.f.: farmscapes) for bucolic ideals, extended vacations, leisure, rest and relaxation. Clearly stated, amenity migration is the movement of people to places, permanently or part-time, principally because the destination is perceived to have a higher environmental quality and differentiated culture comparative to the place of origin (Moss 2006, Price, Moss and Williams 1997, Glorioso and Moss 2007, Chaverri 2006). Major metropolitan urban areas are one source of amenity migrants (Flognfeldt 2006) that flee the congested city life, affording periodical commutes, to appreciate a more “laid back”, simple rural life around the farm, the second home, the vacation cottage or the summer residence (Chaverri 2006, Sarmiento 2001). In defining the ‘rural’, we consider the dynamic and increasingly unstable social constructions, as well as the fixed geographical entities, i.e., the landscapes produced through these social relations, as collectively shaping a place (Cloke and Little 1997). A substantial body of literature recognizes the significance of the category ‘rural’ as it is constructed by and embedded in everyday social and cultural practices, historically and spatially specific (Hughes

1997). Both the fixed geographical entities and the social relations are transformed by urban-style development taking place as an urbanization of the countryside, the byproduct of the amenity migrant (McCarthy 2008, Cloke and Little 1997).

In Costa Rica over the past decade, ecological and cultural vulnerabilities emerged as a result of vast real estate development and unplanned urbanization of the landscape. The long-term picture for Costa Rica, both ecologically and culturally, is questionable, and even the lay tourist can recognize that real estate development is encroaching upon the once bucolic countryside in the beach oriented development of lowland Guanacaste, in northwestern Costa Rica. We now expect that a similar real estate shift from urbanized areas to rural mountain communities could be experienced worldwide as global change forces highland youth emigration to lowland cities, with the urban migrants finding refuge in the impoverished highland communities, exerting profound change in livelihood (Chen, Irwin and Jayaprakash 2009). Although impossible to predict what tropical mountain areas will be like without more international interest and federal re-examination of land use policy over the next decade (Glorioso 2009, Price and Butt 2000), a certainty is continued environmental and social transition consequential to a 'business as usual approach' operating independent of collaboration among academic planning researchers and communities (Chipeniuk 2006).

Costa Rica remains a very special place in the perspective of Costa Ricans and Northerners. With nearly 25% of the land area preserved in national parks, ranking among the highest percentage of official conservation worldwide, the country is indeed a green, tropical 'paradise' (Chaverri 2006). Additionally, with its tall central mountain range in proximity to two oceans, it ranks among the wettest countries in the world. The transitions from wet humid coasts to cold high mountains enable a large range of ecological zones, reflected in one of the highest levels of biodiversity in the world (Janzen 1983). In the heavily populated highlands of the country a fairly comfortable and temperate climate is maintained during most if not all of the year, and based upon its 'peaceful democracy' boasting no military presence, its citizens live free of armed conflict. Costa Rica's commitment to health care, safety and other social concerns allows both residents and tourists to live in relatively secure surroundings (Hall et al. 2000, Basso and Newcomer 2009). Fortunately, many who call this comfortable, amenity-rich country home also show a commitment to nature conservation and educational attainment, particularly in rural spaces of tropical mountain areas (Kappelle and Horn 2005, Sarmiento 2007)

Costa Rica's real estate is amongst the fast growing markets in the world, and is the fastest growing market in Central America (Figure 1). With so many online searches being conducted for "Costa Rica Real Estate" a dramatic increase in land prices is no surprise (International Real Estate Market News 2008). In some high demand areas land values have grown ten-fold, and have doubled or tripled in many other parts of the country (Koutnik 2005). Although tourism and amenity migration have already transformed many Central Valley and North Eastern regions of the country, the periphery of the central volcanic Cordillera remains relatively unaffected, with a continuing focus on a variety of agricultural enterprises, including coffee, sugar cane and dairy production. As land prices continue to increase in coastal and more accessible mountain destinations, Costa Ricans living in San José and real estate developers *in-the-know* are beginning to discover the affordability of the village of Santa Cruz of Turrialba, as a second-home destination.

**Figure 1. Highest, medium and lowest activities shown from searches for real state online business. Source: International Real State Market News**



## Study Area

At 1500 meters elevation, the village of Santa Cruz occupies a piedmont valley in Costa Rica's Cordillera Volcánica Central, just 80 km to the south of the capital city, San José. The proximity to Monumento Nacional Arqueológico Guayabo, one of the best known prehistoric sites in Costa Rica, and Volcán Turrialba National Park would lead us to believe that the coffee, dairy and vegetable cultivating roots of Santa Cruz would have been taken over in the last decade's tourism frenzy ongoing in other parts of the country; however, the low-key agricultural village in Turrialba has remained off the radar for now, but the word is beginning to spread. The bountiful cloud forests and peaceful agrarian culture is within a two hour commute of San José, and developers and prospectors are arriving. Costa Rica has experienced surges in tourism and amenity migration, and with subsequent shifting economic, cultural and ecological concerns, land use policy and conservation politics are at the center of the equation for all stakeholders involved (Chaverri 2006).

**Figure 2: The location of Santa Cruz de Turrialba, in the southern terminus of the Cordillera Central Volcánica, in central Costa Rica.**



The educational sustainability issues associated with amenity migration are related to traditional and *eco*-tourism discourse, for example, the need to protect cultural identity and ecological resources amidst impending globalization in the rural Global South. Amenity-rich mountain areas frequently border conservation sites and biological corridors, and uncontrolled and under-monitored real estate development for amenity migration directly threatens natural water sources, scenic landscapes and their rich biodiversity – ironically, transforming and degrading the ‘pristine’ landscape originally sought by the amenity migrant (Chaverri 2006). Conceivably, one of the most distinguishing traits of the amenity migrant is the longevity of stay, in opposition to the typical tourists’ passing through mentality – a motivator that could prove beneficial in directing future development in amenity rich destinations, as the amenity migrant conceivably wants to ‘sustain’ the lifescape that attracted them to the destination originally. Some countries, including Costa Rica and Panama, offer wealthy foreigners incentives to take residence there, including attractive tax breaks, subsidies or other stimulus, although Costa Rica rescinded most tax incentives by 1994 (Peterson 2009, Pera 2008). Despite building restrictions on land owned by foreigners (five year residency requirement for building permit issuance), there is a plethora of choices to create Foundations, NGOs, mix-companies or simply hiring a country representative or legal counsel that allows newcomers to get into the economic mesh of

the country and live their dreams in the second destination, for many during their golden years (Peterson 2009). Retirees, expatriates, and those seeking a richer environment and distinctive culture migrate to such destinations as Costa Rica primarily for non-economic purposes. As (Chen et al. 2009) summarize, the amenity migrant is less constrained by employment location and more concerned with place-specific amenities, indicative of retiring baby boomers, a population with a higher disposable income, and an increasingly “foot-loose population” taking advantage of electronic technology to mitigate reliance on living in close proximity to where they conduct business. As a matter of fact, at-home-executives do prefer spaces of solitude and luxury that only the amenity migration phenomenon provides. Satellite telephone service, Skype and videoconferencing software, internet access and other mobile communications, allow people to take prolonged absences from their traditional workplace in big cities without being affected by the isolation of a second home in the mountains (Moss 2006, Borsdorf 2009). While the primary motivator for amenity migrants is quality of life, many also must continue generating an income – whether in working physically in the new location, or receiving income from an outside source, i.e., transfer payments of pensions, investment returns, etc; however, when a migrant moves *primarily* for economic opportunity they are not “amenity” migrants, but what we consider “economic migrants”(Glorioso and Moss 2007, Borsdorf 2009). Economic migrants many times move to high amenity locations with anticipation in building profitable businesses fueled by and marketed toward amenity migrants.

### **Reconstructing sustainability education amidst ecological modernity**

Three central themes inform current trends in literature associated with Sustainability Education. Firstly, the presence of normative goals frequently ignored and knowingly overlooked as an unjustified exclusion from academic research analysis on sustainable development. This notion of normativity requires stakeholders to make choices that are inherently value-driven, and requires an analysis of the complexity in coupled human-environmental systems (Castree N 2009). Secondly, the power relations of inequality specifically associated with environmental (in)justice disproportionately impact certain communities, most commonly the traditional residents of a destination, versus the hierarchy of educational attainment, cash flow or political network capital of ‘satrap’ or patrician newcomers (Meletis and Campbell 2009). Informally, concentration of this type of immigrants to specific areas of the country (e.g., Monteverde, Papagayo peninsula, Jacó beach and Puerto Viejo) has given Costa Rica de moniker of ‘Ticolandia’, where you can wish-upon-a-star for the relaxing atmosphere of paradisiacal tropical settings. This can also be found in other locales of tropical mountains, such as ‘Gringotenango’ on the shores of Lake Atitlán, in Guatemala, and ‘Gringolandia’ in the likes of Puerto Vallarta, Cancún and San Miguel Allende in Mexico. Finally, the discussion of what is called ecological modernization (Buttel 2000), argued by Zimmerer and Basset (2003), recognizes the importance of environmental issues throughout disciplinary fields as a response to globalization, and thus represents a pivotal transition in society’s approach to conservation; however, Baker (1993) argues that in framing complex nature-society relations, one must provide a historical analysis to understand the future potential in sustainability. Additionally, Zimmerer (2003 ) recognizes that ecological modernization will seek environmental management as central to the functions of present-day and future societies, thus at the core of social and political processes.



A comparison between physical and social science methodologies in researching sustainability in amenity migration provides an accountability perspective (see Table 1). In the 20,000 records identified in a Web of Science database search for the word ‘sustainability’, the majority proportion was identified in Environmental and Physical Science methodologies. Only eleven percent of the top 500 was identified as using social science approaches. Discussions of sustainability (Benjaminsen et al. 2006, Whitehead 2007, Clark 2007), it is again noted that social science theory is rarely used to address social-environment relations, and Mansfield (2009) suggests that the complexity of reciprocal associations between man and nature justify the application of social theory in addressing the burgeoning presence of complications. In the table below, the variance between physical and social approaches in understanding sustainability, rurality and amenity migration is clearly demonstrated through a database search of each of the keywords in column one, of data available from January 1980 to December 2009. Note that rurality and amenity migration are typically researched using social science approaches, in comparison to those questions of sustainability, frequently are approached using physical science methods. This divide between disciplinary geography should be overcome with the use of political ecology works that explain the true nature of cultural landscapes in tropical mountains (Sarmiento 2000).

**Table 1: Web of Science Database Search for Records (top 500) from January 1980 to December 2009 – Note: They are redundant, non-mutually exclusive categories**

<b>Keyword Search</b>	<b>Database Search total hits</b>	<b>Environmental Science, Physical Sciences (n= 500 Records)</b>	<b>Social Sciences (n=500 Records)</b>
Sustainability (Total Hits)	20,000	60 %	9 %
Sustainability, Rural...	1,164	53 %	16 %
Rurality	509	21 %	102 %
Amenity Migration	117	68 %	63 %
Amenity Migration, Sustainab...	6	100 %	0

The divide between the arts and science of conservation is applicable to sustainability, so a separate approach is technically oriented in pragmatic spheres of physical geography, while the political approach is artistically driven towards romantic spheres of human geography (Table 2). We agree that researchers often try to turn sustainability into a technical, rather than political, issue...but the process of defining sustainability is an inherently normative, political process (Castree 2009).

**TABLE 2: A sample of 20 years of publications from the Web of Science Database Search for ‘Sustainability’, from 1980 to December 2009.**

<b>Web of Science Database Search: Sustainability (1980 to 2009)</b>		
<b>Subject Area (500 titles)</b>	<b>Record Count</b>	<b>Percent</b>
ENVIRONMENTAL SCIENCES, ECOLOGY, PHYSICAL SCIENCES	303	60.60 %
GEOGRAPHY, SOCIAL SCIENCES	66	9.20 %

### Sustainability and Sustainable Development

Categories of sustainability can be referenced as endurance and long-term carrying capacity of economic, environmental and social resources within a community (Clark 2007, Zimmerer 2003 ). According to principles of political ecology (Zimmerer 2003 , Zimmerer 2006, Houghton 2005) we address sustainability education for development in tropical mountain areas, with emphasis on identification of local tendencies, unique spatial advantages and challenges, historical contexts, and secondary related factors for each category of sustainability (Figure 3) to reveal the complete political network specific to the research site.

**Table 3 – The dependent variables associated with amenity migration in tropical mountain areas, consequential to real estate development as a form of globalization.**

<b>Independent Variable</b>	<b>Dependent Variables</b>
Amenity Migration to Rural Landscapes	Environment
	Culture and Society
	Economy
	Institutions

In analyzing the literature to date on Sustainability practices related to Real Estate Development in rural landscapes, it is apparent that there are different perspectives and theoretical movements at play. Many have formulated that sustainability as it is used today originates with the 1987 UN-commissioned report *Our Common Future* (the ‘Brundtland report’), defining sustainable development as ‘development that meets the needs of the present without compromising the ability of future generations to meet their own needs’ (Adams 2001). In 1992, the goal of the ‘Earth Summit’, or United Nations’ Conference on Environment and

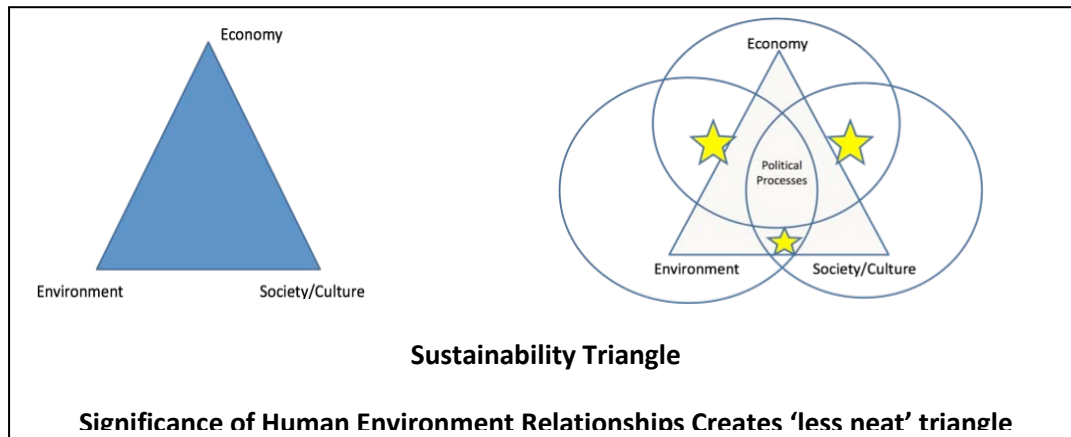


Development (UNCED), held in Rio de Janeiro, was to automate sustainable development into everyday use as it had been defined in the Brundtland report (Mansfield, 2008, 2009). Mansfield states that the 1992 UNCED represents a shift regarding issues of environment and development, which until then had been considered to be largely disparate.

Whether the scale is focused upon local or global, the question remains as to what precisely is to be sustained within the realm of sustainability? What is it that we are trying to sustain? Ultimately, answers to this question are based on normative theory, and will fundamentally involve contradictory value-laden choices of amenity migrants, rather than the local residents, alluding to unequal power relations. What we consider as important and valuable is what we sustain; therefore, sustainability takes on a dynamic role, dependent upon the dialectics of interests and specific values of the different stakeholders involved (Noel Castree 2009).

The consensus in representing sustainability, is a tri-lemma at the apex of environmental, economic, and social concerns, hence sustainability only exists if all three are addressed together (Sneddon 2000; Whitehead 2007). While many will argue that the orthodox perspective of obtaining sustainability requires only 'better knowledge, incentives, and technology', Mansfield (2009) counters that this narrow perspective ignores relations of power that create problems; concluding that 'sustainability' in itself is a political project. In addressing all three components together, rarely are the political implications to involved stakeholders considered as an interactive web. Some are tempted at the idea of researching (un)sustainable relationships among stakeholders as that of a technical problem of degradation to the environment, disregarding the perceptions of what a particular society recognizes as valuable, thereby avoiding the culprit (human-nature association) of the problem and only suggesting it exists (Castree 2009). In utilizing social science perspectives in understanding the concept of sustainability as a normative process, i.e., involving value driven choices, the complexity of coupled human-environmental systems can be approached as identifying links among multiple, intersecting nature-society interactions, instead of just noting that there is a connection between humans and the environment (Sneddon 2000). Identifying key social factors that lead to (un)sustainable situations is recommended prior to advocating assistance policies in order to avoid contributing to the original problem, i.e., treating the challenge of world hunger and inadequate water supply as the need to grow more food, and hence use more water (Castree 2009). Limiting our research to only the components of an issue that can be easily measured and correlated (a technical approach), is an unrealistic, overly simplistic method, relying upon the promise of equally simplistic solutions that something can be done (i.e., quick fix) to address the major problems of our time (Castree N 2009, Mansfield 2009). We recognize the coexistence of humans and nature as reality, and feel justified in our attempt to address unsustainable socio-ecological systems, only through recognizing the entire scenario of actual interaction between society, the environment and economies.

**Figure 3 – Venn Diagram – Complexity of coupled Human-Environment Systems, (concept Sustainability, Mansfield 2009)**



The vast amount of research conducted on sustainability attempts to analyze *Un-*Sustainability as an occurrence among environment, economy and/or society, but it overlooks or disregards the complex reciprocal tensions and power relationships (politics) inherent to social nature settings (Castree 2009). In analyzing commentaries from ecology, ecological economics, and livelihoods, Sneddon (2000) argues that these fields “tend to side step the power discrepancies embedded within social relations... which lie at the heart of many environment and development dilemmas”. Castree et al. (2009) further argue that sustainability researchers disregard by ignoring the politics amongst the actors concerned with specific sectors in the sustainability triangle and in effect are ‘blunting their effectiveness’.

### **Patterns and Politics of Amenity Migration to Tropical Mountains**

Although viewed as ‘long term tourists’ by a United Nations Environmental Program (UNEP 2001) study on economic impacts of tourism, Laurence A.G. Moss (2006a) distinguishes amenity migrants from tourists primarily based upon the intention of residence in an amenity destination. Amenity migration has been classified into three temporal categories of residence intent: intermittent, seasonal and permanent. Scholars consider all movements for amenities to be amenity migration; however, we will distinguish the tourist from the amenity migrant following Moss (2006b) primarily based upon the intent of the tourist to visit, and the intent of the migrant to reside in a destination. So then, shall amenity migrants concern themselves to a greater extent with the transformation of farmscapes that continued unorganized real estate development postulates? Flognfeldt (Flognfeldt 2006) suggests that the permanence of the amenity migrant may be important for socio-political participation, comprising a link to connect traditional resident and infrequent tourist/outsider in integrating a grass-roots environmental stewardship movement in rural, amenity rich destinations in peril.

### **Rurality in Tropical American Mountains**

We take Rurality as the best indicator of the quality of being rural, as opposed to the urban identity. The term ‘Rurality’ emphasizes the characteristics of tradition, community, oral history and folklore embedded in rural communities and characteristic of their internal and

external relationships (Cloke and Little 1997). For the visual landscape of Costa Rica, Hall et al (2000) paraphrase the stark contrast of the ‘lush verdant forests’ of the northeast region giving way to ‘brown, denuded slopes’, separated by large, beautiful mountains bisecting the east and west coasts. They further point out that the transition between natural forest and anthropogenic areas is often a sharp delineation (as opposed to gradual) between the green of forests and the newly opened areas, which are often pastures, pineapple plantations (Hall et al. 2000) and cropland (Kappelle 2008). Planted pastures, or at least a resemblance of what appears to be pastureland, are frequently seen in Central America, but cows are relatively few, and scattered throughout, evidence to the declining profitability of the cattle grazing industry. This is what one of us (Sarmiento, in press) calls “paramization” of the high tropical mountains, the encroachment of pasture into the forested matrix. Although deforestation continues, there are some areas of human-imposed reforestation (Hall et al. 2000) and of afforestation mainly in the highlands. Santa Cruz de Turrialba, hence, assists in the comprehension of the divide between the increasing urbanite presence and its popularity, versus the diminishing importance of rural folk, whose livelihood of farming is a distant, iconic myth for a bygone era of small scale family farms and forestry practices. The rural, often associated with a slow paced, backwards community, offers what busy cities of San José and of the Global North cannot offer anymore: abundant biodiversity, clear water and air, organic food, strong individual work with the land, peace and quiet, security from urban crime, and even spiritual renewal on the mountain tops (Chipenuik 2008, Locke 2006). For instance, cars are replaced with oxen-pulled ‘carretas’, traditionally painted with vivid colors and decorations and used throughout the countryside. Horses, cows and chickens frequently roam free adjacent to the rural mountain roads, and people in these villages seem just as uninhibited as their animals, offering the friendly ‘Buen Día’ to even obvious ‘outsiders’. All these values are accrued by the amenity migrant, willing to invest in the target community where the bucolic is possible, evocative of simpler old times, purer life and better health (O’Reilly 2007). Rurality, hence, arrives as a dialectic choice for urbanites of the Global North whose environmental conviction moves them towards the easy-going lifescape of the Global South, where if you have the economic affluence and some technical know-how, you could become an agent of change (Woods 2005). In rurality, national identity, mountain livelihood and folklore are invigorated as drivers of migration, predominantly of the long-term amenity migrant.

### **Tenure and Urbanization in Real Estate Development for Amenity Migration**

Real Estate booms and landscape transitions have been occurring for as long as people have been settling natural, frontier regions (Firey 1960). One of us (Jones 1985) studied land colonization in Central America and presented a compelling case for the impending influx of people to rural areas of tropical mountains as based on speculation, which continues to be the driver for the current rurality appropriation in Costa Rica. Just as natural resource exploitation alters the physical topography of the land, so shift social demographics and cultural identities. One current trend in Costa Rica is that of wealthy individuals using disposable income to move into open, rural settings, many purchasing property to be used primarily as a retirement or seasonal home (Basso and Newcomer 2009, Moss 2006). The real estate development and influx of non-resident Costa Ricans (outsiders as some will say) not only alter the rural landscape, but also impact existing social networks and power relations. In Santa Cruz de Turrialba, many amenity migrants come from within the country; however, migrants of European and North American descent proliferate in the areas surrounding Santa Cruz. A qualitative investigation is

planned to better understand the demographic, origin, and intent of residency of amenity migrants to Santa Cruz de Turrialba. This trend of widespread real estate development in once bucolic settings (due to amenity migration) leads to augmented land prices, local resident emigration or outmigration, ecological and social fragmentation, and cultural friction between long-term residents and advents (Basso and Newcomer 2009). In developing countries, real estate development is welcomed into the community as a needed economic stimulus, meant to invigorate local societies, just as in most mountain communities in North America, Australia, transitioning Eastern Europe, and much of the rest of Europe. Undesirable outcomes include the transformation of a community to such a level that the identity of the original community becomes unrecognizable amongst gated colonies and villages full of primarily Northerner extended-stay visitors. There are indicative, anecdotal evidence that exurban growth of isolated ‘mansions-‘ and ‘huertos familiares-‘ type of development occurring in Costa Rican countryside have led traditional landowners to feel a sense of overwhelming hopelessness, loss, and fear with the rapid rate of transformation of the lifescape and community lifestyle that they still would like to call home (Basso and Newcomer 2009). Moss (2006a) further suggests that population change in mountain areas is considerable, rapid and characteristically stressful for all involved – both newcomers and earlier residents.

**Table 4: Proposed alternatives to forward the integration of real estate development and conservation goals in the Path of the Tapir (Basso and Newcomer 2009)**

Community-based Alternatives	Country-based Problem
<b>Business as usual:</b> continued uncontrolled, unsustainable development	<b>Real Estate Development and Influx of Outsiders Alter the Rural Landscape and Impact Existing Social Networks</b>
<b>Create new arenas:</b> information gathering, dissemination, and discussion	
<b>Sound information transfer:</b> sustainability best practices, developers’ performance, and corridor goals	
<b>Restructure incentives:</b> promote ecological and socioeconomic goals	

### **Environmental (In)justice in Amenity Rich Destinations**

Basso and Newcomer (2009) suggest community-based alternatives (Table 4) as a solution to the rural landscape transformation receiving towns and villages in Costa Rica, ensuing increases in country-wide ex-urbanization, amenity migration, and tourism. This is a clear scale jumping, adding more complexities to the overall trend of appropriation of rurality by the Global North. Along with physical landscape transformation, signs of social (in)justice and environmental degradation are pronounced in some popular Costa Rican destinations. The World Trade Organization (WTO) describes ecotourism as a nature-based form of tourism in which the main motivation of the tourist is the observation and appreciation of nature and/or traditional cultures prevailing in natural areas (WTO 2002). Further, service industries such as

tourism, hospitality and amenity driven vacation providers in Costa Rica frequently portray a benevolent (providing benefits), and benign (reducing negative impacts) character, cohesive with the national slogan 'No Artificial Ingredients' (Meletis and Campbell 2009). The receiving communities in Costa Rica, and other Global South destinations typically are comprised of North American and European expatriate lodge owners and tourists (Northerners), and traditional Costa Rican, recent Latino immigrants, or Afro-Caribbean residents - dependent upon the region under study. The Northerner restaurant, tour-company and hotel owners themselves many times locate primarily for gain from amenity migration and tourism and we refer to as 'economic migrants' (Glorioso and Moss 2007, Moss 1994, Glorioso 1999). Allegorically, an optimist believes that the destination area can serve as a melting pot of diversity, with all classes, ethnicities, and races finding their individual position and taking part in the economically successful tourism industry. A realist, however, knows better the tension and power relations at play in this ecological modernity of the tropical mountains.

In at least one Costa Rican high amenity destination, signs of environmental degradation and social inequality have been cited, where inequality exists within and between affluent and poor communities due to unjust solid waste burdens in Tortuguero, Costa Rica (Meletis and Campbell 2009). The consumption and production patterns of wasteful 'throw-away' lifestyle nations are perhaps more pronounced in developing countries with their limited ability to handle increased amounts of garbage produced by the pulsing influx of tourists and amenity migrants. The village of Tortuguero, a mecca for sea-turtle watching, has a reputation as a nature-based, eco-friendly paradise. Only once outside of the 'ecolodges' and upon inspection of the center of the actual village of Tortuguero, a place where local people live, work and play (far from the major hotels/lodges), are waste management challenges apparent. The local 'recycling plant' (waste treatment and storage facility) in Tortuguero is located in the center of this village, just next to the major residential areas. Many times the 'recycling plant' is closed for long periods of time and garbage is left outside the plant, resulting in overflow of waste receptacles, along with burning and illegal dumping around the town and on beaches. The plant frequently closes as a result of several businesses and residents refusing to pay for collection services. An important observation was cited by a local male resident who claimed that "hotels in the area are not doing their part in assisting to create a new system for the 'recycling plant', which could handle the excess garbage produced by tourists and amenity migrants." He claims that it is not the tourists that are throwing out their garbage, but they are generating it. It is then the business owners that are deficient in arranging appropriate disposal of the excess garbage, consequently endangering continued tourism by tarnishing the destination's eco-friendly image. Garbage is hard to deal with in many rural Costa Rican destinations primarily because there is no transportation to remove solid waste, and effective recycling solutions hitherto have not been implemented. Many times the waste treatment facilities, and their negative environmental and health impacts, are located out of the eye of the newcomer and in the living areas of the poorer residents. If we are to frame the politics of the waste crisis in the theory of environmental justice, Tortuguero and its relation to ecotourism, a supposedly green form of development, includes class and race-related inequalities. Even with the recycling plant working at full capacity, the potential for negative environmental and health impacts for those living in proximity is pronounced (Meletis and Campbell 2009).

In a historical perspective of tropical zones, Baker (1993) noted that northerners accept without question that nearly all poor countries throughout the world are tropicals, but why should

this be so? Is it acceptable that two people doing the same agricultural task in the tropical and temperate world should command significant differences in reward? Is hence social (in)justice environmentally determined, is thus sustainability a North-South dialectic, and are the tropics environmentally, economically and socially in trouble?

Economic disparities in the developing tropical world were created through slavery, colonial systems and natural resource stripping, consequentially growing a rich Global North (stated as West). Baker (1993) argues that in trying to construct a new world order capable of balancing troubled realities we need something much more positive than guilt to frame our historical (in)justice. In that Global division was created by a historical process, another historical process will be required to change the current state of developing nations in the Global South. Further, the Global North must dispense with the idea that the tropics are poor intrinsically – they were made poor. We must now work toward their “full and fair reincorporation” into a balanced global economy (Baker 1993, Glorioso and Moss 2007). Spoken in the succinct fashion of former head of the World Bank, Barber Conable, “Sound ecology is sound economics” (Baker 1993) and as researchers we must now operationalize a plan to include not only economic valuation of natural resource losses, but go further in conceiving a solution for a balanced economy that includes beneficence to traditional communities, respect for local traditions and invigoration of local cultures (Glorioso 2009, Chipeniuk 2008). Often times, this was not the case in Central America, and foreigners became satraps, showing hegemonic views of urbanization and myopic, often biased views of culture, transforming mountain villages into resort towns, sex trade sites, abused farming practices, mining depots or another secondary role dictated by empire (Russo and Prado 2006).

Baker (1993) states that the resources required to bring the developing world out of poverty and assist in providing alternatives to the “rape of the Earth” are stupendous. He further argues the need for global environmental management as the only realist sustainable approach to human-environment complexities, citing a contemporary trend in environmentalism in which international offenders of the environment should pay for violations, thereby redefining the boundaries of environmental policy to an international scale (Baker 1993).

### **Livelihood (In) Security and Sustainability Education**

The village of Santa Cruz of Turrialba is quickly becoming an amenity migration destination and migration patterns are being evaluated with emphasis on landscape transformation and resultant transitions in culture, economy, environment and institutions. The internal migration from Cartago, Turrialba and San José to Santa Cruz results in patterns of farmscape transformation into villa-style residential haciendas, and consequential shocks to local culture, economy and environment. Incorporating the theory of amenity migration with qualitative analysis, we propose a project in identifying trends of development in Tropical Mountain areas, and answering the following questions: a) What does the local population value in their community with regard to migrant real estate development? b) Where do the previous landowners relocate, and what are the benefits and losses to community in transforming rural landscapes? c) How are the properties being developed, and are they cohesive to the goals of the community? d) Do differences in development styles, and resultant environmental impacts, exist between external and internal migrant home construction? e) What is the process for community

involvement as a stakeholder in landscape transition of rural areas as a result of amenity migration?

Zimmerer (2006) emphasizes the criticality of ecological modernization, a perspective recognizing an increased importance in implementing environmental management to be central to present and future societies. The most sophisticated versions of ecological modernization call for the notion that political processes and implementation of those processes are critical in enabling “ecological phenomena to be moved into the modernization process” (Buttel 2000). Mol (1995) compares the role of ecological modernization as a shift from radical environmentalism, thereby noting a shift from a “critical commentator outside societal developments to that of a critical... participant in developments aimed at the ecological transformation.” With identification of key stakeholders in developing areas of the Global South, ecological modernization holds promise in overcoming the shortfalls previously discussed with its sister concept, sustainable development. Mol and Spaargaren (2004) focus on organization of the patterns of production and consumption to incorporate not only “economic criteria of quantity”, but also equally using “ecological criteria of quality”. Just as feasibility of incorporation into lifestyle is a tipping point with sustainability in practice, so might we consider with the concept of ecological modernization. Environmental policy should be steered to create favorable conditions for environmentally sound practices and behavior on the part of producers and consumers, with consideration to the ease of use for both sets of stakeholders. In other words, the success of both sustainable development and ecological modernization demands that people, consumers and producers alike, can easily adapt an ecologically sound practice into their lifestyle without a substantial amount of effort or cost, comparative to traditional ‘ecologically unsound’ practices.

Specific to Santa Cruz de Turrialba, the major drivers of change associated with amenity migration (i.e., agriculture, real estate development, science, transportation, industry, etc) should guide conservationists and assist urban planners to acknowledge emerging issues due to continued development, by answering the following research questions in Table 5:

**Table 5: Major descriptors of change as evidence of farmscape transformation and the community response to prospective transitions for future sustainability.**

<b>Driver of change</b>	<b>Descriptor of transformation</b>	<b>Question community response</b>
Environmental impacts of residential development	Decreased biodiversity and corridor continuity, pollution and waste disposal, deforestation, and global climate change	Can we describe one approach to understand the effects of urbanization and justify the impact of deforestation on water supply?
Ease of locating development	Zoning regulations and building codes for design and construction with regard to	Can we find motivation to require construction codes and better practices for



	conservation	conservation?
Cultural transitions, acculturation	Frictions resulting from amenity migration in amongst the social actors and their livelihood	Can we forecast specific cultural shocks that community members will face?
Economic trends and considerations in relation to amenity migration	Normative behavior of a real estate buyer as well as the stance of the communities in peril regarding their valued lifescape	Can we use land value as an indicator of cultural landscape?
Decision making in conservation of cultural landscapes	Mitigation and conflict resolution of cultural, economic and environmental impacts	Can we include retrofits in ecology practices in the management of tropical countries?

In Costa Rica short-term speculation proliferates, and the many bulldozers plowing the sides of once rural roads are frustrating signs of things to come. Opening new roads or improving gravel roads to paved surfaces forecasts a shadow of urban growth, i.e., urbanization. Governmental enforcement of responsibility in land development poses the notion of a custodial view of property, just as manifested in some laws affecting polluters where responsibility (and financial liability) follows the chain of title. This brings us to question: Is land development a right or a privilege? We postulate that land development is a *responsibility*. Because of the longevity of land use and development decisions (c.f.: man-agement), they must be taken with a sense of responsibility to the community and to the future as well as to the investor. The foreign investments will gratuitously continue to flow into Costa Rica and the land use decisions made today will affect the area for centuries to come.

Further research into land use policy allows for developments that are built irresponsibly to be traced back in a similar custodial fashion, and then perhaps a broader sense of responsibility and “voting” with the acquisition dollar by informed investors will help set the course aright. Either way, a broad grass roots holding of stewardship values throughout the tropical mountains is fundamental for change. By integrating geographic analysis, reasoning, and technology for the improvement of the business judgmental decision, specifically with consideration to real-estate development and urban planning, we create a self-sufficient model appealing to economies of scale.

We must educate people, on a local level of the school of thought merging the realm of the geographical with the area of business logic and environmental planning and/or management. This creed is the core of a prospective educational pipeline in sustainability education that will

bring undergraduate students from tropical countries through EARTH University in Guácimo, Costa Rica, who will pursue masters degrees from CATIE (Center for Tropical Agricultural Investigation), in Turrialba, Costa Rica, and doctoral studies from The University of Georgia (Athens, Georgia, USA) with special emphasis in ecological agriculture, rural development and political ecology. If the educational pipeline is achieved, the graduates of the program will be in a better position to affect changes for the societal grasp of sustainability in tropical mountains. A solid understanding of economics combined with ecological research of environmental and agricultural phenomena can be that unifying link that lubricates the pipeline for the brain flow towards tropical mountains. Sustainability education requires also that the newest “green ecology” model be understood and carried out by teachers training students and young people in best management practices for the maintenance of quality of life instead of tactics for the increase of quantity of commodities’ needs and wants. It is a most challenging way ahead and the future of tropical mountains depends on it.

## **Conclusion**

Although amenity migration was the target discussion for sustainability in this review, the surface has just been touched in relation to global change in mountain regions. The magnitude of amenity migration in mountain areas is rapidly increasing worldwide (Glorioso and Moss 2007, Chipeniuk 2008, Moss 2006, Chaverri 2006), and the boundaries of our scope of study are many. We must define the appropriate framework to research cultural and environmental shifts due to amenity migration in tropical mountains. With the similarities between amenity led migration and tourism, one would suggest comparison studies; however, the amenity migrant offers a valuable component to drive sustainability – that of their permanence. With the worldwide popularity of ecotourism and amenity migration, and the growing interest by governments in maintaining this valuable economic option, should these relatively new enterprises be framed and regulated in a similar fashion to that of historical resource exploitation industries, timber and export agricultural industries for example? Prospective projects must include joint initiatives with policy makers in conservation and development planning, whereby studies are conducted to better understand the likely outcomes and probability of land cover change and growth in tourism and secondary housing markets, improving adherence to sustainable development practices, and simultaneously, addressing the need to protect the value of the rural, bio-diverse environment that initially attracts the migrant, and thereby secures continued economic resiliency of the immigration area, and its sustainability.

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