

# Measuring Poverty and Wellbeing: Applications for Land Management

by

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## AUTHOR'S DECLARATION

I hereby declare that I am the sole author of this thesis. This is a true copy of the thesis, including any required final revisions, as accepted by my examiners.

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## **Abstract**

Poverty reduction and conservation can seem contradictory as integrated goals. Despite mixed results over the past several decades, both goals are increasingly being sought out together in practice. Using a case study of an integrated conservation and development project in the Azua province of the Dominican Republic, this thesis examines the definitions and measurement of poverty and wellbeing within integrated conservation and development initiatives. It asks whether the inclusion of subjective ideas and participatory approaches may present new opportunities to better integrate poverty measurements within natural resource initiatives. Four focus groups and 250 questionnaires formed the core methods for data collection. The study reveals wellbeing as a concept was better able to capture the multi-faceted nature of capabilities poverty. Wellbeing often engages with the themes of vulnerability and inequity and includes politically-sensitive considerations instead of concepts that are about assets or consumption, ideas based in the outdated income-poverty perspective. Locally developed indicators were best able to reveal nuances related to context that universal poverty indicators would miss or misrepresent. The results also found that the way poverty, wellbeing, problems and solutions are conceptually framed and defined can be highly relevant. Using asset-based concepts and metrics would lead to economic development goals whereas rights-based ideas would promote very different objectives and methods. The comprehensive identification and targeting of stakeholders was found to be a necessary focus in determining the priorities. Participatory processes, especially with a commitment to power devolution, can help ensure that an array of local ideas are accounted for, and contribute to, a nuanced understanding of complex phenomena. Overall, subscribing to a rights-based approach that targets the means (opportunities) of development and not the ends (assets) can facilitate the needed shift towards the new poverty paradigm, in both concept and practice. A more successful integration between poverty reduction and conservation will require such a shift.



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*For Mom and Dad*  
*who cultivated my love of exploration*  
*with head and heart.*  
*Los quiero mucho.*



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## List of Acronyms

<b>CBC</b>	Community Based Conservation
<b>CBNRM</b>	Community Based Natural Resource Management
<b>CBO</b>	Community-Based Organization
<b>CWIQ</b>	Core Welfare Indicators Questionnaire (by the World Bank)
<b>DfiD</b>	Department for International Development (UK)
<b>DGF</b>	<i>Dirección General Forestal</i> (National Department of Forestry)
<b>DHS</b>	Demographic and Health Survey (by USAID)
<b>DOP</b>	Dominican Peso
<b>DR</b>	Dominican Republic
<b>FAO</b>	Food and Agriculture Organization
<b>FGT</b>	Forster, Greer, and Thorbecke
<b>GDP</b>	Gross Domestic Product
<b>GEF</b>	Global Environmental Facility
<b>HCI</b>	Headcount Index
<b>HDI</b>	Human Development Index
<b>HPI</b>	Human Poverty Index
<b>ICDP</b>	Integrated Conservation Development Projects
<b>IIED</b>	International Institute for Environment and Development
<b>IFAD</b>	International Fund for Agricultural Development
<b>KM: Land</b>	Ensuring Impacts from Sustainable Land Management: Development of a Global Indicator System (by GEF)
<b>LSMS</b>	Living Standards Measurement Survey (by the World Bank)
<b>MDG</b>	Millennium Development Goals
<b>MICS</b>	Multiple Indicator Cluster Survey (by UNICEF)
<b>NGO</b>	Non-Governmental Organization
<b>ONE</b>	<i>Oficina Nacional de Estadística</i> (Office of National Statistics)
<b>PCLG</b>	Poverty and Conservation Learning Group
<b>PLA</b>	Participatory Learning and Action
<b>PPP</b>	Purchasing Power Parity
<b>PRA</b>	Participatory Rural Appraisal
<b>SF</b>	<i>(Fundación) Sur Futuro</i> (Sur Futuro Foundation)
<b>SLM</b>	Sustainable Land Management
<b>SYS</b>	<i>Proyecto Sabana Yegüa Sostenible</i> (Sustainable Sabana Yegüa Project)
<b>UN</b>	United Nations
<b>UNICEF</b>	United Nations Children's Fund
<b>UNDP</b>	United Nations Development Programme (PNUD in Spanish)
<b>USAID</b>	United States Agency for International Development



# Chapter 1 Introduction

## 1.1 Conservation and Development

For centuries, humankind has been altering the world's landscape in pursuit of progress and development. The practice of agriculture and the industrial revolution are but a few clear examples of this ever-expanding reach and the ongoing testing of spatial and resource limits. However, despite our survival relying on a well-functioning biosphere, current trends indicate the rate of biodiversity loss has never been as great as in the past 50 years. The UN's Millennium Ecosystem Assessment Report goes further to state that the extinction rate of species is 100 times higher than the naturally occurring rate specifically because of human activity (Duraiappa, 2005). This situation has been deemed an unprecedented ecological crisis justifying diligence for conservation and the improved management of our natural resources. However, a more pressing concern, politically-speaking, is the unequal level of development across the world's population and the persistence of unacceptable levels of poverty among so many (Collier, 2007). The adoption of the UN's Millennium Development Goals (MDGs) in the year 2000 by all 189 country signatories indicates a collective agreement to dedicate considerable effort at improving the living situation of so many people (Saith, 2006).

While simple language puts development and conservation at either ends of a spectrum, these concepts are clearly interlinked. Just as in the political continuum the extremes converge to meet, the two concepts of development (for poverty reduction) and conservation also need to be reconciled to achieve genuine sustainability. As proposed over 25 years ago in *Our Common Future*, achieving sustainable development that inherently addresses economic, social and ecological needs, concurrently and for the long term, is the global policy goal at the core of this debate (Bruntland & Khalid, 1987). Yet, despite over two decades of experimentation, combining socio-economic development and conservation through human-centered models continue to produce mixed results (Roe, 2008). In an effort

to demonstrate that sustainability can be achieved, defining and detailing initiatives which can serve as exemplars is important (Timmer & Juma, 2005). However, there is increasing recognition that ideal solutions are not necessarily feasible and instead tradeoffs need to be negotiated in most cases (Fisher, Maginnis, Jackson, Barrow, & Jeanrenaud, 2008). This thesis seeks to elaborate these tradeoffs between conservation and development through the use of a case study.

### **The Dominican Republic**

The Dominican Republic is a good country for a case study on these themes. It has a history of relative success in conservation strategies (e.g. approximately 25% of the land base is a National Park or protected area) as well as fairly good record of success for many of the United Nation's Millennium Development Goals (MDGs) for development. However, roughly twenty percent of the population continues to live in poverty and biodiversity continues to be threatened by a variety of causes (Brothers, 1997; UN Millennium Project & United Nations, 2005). One multi-faceted initiative which seeks to combine development and resource conservation is the Sabana Yegüa Sostenible Project (SYS), a Global Environmental Facility (GEF) project implemented by a national NGO, the Fundación Sur Futuro (SF). The 5 year initiative sought to implement sustainable land management (SLM) within the Sabana Yegüa watershed by encouraging appropriate activities and policies. Over 50 communities fall within the project area (Japan International Cooperation Agency, 2002). Notably, the project is located in one of the poorest provinces with high incidences of land degradation (Fundación Sur Futuro, 2007; Sur Futuro, 2010). Additionally, the SYS was selected by the GEF as a pilot case to explore the development of international indicators for integrated conservation and development goals. When combined, these factors make the SYS project an excellent case study for this thesis subject.

This study examines several key social concepts in seeking to fill gaps at effective poverty reduction and conservation integration. The evolution of the concept of poverty is

detailed, highlighting the notable shift from income-poverty to capabilities-poverty, in other words a focus on enabling opportunities instead of providing assets. This directive is increasingly guiding the academic literature in poverty studies. The inclusion of wellbeing, which is more ample and makes room for subjectivity, is also explored. Particular attention is given to poverty and wellbeing measurement tools and processes. Traditional indicators and techniques are contrasted with newer markers and methods such as participatory and rights-based approaches. The body of literature that specifically addresses the combination of poverty and conservation is also reviewed, and the subject of focus for this thesis picks up from the identified gaps by numerous researchers and practitioners interested in these converging themes (W. M. Adams et al., 2004; W. Adams & Hutton, 2007; Borrini, Kothari, & Oviedo, 2004; Brechin, Wilshusen, Forwangler, & West, 2003; Fisher et al., 2008; Roe, 2008; Secretariat on the Convention on Biological Diversity, 2010; Walpole & Wilder, 2008).

## **1.2 Research Goal and Objectives**

Although research on poverty and conservation exists, an identified gap is how these two objectives can be better integrated when pursued in conjunction. The purpose of this mixed methods study is to evaluate how poverty reduction and human wellbeing is defined and measured within conservation initiatives. The new multidimensional understanding of poverty is considered in particular. A case study in the rural Dominican Republic is employed. This study hopes to contribute to academic research by suggesting improvements in measurement which might help the achievement of both poverty reduction and conservation goals.

The specific objectives are:

- Assess how poverty and wellbeing are defined and measured
- Compare and contrast objective and subjective perceptions of poverty and wellbeing in two communities in the Azua province of the Dominican Republic

- Identify improvements to traditional poverty measurements and processes and compile key elements for a pro-poor conservation approach
- Use findings to contribute to ongoing development and conservation work in the Dominican Republic and beyond. More specifically, provide implementing bodies such as NGOs with recommendations for fostering an improved integrated approach.

### **1.3 Organization of the Thesis**

This thesis is organized into 7 chapters. Chapter 2 reviews several bodies of academic literature in order to provide a framework to interpret the research results. The concepts of poverty and wellbeing are explored, including how these ideas are interpreted for policy purposes and measured in practice. A second theme explored are social considerations in natural resource management. This includes the themes of rights, capacity, vulnerability and others. Chapter 2 concludes by briefly considering the works discussing integrated poverty and conservation studies. Chapter 3 details the research design and methods used for this study. Chapter 4 provides historical background information on the Dominican Republic as well as the specifics of the Sabana Yegüa Sostenible project implemented by Sur Futuro. The results from the case study are then presented in Chapter 5 exploring local definitions and perceptions on the issues of: poverty, wellbeing, conservation, economic indicators, food security, vulnerability, empowerment and hope. Chapter 6 discusses the results in greater length intertwining analysis with considerations from the literature. Chapter 7 broadens out to consider the conceptual implications from the results. It then goes on to provide recommendations to improve the integration of poverty concepts within natural resource management initiatives in practice. Chapter 7 concludes by highlighting some potential areas of interest for further academic studies.

## **Chapter 2 Literature Review: Exploring Poverty and Conservation**

### **2.1 Introduction**

This chapter explores the dramatic shifts in the conceptualization of poverty that have changed how this issue is understood. As elaborated, these conceptual changes have affected the very definition of poverty, the inclusion of the concepts of wellbeing and participation, the attributed causes of poverty and the prescribed policy responses. This is followed by a review of another body of literature on the incorporation of the social dimension within conservation and natural resources management more broadly, as well as the specific literature on the integration of poverty within conservation specifically. Gaps in the literature are identified and the influence of these bodies of literature on the research is elaborated at the end.

### **2.2 Conceptualizing Poverty**

#### **2.2.1 Income-Poverty**

Tracing the historical changes in our understanding of poverty helps summarize what was successful and what challenges remain in defining and addressing this important issue. When poverty was first studied more than 100 years ago, economic and material consumption models dominated. This *income-poverty* perspective arose largely out of the history of Western Europe's and North America's development path. The earliest cited systematic report on poverty is Charles Booth's *Life and Labour of the People in London Volume I and II* published in 1889 and 1891 respectively. Using census and survey data, Booth investigated poverty in an urban and industrialized context (Chimhowu, 2009). Booth suggested that due to the pursuit of capitalistic development, income and labour opportunities were strong determinants of social rank. Following this desire to define subsistence poverty for the poorest in society, economists in the 1970's sought to improve

measurements through objective and more systematic methodologies (Kakwani & Silber, 2007). What emerged from this work on measuring poverty is a conceptual division between absolute and relative poverty. Those living in absolute poverty cannot meet the most basic needs for survival, in other words, they are below a definable “poverty line” which represents that very basic needs threshold. By contrast, relative poverty compares a household’s economic position in relation to the average household income of a given population. This relative poverty line, which is highly variable and context-dependent, is more often associated as an indicator of inequality than poverty per se (Chimhowu, 2009). Both measures are commonly used in developed countries, whereas absolute poverty is the main concept applied in places where meeting the basic needs for survival remains the principle objective (Chimhowu, 2009). In either case, both absolute and relative poverty are situated within an income-poverty understanding which has been challenged by other conceptualizations.

### **2.2.2 Capability Approach**

Other cognate disciplines such as psychology, geography, political science and others critiqued the income-poverty conceptualization as misleading, incomplete and biased. Philosophical and epistemological notions were challenged by pursuing an amplification of the definition of poverty. If raising incomes did not necessarily help a family raise its welfare, as was being observed in the late 1970s, a shift in focus was due (Chimhowu, 2009). The new poverty paradigm that emerged around that time no longer viewed material deprivation or low consumption as the only poverty consideration. Economic assets or gains were no longer seen to be the *end* and access to other social services the *means* to development, instead, pursuing development as an answer to poverty could be achieved through “expanding substantive freedoms” (Sen, 1999, p.3).

Amartya Sen’s seminal work *Development as Freedom* is largely credited with the shift towards a new multidimensional approach to understanding poverty as “the deprivation of basic capabilities” (1999, p.87). Sen describes these deprivations as “unfreedoms” that



prevent people from leading “the kind of life he or she has reason to value” (1999, p.18). Unfreedoms, or deprivations, range from famines and undernutrition, lack of access to health care, clean water or education through to lack of political liberty and civil rights. For this reason, Sen’s “Capability” approach coalesces with a “rights-based” approach generally and includes freedoms as both the ends *and* means of development (Chimhowu, 2009, p.409).

Central to the right-based approach is the recognition that a person’s agency is itself an engine for development (Sen, 1999). Agency is defined as “what a person is free to do and achieve in pursuit of whatever goals or values he or she regards as important” (Sen, 1985, p.206). Conversely, someone without agency is someone who is coerced, oppressed or passive, thus empowerment follows as an expansion of agency (Alkire, 2007b). In fostering this *agent-oriented view*, promoting development via increased participation of the poor themselves is advantageous. There has since been an impetus to “put the last first”, to promote a “new professionalism” that reverses entrenched power, knowledge, skills and most importantly recognize the role of the poor themselves as agents in the pursuit of development (Chambers, 1995, p.174). The inclusion of concepts such as personal freedoms and rights brings in a different qualitative aspect to understanding poverty that the prior quantitative income-poverty model missed. Participatory approaches have further developed the importance of incorporating subjectivity and locally-constructed understandings and definitions of poverty.

### **2.2.3 Participatory Approaches**

Participatory approaches pioneered by Robert Chambers, evolving initially from Rapid Rural Appraisals (RRA), to Participatory Rural Appraisal (PRA), and now to Participatory Learning and Action (PLA), are increasingly promoted in development discourses as a useful way of understanding and working towards solving poverty. These have been described as: “a family of approaches and methods to enable rural people to share, enhance, and analyze their knowledge of life and conditions, to plan and to act”

(Chambers, 1994, p.953). This includes promoting the following changes as summarized by Horwich and Lyon (1997): from top-down to bottom-up, stimulating community awareness, taking a facilitator role, establishing community ownership of the project, empowering rural people, learning about the community and area from traditional knowledge, treating local people as capable of managing their lives and natural resources, and working with flexibility and creativity (Chambers, 1994). In this way, Chambers also expands the notion of poverty-related deprivations to include physical weakness, isolation, vulnerability and powerlessness (Chambers, 1995). Together these dimensions of poverty and a focus on personal freedoms result in the conceptualization of poverty as “what people are able to do or be” instead of “what they have or don’t have” (Chimhowu, 2009, p.409). Chambers is also clear about appropriate metrics to use in the participatory approach by stating explicitly: “In the new understandings of poverty, wealth as an objective is replaced by wellbeing...” (1995, p.173). Although PRA and PLA are often considered methods, Chambers is clear that participatory approaches require a commitment to the overall philosophy, or conceptual framework. The inclusion of wellbeing further challenges the objective economic view of poverty and expands the subjective and changing nature of how this topic is understood.

#### **2.2.4 Wellbeing**

Wellbeing emerged in the development literature replacing wealth in the 1990s (Chambers, 2008; Kakwani & Silber, 2007). This shift mirrors Sen’s concept of freedoms and is traced as a response to disillusionment with solely economic indicators of success. The “Easterlin paradox” is often used to illustrate this point. In his famous survey, economist Richard Easterlin discovered, using data from the USA, that happiness did not increase with income over time (McGillivray & Clarke, 2006b). This study therefore concluded that an income-perspective (GDP in particular) was not necessarily the best measure of wellbeing. Although income “continues to be regarded as the ‘quintessential’ well-being indicator” (Dasgupta, 2001, p.53) other alternatives are being pursued, including wellbeing indices (MacKian, 2009; McGillivray & Clarke, 2006a). One of the earliest and most prolific of these

indices was the UN body's "Human Development Index" (HDI) which combines the following dimensions: education (literacy, school enrollment), longevity (life expectancy at birth), as well as income (GDP per capita) (Alkire, 2010; McGillivray & Clarke, 2006b). The Human Poverty Index (HPI) excludes GDP but includes access to water and malnutrition (Chimhowu, 2009). Taken further still, the government of Bhutan measures Gross National Happiness instead of GDP, and Canada produces its own Index of Wellbeing incorporating 64 different indicators (Coyle, October 20, 2011; MacKian, 2009). Some of these indices which have now been used over the past 20 years demonstrate progress in the adoption of broader measurements of how people are faring generally.

Wellbeing is fundamentally more nuanced than income poverty and wealth. Unlike "basic-need" elements of poverty which are material and clearly observable in nature (e.g. housing, food consumption), wellbeing cannot be necessarily observed. This makes explicit measurement much more challenging than with physical assets. It is clear that, to a large extent, this results in the acceptance that wellbeing is *inherently* subjective (Alkire, 2010; MacKian, 2009; McGillivray & Clarke, 2006b). Some attempts at a definition include "the experience of a good quality of life" (Chambers, 1995, p.175) or "some assessment of attributes to be found within a society or institution that are taken as proxy measures of 'satisfaction'" (MacKian, 2009, p.236) or even simple "happiness" (McGillivray & Clarke, 2006b, p.4). Measuring wellbeing is often associated with happiness economics though by dint of being an economic approach, it tends to revert to more objective and easily measurable indicators such as democratic engagement, time spent on leisure versus household chores, etc. and thus avoids the subjectivity issue. Alternatively, subjective wellbeing or happiness measurements propose to ask directly how satisfied or how happy a person is (Alkire, 2010). Mimicking difficulties with the changing poverty paradigm, at the heart of this still-emerging discipline is the lack of clarity surrounding whether "subjective views are truly measurable" (Organisation for Economic Co-operation and Development, 2011, p.266).

It is recognized that the broader the poverty/wellbeing conceptualization and definition is, the more challenging it is to define and measure poverty formally. In turn this increases the inherent methodological tension (Fisher et al., 2008; Sunderlin et al., 2005). Despite the methodological challenges, wellbeing continues to be of interest to the field of poverty. Although not necessarily recognized as a dimension of poverty (because a lack of wellbeing is not necessarily indicative of poverty per se), subjective wellbeing is pursued in academic endeavors and also in practice (Alkire, 2007b). It is considered both important as a goal but also as a process since subjective wellbeing is an influence onto itself and in other areas (MacKian, 2009). Happiness can correlate with increased self-confidence which in turn can lead to improved economic performance and longevity (MacKian, 2009, p.239). The inclusion of wellbeing, and especially subjective wellbeing, is a natural progression of the newer capabilities development approach that seeks to expand the understanding of how poverty is experienced and understood by the poor themselves.

It is becoming evident in the literature that including subjectivity is a requirement for better understanding poverty and thus pursuing successful development work. It is also largely accepted that the local perspective, which is tied to subjectivity, should indeed be incorporated in planning and policy (MacKian, 2009; Roe & Elliott, 2005). The initial emergence of the capabilities framework as a response to urban and economic-centric poverty understandings proves this link between subjectivity and development. The call for more participatory frameworks and the inclusion of the goal of wellbeing is another example.

### **2.2.5 Poverty: New Concepts**

The literature on poverty is also clear: no universal definition of overall poverty exists and there is “no objective way of defining” the concept (Ruggeri Laderchi, Saith, & Stewart, 2006, p.48; Chimhowu, 2009). It must therefore be accepted that, in any context, the poverty conceptualization and definition used will contain inherent biases and affect the design and poverty intervention. As a result of the opposing concepts presented, a number

of polemic issues are raised in the literature when a widely-accepted definition is attempted. The selection of the appropriate poverty “spheres of concern” have led to vigorous debates (Ruggeri Laderchi et al., 2006, p.20). These include poverty’s material, social, cultural, political aspects, the universality of a definition, objectivity versus subjectivity, the use of a poverty line, measurement unit choice (individual versus household), incorporating multidimensionality, time horizon (chronic versus temporal poverty) and definitions as causal explanations (Ruggeri Laderchi et al., 2006). The Capabilities Approach deliberately does not outline a basic requirements list, allowing authors to recommend subjective and contextual influences (Alkire, 2010; Hulme & McKay, 2007; McGillivray & Clarke, 2006b). Though both the economically-dominated unidimensional and multidimensional frameworks continue to exist side-by-side and could be considered “complementary” (Chimhowu, 2009, p.409), or “widely-accepted” (Fisher et al., 2008, p.39), in practice many challenges remain in implementing a more comprehensive conceptual understanding and definition of poverty. Given the lack of overlap, some authors claim targeting errors are inevitable and have important policy ramifications (Ruggeri Laderchi et al., 2006).

Of significant concern to achieving more comprehensive overlap in definitions is the ongoing dominance of the income-model. Chambers argues that “income-poverty starts as a proxy or correlate for other deprivations but then subsumes them” (1995, p.180). The result is that economic indicators continue to dominate the very definition of poverty and prescribes economic growth as the policy solution. This is largely because of the persistent use of the income-poverty which “gives the (false) impression of being the most accurate and objective of the methods” (Ruggeri Laderchi et al., 2006, p.48). One demonstrative example is the very first of the Millennium Development Goals (MDGs) which aims to eradicate extreme poverty and hunger by 2020: poverty here is measured by economic markers, unemployment and food scarcity, specifically intending to “reduce by half the proportion of people living on less than a dollar a day” (Chimhowu, 2009, p.411). So despite acknowledging the multiple aspects of poverty, the (economic) metrics chosen place

economic development as the most important answer to poverty. It is then clear that indicator choice reflects the definition of poverty employed.

One economic measurement that does reverberate within the capabilities framework, at least in part, is an indicator which measures economic inequality. Embraced by critical economists, the Gini Coefficient measures income or wealth inequality across a population. Though it does have an income-orientation, it serves to highlight that it is not total wealth itself but the relative equality of distribution that is a more relevant poverty indicator. Coincidentally, in Easterlin's paradox it is relative income not absolute income that translates into increased happiness (Lancet, 2010). As other academics state, it is in fact equity not economics that matters and suggest that the underlying problem of inequity lies with a neoliberal economic model of development as a root of poverty (Berkes, 2010; McGillivray & Clarke, 2006b; Veltmeyer, 2010).

Different perspectives have been offered with regards to how to engage with the emerging themes for an expanded notion of poverty. Often, the suggestions seem to mimic a disciplinary bias. Social scientists promote continued exploration of the nuanced poverty concept and by furthering the themes of empowerment, equity and vulnerability that have more recently emerged (Kakwani & Silber, 2007). Economists have suggested the way that poverty is *thought about* can be multifaceted and complex, but the way it is *measured*, for operational practicality, can continue to rely on traditional (mostly economic) indicators or composite indices. Justification for this position includes the importance of ensuring robustness, replication and reliability, methodological qualities emphasized in quantitative fields (Angelsen & Wunder, 2003; Secretariat on the Convention on Biological Diversity, 2010). Another way of parsing poverty might include dividing *aspects* of poverty (incidence, intensity, inequality, temporality, spatially) from *dimensions* (income, wealth, education, health, nutrition, food security, political autonomy, empowerment, social equality) as one way of helping distinguish between variables that can be more or less easily measured. Participatory advocates often from anthropology or human geography suggest centering on the poor themselves for the development of relevant indicators (Chambers, 2008; Herweg &

Steiner, 2002; Mayoux & Chambers, 2005). The debates and justifications for different positions are ongoing.

## **2.2.6 Poverty Distinctions**

### **2.2.6.1 Urban / Rural Poverty**

Despite rural to urban migration patterns which are escalating, the majority of the world's poor continue to live in rural settings (Chimhowu, 2009). However, government and development work decision-making continues to be done in cities. This has resulted in what is termed "spatial" (p.13) and "professional biases" (Chambers, 1983, p.22). Overcoming these biases requires a substantial shift in thinking about poverty from different perspectives, including rural/urban differences. So great is the need that it has been proposed that even development professionals themselves would greatly benefit by undertaking an annual non-work experiential trip to remote poor locations to reconnect. These are called immersions or "reality checks" (Chambers, 2008, p.159).

Though defining rural spaces and poverty based on population density and income can seem straightforward, differences between rural and urban poverty definitions are certainly more complex. Rural poverty, being the focus of this study, usually includes identifying and targeting sub-themes such as lack of land tenure (lack of natural capital), political marginalization (powerlessness), absent or deficient water, electrical, transportation infrastructure (lack of physical capital), and many others that can be less relevant for an urban poverty context (Chimhowu, 2009). As a result, rural poverty has unique dimensions that require distinct responses. For example, an emphasis on food security for a food producing rural region (areas rich in natural capital) might not be prioritized over improved transportation options (improved access to markets, health care, etc). There can be greater opportunities in rural areas to recognize and leverage higher social capital than is often found in urban settings. Social capital is described briefly as the structure of relations

between and among actors and comprises “relations of trust, reciprocity, common rules, norms and sanctions, and connectedness in institutions” (Pretty & Ward, 2001, p.209). It is precisely high levels of social capital that can decrease vulnerability to system shocks such as extreme weather or economic hardship (International Fund for Agricultural Development (IFAD), 2001; Pretty & Ward, 2001).

#### 2.2.6.2 Chronic / Temporal Poverty

The two main temporal poverty distinctions made are between transitory and chronic poverty. Transitory poverty affects households that fluctuate around poverty thresholds, falling below a poverty line on occasion or temporarily. This can often be the case in agrarian societies dependent on external factors such as crop production and weather variability. Families in poverty can be above the poverty line with a good crop production but are still vulnerable to falling back below the poverty line with unexpected shocks such as climatic events like hurricanes, or even indirectly by falling in poor health and not having any other insurance. This exemplifies what the literature coins a “poverty trap” (Angelsen & Wunder, 2003; Secretariat on the Convention on Biological Diversity, 2010). Chronic poverty or “the persistence of poverty over time”, by contrast, is a reality that is difficult to break away since the poverty is not transitory or seasonal (Hulme & McKay, 2007, p.187). Chronic poverty can be defined as any, a combination, or all of the following: 1) having experienced poverty for a minimum of 5 years, 2) having experienced poverty throughout an entire life (lifecourse poverty), 3) transfer of poverty from parent to child (intergenerational poverty); and 4) dying an easily-preventable premature death (Hulme & McKay, 2007). Unlike temporal poverty, chronic poverty focuses on severity depth and less on durational aspect. Either temporal or chronic, this aspect of poverty can be especially difficult to capture as it is highly dependent on data availability, and this data continues to be largely dominated by inadequate income or consumption metrics (Kakwani & Silber, 2007).



### 2.2.7 Formal Definitions

In practice, there has been a need for an operational definition of poverty. The World Bank has responded to the debate in academia with the adoption of new non-consumptive measures of poverty such as inequality and empowerment into their poverty definition. The World Bank defines poverty as “a pronounced deprivation of wellbeing related to lack of material income or consumption, low levels of education and health, vulnerability and exposure to risk, lack of opportunity to be heard, and powerlessness” (World Bank, 2000, p.15). The World Bank categorizes the multiple poverty dimensions under three groupings, lack of assets, powerlessness, and vulnerability, which are detailed in the following table:

Lack of Assets	Powerlessness	Vulnerability
Assets include: <ul style="list-style-type: none"> <li>• Natural Capital</li> <li>• Human Capital</li> <li>• Financial Capital</li> <li>• Physical Capital</li> <li>• Social Capital</li> </ul>	Powerlessness caused by: <ul style="list-style-type: none"> <li>• Social differences <i>(including gender)</i></li> <li>• Inequitable access to resources</li> <li>• Unresponsive public administrations</li> <li>• Corruption <i>(Inequitable legal systems)</i></li> </ul>	Multiple risks resulting from: <ul style="list-style-type: none"> <li>• Economic crisis</li> <li>• Natural disasters</li> <li>• Social crisis</li> </ul>

Table 1: Dimensions of the World Bank Poverty Definition

(Adapted from World Bank in Fisher et al., 2008)

The operational definition and framework above includes many of the salient poverty considerations being discussed in the literature. Overall, the convergence of the multidimensional aspect of poverty and inclusion of wellbeing (explicitly via the very definition) and inequality are well evidenced and it would appear there is an attempt at reflecting a current understanding of the complexity of poverty in terms of a definition. Since the World Bank definition is cited as the most common in the applied development

literature (Fisher et al., 2008), it is used as an important, but not exclusive, reference in this thesis.

Defining poverty is only one step toward identifying the populations affected by poverty, which is in turn critical for prescribing policy responses. Since targeting the appropriate populations is essential for planning development interventions, a brief review of the measurement methodology follows.

### **2.2.8 Measuring Poverty: Who are the poor?**

As a concept, a multifaceted view of poverty has been accepted; however challenges remain in implementing these concepts in practice. The methods in poverty measurements continue to be fiercely debated, and while multidimensional poverty measurements are increasingly expanding, the income-paradigm and economic indicators still dominates, especially for delineating target populations. Determining poor from non-poor is still mostly done through formalizing the economic concept of a poverty threshold or a minimum living standard (Kakwani and Silber 2007 and Chimhowu 2009). This minimum living standard is most often referred to as a *poverty line*. Poverty lines are usually set nationally by quantifying the requirements for basic survival (Chimhowu, 2009). More specifically a “normative basket of goods” is used to calculate: “the level of per capita consumption that permits the individual to satisfy basic nutritional requirements (daily per capita calorie intake differentiated by age and sex)” and other items such as food, clothing, shelter, etc. (Fisher et al., 2008, p.39; World Bank, 2006). The value of this basket of goods is determined using local prices and this figure that represents the minimum expenditure needed for survival becomes the national poverty line. By using data from surveys on expenditures, households not spending this basic amount are then considered to be impoverished or below the national poverty line. If non-food items are disaggregated, not being able to meet a food-only basket of goods can also indicate extreme forms of poverty (Kakwani & Silber, 2007). This calculation is often considered an *absolute poverty line* measurement, and tends to be more relevant to developing countries where the most basic material deprivations are

experienced. However, this methodology is clearly flawed among subsistence agriculturalists that may in fact produce a large part of their own “basket of goods”.

The *relative poverty line* approach, by contrast, is used more commonly in developed countries. A relative poverty line helps indicate how a household’s income relates to a fraction of the mean or median income of said country and so is dependent of time and context (Kakwani & Silber, 2007). A relative poverty line can be indicative more of inequality in society and stresses a desire to achieve the average standard of living (Chimhowu, 2009; Kakwani & Silber, 2007).

Other challenges persist in defining adequate poverty lines. Two demonstrative examples identified in the literature include: 1) the proportion of food to non-food items varies across countries and is culturally-situated, thus subjective, and 2), the static nature of poverty lines does not reflect seasonal poverty, which can be prevalent with rural poverty (Kakwani & Silber, 2007). All these poverty measurements outlined are often termed income or consumption-based, and thus criticized for solely subscribing to the income-poverty model (Kakwani & Silber, 2007). In response, some economists have recognized the multiple “aspects” of poverty and responded accordingly. Understanding poverty even within an income-consumption framework includes recognizing variations in what is known as “The Three I’s”, 1) Incidence, or the proportion of poor in the population (measured by the headcount ratio), 2) Intensity, or how far on average is the income of the poor from the poverty line (measured by the income-gap ratio, and 3) Inequality or severity of the poverty (Hulme & Toye, 2007).

In broadening out poverty measurements, multiple-variable indices and measurements that focus on inequality have emerged. Some notable indices ones include: the Headcount Index (HCI), the FGT (Forster, Greer, and Thorbecke) which includes the Headcount Index, Poverty Gap Ratio, the Poverty Severity Index. The Gini Coefficient in particular hones in on income inequality specifically (Hulme & Toye, 2007). However, many still rely on concepts of objective measures driven by externally defined concepts of poverty. The literature addressing chronic poverty specifically asserts it is: dominated by economists,

uses income poverty as a main variable, and is quantitative in nature. Due to doubts raised about the concept of an “objective poverty line”, other social science disciplines, including Geography, contrasted this methodology by instead focusing on social and political inequality as the underpinnings of poverty (Hulme & McKay, 2007, p.189). In light of this debate, some economists have even suggested defining a poverty line on the basis of subjective questions on satisfaction levels regarding income or standard of living. The literature reflects a potential movement away from the income-model dominated methodology towards the incorporation of subjective concepts such as wellbeing and happiness as discussed previously. Challenges remain in the perception of valid and appropriate ways of measuring concepts thought to belong solely to the field of economics (Chambers, 2008).

### **2.2.9 Measurements Standardization**

Despite criticisms, standardizations with regards to poverty measurement can help gauge relationships and progress towards decreasing poverty – however the concept is defined. Therefore, in addition to a poverty line which is often nationally-devised, one standard measurement for comparability across countries is the World Bank’s poverty categories. The world bank defines extreme poverty as living on less than US \$1 (now \$1.25) per person per day (purchasing power parity, PPP at 2005 prices), and moderate poverty as living on less than \$2 (now \$2.50) per person per day (purchasing power parity, PPP at 2005 prices) (Veltmeyer, 2010). Constant Purchase Power Parity (PPP) for 2005 refers to the amount of local currency needed to purchase the same collection of items in the United States in the given year. Other agencies, especially UN-affiliated ones, choose to use other indices of progress, such as the Human Development Index (HDI) or Human Poverty Index (HPI) defined previously.

As with any evaluation methodology, there is a need for large consistent (panel) data sets for cross-country or even regional comparison purposes (Kakwani & Silber, 2007). The

ongoing reliance on income-poverty metrics is linked to time-series data produced by ongoing measurement instruments (Chambers, 2008). There are four major world-wide surveys used to collect data on poverty: the World Bank Living Standards and Measurement Survey (LSMS), the World Bank Core Welfare Indicators Questionnaire (CWIQ), the United States Agency for International Development (USAID) Demographic and Health Survey (DHS), and the UNICEF Multiple Indicator Cluster Survey (MICS) (Alkire, 2007b). Despite some recent efforts at including multi-dimensional and even subjective indicators to incorporate the new multidimensional poverty concept, these are not consistently applied.

#### **2.2.10 Measurement Tools: Questionnaires**

Additionally, criticism abounds about the use of questionnaires as appropriate data generation instruments. Though they indeed produce large data sets which can be useful for comparison and evaluation purposes, contextually-based information is not adequately captured and this methodological choice in effect silences the ways poverty is measured and understood by the very poor themselves (Chambers, 2008). The vast critical literature on the topic of questionnaires concentrates on problems surrounding validity and accuracy of the data. Neutrally, these concerns are termed “measurement errors” or “recall errors” (Hulme & McKay, 2007, p.191), but some academics take this further to imply that the questionnaire instrument as a whole is not objective but flawed and serves to “confirm” the desired answers of the more powerful players (Chambers, 1997). Flaws can be traced throughout a questionnaire’s lifecycle: 1) the removed nature of the questionnaire development, often by professionals in urban settings with flawed top-down conceptualizations of poverty; 2) The administration of the survey can (even inadvertently) reinforce dominance, suggest acceptable answers and be complicit with investigator bias; 3) The analysis of questionnaire data serves to reinforce the desired reality through selectivity of subsets of data, simplification, over favourability and reconfirmation (Chamber 1983). This suggests that it is not even more difficult to quantify complex livelihood strategies that are not solely income

or employment dependent (Hulme & McKay, 2007), but moreover, that doing so can be factually incorrect. Most critically, questionnaires “ask mainly ‘what’ questions, and much less the complementary ‘how’ and ‘why’ questions which illuminate ‘what’ findings” (Chambers, 2008, p.19). While large and standardized questionnaire data will continue to be produced, there are exciting alternatives that allow the generation of numerical data that is nonetheless subjective, sourced through participatory frameworks (Guijt, 1999). Developing globally applicable, yet locally relevant, indicators for the newly emerging (and difficult to quantify) capabilities concept is emphasized in the literature as an important focus for the future (Alkire, 2007b).

### **2.2.11 Causes of Poverty**

Plural and diverse theories on the root causes of poverty mimic the variety of conceptual underpinnings of poverty definitions and measurement. These theories often reflect a researcher’s own personal ideologies and cultural origins, though most reject a single and unifying theory (Handelman, 2000). The predominant ideas are briefly described in the following table:

		Theory Name	Main Argument	Influencing Factors	Barriers to Development
Discipline-based theories	Geographical Theories	<b>Deterministic Perspective</b>	Physical geography and/or climatic conditions determine levels of development. Predispositions to poverty dependent on location, e.g. polar and tropical regions, are “poverty traps” (Chimhowu p.413).	Geography, Climate	Biophysical constraints largely outside scope of control
		<b>Possibilistic Perspective</b>	Interaction between physical conditions + human processes determines levels of poverty. Physical environment influences (but does not determine) poverty/development. Rurality per se doesn’t result in poverty. History, economic and social conditions determine outcomes.	Policies, Management	Understanding integration of physical + social relationships
	Socio-Economic Theory	<b>Individual Pathologies Theory</b>	Individuals to blame for their poverty. Personal characteristics (laziness, addiction, low intelligence) prevent being able to take advantage of opportunities for development.	Personal Development	Ability to influence human nature, increase education levels
		<b>Culture of Poverty Thinking</b>	Poverty is traced to a “culture of poverty” thinking caused by socially-generated belief systems. Poverty reproduces itself through inter-generationally reinforced behaviours and socialization.	Local Culture	Cultural Change
		<b>Structuralist Theory</b>	Intrinsic and built-in barriers within political and socio-economic systems, at macro-scales cause poverty. Poverty is “a social condition at one extreme of the unequal distribution of wealth and income” which the poor cannot influence (Veltmeyer, 2010, p.27). State responsible for establishing equitable distribution of rights + resources.	Capitalistic economy influences political participation	Political + socio-economic capitalistic framework currently infringes on rights

**Table 2:** Contrasting theories on the causes of poverty

(Adapted from Chimhowu, 2009; Handelman, 2000; Veltmeyer, 2010)

The theories elaborated above emerged from different disciplines and thus share some commonality. However, each discipline subscribes to its own perspective and they have all been useful in advancing our understanding of, and response to, poverty. One of the practical ways the above theories can be differentiated, in part, is between the role of local and distal influencing factors (Turner & Robbins, 2008). To simplify, at one end is the individual pathologies theory: a culture of poverty or “blame the poor for themselves for their poverty”, and at the structuralist end, poverty is:

“a social condition at one extreme of the unequal distribution of wealth and income, a socioeconomic structure that is undoubtedly the end result or ‘product’ of specific social relations of production and power dominated by the rich and powerful and beyond the ability of the poor to control or affect in any way” (Veltmeyer, 2010, p.27).

The latter point has been present in academic literature for some time, but is only recently being embraced by development agencies. This important conceptual link translates into new ways of understanding the roots of poverty. For example, criticism of capitalistic neoliberal development strategies was formalized in 2010 by explicitly connecting structured social inequalities and poverty in the UNDP’s report on human development in Latin America and the Caribbean. The result of this new assertion is that solutions to poverty must now address systemic inequality directly (Veltmeyer, 2010). Changes to policy responses based on broader understandings of poverty’s roots, causes and nuances are explained below.

#### **2.2.12 Poverty Policy Responses**

A policy response towards poverty necessarily assumes that such a response is justified. Though seemingly obvious, this is not always automatically accepted, especially as will be explored in including poverty goals within conservation initiatives. Generally speaking, however, the world-wide acceptance of the MDGs demonstrates general consensus on poverty as a global policy concern. As it can be anticipated, policy responses to poverty will end up reflecting the choice of ideas subscribed to, including: the poverty



paradigm, the attributed roots of poverty, and the desired metrics to gauge success. Naturally, given the multiple interpretations regarding the roots of poverty, various development paradigms emerge in response. The two principle economic development theories still being debated include Modernization Theory and Dependency Theory, elaborated below.

	<u>Main Argument</u>	<u>Influencing Factors</u>	<u>Barriers to Development</u>
<b>Modernization Theory</b>	Certain cultural environments more amenable to technology adoption and ideas of “progress” (modernity). Traditionalism is a barrier. Affluence is the rarity not poverty. Local economic development (through trickle-down and trickle-out effects) via a modern industrial global economy key to development.	Finding a niche to exploit in the global economy, having a competitive advantage	Resistance to participation in the global economic system
<b>Dependency Theory</b>	Poor countries are “dependent” on richer countries: they sell raw materials and buy back more expensive value-added goods. Roots in colonialism and exploitative economic trade relations. Increasing rights, pursuing social justice, strengthening governance and more ethical trade seen as solutions.	Historically entrenched and exploitative trade patterns, colonialism	Vested political and economic powers unwilling to address inequality

**Table 3:** Contrasting economic theories on development

(Adapted from Chimhowu, 2009; Handelman, 2000; Veltmeyer, 2010)

The two economic theories of development above mirror the roots of poverty theories previously elaborated. Modernization, with an emphasis on seizing technological and marketplace opportunities suggests that if an individual or a community can change “traditional” customs and adapt into a modern world, development is attainable. In turn, dependency theory suggests that there are structural barriers in place (trade laws, economic relationships) that are largely outside of the influence of the local individual or community mirroring the structuralist theory. These two conflicting ideas were not often addressed in

most of the literature reviewed for this thesis, though it is clear to see the ramifications on prescribed solutions. The section on environmental problem-framing discusses this in greater length.

One study particular to rural Latin America does highlight the attributed cause for a decrease in rural poverty in the region: outmigration. The study notes that, contrary to what is believed, development did not in fact help achieve poverty reduction (de Janvry & Sadoulet, 2000). The article also highlights four pathways or ‘exit-paths’ out of poverty that are available to the rural poor. These include: 1) exiting (outmigration), 2) agriculture (farming), 3) development (assistance), and, 4) pluriactive which is devised of farming combined with off-farm labour. The authors argue that for successful development to occur, regional development, decentralization and participation need to be emphasized (de Janvry & Sadoulet, 2000).

Just as different causes of poverty elicit diverging responses, different kinds of poverty also result in varying policy responses. The distinct poverty concepts illustrated below are poverty alleviation, poverty reduction, and preventing or addressing poverty.

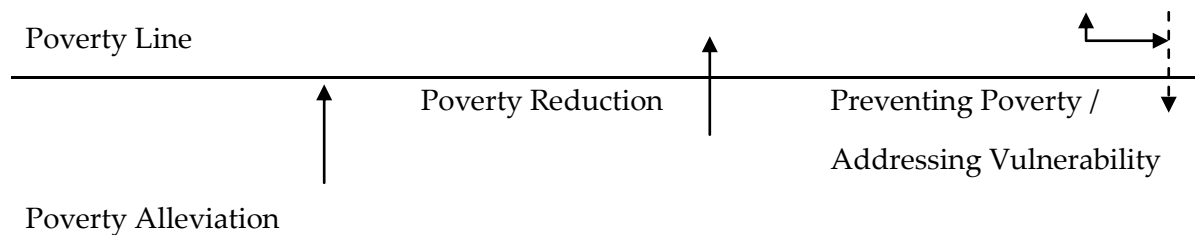


Figure 1: Poverty Line Differences

(King & Palmer, 2006, p.15)

Poverty alleviation is attributed to short term responses for immediate relief (such as with humanitarian crises), while poverty reduction implies a longer term vision dealing with the elimination of root causes to some extent and can be interchangeable with development (Jones, 2004; Roe, 2008). However, some authors who emphasize the human damage to the environment attribute poverty alleviation and development also as “nearly equivalent” (Agrawal & Redford, 2006, p.8). Preventing poverty is usually pursued when

the population is already above the poverty line though perhaps vulnerable to once again becoming impoverished (King and Palmer 2006). It would appear that poverty alleviation, due to its shortened time frame in response to crises, would be difficult to achieve under a rights-promoting framework. For this reason poverty alleviation is not a term usually applied in a longer-term development context. Overall given the inconsistencies of terms in the literature, there is a call to use more explicit definitions, as well as brief justifications for the choices made (Alkire, 2007a; Alkire, 2010).

When addressing poverty it is important to recognize that policy prescriptions are centered on a particular analysis of the roots of said poverty. When there are inconsistencies between theory and prescribed action, this can be referred to as “targeting error” or “errors in problem framing” (Ruggeri Laderchi et al., 2006). It is often argued this can be mitigated by increasing the involvement of those being targeted from the onset (Chambers, 2008).

Reflecting the widely-adopted World Bank poverty definition, the following chart elaborates on some of the poverty reduction dimensions which often guide policy objectives:

Opportunities and Growth	Empowerment	Security
<ul style="list-style-type: none"> <li>• Expanding assets of poor</li> <li>• Encouraging private investment</li> <li>• Expanding international markets</li> <li>• Pro-poor market reform</li> <li>• Restructuring aid</li> <li>• Debt relief</li> </ul>	<ul style="list-style-type: none"> <li>• Addressing social inequalities</li> <li>• Enhanced public participation in decision making</li> <li>• Pro-poor decentralization</li> <li>• Public administration reform</li> <li>• Legal reform</li> <li>• Providing forums for debate</li> </ul>	<ul style="list-style-type: none"> <li>• Risk management</li> <li>• Safety nets</li> <li>• Coping with natural disasters</li> </ul>

Table 4: The World Bank's Poverty Reduction Dimensions  
(Adapted from World Bank in Fisher et al., 2008)

The inclusion of the second and third columns on empowerment and security reflect the capabilities approach discussed previously and incorporates structurally-rooted causes

of poverty such as social inequality. Ideally, these dimensions will be addressed in World Bank-required Poverty Reduction Strategy Papers (PRSP), formal documents generated by a national government in order to qualify for official bank assistance (Veltmeyer, 2010). The PRSPs are created through a multi-stakeholder (including external development partners) participative approach indicative of the new more democratic, participatory levels of engagement.

### **2.3 Participatory Poverty-Reduction Methods**

Enabling poverty reduction has increasingly pointed to the need for more participative methods. In many ways, genuine participation as a concept is anchored by Arnstein's ladder of citizenship participation: a model from the 1960's showing participation on a continuum. The more control rests at the local level, the more genuine the participation. Local management is a central tenet of this model and anything outside power-devolution to the local level risks alienating participants and is considered *tokenism*. This emphasis on local rights and control is echoed by proponents of participatory poverty research and practice (Chambers, 1995). Negative long-term management effects can result from the lower levels of the participation continuum (Mitchell, 2002). Note that consultation (what is most often done with local actors) is located closer to the weaker end of the participation continuum.

**The continuum of project participation and/or management**

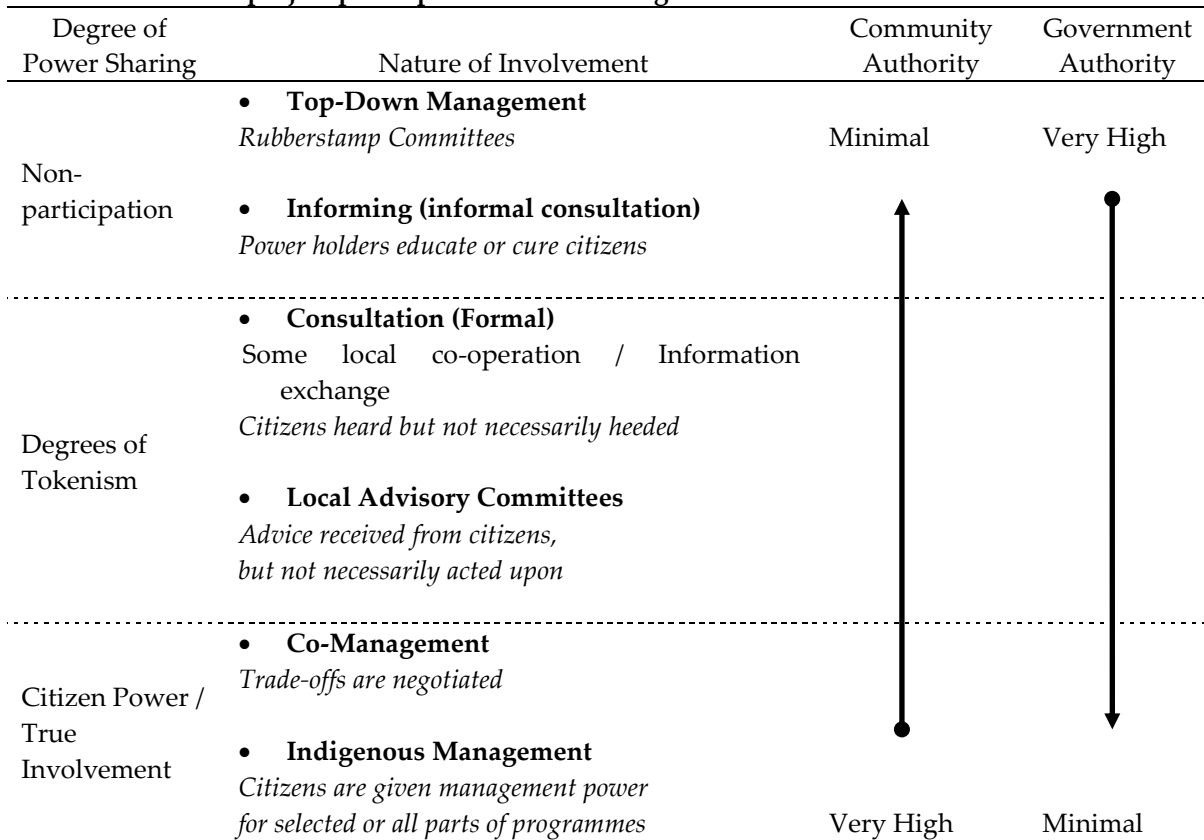


Figure 2: Participation Continuum Model

(Horwich & Lyon, 2007, Adapted from Arnstein, 1969)

Participation as it is elaborated in the extensive development literature is often cited as much as a philosophy as a methodology. To truly engage with participatory approaches requires a particular worldview which places value on the local. By extension, a participative methodology is strongly allied to a fundamental human rights framework. A particular skill set is also required (Chambers, 1995; Classen, 2008). When implemented inappropriately and hastily, participatory approaches have led to ineffective results (erroneously attributed to the concept instead of the application) (Chambers 2008). Instead, the proper implementation of a participatory framework has beneficial long-term impacts on development and conservation initiatives, and in many ways, it is central to the very notion of development that poverty reduction seeks (Chambers, 1997; Horwich & Lyon, 2007).

There are good participatory examples to model. The most famous of these is the World Bank's "Voices of the Poor" study which sought to obtain the local perceptions of poverty and wellbeing, carried out in 1999. This groundbreaking 23-country, 272 site consultation project helped shift thinking about development and poverty away from the income-poverty model, and proved what academics had been long arguing: the local voice is different and much needed in improving development policies (Brock & McGee, 2002; Fortmann, 2008). However, it was initially both the use of highly participative methods for inquiring about subjective poverty *in combination with* an openness to re-evaluate formal knowledge and engrained processes that created the potential to result in positive changes. The study exposed stark links between poverty as experienced and understood locally, and livelihood and natural resource dimensions such as land tenure, that continue to highlight policy implications (Veltmeyer, 2010). The findings were so significant that, "this theory and practice of participation provided the driving force for the convergence of conservation and development discourses" (Roe, 2008, p.495). Thus, livelihoods, conservation and poverty reduction in combination became fully entrenched in research and policy.

## **2.4 People and Natural Resources Management**

The rise in participatory methods in development emerged concomitant to the inclusion of public participation in effective integrated natural resource management (W. Adams & Hutton, 2007; Mitchell, 2002; Slocombe & Hanna, 2007). In a developed country context, there is a longer tradition of engaging directly with local stakeholders in natural resources issues – this is seen as important and completely necessary for successful management (Mitchell, 2002). The key difference between a developed and a developing country context is that in the former, local actors are on a relatively equal plane with managers in that their rights are respected by governments and other agencies. By contrast, in the developing world rights are often unenforced and local populations may have even been displaced and further marginalized as a result of natural resources management, often by powerful agents in the name of conservation (W. Adams & Hutton, 2007). This has

resulted in a lot of criticism of, and reflection by, the conservation community and a related desire to address these impacts (Adams & Hutton, 2007; Brechin, Wilshusen, Fortwangler, & West, 2002).

This convergence of people and natural resources is thus inevitable for several reasons. Firstly, the influence of rights-based approaches to poverty reduction pushed for the inclusion of social considerations in conservation. The critical role natural resources play in the rural poor's survival is now better understood. As evidenced, for example, by the Millennium Ecosystem Assessment Report (Roe & Elliott, 2005) which suggests the poor rely more directly on biodiversity than any other group. Also, poor people more often live within the rural environment and have often built up local knowledge over many generations (Chambers, 1995; Fortmann, 2008). It should be noted that this thesis draws on much of the biodiversity conservation literature although the term biodiversity is often used interchangeably with natural resources when investigated from a livelihood perspective (Secretariat on the Convention on Biological Diversity, 2010). Since the rural poor are tied so directly to natural resources, it should not be a surprise that this group may offer a different perspective on the matter than those of conservation or development authorities. The following table, using biodiversity conservation specifically, highlights the perceived differences on biodiversity.

## Contrasting Global and Local Perspectives on Biodiversity

	<b>Dominant global perspectives adopted by conservation authorities</b>	<b>Dominant perspectives of local communities</b>
<b>Major Biodiversity value</b>	Rare and endemic species and species belonging to charismatic taxa	Species used for livelihood and cultural purposes. Some species may be considered undesirable (pests or dangerous species)
<b>Main rationale for conservation</b>	Maintain ecological integrity on basis of scientific criteria	Maintain products and cultural values based on local criteria
<b>Major objective for maintaining biodiversity</b>	Preserving option and bequest values for future generations	Species locally recognized to provide valuable products and services, including cultural uses and the species those species depend on
<b>Species considered</b>	All taxonomically reasonably known species	Controlled sustainable use and gradual domestication
<b>Main conservation approach</b>	<i>In Situ</i> preservation by prohibiting/or limiting	Controlled sustainable use and gradual domestication
<b>Clients/user groups</b>	A continuum from unclear to 'global' or 'future generations'	Clearly defined
<b>Wild and domesticated species</b>	Treated differently	Form a continuum

Table 5: Contrasting Views on Biodiversity

(Kaimowitz & Sheil, 2007; Vermeulen, 2002)

Clearly these significant divergences of understanding will have management implications. Ideas about nature and resources which differ between development and



conservation plans and local people often result in conflict. Including the local perspective, in a truly participatory way is justified in establishing policies that will be adhered to. The integration of a local perspective continues to be the challenge in merging the development and conservation frameworks to genuinely seek multiple objectives.

It is also recognized, however, that more participation will not always necessarily lead to better conservation. The resurging protectionist conservation literature warns against enacting a *noble savage* or *mythic community* perspective whereby a small and cohesive local community will inherently be driven to conserve rather than overexploit resources (Agrawal & Gibson, 1999). Given this context, the impetus for greater participation and decision making is not because participation will inherently cause more environmentally-consciousness, but because the alternative of conservation without engaging with local people is simply not sustainable for the long term. Another viewpoint argues that a conservation ethic emerged in the West as a consequence of perceptions and attitudes regarding resource use, and especially the very process of making mistakes, learning from them, and adapting governance regimes. A protectionist viewpoint inhibits this same learning and is irreverent to issues of equity and agency (Holt, 2005). The consistent message of viewing conservation as a social process is highlighted.

Another criticism of the conservation literature is the geographically limited scope. Literature on parks and protected areas has been pursued with less attention in dealing with the broader context of resource management and resource conservation in areas of more relevance to poverty reduction and alleviation. These include places such as park buffer zones, degraded lands and other rural geographies. An identified gap in the literature highlights the need for a larger effort by the conservation community at “maintaining wild and semi-wild species and habitats specifically to fulfill human needs... ensuring that disadvantaged people retain access to species on which they have traditionally relied on (sic) for food, livelihoods, shelter, and medicines” (Kaimowitz & Sheil, 2007, p.567). Despite the resurgent protectionist call to exclude human impact in areas of high conservation

importance, there is some acceptance that some mutual gains can be made by collaboration between achieving poverty reduction objectives together with conservation (Fisher et al., 2008). Below are some of the models that have tried to achieve integration.

## 2.4.1 Multiplicity of Integrated Models

In seeking to establish conceptual models that integrate poverty and natural resources goals, a myriad of models have been created and appear in the literature.

### 2.4.1.1 Sustainable Livelihoods Approach

One model commonly used in the 1990s and 2000s, the **sustainable livelihoods approach**, has been useful for incorporating a broad and balanced set of criteria for evaluating the multidimensional aspects of poverty discussed earlier along with livelihood considerations.

A definition: a sustainable livelihood:

“comprises the capabilities, assets (including both material and social resources) and activities required for a means of living. A livelihood is sustainable when it can cope with and recover from stresses and shocks and maintain or enhance its capabilities and assets both now and in the future, while not undermining the natural resource base”

(Carney in Jones, 2004).

It is essential to stress the sustainability emphasis in this definition that implies a natural resource should be managed for longevity. This is a dominant model used by many development organizations such as DfiD, OXFAM, CARE and UNDP when seeking poverty alleviation and reduction (Fisher et al., 2008).

### 2.4.1.2 ICDPs

**Integrated Conservation Development Projects (ICDPs)** emerged in the late 1980's and sought to integrate biodiversity conservation and improvements in human wellbeing in order to reduce pressure on parks. ICDPs aimed to achieve this integrated conservation and development through the following approaches: 1) strengthening park management and

creating buffer zones, 2) providing compensation or substitution to local populations for loss of access to resources, and 3) encouraging socio-economic development in communities adjacent to protected areas (Fisher et al). However, early ICDPs did not produce the expected conservation or development outcomes, and moreover these failings led to a backlash and the impression that ICDPs were “inherently doomed” (Kaimowitz & Sheil, 2007, p.570), or “conceptually flawed” (Fisher et al., 2008, p.22). However, the protectionist nature of how these projects were implemented has been, at least partly, attributed to their demise. ICDPS in many cases emphasized economic livelihood alternatives rather than sustainable use of a resource, and sought to sever, rather than maintain, local access to natural resources (Fisher et al., 2008). “Projects were designed and imposed by outsiders to meet predefined goals with little local control. Often benefits and degrees of engagement were insufficient to counter local resentment and opposition, adding to perceived injustice” (Kaimowitz & Sheil, 2007, p.570). At the core, early ICDPs disregarded underlying rights and access issues instead focusing on the community relations improvements that could result from an initiative (Horwich & Lyon, 2007). With these early ICDPs it is clear to see a genuine participatory approach, recognizing the different degrees of power-devolution, was not conceptually understood or applied.

#### 2.4.1.3 CBNRM

**Community based natural resource management (CBNRM), or community-based conservation (CBC)**, are looser terms tied together by the idea of people and nature co-existing (Fisher et al., 2008). This model is in stark juxtaposition to protected area models where people were seen as part of the problem and their access to natural resources was often restricted (Fisher et al., 2008). This management approach stresses: 1) bottom-up management, “by, for and with the local people” (Western and Right in Fisher et al., 2008, p.28), and 2) the development of institutional mechanisms and capacity to deal with conflict. One working definition for community conservation is: a project “in which community

members or a community-based organization are involved in efforts to protect or conserve the lands and environment they live on or nearby through the highest levels of participation, with the ultimate goal being management of the project by a local community-based organization” (Horwich & Lyon, 2007, p.570). As with all models there are critics and many have claimed CBCs are tarnished and that there are questionable links to poverty reduction (Fisher et al., 2008; Jones, 2004). While some disenchantment has arisen from a lack of gains in either poverty-reduction or improved natural resources management, the CBC model appears to specifically deal with the devolution of power and decision-making to the local level.

#### 2.4.1.4 Adaptive Co-Management

As the name implies, **(Adaptive) Co-management** models seem to strive for local involvement in the actual management of resources. But as with the inappropriate implementation of other models, Pinkerton states this approach has been “misnamed unless it involves the right to participate in decisions about resource use, how, when, where, by whom, and how much” (Pinkerton, 2003, p.62). In one definition, 3 key elements are highlighted: 1) the rights and responsibilities of stakeholders need to be defined and shared; 2) a way for stakeholders to learn through their actions and modify their actions in the future must be present, and; 3) the capacity to deal with the longer term time scales of the bio-economic system must be considered. Here the emphasis is on collaboration, devolution of power, and “recognizing and embracing multiple values and different forms of knowledge” (Brown, 2003, p.486).

#### 2.4.1.5 Pro-Poor Conservation

**Pro-Poor Conservation** seems to specifically call for conservation for the *purpose* of poverty reduction, not for other intrinsic global conservation values. It calls for “going beyond most previous ‘community’, ‘participatory’ or ‘development’ efforts intended primarily to win local acceptance of other people’s conservation agendas” (Kaimowitz &

Sheil, 2007, p.568). Trust is a key component stressed, as is the absolute requirement to engage with local actors via participation, taking into account the local context.

With so many models, many academics lump these approaches together under a rubric of **people-centered conservation** (Brechin et al., 2002). Despite the varied attempts to get at the right definition for successful conservation and development, *all* these models have reported limited success. Many models are accused of being “hasty interventions that fail to build trust and are perceived by local people as just one more attempt to gain control over land and resources” (Kaimowitz & Sheil, 2007, p.568) or further drive “traditional residents to the margins... perpetuating injustices and conflict” (Robbins, 2004, p.153). In many cases, participation is poorly or not-at-all defined, for others, consultation is the highest level of decision making. Some authors suggest that local decision-making has to be a primary goal of conservation and development projects if they are to succeed (Phillips, 2003). Despite the varied attempts, participation has likely not succeeded in bringing about better development and conservation because it has lacked the proper elements as per the original definition (Chambers, 2008). In the development literature, there is an emphasis on returning to a truer meaning of participation, which includes local power devolution as a way of improving the integration of conservation and development goals (Chambers, 2008).

#### **2.4.2 Environmental Problem-Framing**

Just as the understanding of poverty has become broader, environmental problem-framing has also expanded. Historically, poverty and local land use actions were seen as an important and even principle cause of environmental destruction (Robbins, 2004). Whereas previously it was argued that very obviously many “poor people can be driven to over-exploit through an overwhelming priority to meet immediate needs” (Roe & Elliott, 2005, p.8), now, “poverty is rarely the only, or even the most urgent, threat to biodiversity” (Walpole & Wilder, 2008, p.245). Successful conservation will always depend on the local context which includes perceptions and created meanings. Embracing a participatory approach is equivalent to recognizing that poverty and overexploitation occurs where rights

to participate in society, and especially to make decisions, are denied (Secretariat on the Convention on Biological Diversity, 2010). When rights are denied, locals often oppose the existing power structures and go against prescribed actions as the only tool of resistance available (Robbins, 2004). In his seminal book "Weapons of the Weak", Scott names these subversive practices "everyday forms of resistance" which are enacted by locals against dominant political structures (Scott, 1986, p.xvi). It is only through listening and being acutely aware of a local voice that the "secret histories" (Robbins, 2004, p.57) or "transcripts" (Scott, 1986, p.137) of the local perspective on the issues can be revealed. When local rights are ignored, conservation will continue to be seen as a controlling activity, and in turn, this will diminish the possibility of encouraging local champions or gaining local stewards. In this way, increasing participation at least increases the possibility of consciousness-raising and of developing a conservation ethic that the other methods do not provide (Classen, 2008). The strengthening of governance and institutional capacity are suggested as complementary ways forward, and recognizing this means relinquishing control over resources usually externally managed (Agrawal & Gibson, 1999; Brechin et al., 2002).

The lack of formal research on the combination of poverty and conservation spurred the creation of a multi-stakeholder forum (the Poverty and Conservation Learning Group, PCLG) on poverty and biodiversity conservation in 2004. It is comprised of the leading academics and practitioners in these areas, and is coordinated by the International Institute for Environment and Development (IIED). With an emphasis links between poverty alleviation within the conservation context, there have been recent efforts at evaluating the gaps in knowledge and to determine with more certainty the validity of claims being made in the quest for integration.

## **2.5 Current State of Knowledge on Poverty and Conservation**

The conservation-poverty debate has been ongoing in the academic literature for over 30 years, but has become more forceful and hostile recently (Roe, 2008). The most pressing concerns of the day include: 1) the role of large international conservation NGOs and their

impacts on local people, 2) the increase of protectionism in conservation policy and the impact of this policy for populations in and around protected areas, and 3), the diminished role for wild natural resource conservation within the poverty agenda (Roe, 2008). In an attempt to gauge the evidence base for assumptions about natural resources and poverty, a 2010 evaluation called *Linking Biodiversity Conservation and Poverty Alleviation* was commissioned by the IIED. The published work included the review of 431 documents, including case studies, grey literature and academic material to explore whether the poor are dependent on biodiversity and if natural resources conservation can be a mechanism for poverty reduction. This large study had several findings, most notably: 1) poverty was still mostly evaluated in the income-poverty sense, 2) there is a paucity of hard evidence and causal inferences for poverty impacts, and, 3) there is a lack of indicators covering the multidimensional aspects of poverty (Secretariat on the Convention on Biological Diversity, 2010). Results one and three support the expanded concept of poverty described earlier in this chapter and result two highlights strong links to debates regarding problem-framing.

The literature strongly suggests developing a successful poverty reduction / conservation model continues to rest on merging the following requirements: 1) addressing the multifaceted dimensions of poverty, 2) including subjectivity and participation as per the original definition, and effectively and sustainably managing resources, 3) paying attention to context, 4) taking into account equity and rights. Other findings include questioning a notion of scalable win-win scenarios given the high subjectivity and variability of the local context (Fisher et al., 2008). Also, given that win-win scenarios are elusive and trade-offs are more realistic, a “win-more-lose-less” outcome can be more realistically sought (Fisher et al., 2008, p.89). Regarding measurement of success, there are “rarely simple cause and effect relationships” which influence the degree of certainty in the poverty and conservation debate (Fisher et al., 2008, p.121).

### **2.5.1 Influence of Literature Review on Research**

The linking of conservation and poverty reduction has been described as “more of an art than a science” (Fisher et al., 2008, p.125). This sentence summarizes the nuances that need to be accounted for in order to fully conceptualize knowledge on these equally vast subject areas. The overwhelming complexity of the literature was excellent preparation for keeping an open perspective and following an iterative research process described in the next chapter. I found the applied aspects of the measurement challenges in both the poverty and conservation literature to be most relevant and useful in terms of evaluating the implementation of ideas. However, practical decisions need to also be grounded in the philosophical concepts from the multifaceted poverty and participation debates. Overall, the literature helped illuminate the complexity and challenges in these subject areas in preparation for the generation and analysis of data.

Overall, the influence of the literature is chiefly that issues of poverty and conservation have political and decision-making ramifications, that social exclusion is critical, and if these areas are not addressed at the same time “resource based interventions may do little to help the resource dependent rural populations who are their intended targets” (Secretariat on the Convention on Biological Diversity, 2010, p.15). In fact, some actions may actually do more harm than good, as is the case with examples of elite capture that degrades the social fabric (Classen, 2008). Another useful concept that has greatly influenced this thesis is how the role of local perspectives can help frame more nuanced understandings of the underlying causes for environmental mismanagement and poverty.

## **2.6 Research Gap**

This research attempts to fill several gaps identified in the poverty, wellbeing, and conservation academic literature. The ongoing exploration of the capabilities concept of poverty has highlighted the need to embed participatory approaches as both a development “*end*” (for example participation as an indication of agent-oriented empowerment), as well as a “*means*” (for example through democratic and self-administered processes). To expand



on the asset-based income-model, requires the exploration of poverty conceptualization measurement that is more complex. Gaps exist in disentangling poverty *dimensions* (which can be thought of as indicators, such as wealth, empowerment, social equality) and poverty *aspects* (which can be thought of as descriptors, such as incidence, temporality, inequality). The poverty literature acknowledges failings in adequate targeting of populations living in poverty, which centers around heeding a call to “know how the poor are” (targeting) and to recognize that they are not a “homogenous mass” (identification) (Fisher et al., 2008, p.121). At a broad level, poverty analysis has highlighted a gap in the use of more explicit definitions, but also how those definitions come to be defined. In other words, an examination of the fundamental assumptions made regarding root causes of poverty and prescribed poverty solutions is highlighted. Lastly, a politically lens is necessary to account for issues of power, rights and equity.

This thesis seeks to explore how participatory processes might be useful for the improved integration of poverty concepts within land management initiatives. By placing the target population at the centre of this study, this thesis seeks to address a combination of dimensions and aspects, as interpreted locally. In particular, inequality as a concept was investigated, especially as it might be traced through different indicators. On the matter of adequate targeting, wealth ranking and honing in on locally-interpreted indicators, along with the concept of a subjective poverty line as locally defined, is explored. At a broad level, poverty analysis requires a focus on definitions, which this thesis addresses very specifically by assessing how local understanding aligns with academic concepts on poverty. The process by which these definitions are assessed helps engage with the prescribed assumptions made regarding poverty’s root causes and solutions.

On the theme of wellbeing, an academic gap remains in how to implement this concept in practice. Despite the use of the term wellbeing within definitions, for example the World Bank’s poverty definition, there are few consistent indicators regarding measurement. The thesis explores local interpretations of wellbeing, and if and how these differ from the concept of poverty as locally understood. By doing so, the problematic

measurement debate, whether wellbeing is subjective and/or objective, is addressed. As academics try to find an appropriate place for wellbeing within poverty studies, this thesis seeks to contribute to that end by exploring where it might fit, and what benefits leveraging this concept might bring to the issue of development.

Lastly, on the combined thematic area of poverty and conservation, a convergence of the above identified gaps is present. Most pointedly, there are four identified criteria that have been determined as critical for a successful integrated poverty and conservation model. The criteria are as follows: 1) poverty is multifaceted and should be addressed as such; 2) participation and subjectivity should be included; 3) context needs to be accounted for, and; 4) equity and rights need consideration. This thesis addresses all four gaps specifically. It 1) addresses poverty in its multifaceted current understanding by way of many divergent indicators; 2) at the heart of this study is participation and subjective views were actively sought, 3) context, including historical precedents, is explored comprehensively for the case; and 4) a politically-aware analysis of the pressing themes ensured a rights-based approach was implemented as part of this research. Though seemingly complex, the gaps in academic knowledge for poverty, wellbeing and integrated models have significant overlap, which this thesis sought to explore fully.

## **Chapter 3 Research Methods**

This thesis seeks to contribute to the debate on how to effectively pursue conservation and development, by focusing, in part, on how poverty reduction is conceptualized and measured in conservation initiatives. The research is centered on a case study located in the Dominican Republic: the Global Environment Fund's Sabana Yegüa Sustainable (SYS) project whose goals are land conservation, the effective management of natural resources and decreasing poverty by increasing human wellbeing.

### **3.1 Description of Methods**

My brief reflection on some personal philosophical assumptions helps illustrate how the past has shaped my approach to research generally. As a result of my experiences, I am naturally drawn to conducting research through the pragmatic and advocacy / participatory worldviews. The former recognizes the need to intertwine a political agenda with research inquiry, with results and conclusions containing an action agenda for reform to ensure change. The advocacy participatory approach can be centered on a particular social issue (such as inequality or oppression) which often frames the research through a theoretical lens. Advocacy / Participatory approaches are careful to undertake the research collaboratively to ensure participants can represent themselves and their views, and not be further marginalized by the research process (Creswell, 2009). Pragmatism is similar in that it is an approach that sees problems arising out of current actions and situations, not necessarily via a post-positivist perspective of prior conditions. This worldview espouses solutions that are applicable and pragmatic, hence the name. In seeking feasible and implementable solutions, the pragmatic approach is flexible and recognizes that "truth is what works at the time" (Creswell, 2009, p.10). Pragmatism is not necessarily committed to

one philosophical lens, it has been a champion of the mixed methods approach, detailed below and used in this thesis (Creswell, 2009).

### **3.1.1 Strategies of Inquiry**

#### **3.1.1.1 Mixed Methods Strategies**

Mixed methods refer to mixing quantitative approaches from the positivism end of the spectrum together with qualitative methods from the constructionist side. However, the approach is not a dichotomy but rather one which rests in the middle of the quantitative / qualitative continuum. Mixed methods strategies go beyond merely collecting and analyzing the two types of data, they use both approaches to data in tandem as a way of mitigating weaknesses of one and therefore leverage strength (Creswell & Plano Clark, 2007). Many different terms may be used for this approach: integrating; synthesis, or; multi method, although 'mixed methods' is the most recent and commonly used terminology (Creswell, 2009). As Creswell indicates, some of the common characteristics of mixed methods include:

- Pre-determined and emerging methods
- Open and closed-ended questions
- Multiple forms of data drawing on all possibilities, i.e.
  - Observational, census data and surveys (Quantitative)
  - Interview, observation, document analysis (Qualitative)
- Statistical and text analysis (2009)

Mixed methods enables both inductive and deductive strategies (starting from theory and also deriving theory out of data) to be used. However, the justification for doing so should result from the desire to offset weaknesses of any one method through the strengths of the other (Creswell, 2009). For this reason quantitative approaches were used to leverage generalizable findings and combined with qualitative data to improve the richness of details. The section on ensuring validity and reliability covers this in greater details in terms of this specific research. As put forth by Creswell, philosophical worldviews and strategies

of inquiry are two components of a research design. The third and last interrelated element is very much influenced by the worldview and strategy of inquiry outlined above: the precise methodology that was employed.

## **3.2 Research Framework**

### **3.2.1 Political Ecology**

Political Ecology as a field of study, but also as a flexible methodological framework, has been gaining recognition in its usefulness in understanding human and resource management linkages. As a conceptual research framework it emphasizes historical context, scales of influence, and the construction of meaning as important determinants of scientific inquiry in the field of natural resource management (Robbins, 2004). These very determinants were highlighted as ongoing gaps of knowledge in the poverty and conservation bodies of research, and thus, a political ecology framework helped define the focus of this thesis. In particular, the themes of vulnerability and imbalanced power relationships, common to political ecology, were incorporated based on this framework. Political ecology also played an important role in guiding the initial decision to fully explore the historical and present-day context for the problem of poverty and land management for the embedded case study. Fundamentally, grounding this study in a political ecology framework supported the notion that ideas are locally constructed and are not politically-neutral and, as such, justified the decision to incorporate qualitative analysis quite heavily. Ultimately, this thesis sought to determine if there are differences between local and externally understood notions of poverty and wellbeing, and how these ideas correlate, or do not correlate, with the ways these ideas are measured. Thus, the element of political ecology most emphasized was a constructionist perspective towards poverty, wellbeing and resource management.

Although Political Ecology influenced the research broadly, it was not employed as a framework in a strict sense and it did not guide the data analysis or research findings as a methodology of this study in particular. Several limitations hampered applying the conceptual framework more holistically. Poverty analysis is still mostly dominated by a positivistic perspective that is quantitative in nature and this thesis sought to explore this divergence. Equally, the conservation and resource management fields that are historically rooted in the physical sciences are only beginning to acknowledge merit from political ecological analysis. A lack of available local data and especially a limited scope were the most important considerations that prevented a more complex analysis of relationships and scalar dimensions of poverty and wellbeing. Despite the limited application of political ecology as a comprehensive framework, its contribution in influencing the holistic view of the poverty and conservation debate and the findings in particular within this thesis should not be discounted.

### **3.2.2 Case Study Approach**

This research seeks to make use of the single case study research framework to contextualize the literature and gain a deep sense of understanding in one particular place, at one particular time. It sought what Weber calls *verstehen*, an “intimate and empathic understanding of human action in terms of its interpretative meaning to the subject” (Palys, 1997, p.18). This case was located in the Sabana Yegüa Watershed region in Western Dominican Republic where conservation and development issues are of primary concern. The single case study method is appropriate as it can represent a relevant or critical case in light of the existing knowledge on the subject. Since the literature cites the entire Caribbean region as a biodiversity priority simultaneously facing many human development challenges, this case is thus valuable. The specifics of the case study are elaborated on in Chapter 4. With this method, it is understood generalizability may be limited to areas

sharing similar geographies or histories, though the wider application of the findings is not wholly discounted (Khandker, 2010).

Another important methodological concern guiding the research was to seek balance between the emic and etic perspectives. Perspectives can influence the researcher and in turn influence perceptions and analysis by participants within a community. Despite what Chambers critiques as the phenomenon of this approach which is usually an important part of ethnographic research, phenomenological or narrative strategies of inquiry have been found useful in highlighting the human element of the conservation debate. Many sources refer to the predominant users of these approaches such as sociologists and anthropologists, and their important contribution to the conservation / poverty debate and thus the research described here (W. Adams & Hutton, 2007).

### **3.2.3 Evaluation Studies**

Evaluation, in its broadest definition is a methodological area that seeks: “the systematic acquisition and assessment of information to provide useful feedback about some object” (Trochim, 2006). As such, evaluation is intrinsically employed in this thesis and complements the other methods chosen. Within evaluation, there are also multiple perspectives or *evaluation strategies* that can guide the overall evaluation process. This research drew from three of these models. The *management-oriented systems models* include *Logical Framework (logframe)* analysis with its emphasis on evaluation comprehensiveness within other organizational activities (Trochim, 2006). This research seeks situating the Sabana Yegüa Project within larger conservation and development policy goals for the region. The *qualitative/anthropological model* highlights the value of observation, subjective human interpretation, and especially how this influences the context of the evaluation per se (Trochim, 2006). This strategy correlates with the decision to include a brief historical analysis of the case study location, exploring alternate narratives that have led to problem

framing. Lastly, the *participant-oriented models* place importance on the *clients / users* of the program, mirroring this research's emphasis on the local perspective and participatory approaches towards the analysis of the major themes (Trochim, 2006).

Evaluation has also played more specific roles in this thesis. Firstly, the overall research question sought to compare and assess the difference between theory and practice: what a law or policy states and what is occurring on the ground, in the communities. Often referred to as outcome or impact evaluations, these frameworks were useful as references although not applied directly in this research (Trochim, 2006). Secondly, the literature review is in essence an evaluation of the existing examples and bodies of knowledge on the topic. One source in particular, a mid-term evaluation for the case study, was reviewed thoroughly. Since metrics for initiatives are often chosen based on future impact or outcome evaluations, it was important to engage with evaluation as a framework to understand more fundamentally the processes that might guide indicator definition and selection. In this regard, evaluation was a framework that had implicit importance to this study, even if not applied in a traditional sense. Thirdly and broadly, the single case study approach is an evaluation of how the case fits in light of the other sources of information obtained.

The case study component of this research was specifically an *ex-post* operational evaluation of the Sabana Yegüa Sostenible project: *ex post* evaluations examine and evaluate the implementation of a program given the pre-determined project objectives (Khandker, 2010). An impact evaluation (looking at the impacts and effects where possible resulting from the project intervention) was less feasible due to the difficulty of establishing a counterfactual case and due to limited scope (Baker, 2000; Baker, 2000; Khandker, 2010; Trochim, 2006). As part of the stated goals of the SYS project, indicators of human wellbeing were evaluated and compared against baseline data indicators, though not the baseline data itself. This research also evaluated additional information not previously captured by any indicator of human wellbeing, instead, embracing the multi-dimensional concept of poverty and rights-based approaches (Farrington, 2001; Sen, 1999) in an effort to get past a poverty



model focused on income or wealth (Chambers, 2008; Kakwani & Silber, 2007; Roe, 2008). These new indicators do not rely solely on income generation or material wealth but instead on issues of power, resource control, and decision-making (Classen, 2008; Fortmann, 2008). This research sought to then compare and contrast the findings, evaluating the usefulness of incorporating different indicators, as discussed in the literature (Leisher, Sanjayan, Blockhus, Kontoleon, & Larsen, 2010).

### **3.3 Data Collection**

Given my study's emphasis on qualitative research, an emergent design was selected. An emergent research process allows for flexibility of methods and permissible shifts in questioning based on the local context since the intention is to learn from the participants (Creswell, 2009). Data were derived from a number of research methods which generated both primary and secondary data.

**Secondary research** was conducted primarily through an extensive academic literature review on the subject, and related themes. In this study this includes the robust debates on conservation and development, poverty, and measurement indicators. Other secondary sources that enhanced this study included census data, written policies, program work plans and grey literature. Secondary sources were heavily complemented by primary data. The use of secondary data was employed because it was cost and time efficient and useful as a comparative tool. Some of secondary data's disadvantages are the possibility of inherent bias and difficulty in determining and verifying reliability.

**Primary** data, both qualitative and quantitative was sought throughout this study. Geographically, the sources of primary data were situated in two areas: the offices of Fundación Sur Futuro and other governmental offices in the capital Santo Domingo, but mostly in the western province of Azua, in the Dominican Republic. The communities of El Recodo, in the municipality of Guayabal and Monte Bonito, in the municipality of Padre Las Casas (both in Azua province) were selected for the field work upon the recommendation of

Fundación Sur Futuro. Among many reasons, these two communities have had different intervention strategies throughout the course of the project and they are communities for which there was baseline data already available. El Recodo and Monte Bonito were also chosen for reasons such as relative ease of access and adequate sizing for comprehensive sampling. Timing prevented more than two communities from being sampled, but a minimum of two communities was deemed necessary to ensure a wider breadth of contextual factors were taken into account. For example, Monte Bonito has relatively good road access, whereas El Recodo requires four river crossings. While Monte Bonito was representative of a larger and more prosperous community in the area, El Recodo was likely more representative of the 60+ smaller and more isolated communities that populate the remote rural Sabana Yegüa Watershed.

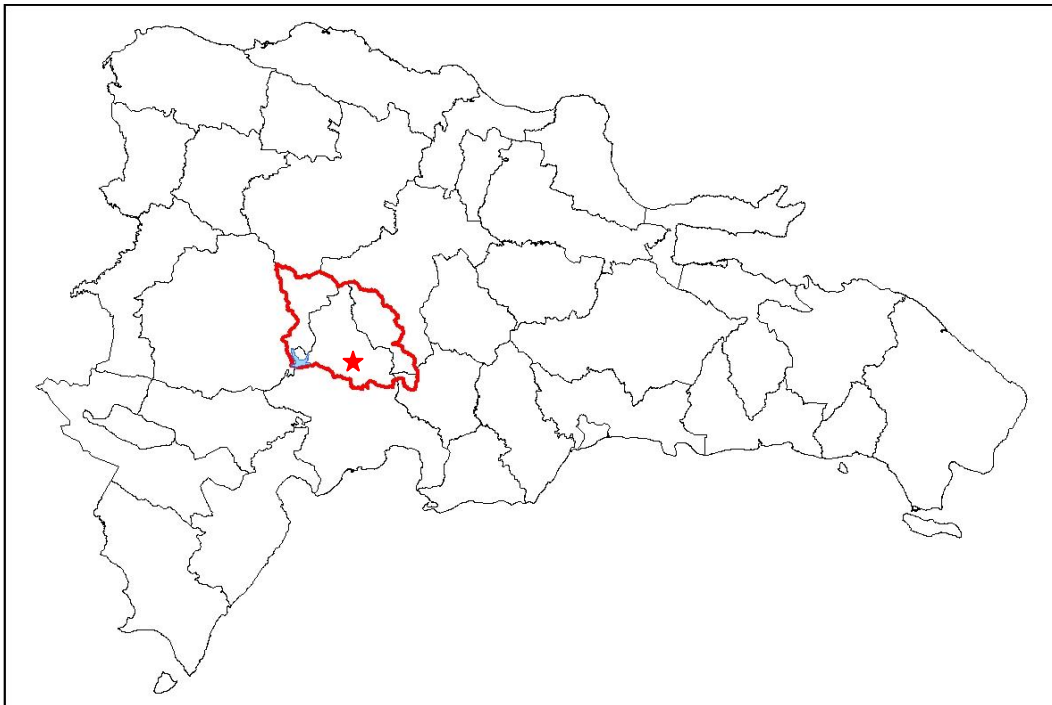


Figure 3: Map of the research area (red star) in the Dominican Republic.

(Fundación Sur Futuro, 2005)

Three different methods were used to generate primary data in this research:

- 4 **focus groups** composed of 18 members of community-based organizations and using participatory approaches,
- 250 quantitative **surveys** in two communities in which Sustainable Land Management intervention strategies have been implemented,
- Participant observation such as: daily livelihood farming activities, interactions at community meetings, etc.

The qualitative data I gathered followed PRA (participatory rural appraisal) and PLA (participatory Learning and Action) which are families of participatory approaches and methodologies (Chambers, 2008). PRA and PLA subscribe to general principles of: “they do it”, sharing, personal responsibility, and being action-oriented (Brydon-Miller, Greenwood, & Maguire, 2003). Participatory approaches and methods are often used in the development community and inherently have a focus on materially poorer individuals who may have limited literacy and language comprehension skills. Although PRA and PLA emphasize flexibility, a higher importance is given to embodying the appropriate “mindsets, behaviours and attitudes” during the research process. In fact, these are cited as more important than the methodologies themselves (Chambers, 2008, p.87; Chambers, 1994; Chambers, 1997). During the data collection process much emphasis was given to the following PRA/PLA precepts: “Don’t rush”, “Sit down, listen and learn” (Chambers, 2008, p.87). The strongest advantages of these participatory methods are that they enable the direct participation of individuals, support empowerment and education, build dignity and often produce not only relevant but detail-rich results. Disadvantages range from difficulties in assuring quality of data, the data that is produced may be what is most comfortable or common versus most accurate (otherwise referred to as “backsliding”), data can be highly subjective and documentation can be difficult (particularly in cultures which do not wish to be recorded, photographed or only documented orally). The advantages were determined to

outweigh the potential risks for reasons including the researcher's experience in community facilitating and the appropriateness of these methods in light of the context of the case.

The first participatory method used was **focus group** research. This method was used to determine issues of concern to the community within the targeted research, as this is a method commonly used in the exploratory and early phases of an investigation (Creswell, 2009). This method helped identify common perceptions and the language of conservation and development in the case study, helping the researcher contextualize the prior information gathered through the literature review and generated questions. This method is flexible and permitted the inclusion of participants perhaps not usually targeted (new mothers, elderly, etc), and those that may be marginalized (illiterate). Key probes were used, although generally an open-ended questioning style was employed (Creswell, 2009).

Open interviews were undertaken with **four focus groups** comprised of any member of a community-based organization in each community. These focus groups were conducted in neutral spaces, the local community centre and the local school, and lasted between 1 and 2 hours. In total 18 participants were involved with representation from producer groups (San Isidro, Santa Clara, greenhouses), social groups (church group, youth group, women's group), and an advocacy group (Consejo De Desarrollo Comunitario). (See appendix C for activity sheets). No stratification based on variables such as gender or age was done given the anticipated challenge of enticing participants within a short timeframe. As a result there was a notable over representation of men for the focus group participants at 72%. Within the male-dominated society of the Dominican Republic, it was likely this overrepresentation could be attributed to perceived prestige by male participants to contribute to an international research project involving a foreigner in their community. Time availability could also have been an important factor preventing more female participants in the focus groups given their heavier household workload and responsibilities in child care.

Some of the advantages of the focus group method are its efficiency in time and cost and the ability to observe non-verbal cues through analysis of the interaction of participants. Another advantage is the in-depth information that can be obtained through the participants own reflections and in their own words.

Some of the disadvantages include the following: that the small sample size affects generalizability, the validity of answers may suffer from collective groupthink where unusual or unpopular answers may not be raised; power and personality may influence group interactions and therefore contributions, and lastly; I as moderator, may have inadvertently provided influencing cues through the use of verbal and body language.

A participatory wealth ranking using an aerial map was conducted successfully with one focus group. This method was not repeated due to perceived difficulties in conceptualizing space by the participants in another instance, despite the use of an aerial map of the local community. The unexpected larger size of the community of Monte Bonito excluded the possibility for community-wide wealth ranking for the other two focus groups. The wealth ranking that did occur revealed dimensions of poverty and wellbeing that were unique and locally relevant, and passively observing the discussion of indicators was a useful method. More importantly, the activity was based largely on local analysis without the need for external interpretation, and the participants seemed to appreciate viewing their community from above and engaging in the study in this independent way.

A 40-question **survey** was used to produce quantitative and representative results regarding local perceptions on poverty and conservation, and the current state of socio-economic development in the two communities of Monte Bonito and El Recodo. (See Appendix B for both the Spanish and English versions). I administered the questionnaires to ensure participation by the household adult resident regardless of literacy level or defaulting on a male household head. The relative ease of participating in the surveys, conducted at the home of respondents and much shorter in duration, ensured women's voices were incorporated. The survey was administered during the day while the majority

of the men were away from the home, explaining an over-representation of women for the surveys at 61%. This over-representation helps offset the male-dominated input for the focus groups.

In the absence of any formal household lists, these were created for this study. For El Recodo, data from a year-old GIS database developed by Sur Futuro was used. For Monte Bonito the only available data were hard copy records from the local health clinic which are updated annually. From these records a village population list was developed. In both communities, leaders were asked to review two iterations of the lists before finalizing a random sampling frame. The questionnaire was piloted in El Recodo, and given the lack of changes, was included in the final data. An initial aim of a 95% confidence rate with a 5% margin of error was selected as per standards for socio-economic studies of this type and as requested by Sur Futuro. This decision guided the ideal number of households to survey. However, given much higher population numbers than anticipated, as well as limited time, this was scaled back to a 90% confidence rate. Probabilistic simple random samples were taken and 85 household questionnaires out of a population of 121 households were conducted in El Recodo, and in Monte Bonito 153 out of 278 potential households. These questionnaires produced response rates of 90% and 94% respectively, a 90% confidence rate as mentioned, with a 5.1% margin of error in El Recodo and a 4.5% margin of error in Monte Bonito. Cluster area random sampling was not done given the challenges in establishing geographical boundaries (including neighbourhoods) and particular difficulties identifying separate households within the context of informal rural housing. The creation of population lists was also useful as an analytical exercise to confirm or contrast prior knowledge regarding local demographics in these two communities since the prior census. See section 5.1 and appendix F for details.

The survey instrument itself was developed with input by Sur Futuro staff. The decision to include development practitioners resulted from a desire to understand current field practices based on applied experience outside of academia. The survey was created

modeling questions on a prior socio-economic assessment undertaken in 2007. This baseline study presented data on demographics, infrastructure and services, sources of income, agricultural productivity, social capacity and environmental awareness. This study was referenced for this research and, given the nationally-created questionnaire, also served the purpose of highlighting adequate local terminology. However, additional indicators were added to reflect emerging dimensions of poverty such as vulnerability and empowerment. These new indicators were selected for comparison purposes, desirability for inclusion as indicated by Sur Futuro but most importantly to address the gaps identified in the literature review. Open ended questions regarding local perspectives on poverty and wellbeing were also incorporated throughout. An overly ambitious amount of data was collected in an effort to comply with the breadth of multidimensional poverty. However, given the limitations of this study, only a small selection of the indicators will be analyzed in detail in the results chapter. Appendix A contains a comprehensive list of all the indicators measured by the questionnaire survey.

Lastly, **participant observation** was used as an additional qualitative measure to document and analyze the interactions between community members, project staff, government officials, etc. My role as a researcher was primarily "*observer as participant*", enabling me to record information as it occurred and enabling inconsistencies to be highlighted. In other settings, (for example when interacting with park rangers, conservation staff, political or governmental workers), my role was as "*complete observer*" (Creswell, 2009). Participant observation is a method that was useful in the early stages of the research to help determine context. It supported and refuted data collected via other means as it is very direct – the researcher observed actions instead of words. However, a major disadvantage is the bias the researcher might impart given a particular lack of familiarity with context. Familiarizing myself with norms, customs, through literature, local popular culture, daily conversations and through conscientious observation mitigated these drawbacks.

### **3.4 Order of Methods**

The timeframe for the field work spanned 3 months altogether: June, November and December 2010. This timeframe was guided by financial and temporal reasons given the requirements of the academic program and availability of funding. Given this relatively condensed timing, it was important to conduct the exploratory research such as participant observation and the review of the grey literature early on in June. In November and December, logistical challenges, the coincidental sampling for the national census, as well as having the Christmas holidays and harvest season influence the research, the timing of the focus groups and questionnaires was amended. While ideally the focus groups would have all been conducted initially to highlight the issues affecting the community, these ended up being interspersed with administering the questionnaire. The specific order was as follows: the two focus groups in Monte Bonito were conducted followed by questionnaires and focus groups in El Recodo, and lastly the questionnaires in Monte Bonito completed the data collection process. Participant observation was conducted on an ongoing basis. Throughout the data collection process, trust and an appropriate level of comfort with the participants was fostered by clearly articulating the intent of the study, by being patient, friendly and as much as possible, apolitical and independent. Ultimately paying attention to these details helped obtain insightful and detailed data within the scope of this study even with a brief field stay.

#### **3.4.1 Data Analysis**

The questionnaire data was coded, tallied and analyzed using both SPSS and basic excel software, and then compared to similar indicators. For the data obtained by the focus groups, content analysis was conducted in order to determine notable trends and gaps in knowledge and analysis, thereby situating my research within that context. Data from participant observation was written up and incorporated by themes to support or refute with rich details the data generated through the surveys.



#### **3.4.1.1 Language considerations**

Given that Spanish is my native tongue, I had a noted advantage of conducting research in the Caribbean where communication between research participants was facilitated and less information was lost in the translation process. My ability to fluently communicate in Spanish, especially by leveraging my Caribbean accent and idioms, was not insignificant in establishing genuine connections with the research participants. As well, I was able to better detect nuances and differential meanings in the language which lent to deeper local interpretations and understanding. The ability to probe lines of questioning immediately, understand the regional dialect and in turn express myself as a researcher with confidence, are all very important advantages. However, there were also several limitations regarding language considerations: Spanish is not the language I am most comfortable with, nor am I from the Dominican Republic or the Azua province which has its own peculiar dialect. The irregularity of being fluent but from another Caribbean region was addressed by paying careful attention to unfamiliar words, expressions and cultural cues, and seeking out official and unofficial definitions. In taking from the tradition of applied anthropology, I sought ways of understanding the local context via popular culture such as through oral histories, music, and by liaising with community members and colleagues in the country.

#### **3.4.1.2 Triangulation, Reliability and Validity**

Triangulation, a means to ensure reliability and validity, is the process whereby differences in the research approach complement and reduce any shortcomings. Within this research, triangulation was employed by using different research methods, both qualitative and quantitative and even within the qualitative methods themselves by using both primary and secondary sources. This enabled different data sources and types to complement or indicate deviances more clearly. Triangulation was also used to explore a variety of perspectives, the emic and etic discussed above, but also the differences between a villager, an outside expert, myself as a researcher, published academics in the field, etc.

Triangulation was done simply by comparing and contrasting the information collected and analyzed from different sources and perspectives. This was made more comprehensive by approaching my research objectives by asking the same questions at different times and in different ways. Triangulation helped add reliability and validity to the research study (Creswell, 2009). Providing sufficient details to ensure accuracy of measurements also facilitated reliability. Additionally, other procedures included checking transcripts for obvious mistakes, and ensuring there was no drift in the definition of codes or a shift in the meaning of the codes during the process of coding. This was accomplished by constantly comparing data with the codes and being aware of this issue. Validity in this research was ensured via the qualitative focus which inherently has a heightened level of authenticity and credibility (Creswell, 2009). Consistent revision of transcripts, rich, thick descriptions, and corroborating accurate findings with interviewees and participants, also strengthened validity.

#### **3.4.1.3 Generalizable Results**

Although some of the research results are not likely generalizable given the specific context of the research, some findings are thought to be applicable to other similar geographical regions such as rural underdeveloped areas of middle-income countries, especially in Latin American or in other tropical regions with histories of colonization. The findings therefore may inform the broader discussion on conservation and development. It is hoped this research will fill in existing gaps at the academic level, but will also provide the implementing agency insight into different ways poverty reduction can be defined and measured, which may in turn lead to more effective development and conservation programs.

#### **3.4.1.4 The role of the researcher**

All attempts were made to conduct this research in a fair, equitable and respectful manner, accurately representing the views and perceptions of participants and communities

and interpreting the data obtained honestly and wholly. Privacy was respected, anonymity (if desired) was guaranteed and data carefully protected through cautious safeguarding during field research. It must be noted that written consent was not possible in the politicized cultural environment or even technically feasible when working with illiterate or semi-literate individuals: in these cases verbal consent sufficed. Obtaining the required approval through the University of Waterloo's Office of Research Ethics also ensured just and accountable research was undertaken. Efforts were made to ensure this research does not become exclusively extractive, it is hoped the findings will be taken into account by others including stakeholders of natural resource management and poverty issues, (such as local NGOs, government officials and even the community members), academics and even the wider public. Results will be disseminated to interested groups in shorter report form and in Spanish to facilitate the sharing of this knowledge in the hopes this study may contribute useful and purposeful information in mitigating the problems of impoverishment and the concern towards conservation.

#### **3.4.1.5 Limitations of this research**

It is recognized conservation and development as topics are, in and of themselves, broad and complicated subjects, of which perhaps limited solutions may be found. This study is narrow in scope and geographical representation, although it is hoped the findings will be useful and relevant more broadly. Based on literature and practice, methodology alone would appear to be a determining factor in the acceptance of this study across the disciplines engaged in the subjects of poverty, wellbeing and resource management. There were unanticipated challenges in justifying academic decisions that conflicted with operational and conventional perspectives for the case study. A notable example includes the tension between employing participatory philosophies broadly and operational NGO practices that, for project needs, place greater importance and validity on the use of quantitative, top-down traditional measurement methods. While situating the case and access to communities for sampling benefitted from the involvement of a local NGO, this, in

turn, required allowing an evaluation panel associated with the NGO to have input into the research design for this study. Only methods were impacted and not analysis or findings, and so this input was accepted as part of doing this research. However, an assessment of the alignment between personal convictions and the underlying values and practices of groups facilitating the research process is suggested for any future studies. With any rights-based research, both disciplinary focus and documented practices should be evaluated more thoroughly prior to any formal agreements to collaborate.

Challenges in designing and implementing a well-situated study while learning about methods and subject matter content is highlighted as a specific concern for young researchers such as myself. The existing contrasting disciplinary perspectives (i.e. prevailing economic perspectives and unfamiliarity with the subdiscipline of development geography in the case study country) were not insignificant limitations with regards to how this study was pursued. An ability to adequately design research examining basic assumptions in rationale, problem-framing and organizational culture needs to hinge upon credibility that young researchers often lack. Abundant confidence in methods and subject matter is required, and for some, this might only be achievable after some professional experience.

Given more time and funds, a multidisciplinary study, especially one that could include longitudinal or comparative study across cases in similar regions would be of interest. Employing counterfactual cases to increase the diversity of local views and satisfy requirements across multiple disciplines would also be encouraged. Integrating various cognate fields appears to be a future trend in the themes of interest to this study.

## **Chapter 4 The Dominican Republic Context**

The account below seeks to emphasize how resource use and management issues in the DR have been shaped by historical antecedents and provides the context for the case study. A particular emphasis is placed on the multiple perspectives and meanings that colour a holistic account, and thus make it more accurate. Understanding the historical context is seen as critical in situating the challenges facing the pursuit of both conservation and development in the DR today. First, a history of the island is given emphasizing events and policies that relate to rural land management, peasants and development. Second, background on the particular region of the DR is given: the Sabana Yegüa watershed. Lastly, Sur Futuro's Sabana Yegüa Sostenible (SYS) project is presented since this project sought to achieve both conservation and development goals in combination. The chapter ends by detailing the geographic and demographic characteristics of the two communities surveyed, El Recodo and Monte Bonito.

### **4.1 History: Early colonization**

The island of Quisqueya, modern day Hispaniola Island comprising Haiti and the Dominican Republic, has a rich history. Previous to European contact, Quisqueya was inhabited by the indigenous Taíno people who lived off subsistence agriculture in pacifist societies (San Miguel, 2005). Columbus' first visit in the name of the Spanish Empire in 1492 introduced diseases and armed conflict, and in less than a generation, the local population was nearly entirely decimated (San Miguel, 2005). With Spain controlling Santo Domingo (present-day Dominican Republic), France colonized the western portion of the island, Saint Domingue (present-day Haiti). Both colonial powers developed the lucrative natural resource industries of the time, primarily sugar and timber that were of great importance to Europe. To this end many African slaves were brought to the island for forced labour, a practice that continued for more than 300 years under colonial rule. Slavery on Saint

Domingue ended with the Haitian Revolution; a slave-revolt led in part by Jean Pierre Boyer and resulted in the founding of Haiti.

Santo Domingo would face much struggle for its independence, especially in light of the revolutionary events in Haiti. Santo Domingo was freed from Spain but governed by Haitian rule briefly in 1803 and from 1822 – 1844, and was actually re-annexed by Spain in 1804 and again in 1861. Santo Domingo was even occupied by the United States twice, from 1916 to 1924 and again in 1965 (Carruyo, 2008). Known as the Dominican Republic (DR) as of 1944, these numerous instances of foreign rule is a relevant background for the ongoing pernicious governance effects, especially relating to land.

#### **4.1.1 Independence and land tenure**

During the initial years of independence from Spain, but while united under Haitian rule in the 1820's through 1840's, land reform measures were attempted on Hispaniola which had important ramifications. Haitian president Boyer tried to move away from the plantation agriculture and *latifundios*, large estates established under colonial law and the site of forced slave labour. Boyer tried to enact these changes without crippling the sugar-dependent economy of the time by proposing the diversification of export crops. However, increasing cacao and cotton production was rejected in lieu of the historically produced and used resources in the DR: timber (specifically Caoba), tobacco and cattle. Boyer also offered free land for anyone interested in small scale productive agriculture for national consumption. Providing land and encouraging its productivity by willing participants, it was theorized, would sustain economic development without the coercive labour practices of the past. Interestingly, this policy was resisted. The large landowning classes such as the Catholic Church stood to lose significant control and were thus opposed. But, since many peasants were technically landless and could benefit from formal and titled land, it is especially curious that they too rejected Boyer's offer of free land. The rejection of free land by classes that included newly freed slaves can be better understood by evaluating the historical land management structures in place prior to Boyer's proposal.

It is important to note that even prior to Boyer's abolition of slavery; many rural inhabitants of Hispaniola actually lived autonomously as free peasants. There is evidence of slaves who purchased their freedom and marooned slaves who escaped their ordeals surviving off subsistence agriculture in remote enclave communities in the DR. These free peasants became accustomed to self-management and a flexible and autonomous land use arrangement (Turits, 2003).

For centuries and certainly until the 1850s, the majority of land in the DR was managed under a system known as *terrenos comuneros*, not *latifundios*. *Terrenos comuneros* have a complex description, in large part due to the differences in interpretation by different user groups. In simple terms, *terrenos comuneros* are a joint-ownership model whereby large groups of people own shares (not individual pieces of land) and have the right to utilize any unused area within the defined boundaries. The advantages of this model included that shareowners could have access to diverse land types (pastures and forests) and different resources (especially water). This was of particular benefit to cattle ranching and other livestock needs (Turits, 2003). In this definition, *terrenos comuneros*, despite being translated as communal lands, were not intended to be managed as open-access regimes since the land use was restricted by the number of shares made available. However, given the lack of formal laws or policies, different interpretations of this definition would also arise.

Peasants that were not share-holders understood *terrenos comuneros* differently. For free peasants, *comunero* was equivalent to common or "nobody's lands" (Turits, 2003, p.43). These rural areas were thought to "belong" to former slaves and their families that had lived and worked in the mountains for generations. Despite the acknowledgement of formal title holders, "those property rights were not imagined as including the right to bar others from lands that the owners were not using" (Turits, 2003, p.43). A sense of entitlement to use uncultivated lands was prominent. By the mid 18<sup>th</sup> century, *terrenos comuneros* became "virtual common lands" – in other words unenforceable property with completely open access (Turits 2003, p.42). Given the large amounts of unused land and low population

densities, squatters “reinvent[ed] the system for their own purposes” (p.41), pursued their own livelihood options, and lived “autarkic” existences (Turits, 2003, p.39).

These squatters were tolerated by the landowners for several reasons. The boundaries of *terrenos comuneros* were ill-defined. The landowners mostly belonged to the elite class, many who lived in the cities and who may have not been entirely engaged in the day-to-day countryside realities. The free peasants were few in numbers and used only small plots that did not hinder the main economic activity of the elite, (mostly cattle ranching), in any significant way. Lastly, there was little appetite to incite any peasant uprisings given the context of slave revolts, ongoing political upheaval and an armed peasantry (Carruyo, 2008). The free peasants continued farming and living as they had for generations.

Free peasants, though low in numbers, survived using low-impact livelihood strategies. *Montería*, hunting wild pigs, was common, as was foraging for elements such as honey. Chiefly though, the subsistence agricultural method of *conuquismo* was practiced. A *conuco* is a small intensive multi-cropping agricultural plot perfectly suited for local conditions including tropical soils and climate. A rich diversity of plant choices on a typical *conucos* included fruits, vegetables, medicinal plants and especially staples such as cassava, maize, sweet potatoes and pigeon peas (Geisler, Warne, & Barton, 1997; Sauer, 2009). These crops are grown at different vertical levels (instead of separately in fields) and the messy appearance confirms the mimicking of tropical vegetation regimes. Since *conuquismo* is part of shifting agriculture, these plots were left to go fallow after some time.

The peasant’s opposition to free land from the state can be understood in light of the history of open-access to land and autonomous decision-making to plant on their *conuco* what they wished. Free land, in this context, presented few gains. Peasants agreeing to the state’s terms meant entering into a social contract and giving up a certain level of perceived control and flexibility (Turits, 2003). This rejection of a more structured governance model



was not acceptable to other factions of Dominican society and would have important ramifications with regards to the role of the peasantry in domestic politics.

#### **4.1.2 Peasant indolence**

By merging the political and economic challenges of the day with the rejection of free land, the elite classes used the peasantry as scapegoats for the nation's problems. The elite who stood to gain the most from a turn towards commercialized agriculture did not appreciate the peasantry impeding this through resistance to modernity and a desire to continue living in traditional, subsistence ways. Rejecting free land was thus interpreted as an act of resistance to the "sedentarization" of freed slaves and peasants (Turits, 2003, (Carruyo, 2008). Language became forceful and the autonomous peasant practices became labeled and known as "peasant indolence" (Carruyo, 2008, p.20). Furthermore, racialized terms were even used to further incite hatred. The marooned citizens (referred to as "free blacks") were depicted as being disinterested in contributing to national progress or the common good (Carruyo, 2008). From here on, "blackness" in the discourse of the era began to be tied to a representation of both the despised Haitian colonizer and the autonomous peasant in the Dominican Republic (San Miguel, 2005).<sup>1</sup> The elites went further still by stating that subsistence economies that were "non-commercial, non-capitalist" were akin to vagrancy (Turits, 2003, p.85). The peasants were thus considered more than merely unproductive, they were seen as destructive: politically (towards the aims of the powerful), and economically for the good of the newly formed nation (Carruyo, 2008). As a consequence, the lack of national self-sufficiency and stagnation was blamed on the insolent peasants and facilitated the justification for aggressive and vindictive land reforms, among other policies in pursuit of economic development (Turits, 2003).

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<sup>1</sup> *A more comprehensive understanding of the challenges facing conservation and poverty alleviation in the Dominican Republic requires the themes of ethnicity, identity and race to also be investigated. They fell outside*

### 4.1.3 Rafael Trujillo and “Men of Work”

The ruling classes in the DR sought a more formalized system of land administration to pursue progress and modernity. In 1920 the Land Registration Law, using the Torrens system of title registration, was passed. Under the occupation of the United States at the time, all lands were to be surveyed and registered, unclaimed lands were turned over to the state, and those unable to afford the land registration expenses were forced to sell off their titles at discounted prices, again to the state. This resulted in the concentration of land, (often the best agricultural lands), at the hands of elite Dominicans and foreign American companies who had connections to the government (Carruyo, 2008). After being given power by the retreating US forces, the soon-to-be dictator Trujillo continued to consolidate power and land while pursuing greater economic activity.

At the end of the American occupation in 1924, Rafael Trujillo sought to modernize the Dominican Republic especially by legislating permissible rural land use decisions, mostly for commercial purposes. The Dominican Republic of this time pursued development more aggressively therefore, land that was deforested or actively worked on was considered improved. Every rural man was actually required to cultivate ten *tareas* (16 *tareas* is one hectare, (Kustudia, 1998), and failure to do so resulted in jail time (Carruyo, 2008) and the potential loss of land titles or de facto ownership rights (Rocheleau and Ross, 1995). The government implemented agrarian reform, resettled rural families into colonies, and populated remote areas with (white) immigrants keen to farm commercially. The government also initialized infrastructure programs, especially road building, to open up transportation for both domestic and foreign buyers, further encouraging agricultural productivity for a market economy (Carruyo, 2008).

Trujillo’s land reform legacy had longstanding effects on the Dominican Republic. During his 30-year reign he laid claim to the most fertile lands and forest tracts, appropriating as much as 60% of arable land for personal and familial landholdings (Geisler et al., 1997; Turits, 2003). In sectioning off land for these personal and commercial purposes,

Trujillo displaced peasants who often fled upslope to seek the open access they were used to (Brothers, 1997). These peasants would continue establishing their traditional *conucos* in increasingly challenging locations such as steep slopes (Kustudia, 1998). This was at a time when slash and burn clearing was forbidden, population was doubling every 20 years, and rural peasants were being marginalized by exercises of political muscle-flexing (Carruyo, 2008).

During this period of marginalization, Trujillo conversely created a sense of pride. He established a discourse of “men of work” whereby peasant’s work was deemed worthy and valuable and agricultural development was of utmost importance in getting the country out of poverty (Turits, 2003). Trujillo during this phase promoted land clearing (except for pine trees) as a good endeavor in creating useful land, labour and a sense of national pride. However, land clearing could only be pursued via a formalized agricultural industry where (commercial) work was always available for those who wanted it. For those peasants who preferred subsistence land productivity outside of a formal market economy, these terms were undesirable. It should be noted that despite the often cited marginalization and displeasure of these peasants during this era due to such restrictive policies, Turits provides a counter-narrative: some peasants actually infer pride in a time where economic growth seemed limitless and job stability ensured a decent living for peasants willing to engage in formal work (2003). Trujillo thus greatly influenced the complexity between the peasantry and permissible land uses. This duality between conforming to the state’s acceptable land use and the autonomous land use enjoyed for historically continues to present day.

#### **4.1.4 Trujillo’s legacy: contested conservation**

Trujillo’s assassination in 1961 saw many changes in the Dominican Republic. Trujillo’s legacy includes the establishment of many reserves that today remain sites of conservation. However, the notion of park creation as motivated by a morally-driven

conservation ethic has been questioned. Some authors point to the timber felling that went on in these reserves, and a desire to develop hydro-electric generation that required protected riversheds as more likely motivators (San Miguel, 2005). At the time of his death, the country had 60% forest cover, not only because of Trujillo's desire to protect (yet log) certain areas, but more importantly because he prohibited others from doing so (Diamond, 2005; Geisler et al., 1997). That the rural countryside was heavily controlled by the state during his dictatorship is undeniable. It is not surprising then, at the time of his sudden death and under a chaotic political system, smallholder invasions were seen as a response to the collapse of a repressive regime (Brothers, 1997). With interests to defend, the United States re-occupied the Dominican Republic in 1965 re-emphasizing state control. Shortly afterwards in 1967, forest reserves were converted into parks and the strict Law 211 banning any tree cutting was passed. Households became "sites of struggles" as all tree cutting was enforced by a newly militarized National Forest Service (Dirección General Forestal, DGF or commonly referred to as Foresta) (Rocheleau & Ross, 1995). Foresta was, by many accounts, unsystematic in its application of the law (Geisler et al., 1997; Rocheleau & Ross, 1995) and tied to political patronage (Brothers, 1997). Conservation in practice became overly concerned with limiting local tree use, controlling even the felling of a single tree on private land (Rocheleau & Ross, 1995). Peasants became cynical and trees became sites of "everyday peasant resistance" (Rocheleau & Ross, 1995, p.410; Scott, 1985). The struggle between the state and local peasants in defining adequate land uses did not end with Trujillo but continues to present day.

#### **4.2 Current land issues in the Dominican Republic**

Land management in the Dominican Republic became more even more controlled towards the end of the 20<sup>th</sup> century. In an effort to improve rural land management and avoid associated problems as experienced in neighbouring Haiti, the Dominican Republic

would seek to further protect forests and mountainous areas. In 1990, 11% of all land was under protected status, and within 4 years this figure doubled, at least in official plans if not in practice (Brothers, 1997). One year later citing deforestation and the collapse of Haiti, Decree No. 151 banned migratory agriculture (also known as shifting cultivation) as a way of legislating parks and further controlling the activities of landless peasants (Geisler et al., 1997). Peasants as “enemies of the forests” (Martínez in Carruyo, 2008, p.26) would continue to be an oft-cited narrative justifying the ongoing restriction of peasant access.

Some authors highlight the inaccurate problem framing that resulted from blaming peasants as the main cause of environmental destruction. They suggest a more accurate or comprehensive forest history which should include the role of politically-motivated and powerful timber and cattle industries instead of the swidden practiced by peasants as the primary threat (Brothers, 1997; Carruyo, 2008). Carruyo further posits this misguided interpretation may have actually been intentional given the likelihood some of the powerful timber or cattle ranchers may also be elite conservationists based in Dominican cities (Carruyo, 2008).

Current enforcement of boundaries and laws for protected areas in DR in particular are hampered by many factors. Nationally there is a lack of infrastructure, (for example demarcated park limits) and low staff numbers to enforce the laws. Enforcement is also made more difficult by the fact that marginalized communities have continued to seek out survival under the undefined geographical context. There are examples of communities living inside national parks. A heavy-handed but irregular enforcement approach is still used and farmers even unknowingly working protected land are jailed and even killed for their perceived acts of resistance (Geisler et al., 1997). Pursuing any or all of the following actions within park boundaries was problematic: carbon-production, logging without permits, or even growing yautia, a common tuber crop (Carruyo, 2008; Geisler et al., 1997). The state thus pressures farmers to settle in demarcated areas, abandon migratory agriculture and adopt forester and sedentary “productive” livelihoods (Kustudia, 1998;

Rocheleau & Ross, 1995). However, the opportunities for improved wellbeing as a result of sedenterization and realistic prospects for economic gain at the household level are increasingly difficult and result in continued land use conflict (Carruyo, 2008).

Throughout DR's history there have been several indications of contested meaning of development and land management. When the society was undergoing changes from slavery to peasantry, free land was rejected in pursuit of self-management. Although there is evidence that *terrenos comuneros* survived until as late as the 1940's (in the Yaque del Norte region, close to the case study location for this thesis), modern times erased these traditional large plots of open land (Kustudia, 1998). Land expropriation continued long after Trujillo's regime, with new cases as late as 1992 (Rocheleau & Ross, 1995). "Campesino laziness" is seen by some Dominicans as preventing the creation of more efficient and modern agribusiness opportunities (Carruyo, 2008). The concept of food production for the national economy is especially unique as monoculture crops such as coffee or avocado for export have displaced the biodiverse crop practices of small peasant landholdings that have historically been able to provide for the subsistence of the rural poor. *Conuquismo* is still practiced but, in promoting acceptable commercial agricultural development instead of subsistence cultivation, there is now more pressure on peasants to conform to politically permissible natural resource management frameworks. Contested meaning of development and land management in the DR continue to the present day (San Miguel, 2005).

#### **4.2.1 Justification of Case Study: Development in the Dominican Republic**

The Dominican Republic is a useful country to study with regards to conservation and development due to its middle-income socio-economic position relative to other nations. On average, it is neither a very wealthy or developed country, nor a very impoverished one either. The World Bank categorizes the DR as having an upper-middle income economy and in 2011 the United Nations ranked it as medium on the Human Development Index, or 98<sup>th</sup> place out of 187 countries (United Nations Development

Programme, 2011; World Bank). Based on increased GDP and HDI every year, the country is considered to be on a successful path towards development in comparison to other Latin American countries (World Bank, 2006). However, the DR has not taken adequate advantage of high economic growth in terms of poverty reduction and improved social indicators (World Bank, 2006). The level of inequality is also one of the highest in the world as measured by the Gini index (United Nations Development Programme, 2010). Furthermore, significant disparities exist between regional poverty figures within the Dominican Republic. While the capital region that includes Santo Domingo ranks highly, equivalent to an HDI ranking of 34 out of 177 countries, the El Valle region where this case study was based, ranks among the lowest in terms of human development. Ranked 173 out of 177 this south western region occupies a position below the human development average for Sub-Saharan Africa (PNUD, 2005). Given that the Dominican context is similar to neighbouring countries and to the Caribbean region, lessons learned here may be applicable to the wider regional context. For this reason, a specific land management project was selected for a watershed in the poor rural western region of the Dominican Republic.

### **4.3 The Sabana Yegüa Watershed**

The Sabana Yegüa Watershed comprises 166,000 hectares in Western Dominican Republic. It contains three large rivers (the Rio Yaque del Sur, the Rio Grande del Medio and the Rio Las Cuevas) that feed into the Sabana Yegüa Dam which became operational in 1979. The watershed occupies four provinces: Azua, San Juan de la Maguana, San Jose de Ocoa and La Vega. Within the watershed there are two national parks (José del Carmen Ramírez and Juan B. Pérez Rancier ) as well as three smaller forest reserves (Arroyo Cano, Guanito and Villapando) (Sur Futuro, 2010). The watershed contains an estimated population of 77,000 mostly impoverished subsistence farmers scattered in approximately 60 rural villages (Fundación Sur Futuro, 2005). Basic services such as water and electricity are not always present and economic opportunities are limited. An estimated 70% of the

non-protected area is without tree cover, and inappropriate land uses such as hillside tillage and burning are causing further problems. Given the steep mountainous slopes that dominate, the entire region is at high risk for soil erosion which in turn is decreasing the operational lifespan of the Sabana Yegüa Dam and compromising the irrigation and hydroelectricity services provided to over 600,000 downstream users.

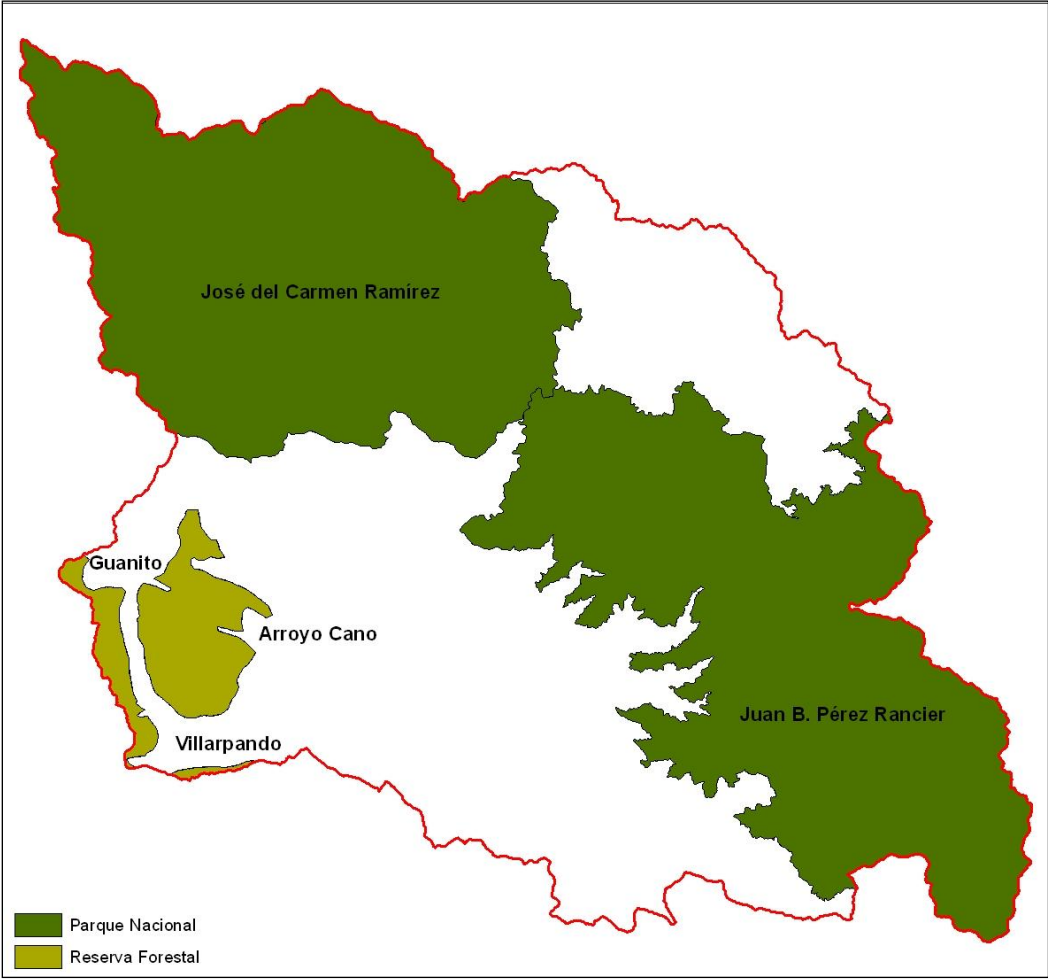


Figure 4: Map of SYS project area, green represents protected areas and forest reserves

(Fundación Sur Futuro, 2005)



#### **4.4 Sur Futuro's Sabana Yegüa Sostenible (SYS) Project**

As a response to ongoing threats of land degradation, the Sabana Yegüa Sostenible (SYS) Project began in March 2006. The national Dominican NGO Sur Futuro was the implementing agency with the UNDP as the overall overseeing agency for the 5-year initiative funded by the UN's Global Environment Facility (GEF). The stated overall project objective was to promote "sustainable land management in the Upper Sabana Yegüa Watershed System, in order to achieve global environmental benefits within the context of sustainable development and poverty reduction" (Henning & Herrera-Moreno, 2009, p.1). The comprehensive project included the creation and promotion of policies, planning frameworks, local capacities and financing schemes for sustainable land management (SLM). SLM is characterized as a management system that uses knowledge-based procedures to integrate land, water, biodiversity and environmental management to fulfill food and fiber demands while sustaining ecosystem services and livelihoods (Global Environmental Facility, 2010b). Metrics used to evaluate the project objectives include increasing the total land with appropriate use, reduced soil erosion rates, and increased forest cover as an indicator for restored ecosystems, among others.

More specifically, the 5 project outcomes are as follows:

1. The creation of a favourable environment of policies, programs, planning frameworks and tools for SLM.
2. The creation of the necessary capacities among local and institutional stakeholders for planning, regulation and support of SLM initiatives.
3. The promotion of access to finance and other forms of incentives necessary to make SLM-related activities economically attractive.
4. Improvement of the livelihood and wellbeing of the population in the watershed system.
5. Learning, evaluation and adaptive management

The recognition that conservation measures were being sought in an impoverished context was addressed. The two project outcomes that are of particular relevance to this study and local communities are outcome two and four.

Outcome two and the associated outputs that have direct relevance to local communities are listed as follows:

- Outcome 2: Capacity of stakeholders at diverse levels to improve application of SLM in the project are developed
- Output 2.1: Participatory governance structures and procedures for watershed planning for SLM functioning
- Output 2.2: Land management and production models to support SLM are developed and adopted
- Output 2.3: Knowledge among local population to reduce technical problems that influence production models, land degradation and ecosystem recovery

The above outputs are conservation-focused, yet use social indicators to measure what can be considered management aspects of the project, such as stakeholder capacity, governance structures, the adoption of production models and overall knowledge of SLM. Outcome two garnered 48% of the project budget given the high level of relevance and importance.

Outcome four sought to address poverty and wellbeing explicitly. The identified indicators are detailed in the table below:

**Outcome four:** Improvement of the livelihood and wellbeing of the population in the watershed system

<i>Indicator Theme / Output</i>	<i>Specific Indicator</i>	<i>LF*</i>
Migration	Maintain or decrease the migration rate	4.0
Education	Increase the number of school age children attending school	4.0
Livelihood	Decrease the % of population whose livelihood directly depends on land exploitation	4.0
4.1	<i>Increased employment generated</i>	
Employment	Increase the % of the population with access to employment	4.1
4.2	<i>Improvement in basic human service delivery that follows environmental practices</i>	
Infrastructure	Improved time savings procuring water and fuel	4.2

Infrastructure	Increased access to electricity	4.2
Infrastructure	Drier, safer dwellings	4.2
Education	Increase the % of literate adults	4.2
Infrastructure + Access to services	Improve access to health care services by women and children (reduce distance travelled / time required)	4.2

\*LF = Logical Framework

Table 6: Outcome 4 indicators for the SYS Project

(Fundación Sur Futuro, 2005; Global Environmental Facility, 2010a; Henning & Herrera-Moreno, 2009)

As can be seen above, the selected indicators span several poverty themes. These indicators were supported by a project-area wide study commissioned by Sur Futuro in 2007. Additional socio-economic data was obtained through this study for the purposes of deepening local socio-economic knowledge through a participatory process. It should also be noted that although the targets sought for objective 4 accounted for 66% of the project budget, only funds external to the project were in fact made available. Given the perceived “externality” of addressing poverty, the project was forced to rely on leveraging other sources of funding such as national funds to achieve the stipulated goals (Henning & Herrera-Moreno, 2009, p.38-40).

#### 4.4.1 Amendments to the SYS Project Design: Problem Framing

In 2009 a mid-term review of the SYS project by Henning & Herrera-Moreno some interesting analysis of the project was elaborated. As per the mid-term review, some **root causes of the problems** being addressed were not identified and led to faulty problem framing. Briefly, these included: 1) an assumption that de facto land tenure was sufficient for obtaining loans when in reality, a lack of formal land tenure limits access to credit and motivation to invest in the long term; 2). Existing government policies promoted short-cycle crops and were in conflict with other environmental laws and fundamental principles of sustainable land management (for example by subsidizing beans versus fruit trees), 3) There was no recognition of a local “anti-tree culture” since reforestation is seen as a livelihood

limiting activity (because trees cannot be felled or used without permits and trees can impede other forms of agriculture). Instead, subversive deforestation prevailed in an effort to decrease the risk of police intervention (tree policy enforcement) in a state with a history of impunity and a corrupted legal system (Henning & Herrera-Moreno, 2009). Sur Futuro has since addressed these criticisms by commissioning specific studies (for example on land tenure) to facilitate learning and adaptation which was also a stated objective of the initiative.

When the operational mid-term evaluation was being conducted in 2009, the **project design and implementation** came into question by the evaluators. Indicators chosen for outcome two (the development of capacity of stakeholders at diverse levels to improve application of SLM in the project area) were criticized as misinterpreting the concept of capacity development. Core capacities common to most stakeholders such as an ability to communicate, clear organizational structures and democratic decision-making, were not at all considered under the original concept of capacity in the project. Alternately, output 2.3 (knowledge among local population to reduce technical problems that influence production models, land degradation and ecosystem recovery) was determined to have been too narrowly conceived, incorporating only lack of technical knowledge as a limitation to the implementation of SLM and not socio-economic factors that might limit this work.

Outcome four, the improvement of livelihood and wellbeing, was questioned outright. The evaluator cited that problems were associated with the very “conceptual linkage” between improving the livelihood and wellbeing of population in the watershed system and removing barriers for Sustainable Land Management. While acknowledging that addressing poverty is reasonable, the review also suggests the project requires a narrower focus so that it doesn’t risk becoming “a rural development intervention” that ends up targeting broad ranging and underlying conditions such as education and basic service provision (Henning & Herrera-Moreno, 2009, p.38-40).

Given the lack of financial commitment to pursuing an increase in wellbeing, the evaluators highlight the benefits of leveraging correlated outcomes, specifically the development of local capacity to sustain the project. To achieve this, the report highlights the significance of obtaining local perceptions regarding the resident's changes of living conditions and their environment as a mechanism for improved capacity. It is clearly stated that "although the original project design did not foresee the participatory development of project indicators, positive changes at the very local level (e. g. communities) should be defined and measured by local people" (Henning & Herrera-Moreno, 2009, p.38). The following chapter presents data on precise local definitions of poverty and wellbeing.

#### **4.4.2 Amendments to the SYS Project Design: Recommendations and Indicators**

The mid-term evaluation also suggested there were problems tracking project success, specifically related to the selection of indicators. Firstly, indicators formulated at the project objective level contained deficiencies that affected project implementation. At the outcome and output level, problems with indicators included that they: lacked significance, were difficult to measure and were not conceptually linked to the other levels of the project matrix. As well, active participation of local peoples was limited to their contribution of technical capacity and local governance capabilities needed further development (Henning & Herrera-Moreno, 2009). Empowerment and devolution of local decision-making was not highlighted or sought, thus any capacity-building efforts were reactive to Sur Futuro's initiatives.

The key mid-term recommendations for long term sustainability included various specific suggestions. One recommendation was to aim to leave a functional local governance structure in place by the end of the project. Another recommendation included a greater emphasis should be given to the quality of the project work versus meeting numerical targets alone. Lastly, a new project approach with an emphasis on "facilitation of change processes" was stressed. The idea proposed in the mid-term evaluation included moving

away from top-down technology transfer and instead opting for “participatory innovation development” where value is given to locally-produced knowledge and experimentation in the field to help promote capacity-building and empowerment (Henning & Herrera-Moreno, 2009).

While the limited scope of this study did not permit a holistic review of indicators overall, the evolution of SYS indicators for poverty and wellbeing was analyzed. A brief review of two discussions surrounding alternative indicators follows, one by the mid-term report and the other by GEF. The mid-term report identified deficiencies with some of the initial indicators in the SYS project (see table 6 for the original indicators).

- Given the lack of baseline for the migration rate, this indicator was deemed ineffective
- The rationale behind decreasing employment related to “land exploitation” was deemed contradictory to other project goals promoting an increase in agro-forestry, for example
- The infrastructure-related indicators were limited to measuring new infrastructure implemented (assuming the existing infrastructure remained in place), and were not necessarily responsive to housing needs, for example, following tropical storms known to displace households
- An increase in access to employment was perceived as having poor direct linkages to the promotion of SLM, besides being a difficult-to-measure indicator.
- Improved access to health care, (as well as improved infrastructure) were another two indicator categories that were recognized as important for “basic needs” but raised questionable links (poor rationale) for SLM-related objectives.

Indicators that were deemed relevant and useful in the mid-term report included education-related ones (school age kids attending school and adult literacy). Here the evaluators determined obvious links with the effective management of the natural environment. In addition to the existing indicator review, newly proposed indicators were also provided, these are listed as follows:

## Proposed Indicators by the SYS Mid-Term Evaluation relating to Wellbeing

<i>Indicator Theme</i>	<i>Specific Indicator</i>	<i>Rationale</i>
Livelihood	Rate of unemployment (esp. <30) decreased from XX to XX%	Decreasing “land exploitation” related jobs was not deemed as important as creating new livelihood opportunities
Comprehensive	Decrease the % of the population living below poverty line	Targeting poverty reduction was not being captured by any indicator

Table 7: Proposed Indicators for Wellbeing in the SYS Mid-Term Report

(Fundación Sur Futuro, 2005; Global Environmental Facility, 2010a; Henning & Herrera-Moreno, 2009)

### 4.4.3 KM: Land - SYS as a Pilot for Indicators

The SYS funding agency (GEF) sought to improve scientific-technical capacity for indicator selection to facilitate comparison and tracking across all GEF projects worldwide. GEF developed the initiative “Ensuring Impacts from Sustainable Land Management: Development of a Global Indicator System” (KM: Land) to this end (Global Environmental Facility, 2010b). The SYS project was selected as only one of 6 projects globally to help pilot test both global and project-level (impact) indicators for selected SLM projects.

The results of the KM: Land initiative included partitioning project-level impact indicators into 4 groupings: 1) Land use, 2) Land productivity, 3) Water Availability and 4) Human Well-being. Human Well-being was captured by 3 suggested indicators listed as follows. The results of the study corroborate the desire for consistent indicators used by other UN agencies (such as the UNDP with a focus on the human development index) and poverty within the MDGs (Global Environmental Facility, 2010b).

### **Specific Indicators proposed by KM: Land**

<i>Indicator Theme</i>	<i>Human Wellbeing Indicators</i>
Comprehensive	Rural population below national poverty line
Health	Proportion of chronically undernourished children <5 yrs of age
Access to Services	Maternal Mortality (ratio or rate)

Table 8: Newly Proposed Universal Indicators for in SLM-related Projects

(Global Environmental Facility, 2010a, p.27-39)

In an effort to include the impact of external influences to the project intervention, the KM: Land Initiative report suggests including the following contextual indicators:

### **Contextual Indicators proposed by KM: Land**

<i>Indicator Theme</i>	<i>Contextual Factor Indicators</i>
Environmental	30 years of mean monthly rainfall
Environmental	Frequency and magnitude of extreme natural events
Socio-Political	Other non-natural events
Demographic	Population density
Economic	Market Prices (local, national, global)

Table 9: Contextual Project Indicators Proposed by KM: Land

(Global Environmental Facility, 2010a, p.27-39)

It is interesting to note that the report also identifies alternative indicators that can be captured at low cost and at the appropriate resolution needed to determine impact at the project level. By definition, the scaling up and international comparability of these indicators are thus not important factors. For the human well-being category, a village-level estimate of the population living below a locally-defined poverty level is presented (Global Environmental Facility, 2010b). The report elaborates on how this data might be obtained by conducting village meetings, defining poverty together with the stakeholders and then



asking for estimates with regards to numbers of families meeting or failing to meet the poverty criteria (Global Environmental Facility, 2010b).

**Cost effective and locally developed project impact indicators proposed by KM: Land**

<i>Indicator Theme</i>	<i>Locally-Developed Wellbeing Indicators</i>
Comprehensive Poverty	Village-level estimate of households living below poverty line Local Definitions

Table 10: Cost Effective and Locally-Developed Project Indicators Proposed by KM: Land

(Global Environmental Facility, 2010a, p.27-39)

The case study that follows employs this methodology supported by both the mid-term review and the KM: Land initiative in focusing indicators on subjective local analysis. First the context of the case study communities is provided.

**4.5 Case Study Communities: Overview of El Recodo and Monte Bonito**

This study focused on two communities: El Recodo (within the municipality of Guayabal) and Monte Bonito (within the municipality of Padre las Casas). Both lie within the SYS project’s geographical scope and are in the province of Azua, ranked the second poorest province in the Dominican Republic by incidence of poverty (World Bank, 2006). Both communities are on land classes associated with high susceptibility to erosion (Monte Bonito on soil class type VIes-2 and El Recodo on VIIecs) and on mountain slopes categorized as “pronounced” to “steep”. These geographic characteristics limit the kinds of suitable resource uses to forestry or permanent crop types such as shade-grown coffee. Short-term agricultural production such as shifting cultivation has been deemed incompatible (Sur Futuro, 2010). Accordingly, both communities were targeted by the project to promote SLM practices and four farmer plots in El Recodo and thirty plots in Monte Bonito were selected for inclusion.

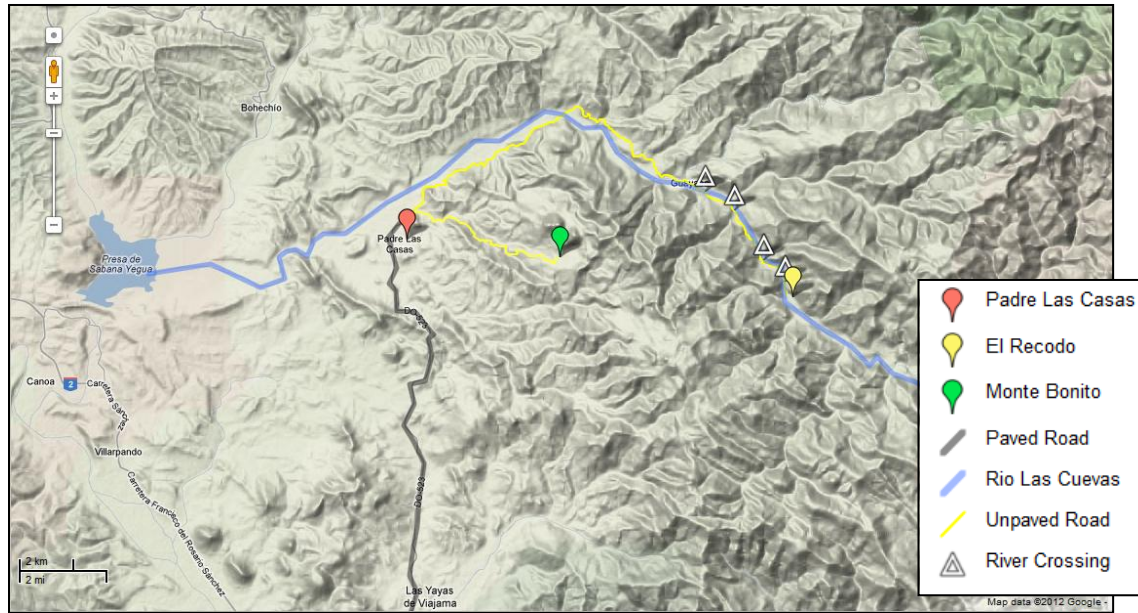


Figure 5: Case Study Detailed Location

(Google Inc., 2012)

Lack of accessibility is a challenge for both communities since they are linked to the closest bigger town (Padre las Casas) only by unpaved mountain roads. To reach El Recodo from Padre Las Casas, 4 river crossings are required as there are no bridges after the town of Guayabal. The community of El Recodo lies on the immediate eastern shore of the major river Las Cuevas, which feeds directly into the Sabana Yegüa Dam. El Recodo covers just 0.05 Km<sup>2</sup> and is at an elevation of 830 m.a.s.l. Monte Bonito is at a slightly higher elevation, 1050 m.a.s.l. with only a small tributary river nearby and no river crossings needed to reach it from nearby Padre Las Casas. Monte Bonito is not only twice the geographic extent of El Recodo (0.16 Km<sup>2</sup>), the community is grouped into 8 distinct neighbourhoods.

The following results chapter begins by elaborating on the demographic characteristics of the two case study communities. This is followed by the results of the surveys, focus groups and participant observation on the topics of poverty and wellbeing.

## Chapter 5 Study Results

In an attempt to gain exposure to the multifaceted dimensions of poverty and wellbeing elaborated in the literature review, over 40 variables were explored through the questionnaires and focus groups<sup>2</sup>. Variable choice was guided by the literature as well as by the prior use of certain indicators in national surveys and in the socio-economic baseline study conducted for the Sabana Yegüa Project. Though the questionnaires employed both open and close ended questions, data for universal indicators commonly used in other studies was sought in an effort to evaluate poverty. The focus groups instead were conducted in a more open fashion using only guiding themes but not specific questions to obtain data as defined by the participants, with a greater emphasis on the more subjective topic of wellbeing. The appendix contains a list of the variables investigated (Appendix A), the questionnaire and themes explored in the focus groups (Appendix B). Through the ensuing data obtained I sought to emphasize local understandings and definitions of the themes of poverty and wellbeing.

### 5.1 Case Study Demographic Details

The Monte Bonito and El Recodo demographic details are presented in the following table. This comparison highlights discrepancies between the population estimates for Monte Bonito from a study in 2007 and my findings. This difference signals that either the community has nearly doubled, or that many families were missed in the prior calculations. The El Recodo estimates were nearly unchanged. Both communities have similar population structures and male/female proportions also demonstrate a similar composition.

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<sup>2</sup> During the field sampling dates, the 2011 national census was also undertaken. However, given the processing time required for national census information, this data was not available as a reference at the time of writing.

**El Recodo**

Estimated demographics (2007):  
 117 families, 585 population  
 (Fundación Sur Futuro, SEMARN, FMAM, & PNUD, 2007)

Updated # of Households (2010):  
 121 families  
 Families sampled: 85

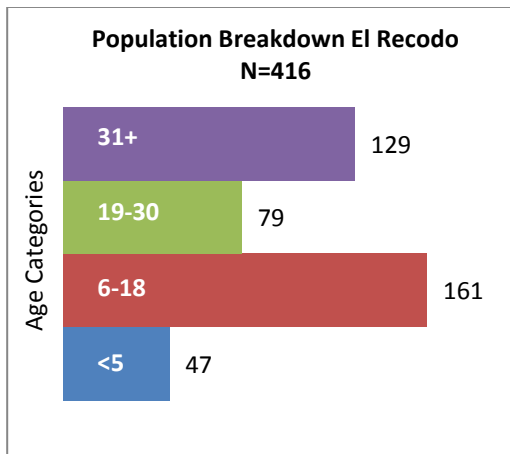


Figure 6: El Recodo Population Breakdown

(based on survey responses)

Population (n=416):  
 Male 58%, Females 42%

Survey respondents (n=85):  
 Male 48%, Female 52%

Focus Group Participants (n=13)  
 Male 85%, Female 15%

**Monte Bonito**

Estimated demographics (2007):  
 133 families, 797 population  
 (Fundación Sur Futuro 2007)

Updated # of Households (2010):  
 278 families  
 Families sampled: 153

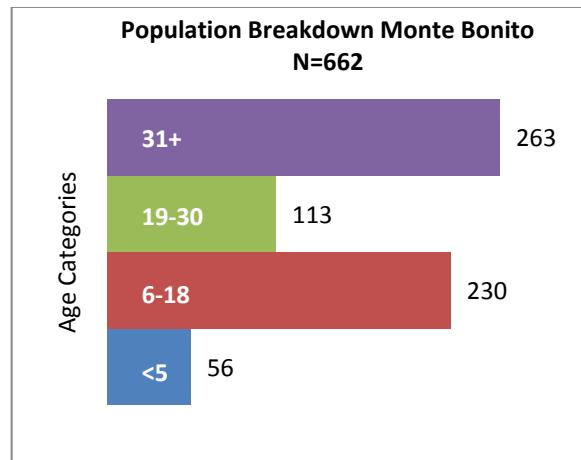


Figure 7: Monte Bonito Population Breakdown

(based on survey responses)

Population (n=662):  
 Male 54%, Females 46%

Survey respondents (n=153):  
 Male 33%, Female 67%

Focus Group Participants (n=8)  
 Male 62%, Female 38%

Table 11: Demographic Data for El Recodo and Monte Bonito

The two communities of Monte Bonito and El Recodo are similar, as can be seen by the above demographic composition. Furthermore, both communities are primarily sustained by agricultural livelihoods and are located close to one another geographically. Significant variations in local perspectives on poverty and wellbeing were not anticipated based on these characteristics. For these reasons, and given the wide scope of this study, the community data were not analyzed separately. Instead, the data from both communities was combined and examined in unison to allow a greater focus on how the prevailing views compared against grey literature, academic theory and the understanding of poverty and wellbeing in a broad sense. It should be mentioned that a contentious demographic concern are the often illegal and sometimes transitory Haitian workers found throughout the region. Language barriers, among other reasons, prevented their inclusion from this study but engaging with this highly sensitive topic is essential for truly comprehensive local views.

Highlighting the results from the questionnaires and the focus groups, this chapter will first explore local definitions of poverty and wellbeing. Data on economic indicators and food security is then presented, followed by the results relating to questions of land tenure and perceptions of vulnerability. The next section highlights data related to empowerment, in particular, association membership, inequality, “hope”, and local priorities for action.

## **5.2 Local Definitions of Poverty**

When asked the open-ended question, “What is the cause of your poverty?” 38 distinct answers were given. Due to similarities between some of these answers, several were combined to form a total of 22 answers which collectively illustrate the complexity and breadth of the poverty concept.

<b>“What is the cause of your poverty?” (N = 238)</b>	<b>% of cases</b>
No jobs or wage income, few politically appointed jobs (“ <i>nombramiento</i> ”)	15.8%
Vulnerability to weather, seasons, dry lands, no irrigation	12.3%
Agriculture	11.2%
Family issues (single parent, abuse, widowed status, orphaned)	10.6%
No resources, state of the economy	10.3%
High cost of living, poverty itself (“ <i>pobre de cuna</i> ”, “ <i>trabajando para vivir</i> ”)	8.9%
Health issues	6.3%
Unfavourable employment options: day labouring (“ <i>hechar día</i> ”), work is manual and not mechanized, no opportunities for women, unsteady income, forced to sell agricultural products when prices are low	5.2%
Politics and administration: bad management, corruption, no one helps each other, no projects, no government assistance	4.6%
Age, inability to work, disability	3.4%
No land, too little land, moving around, no house	3.4%
Vices (alcoholism, dancing, gambling)	1.1%
Not enough education, educational opportunities	1.1%
Bad road, can't move products out of region	1.1%
Rich make life impossible for poor, inequality, dependency (no control over life)	1.1%
No animals	0.9%
Too much work	0.9%
No access to credit, debts	0.6%
Things are getting worse, things are going backwards	0.3%
“One doesn't even know”	0.3%
No bathroom	0.3%
Unhappiness, “poverty comes from within” (“ <i>se lleva por dentro la pobreza</i> ”)	0.3%

Table 12: Perceived causes of poverty

The data from the questionnaire results demonstrate that the perceived causes of poverty are varied, albeit with several dominating trends. A lack of wage employment tops the list of responses at nearly 16%, though this result is much higher (44.7%) if combined with the other livelihoods-related categories such as *Vulnerability to weather, seasons etc.*, *Agriculture*, and *Unfavourable employment options* at 12.3%, 11.2% and 5.2% respectively. Together these responses highlight a strong association between poverty and the nature of limited local livelihood options based on agriculture. Some respondents elaborated that they

wished for alternatives to physically-demanding agricultural work: “something else to do besides agriculture”, “another way of living; one suffers from too much work” (*“algo que hacer a parte de la agricultura”, “otro método de vivir, uno pasa demasiado trabajo”*). Another respondent referred directly to the seasonality of poverty: “5 months with no pesos, 2 months of coffee [production and thus income], May and June are hungry months” (*“5 meses sin pesos, 2 meses de café, hambre hay entre mayo y junio”*). Since livelihoods and economic considerations are often intertwined, it was not surprising to have popular answers equating poverty with “No resources, state of the economy” (10.3%) and “High cost of living, poverty itself” (8.9%). One demonstrative statement highlights this income insufficiency: “I make 250 pesos but spend 300 a day”.

Answers that stressed other social reasons, rather than livelihood concerns as main causes of poverty included: Family issues (10.6%), Health issues (6.3%) and Politics and administration (4.6%). Although generally the negative aspects of politics were seen as outside the respondent’s sphere of influence or ability to change, at least one person related poverty to personal abilities or knowledge by stating: “poverty is mental, [it has to do with] the administration of resources” (*“la pobreza es mental, la administración de recursos”*).

While non-economic reasons for poverty were not prevalent, some respondents were nevertheless eager to point out other reasons. Notably, “poverty is natural” and that “sometimes poverty comes from within. Even though some people may have money, they are poor because they are not happy”, (*“la pobreza a veces se lleva dentro. Aunque tengan dinero son pobres porque no tienen felicidad”*). One respondent emphasized a positive spirituality element: “if you have God, you are not poor”, (*“el que tiene a dios no es pobre”*). Although the DR is a majority catholic country, local spiritual customs prevail. The role of evil and witchcraft in determining outcomes and destiny (causing or limiting poverty) was initially attempted based on conversations with local experts. However, this subject was discarded as questionnaires were not deemed an appropriate mechanism for this highly taboo subject requiring a more ethnographic research technique for accuracy. However, the role of

spiritual beliefs and practices in obtaining successful livelihoods, (evading poverty and achieving wellbeing), was present via observation and anecdotal conversations<sup>3</sup>. Spirituality's role, though very contextual and challenging to measure, is lacking from the poverty and wellbeing literature, yet can represent a unique angle in understanding how poverty is understood and explained locally.

Other categories that were present but were not common answers include land-related aspects which accounted for only 3.4% of responses and less tangible indicators such as unhappiness (0.3%) and inequality (1.1%).

### 5.3 Local Definitions of Wellbeing

Although wellbeing is a fairly new indicator in the academic literature, with emerging suggestions for its use, the concept was employed in this research<sup>4</sup>. The question asked was simply: "what does wellbeing mean to you?" It should be noted that wellbeing ("bienestar") is a familiar word in Spanish and there were no obvious concerns in translating or conveying the concept. The responses from 233 participants are presented in the following table.

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<sup>3</sup> Throughout crops in the area, red flags are prominently displayed to ward off birds as well as the evil eye, locally known as a trickster spirit called "Baca". Some farmers believe that a red flag or other omens distracts evil spirits from taking too much interest in a potential crop, either to ruin emerging flowers (future fruit) or even "steal" them and allocate them elsewhere. Stories of engaging with spiritual forces to "buy" good crop production, gain protection from evil, even to tip luck one's way, are part of the local lore.

<sup>4</sup> As wellbeing measurements are becoming more refined, this indicator is differentiated by wellbeing as "satisfaction is life overall, or wellbeing as "affect balance" or "mood" (Alkire, 2007b, Organisation for Economic Co-operation and Development, 2011). However, no difference was made in my questionnaire between these concepts that were uncovered subsequent to the data collection process.



<b>"What does wellbeing mean to you?" (N = 233)</b>	<b>% of cases</b>
A job, enough money, access to credit, more money, consistent income, a little extra as a safeguard, two incomes for the family, job opportunities for women	22.3%
Health	17.3%
A nice house, indoor kitchen, improved bathroom	15.1%
Healthy relationships: peace, no vices, behaving well, good relations, kindness (" <i>bondad</i> "), safety from delinquency, love, family, "a woman", a union, help, community support, help with personal tasks (for disabled)	10.7%
Improved quality of life: no shortages, having everything one needs, living comfortably, having an easier time, less struggle, progress, living with dignity, working with one's head (not body), having enough for whims	9.8%
Enough to eat, eating well	4.7%
Appliances (fridge, stove, blender, dining set, washer)	4.2%
Education	3.1%
Road / Vehicle	2.2%
Land	2.0%
Happiness, positive thinking, no worries, achieving everything you've set out for yourself	2.0%
Faith	1.7%
Good harvest / sell products high	1.4%
Electricity / Aqueduct / Agricultural technology	1.1%
Long-cycle crops, irrigation, animals, hiring workers	1.1%
So many things, don't know	.8%
Local clinic	.3%
Power	.3%

Table 13: Definitions of wellbeing

Similar to responses for poverty, there was a great variety of answers for local definitions of wellbeing. Although economic considerations prevailed as the top answer at 22.3% (a job and having enough money were the most commonly cited answers), many respondents nuanced this response by specifying criteria such as access (to credit) and consistency (as opposed to seasonal profits) and even money as insurance ("having a little extra as a safeguard"). Economic opportunities being scant, one respondent elaborated that sufficient income and wellbeing requires "having one's child leave the country [migrate] in

order to change one's situation", (*"Que un hijo viajara fuera del país para cambiar la situación de uno"*). Income and access to credit were also among the top categories of wellbeing to the focus groups, common to three of the four undertaken.

The remaining categories after income-related indicators of wellbeing were varied. In order of importance, the next most important wellbeing categories were health at 17.3% followed by having a nice house, or an improved kitchen or bathroom at 15.1%. Health only factored as a wellbeing category for two of the focus groups (one group didn't even consider it an indicator), and when it was discussed, health in particular referenced access to health services and medications.

With regards to housing, an initial attempt to survey housing quality presented unanticipated challenges and was abandoned (i.e. there were different construction materials used with which I was not familiar for housing applications such as palm thatch, cement blocks and concrete. Evaluating these materials also presented challenges in that different materials were used on different surfaces such as roofs and walls and rooms such as kitchens and bathrooms were not always under one structure). Flooring equally varied. However three of the four focus groups identified housing as an important wellbeing category. Instead of overall housing, the subset of bathroom infrastructure was evaluated. Over 70% of residents surveyed in Monte Bonito used latrines and 100% in El Recodo. Of the respondents in El Recodo, 15.3% do not even own their own latrine but use a lent one. Evaluating water infrastructure was not emphasized either in light of the prevalence of adequate infrastructure (plumbing on the household premises), though it should be stated that there were observed instances of lack of access or shared access. Water was listed as a common wellbeing category to three of the four focus groups, though it was not clear if the groups were referring to water for personal use or water for agricultural applications.

Cooking and food-related categories were also surveyed. Over 30% of 236 respondents use firewood as a cooking fuel type, usually in open air kitchens. Though not quantified, many outdoor kitchens in both communities were observed. 4.7% of respondents

actually specified 'eating' and 'eating well' as a separate category for how they define wellbeing, indicating a local emphasis on food sufficiency and food culture for Dominicans. This aligns with observed phenomena and conversations with local development workers who highlighted the cultural importance of meals, further elaborated on in section 5.5 on food security. Three of the four focus groups identified food as a wellbeing category, as compared to 4.7% of survey respondents. This "food" survey response was followed by "having appliances" (4.2%), kitchen appliances being the most frequently cited. Although appliances may be attributed to women respondents who are the homemakers almost exclusively, at least several men spoke about having "something" in your house, especially "a little fridge to drink cold water" ("*una neverita para beber agua fría*"). After a long day of work in a hot field the possibility of cold water (beer also cited) is an understandable definition of wellbeing. Furthermore, as elaborated on in the focus groups, food is closely related to being hospitable and being attentive to guests ("*atencionar*") as culturally this is seen as an important aspect of wellbeing.

Living with a better quality of life is a category that encompassed non-tangible wellbeing concepts, but excluded anything relating to relationships. These answers comprised 9.8% of the total answers in the wellbeing category. Specifically, some respondents equate wellbeing with not suffering from any shortages, living more comfortably, living easier, living with dignity, and having enough for whims. Wellbeing in this category is also defined as working with one's head [and not body], mimicking the description of poverty and being related to the manual nature of agricultural work as elaborated above. Elaborating this further as wellbeing, one respondent stated: "wellbeing is not working extraneously in the hills, one gets disillusioned, one suffers from too much work and sweat". This statement clearly encapsulates both the physical (extraneous work, sweat) and mental (disillusionment) aspects of quality of life, and how they are intertwined. Another example includes the statement that wellbeing is "working with one's head, not squandering what one achieves" ("*trabajar con cabeza, no botar lo que se consigue*"), where an

intangible but capacity-related element is emphasized. Three of the four focus groups highlighted that “organizations” or a “planning capacity” defined wellbeing, just as “hope and happiness” were also important wellbeing categories to three of four groups.

Lending further emphasis to the social tangent of wellbeing, the fourth most popular wellbeing category (10.7% of answers) relates to healthy relationships. Respondents included descriptors such as: peace, no vices, good relationships, love and kindness, and other answers. This category emphasizes relationships within a community rather than more individualistic notions of wellbeing (such as personal happiness, positive thinking and satisfaction) which were divided as separate answers (2% of responses).

To conclude, the survey results on wellbeing, several clusters of responses represent 3.5% of answers each (or less) and include: education, transportation, land and others. See the prior table for the breakdowns. Land is a particularly interesting indicator given that it was the only wellbeing category raised by all four focus groups. Although transportation was not emphasized in the survey responses, “a road” was a wellbeing category identified by three of the four groups, besides a separate category for “transportation” common to two of the four groups.

#### **5.4 Poverty through Economic Indicators**

The use of economic indicators, despite misgivings in the literature, is still one of the most widely used indicators for measuring poverty and is thus included. The respondents, both from the survey and the focus groups, used economic indicators in their understanding and discussion of poverty and wellbeing. However, there was a notable absence of specific methodology elaborated in any of a dozen national poverty reports or even in the commissioned socio-economic study by Sur Futuro on how to measure income specifically. Despite these limitations, pursuing a general notion of income was deemed essential and pursued as comprehensively as possible without the well-developed economic background. Respondents were asked to specify each income source and amounts whenever possible in

an effort to obtain income data as accurately as possible. There were no notable challenges in respondents' articulation of income. (Methodologically however, it was later determined that "expenditure data" is more commonly sought.) When calculating agricultural income, wage income and remittances, several assumptions were made in light of contextual information gleaned. These assumptions are elaborated in detail in appendix H. Income had several prominent sources, including income from self employment (notably by working your own land), wage income from day laboring for a landowner, remittances from family or friends outside of the community, and the national conditional cash transfer program referred to as the "Solidarity Card".

In order to evaluate how the income data aligns with poverty, parsing the economic data through established conventions was needed. However, until as late as 2009 the Dominican Republic did not have a nationally created Poverty Line (Morillo Pérez, 2010). Instead, the World Bank<sup>5</sup> and USAID's poverty line prevails as a benchmark in national reports, and is thus referenced here. Using this poverty line, survey results reveal that over 70% of respondents fell into the extreme poverty category, earning less than 1740 Dominican Pesos (DOP) per capita per month, while 21% were considered moderately poor earning less than 3570 DOP per capita per month. In the communities of Monte Bonito and El Recodo, only 7% of residents were considered to be non-poor using these designations. When the communities are evaluated individually, there is little variability in the results. El Recodo data skews more towards the "Extreme Poverty" category than Monte Bonito, but overall both communities reflect the trend.

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<sup>5</sup> The World Bank poverty line for the DR uses data from the DR's national labour force surveys (the *Encuesta nacional de fuerza de trabajo, ENFT*) which are conducted semiannually. From this data, the amounts that determine an extreme, moderate and non-poor poverty line are derived.

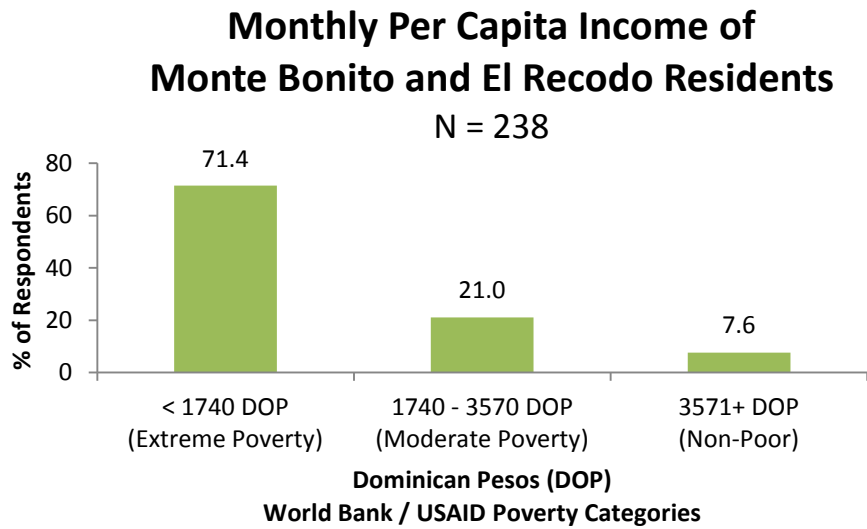


Figure 8: Monthly per capita income of both communities using the World Bank / USAID Poverty Line

Using the alternate UN's poverty line which calculates poverty based on international purchase price parity in US dollars (at the 2005 rate), I obtained similar findings: over 70% of the residents live below the international poverty line of earning less than \$2.50 a day, as detailed in the following chart:

## Daily Per Capita Income of Monte Bonito and El Recodo Residents

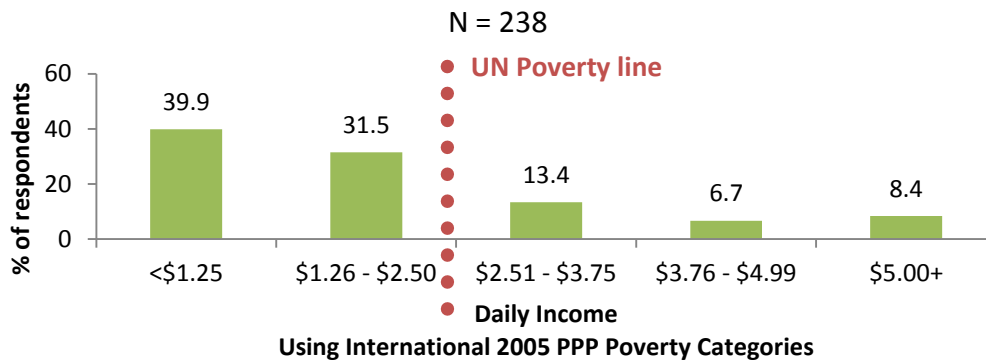


Figure 9: Daily per capita income using the UN’s international poverty line

### 5.4.1 Income Sufficiency

Gauging poverty through income serves the purpose of determining if enough income is generated to live comfortably and meet basic requirements. However, it is not enough to measure income alone: income should also be compared with the cost of living. As elaborated in the literature, the methods by which income sufficiency is determined uses sophisticated measures of the price of a basket of essential goods to meet minimum caloric requirements. Using a basket of goods enables differences in local prices to then be accounted for, which is often factored into the poverty lines used. Another way to view income sufficiency is to measure expenditures and then determine how much is spent as a percentage of income. In this questionnaire that sought out the local perspective on these issues, the perception of income sufficiency was asked: “is your family income enough to live adequately?” to which 83% of respondents answered no.

The broader understanding of income as a means and not an ends of development was clearly communicated through the focus group participants. Of the four focus groups, three discussed income, two of which specified that it is the sources of the income (specifically access to credit) that is the more relevant between income and poverty. Having

money is not an end in itself, as one respondent stated, “peasants do not seek riches” (“*los campesinos no buscan riqueza*”). There are, in fact, some negative connotations to being wealthy, as one respondent indicated “if one lives comfortably, it is because one sells drugs” (“*si uno vive cómodo es porque vende drogas*”). This, in part, reflects the multiple views that the principle economic livelihood options continue to be dominated by agriculture, that small scale agriculture produces small profits, and that there is a paucity of other avenues to pursue prominent economic gains. This is confirmed by the data on the sources of income which follows.

### 5.4.2 Sources of Income

Although it is known that the case study region depends economically on agriculture, it is important to get at a more nuanced understanding of the different sources of income for the communities of El Recodo and Monte Bonito. The question asked was: “What are the household’s sources of income?” and multiple responses were permitted to reflect multiple livelihood strategies employed by households.

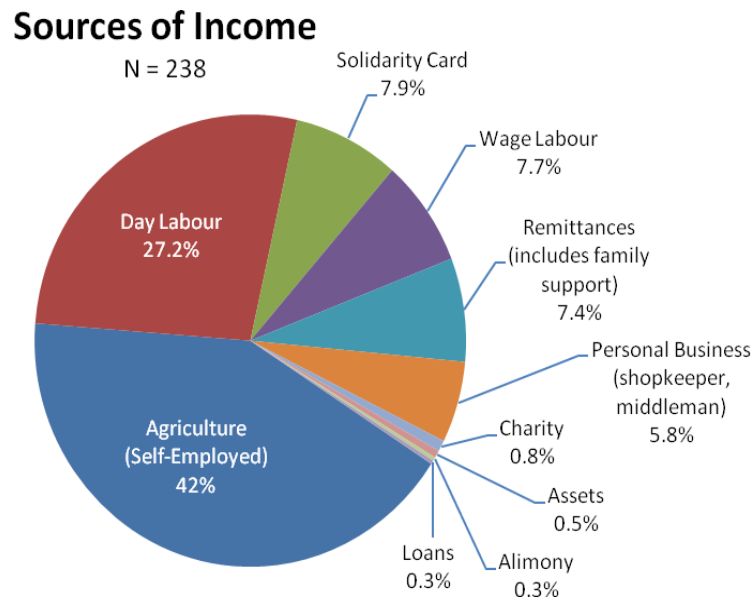


Figure 10: Monte Bonito and El Recodo Household Income Sources



The top source of income reported (42%) is from self-employed agriculture while the next most common source (27%) is from day laboring (also in agriculture). The importance of social assistance from the government is demonstrated by the third largest category, with almost 8% of respondents citing the cash benefits of the “solidarity card” as a source of family income. Wage labour (longer term and more formalized employment than day laboring), and remittances represent even less than the solidarity card, at 7.7% and 7.4% respectively.

Focus group results and comments on the questionnaire indicate that income diversity and consistency are also key factors when evaluating income, and that improved income opportunities can be a result of patronage. The richest members of the communities have a personal business and thus have fixed employment, and if they are land owners, they also potentially live off crop production (which they pay others to work). The next best alternative is a wage job such as teaching, being a driver, an intermediary, etc. Day labourers, who live with a highly insecure income source, are the worst off. Furthermore, focus group respondents lament the lack of government-paid wage jobs such as teachers or nurses. A politicized environment where salaried jobs and wages are allocated based on political affiliations was often cited: “a government supporter manages to find [work, income]”, (*“El que está apoyando al gobierno logra conseguir”*), “wages come by way of politics” (*“sueldos llegan por política”*), “one lives off politics here” (*“de la política es que se vive aquí”*). One respondent even states that if one wants to work they would have to leave the community due to the lack of appointments (*“nombramientos”*). Inequality, especially of opportunity, would be a repeated theme in different areas of the questionnaire as discussed in a following section.

The last element of income relates to timing. In the absence of wage income, having funds available year around can be challenging with seasonal income generation in an agricultural context. One respondent states: “In the mountains there are no paycheques” (*“En la loma uno no cobra cheque”*). As discussed in the literature on rural seasonal poverty,

there can be several months of particular hardship. Some questionnaire respondents discussed their coping mechanism is selling their products in advance (*“por adelantado”*) or when the fruit (e.g. coffee, avocado) is *“in flower”* (*“a la flor”*) to obtain cash before the harvest season. Selling products *“a la flor”* is one way of accessing credit otherwise unavailable to smallholders who lack the sufficient requirements (collateral by way of land or other formal documentation). However, while selling *“a la flor”* is a strategy that may help limit risk for volatile market prices (and thus vulnerability discussed below), anecdotally it appears to only be employed by those unable to wait out the months until the fruit ripens and is sold. Accompanying interest rates of 4, 8 and 10% were also cited as being very disadvantageous and cut into profits.

The source of income (and therefore employment/livelihood) is highly relevant to determining the objectives of development interventions and livelihood strategies pursued by conservation efforts alike. In particular, the next chapter will discuss the implications of decreasing reliance on agriculture and moving towards other primary sources of income, as initially desired by the SYS project.

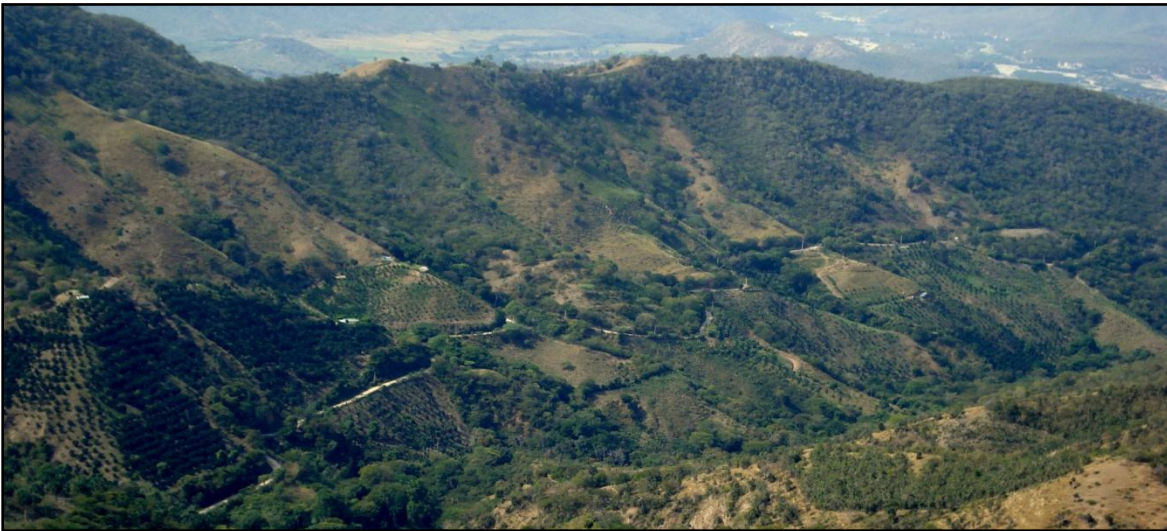


Figure 11: Reforested Agricultural Plots Flanking the Road to Monte Bonito

### 5.4.3 Wealth and Wellbeing Ranking

Methodologies for estimating wealth and wellbeing are numerous. Measuring income is often used to numerically and objectively help stratify a society in order to identify, and then target, the economically most-deprived members of the community. However, instead of using income or expenditure data, a more participatory method to rank wealth or wellbeing in a community has been suggested by notable authors such as Chambers and even institutions like the FAO and the World Bank (Chambers, 2008; Hargreaves et al., 2007; The World Bank; World Bank, 2006). Such participatory methods have primarily been used as a cross-check method, but as a standalone approach, participatory methods have also proven to be faster and to better capture complexities and underlying nuances (Chambers, 1997, p.143). These methods are gaining prominence, and are now used in selecting households for anti-poverty programs by a number of different groups around the world (Mayoux & Chambers, 2005).

A participatory wealth ranking exercise was done in one of the focus groups. Participants were asked to rank each household on a village map, categorizing a household as being either “best off”, “okay” or “worst off”. The group was eager to modify the category titles as “best off *but still poor*”, and “okay *but still poor*”. The end result, a numerical tally of households per category, are presented in the middle columns of the chart below. The wealth ranking method enabled the stratification of the community by consensus through participants who leveraged intimate local knowledge of their village. This wealth ranking exercise enabled a comparison of community stratification with two different questions obtained via the questionnaire, one quantitative and another qualitative. The first two columns show community stratification using income poverty as discussed in section 5.4. The last columns show results to a subjective survey question that asked respondents to rank their household situation as “well”, “so-so”, or “doing poorly”. It is evident the participatory wealth ranking method was more aligned with the self-reported answers, and that it depicts a very different poverty picture.

Income poverty	% of responses	Participatory wealth ranking	% of responses	Self-reported household situation	% of responses
Extreme Poverty	83.5	Worst Off	23.4	Doing Poorly	21.2
Moderate Poverty	12.9	Okay ("but still poor")	46.9	So-so	62.2
Non-Poor	3.5	Best off ("but still poor")	29.5	Well	16.5

Table 14: A comparison of different ranking methods

The table above highlights the over-representation of residents in the “extreme poverty” category when defining this in income terms versus local perceptions. While it must be recognized that these questions were worded differently and would therefore be expected to produce somewhat different results, this comparison reveals the importance of different poverty conceptualizations. The implications of this result are elaborated on in section 6.1.3.

Not only did the end result provide useful data, but observations of the ranking process were also quite valuable. Participants openly discussed considerations while evaluating a household’s status. In their discussions they revealed locally-relevant indicators that would be challenging for a non-resident to determine or capture objectively. Two examples: households who have members that “squander their money on alcohol” *“bota los cuartos bebiendo”*, and villagers who are regular gamblers at the weekly cock fights, *“juega mucho gallos”*. While both were discussed as potential indicators of excess income (and therefore justifying being “well off”), this was balanced through a notion of “savviness”, *“chispa”*. Being “savvy”, as per the discussions, implied either good business or planning skills, raising the possibility that using excess funds on vices contributes to an overall lack of “wealth” more broadly. The extent to which measuring poverty and

wellbeing are most accurate through the measurement of tangibles such as income or assets is questioned by the above data and elaborated in the next chapter. The next section discusses data on non-income data that may also be useful in evaluating.

### 5.5 Food Security as a poverty indicator

While food security is a topic in and of itself, it is also used as a proxy for poverty. In applying a subjective measure, respondents were asked to gauge the frequency of food shortage. This resulted in 25.2% citing never having difficulty obtaining the necessary food, the majority, 67%, citing “sometimes” having difficulty, and 5.9% of respondent having difficulty obtaining the necessary food “all of the time”.

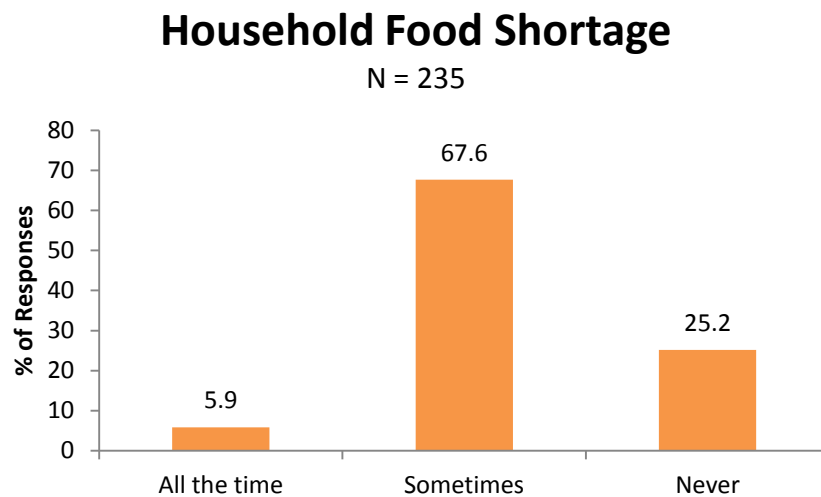


Figure 12: Food Shortage as reported by survey respondents

Respondents elaborated on food in greater detail. In the focus groups, local expressions were often used to explain eating sufficiently. “*Moritos vacios*” (loosely translated as empty beans) denotes an incomplete meal of only rice and beans, whereas “*Moritos acompañados*” (accompanied beans) refers to rice and beans and at least a small portion of animal protein. Rice, being an important staple, was mentioned as an indicator of

wellbeing in the focus groups. Being able to consume half a pound of rice per person per week as a minimum was considered a wellbeing indicator for one focus group. Being well off includes timely eating, three meals a day, consisting of whatever one wishes to eat. Ranking poorly means enduring hunger and on-the-job sleepiness. Day labourers often get a lunchtime meal included as part of their pay. A questionnaire respondent also states: “we eat like hens, there comes a time when there is nothing [for us to eat]”, (“*comiendo como las gallinas, se da un momentos que no se haya na*”). Observations and anecdotal comments suggest at least a few residents in both communities rely on food-related charity, in particular food from neighbours, for their everyday survival.



Figure 13: Avocados growing in El Recodo

Although the case study communities are located in a region which produces food for other parts of the country, export agriculture largely dictates crop choices. This may, in fact, limit food security despite the region having the natural resource base and historical tradition in *conuquismo* (subsistence agriculture). The local coffee crop is a good example of this: coffee crops produce economic benefits but does not facilitate local food security in and of itself in the way that growing bananas, avocado or even pigeon pea would.



Figure 14: Coffee drying on an El Recodo sidewalk

## 5.6 Land Tenure as a poverty indicator

Land tenure was identified in various sources as an important poverty indicator and was thus included in the questionnaire. Given difficulties in assessing whether there was a formal title to the land, land understood to be owned by the resident, either formally or informally, was included as owned. It is acknowledged that unregistered land (be it a lack of a formal deed or any other documentation, known as an *“acta de poder o venta”*) is considered state land by local residents. The main findings conclude that 61% own land, 15% do not own any land, and that almost as many, 14%, lease or use lent land exclusively for their agricultural production.

### Land Status of Monte Bonito and El Recodo Residents

N = 238

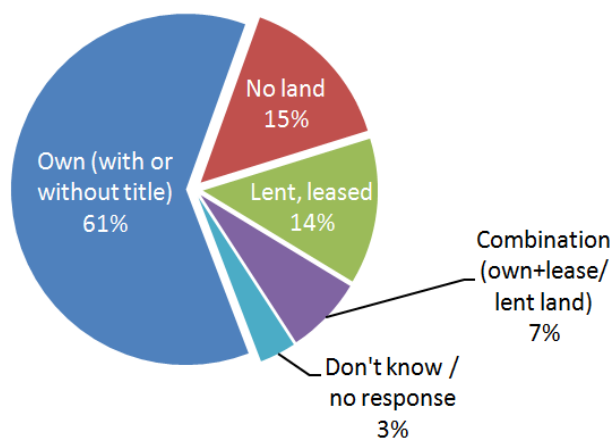


Figure 15: Land Status of Residents

The exploration of this topic with focus groups resulted in the consensus that land is a good indicator of wealth or wellbeing. In every group, not having land was considered a clear indication of poverty, and the number of *tareas* owned (16 *tareas* is roughly equivalent to 1 hectare), was also suggested as an indicator of degree of wealth. Table 15 presents a wealth matrix based on land ownership as elaborated by the focus groups and figure 16 presents the breakdown of land ownership by households.



Community	Wealth Ranking: Low	Wealth Ranking: Middle	Wealth Ranking: High
<b>El Recodo</b>	No land, lent land <10 tareas	11-40 tareas	41+ tareas
<b>Monte Bonito</b>	No land, <10 tareas	1-50 tareas	51+ tareas Very high = 1000+
Details	<ul style="list-style-type: none"> <li>• Faraway location</li> <li>• Day laboring needed to supplement income</li> <li>• Short cycle crops: (<i>beans, pigeon pea, squash</i>)</li> </ul>	<ul style="list-style-type: none"> <li>• Able to hire labour</li> <li>• Both short-cycle and long-cycle crops</li> </ul>	<ul style="list-style-type: none"> <li>• Hires labour</li> <li>• Long cycle agricultural crops: (<i>avocado, coffee</i>), hardwood plantations (<i>Cedars, Pines, Caoba</i>), pastureland (<i>Grabilea, Yaragua</i>)</li> </ul>

Table 15: Land tenure and wealth ranking matrix for poverty evaluation

In the context of the case study, as especially the SYS project which sought to improve land use practices, it is important to understand the breakdown of the land distribution per household. Given that land is tied to livelihoods and access to credit, and can be a determinant of poverty, land distribution was assessed via the questionnaires. Due to the difficulty in distinguishing between formally and informally owned land, leased or lent land was also included in the total calculation of land distribution per household as follows.

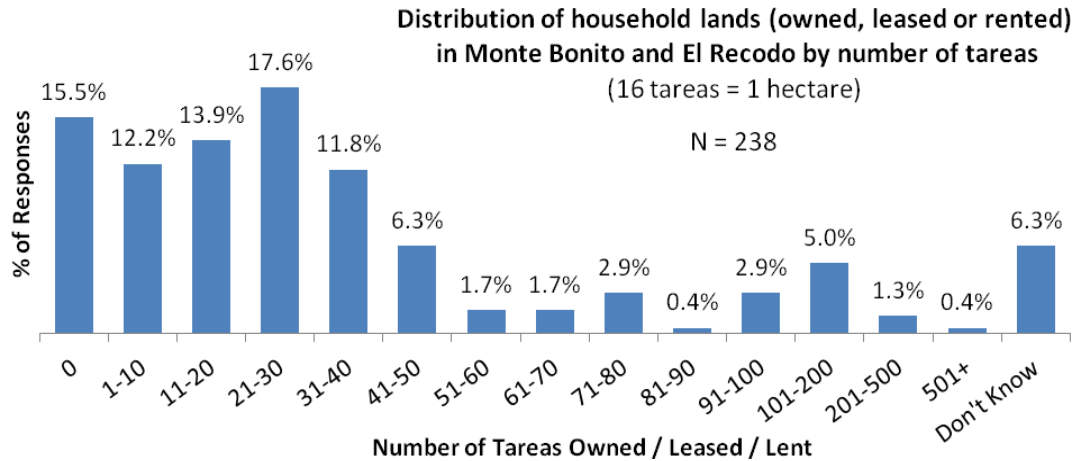


Figure 16: Distribution of household lands by number of tareas

The results demonstrate that the majority of households own and/or work smaller parcels of land. 43% of the households surveyed cultivate less than 2 hectares (32 tareas). At the most extreme end of the spectrum, 15.5% of the respondents do not own or have access to leased or lent land. This is significant since a minimum of 10 tareas with documentation is needed to access credit, and credit, in turn, can facilitate investments on land such as switching to long cycle crops, incorporating irrigation or hiring labour to implement land conservation measures such as barriers, discussed below.

### 5.7 Conservation through Sustainable Land Management (SLM)

Although this study mostly focused on socio-economic considerations of poverty and wellbeing, a series of questions relating to natural resource management were also incorporated. The communities sampled are located in the buffer area of several national parks and reserves (almost 70% of household incomes come directly from agriculture-based activities). Conservation-related questions were incorporated especially since the overall project goal of the SYS was to promote Sustainable Land Management (SLM).

The principal aim of these questions was to briefly gauge knowledge, practices and perceptions of conservation among the wider community. The 15% of respondents who did not own their own land, or did not use lent or leased land (represented in figures 16 and 17 above), were not asked the conservation questions, in part, because of their household's limited ability to engage with conservation directly as part of their livelihood. Women tend to only engage in harvesting as an agricultural activity (and not planning, planting, weeding, etc.), but their responses were included. The possibility for limited specific knowledge is recognized, but their perspective was still considered essential in broadly evaluating conservation.

Challenges that surfaced regarding methodology around conservation should be noted. In Spanish the words for land and soil ("*suelo*" and "*tierra*") can often be used interchangeably, presenting conceptual concerns. By using the term "Sustainable Land Management (SLM)" along with "soil conservation", I attempted to convey a broader scope. However, soil conservation was most likely the concept understood by respondents in light of answers provided. There was an emphasis on applied concerns such as erosion and the productive capacity of land. It is acknowledged that the extent to which a technical term such as SLM is understood by local residents is not known. The results should mostly reflect an exploration of this complex issue.

When 190 respondents were asked the question "Do you know of any method for sustainable land management or soil conservation practice?" 73% of respondents answered positively. Asked to cite these practices, "Barriers" topped the list, followed by "Trees", "Brush cuttings left to rot" and finally "No burning". These practices listed by 129 individuals encompassed over 90% of the responses. The "no burning" answers from the list of practices, combined with the "burning is bad" responses from figure 17 below highlight the possibility that some respondents wished to demonstrate compliance against this illegal activity. In reality, slash and burn continues to be a relevant farming method for the most poor who are unable to afford time or labour to otherwise prepare land for cultivation as

anecdotal information suggests. When asked if soil or land conservation practices were considered beneficial, over 95% of 126 individuals answered “Yes”. When asked “Why?”, the respondents listed the benefits. The top five answers, which encompass 87.5% of all stated “benefits”, are indicated in the following chart.

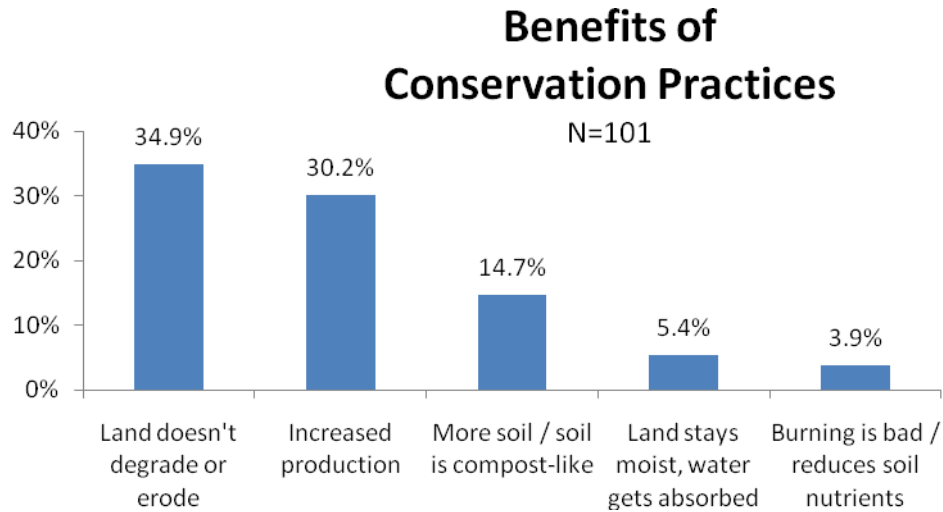


Figure 17: Cited Benefits of Conservation Practices

145 respondents were asked if they were using any conservation practices on the land, to which 53% said “yes” and 47% said “no”. Of the 47% that were not using conservation practices, these respondents were asked “Why not?” The following results indicate the perceived barriers for implementing conservation practices.

## Reasons for not using land conservations practices

N = 68

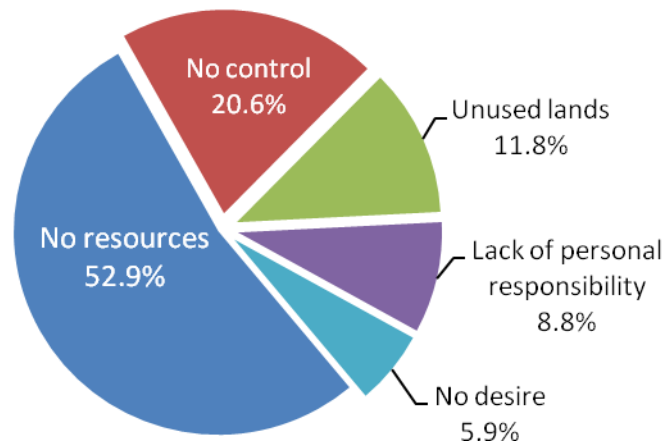


Figure 18: Reasons for not using land conservation practices

The top response “No resources” contains answers such as not having enough time, funds, or strength [to implement barriers, for example]. The answer “No control” was provided when the respondent did not own the land but either shared it with others, was leased or was lent land. One respondent explained that the landowner was “too frugal to make these investments”. The next category of “unused lands” refers to responses indicating that the land was just acquired, (i.e. the Mama Tingo initiative described in section 5.9.1), the land was abandoned, or the land was being left fallow. Interestingly, fallow land could be considered a conservation practice itself but was not perceived as such. The category “Lack of personal responsibility” as a reason for not applying conservation measures were described simply as “carelessness” (“*descuido*”). The answer “No desire” referenced a few concerns with the known conservation measures. For example, “lemongrass [a common plant used for live vegetative barriers] attracts rats [that can go on

to eat the crop]", (*"limoncillo llama mucho ratón"*), and "cattle need to be able to roam after harvest" (and this would be hampered with terraces or barriers). These last examples demonstrate that complex, often economic, factors are used by locals to evaluate the benefits of implementing conservation practices.

What was clear from these responses was that the landless cannot easily make land use decisions. Even those respondents that are on leased or lent land expressed the leasing or loan arrangement as a disincentive for land conservation. One respondent stated: "One cannot impose too many conditions on lent land" (*"uno no puede dar muchas condiciones a la tierra prestada"*). Since the tenant may or may not rent or lease the same lands out in future years, and that improvements to the land represent a significant investment for poorer individuals, unsustainable land use practices persist.

There were expressions of interest in engaging with conservation and specifically SLM if the land tenure situation were different. One respondent was adamant: "If the land was my own, [I would be] obliged to conserve the soil" (*"si la tierra fuera propia, obligado a conservar el suelo"*). A wife states: "If it [the land] were his [her husband's], he would have barriers", (*"Si fuera de el las hubiera embarrenado"*). Another respondent adds: "Pigeon pea and beans are planted by necessity. There is awareness that pigeon pea should not be a crop [of choice]", (*"guandul y habichuela se siembra por necesidad. Hay concientización de que guandul no debe ser la cosecha"*). Trees, especially ones that produce economic benefits such as coffee or avocados, formed part of the conservation strategies elaborated. Thus, the relationship between crop choices, land ownership and conservation efforts is clearly linked to underlying poverty. The extent to which small-scale subsistence farmers with limited resources can implement SLM practices espoused by the SYS is put into question. Residents with no access to land or land decisions are completely hampered at implementing conservation measures. These themes are explored in the next chapter.



Figure 19: Pigeon pea plant in foreground, Monte Bonito in background.

### 5.8 Vulnerability: Natural and Economic Shocks

Given that livelihoods in the case study region are so closely tied to agricultural production and land, a question on perceptions of vulnerability, specifically towards natural phenomena, was posed. The question “Do you feel in danger of natural events?” elicited a total of 64.7% of the respondents answering “yes, a lot”, 15.5% “a little”, and 19.3% “not in danger”.

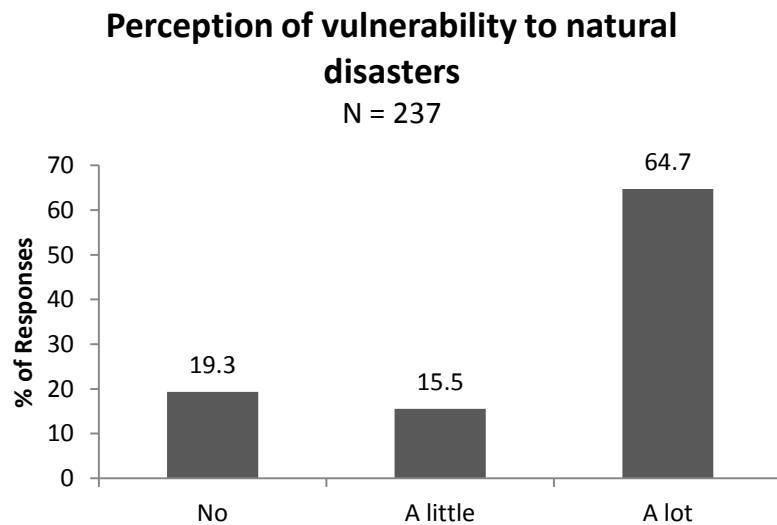


Figure 20: Perception of vulnerability to natural disasters

Respondents living off agricultural production expressed this vulnerability clearly: “Nature is uncontrollable” (*la naturaleza no es controlable*), “everything got damaged by the winds” (“*todo desbaratado por el viento*”) and even “Hurricanes don’t ask, they take what’s there” (“*los huracanes no preguntan, se llevan lo que hay*”). A few respondents emphasized the delicate nature of the avocado crop now proliferating in the region: “The avocados knock against each other [get bruised] by the wind, avocados are delicate” (“*Los aguacates se chocan por el viento, el aguacate es delicado*”). Another respondent expressed lament at a potentially ruined avocado crop due to a mold infestation. She stated that the vulnerability is due to both natural causes (such as pests and diseases) but also that farmers growing avocado crops for the first time lack the knowledge to diagnose and mitigate problems themselves, making them more vulnerable still.

Although the focus of the question sought out vulnerability towards natural events, questionnaire and focus groups respondents also emphasized economic vulnerability through their comments. “The intermediaries do us in. Since outsiders don’t use personal vehicles on this road, we have to sell at the price they [the intermediaries] set” (“*Los intermediarios nos acaban, la gente de afuera no mete carros propios por la carretera y hay que vender al precio que ellos dicen*”). As demonstrated by this comment from a respondent in Monte Bonito, the lack of a good quality road limits the potential buyers to middlemen with large trucks able to navigate the problematic road. The road, thus, is seen to essentially inhibit others (for example specialist or end-use buyers) who would have less bargaining power when buying smaller quantities. In this way, the farmer could have more negotiating power and better access to more markets by improving the road access. The perception that the lack of a good road currently hampers the productive potential for the area surrounding Monte Bonito was commonly emphasized, with many respondents lamenting “the road is a disgrace” (“*la carretera da vergüenza*”).

In El Recodo where the road access situation is even more precarious, respondents also expressed the importance of a good road for both economic in terms of livelihoods so that



“crops not spoil” and safety reasons. Two respondents cited incidents, including the loss of 10,000 oranges and a purchase of 15,000 DOP (i.e. \$500 USD) worth of produce that was forced to remain in the village since the vehicle picking up the produce was not able to cross the river. Many more respondents, however, stressed that a good road would mitigate “being caught / trapped / imprisoned” (“*estamos atajados / encerrados / presos*”). Focus group respondents emphasized that as a wellbeing indicator; a road affects and benefits the entire community. Frustrated at the lack of action on behalf of government authorities, the residents of El Recodo have taken action directly by establishing work teams to dig out by hand an alternative route that does not require river crossings. (*A local Dominican newspaper story covering this initiative is included in appendix E.*) This is actually a great example of local empowerment elaborated on further in the next section.



Figure 21: An artisanal bridge constructed of logs,  
the first of the four river crossings needed to reach El Recodo

## 5.9 Empowerment

Powerlessness and its opposite empowerment are issues that have been elaborated in the previous literature review to show that they form a central part of the World Bank's definition of, and response to, poverty. Specifically, the World Bank's definition attributes the following causes to powerlessness: social differences, inequitable access to resources, unresponsive public administrations, and corruption encompassing inequitable legal systems. This section will first evaluate social inequality through associations, followed by an evaluation of overall wellbeing, and ends with the results on questions concerning hope for the future.

### 5.9.1 Social Capital and Associations

Social capital is the structure and composition of actor relationships and includes elements such as connectedness and networks (Pretty & Ward, 2001). When communities lack in social capital, as per the poverty definition for the World Bank, they are lacking an important "asset". In the same way, enhanced public participation in decision-making is an indicator for empowerment. Since participation can be achieved through association membership where local voices can combine to carry more political weight, membership in a local association is an indicator that has been used for both empowerment and (structural) social capital<sup>6</sup> (Grootaert in Narayan, 2005).

The questions asked if anyone in the household belonged to an association, and if so, to list them. Out of 238 survey respondents, 59.6% or 142 individuals cited positively, yes a household member belonged to an association. The top five community-based organizations (CBOs) are highlighted in the following chart.

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<sup>6</sup> *It is noted that social capital has a wide scope and a full exploration of this topic would require the inclusion of informal, and other forms of social capital. Limitations prevented this more comprehensive consideration.*

<b>Association Name</b>	<b>Self-reported membership</b>
Mama Tingo	46
Santa Clara	42
Ayuda Mutua	15
La Esperanza	11
San Isidro	10
<i>Others: Invernaderos, Sur Futuro, CODOCAFE, Church group, Energy Committee, Jovenes, Consejo comunitario, San Rafael, Padres, madres e amigos de la escuela, Progresando, Aguacateros, Nueva Amistad</i>	41

Table 16: Top associations in El Recodo and Monte Bonito by responses

Mama Tingo, the largest-cited group, was created for the purposes of acquiring new plots of (subsidized) land in Las Agüilas, on the periphery of Monte Bonito. At the time of the survey, the group had 230 formal members who had each received 25 tareas (less than 2 hectares). Santa Clara and San Isidro are both coffee producer groups, and Santa Clara has representation in both communities. Ayuda Mutua, translated as “Mutual Help”, is a kind of local union which gives members access to credit through their dues, for example, to pay for funeral expenses. Such a group has a long tradition in rural Dominican Republic according to local sources. La Esperanza is a woman’s organization in El Recodo. The remaining groups had fewer than 10 responses each. Notably, the Sur Futuro response is in reference to a Sur Futuro created and promoted community-level organization intended to be grassroots and sustain the efforts of the SYS post-project.

Of the 40.3% (96 individuals) that reported no household members belonged to any organization, 79 of those individuals gave the following reasons for their lack of membership:

## Reasons for not belonging to an association

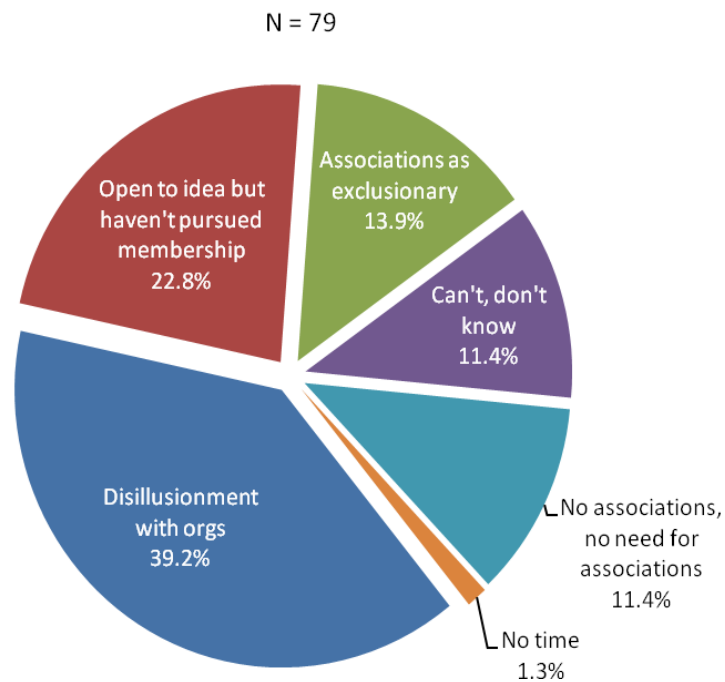


Figure 22: Reasons given for not belonging to an organization

The largest category, disillusionment with organizations (39.2%), included many responses including that organizations operate in “bad faith” (“*mala fe*”), “I got tricked [and so avoid them]”, “[their] unjust practices are not appealing”, “it’s a politicized environment”, and others. The expanded comments below describe these sentiments further. One respondent stated that Sur Futuro, like many development organizations, only work through associations and not individuals but, “[organizations] are difficult here” (“*aquí eso cuesta*”). Further still, “associations don’t work, they start well but bad faith puts an end to them, cunning people [puts an end to them]”, (“*asociaciones no funcionan, empiezan bien pero mala fe lo acaba, gente viva*”).

This thread of bad faith was repeatedly mentioned by respondents in greater detail with regards to its negative impact on operational matters and especially the inequitable distribution of benefits:

- “No benefits [for me], some people obtained benefits, the most cunning”  
(*“ningún beneficio, hay algunos que sacaron, los más vivos”*)
- “They seek you out to work and to receive benefits they don’t seek you out, that’s on purpose”, (*“lo buscan a uno para trabajar y para beneficiar no lo buscan a uno, eso es a propósito”*)
- “[I was] paying in vain, paying and paying [fees, dues] but no credit came my way”  
(*“pagando en balde, pagando y pagando pero nunca salió ningún préstamo”*)
- “People are too smart, cunning people! That’s why one leaves”  
(*“La gente es demasiado sabio, ¡gente viva! Por eso uno se sale”*)

A separate category of associations being seen as exclusionary comprised 13.9% of responses. The following comments further describe this theme:

- “I am illiterate and due to my age, they may not accept me”  
(*“analfabeta y por la edad, quizás no me aceptan”*),
- “They seek out their people not everyone, it is only by invitation”  
(*“Buscan su gente no a todos, es solo por invitación”*)
- They haven’t invited me, that’s how it is here, it’s not open to all”  
(*“no me han invitado, aquí es así, no está abierto a todos”*)
- “It’s an old boys club” (*“Son asociados de viejos”*)

The second largest response category included people who seemed open to joining associations but had not yet pursued involvement for reasons such as “having recently moved” or “having not yet been asked”. One respondent states: “they haven’t put me in anything” (*“no me han puesto en na’”*) indicating the very way one would join an association is externally driven, (at least as perceived by this one respondent).

The last two significant categories each represented 11.4%. One category included households that did not see the need for, or were unaware of the existing of associations. The other grouping of 11.4% failed to provide a reason answering simply “can’t” or “don’t know”. Refusing to elaborate could be indicative of an uncomfortable subject matter for

some respondents, as determined anecdotally through physical cues and change in tone with this question, though this cannot be proven.<sup>7</sup>

This question and the unexpected negative responses highlight the complexities behind measuring the themes of empowerment and social capital, especially using narrow questions. While the more open focus groups did not discuss associations per se, two of the groups did discuss capacity and planning abilities as indicators for being better off. Capacity and planning are intrinsically linked to working within a larger social structure and within potentially political relationships. However, since social capital extends beyond “civic engagement” (Hulme & McKay, 2007, p.209) and participation in local organizations, the questionnaire also explored inequality and power relations as related elements of empowerment.

### **5.9.2 Wellbeing and Inequality**

As per the World Bank’s definition of poverty, empowerment includes addressing multiple forms of social inequalities. Although no question targeted this per se and discussing inequality via a questionnaire presented challenges, instead respondents were asked to generally evaluate whether there had been an overall increase of wellbeing in the community over the past 4 to 5 years. The results are presented next.

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<sup>7</sup> It is recognized that the direct phrasing used, “do you or anyone in your household belong to an association”, may have negatively influenced this potentially sensitive issue. NGOs (and by association foreigners/researchers) are usually seen as association promoters. For questionnaires, a more neutral and open “what do you think about associations?” phrasing may have elicited different responses.

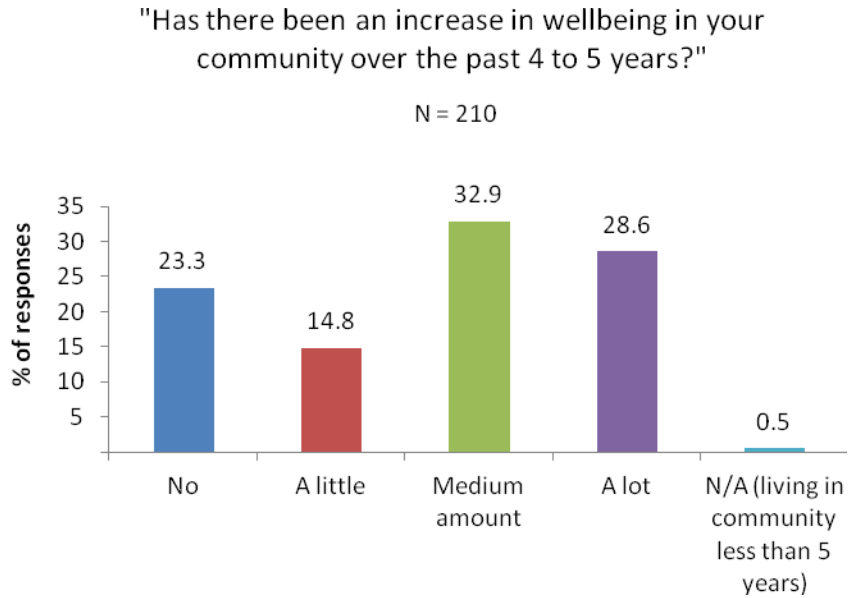


Figure 23: Increases in wellbeing in the community over the past 4 to 5 years

Measuring wellbeing changes in time and across the community was more complex than anticipated with this particular question. A total of 28.6% of respondents suggested there had been a lot of increase in community wellbeing, 32.9% a medium amount, 14.8% a little, and 23.3% answered no increase in wellbeing. However, these answers were nuanced to illustrate how wellbeing and inequality are linked. Respondents often gave two answers, one for the community but a different (often a more negative) one for themselves and their families. This discrepancy clearly demonstrates the methodological flaws with analyzing this data quantitatively. Instead, the unsolicited qualitative comments for this particular question concerning inequality were so numerous that they merited attention. These comments, included as follows, provide relevant views regarding the distribution of wellbeing across the community.

- He who has his own farm is doing well, he who doesn't is doing poorly, day labouring for food.  
*("El que tiene su finca está bien, el que no está mal. Echando día para la comida")*

- For those that have, yes, those that have coffee and avocado, yes, the merchant/wholesaler better and better, the unfortunate stays the same, we are [stuck] in one spot  
*("Para el que tiene sí, los que tienen café y aguacate sí, los comerciantes mejor y mejor, lo infeliz sigue igual, estamos en un solo puesto")*
- Inequality, because that's the way it is. Poor organization, those that have a lot are dishonest"  
*("Desigualdad, porque así es. Mal organizado, los que tiene mucho son de mala fe")*

The above views reveal that inequality was not only clearly understood by some respondents but even articulated in detail when the question clearly asked about wellbeing. The roots of the inequality as expressed by the respondents were nuanced going much beyond mere differences in assets such as income. Instead, the comments encompass limited livelihood options, the issue of land tenure and crop choices (the ability to grow long-cycle export crops such as coffee or avocado). Others highlight social relationships and acting in bad faith. All commentaries demonstrate the complexity and local-context required for understanding just how inequality is understood and lived. Broadening out from inequality regarding the particular question of wellbeing, many questionnaire respondents discussed the general notion of powerlessness as commentary unattached to any particular question. The following section considers this at greater length.

### **5.9.3 Powerlessness as a recurring poverty theme**

Powerlessness prevailed as a recurring theme throughout the questionnaire responses. Commentary was consistently provided for different questions, and at the end of the survey, an opportunity was given for respondents to elaborate on any element they considered particularly important. The disenchantment with processes meant to be equitable was often cited. In other words, problems with the distribution of resources and the implicit powerlessness to change the system were discussed. More than the ill-targeting



of beneficiaries, the comments seem to suggest there were systematic, possibly corrupt, mechanisms driving the process. Examples of these sentiments include:

- “Help doesn’t reach the most needy, it always reaches those that need it least”  
(*“la ayuda no llega a los más necesitados, siempre llega a los que menos lo necesitan”*)
- The solidarity card [a state-provided subsidy card] is “only for the rich”  
(*“solo para los ricos”*)
- “They only invest in the same [people], the producers”  
(*“solo invierten en los mismos, los productores”*)
- “Nothing reaches the poor” (*“Nada llega al pobre”*)

The comments elaborated above allude to the denial of equitable rights of opportunity. Opportunities, in this context, refer to resources such as: any form of aid, the solidarity card or producer investments (this might include agricultural technology such as hoses for irrigation or even agricultural knowledge). The misgivings that these resources are not fairly at the reach of all is demonstrated by suggesting the most powerless, the “poor” or those who “need it the most”, are being excluded. This exclusion was often taken to an extreme through comments highlighting the complete isolation and marginalization faced by the respondents. Examples include:

- “Selfishness, nobody helps anyone, each person [fends] for themselves”,  
(*“Egoísmo, nadie ayuda a nadie, cada quien por su lado”*)
- “Nobody does anything for peasants, the forgotten [people] of the world”,  
(*“A los campesinos nadie hace na’, los olvidados del mundo”*)

The ramifications of these comments suggest these sentiments limit community progress and development, and this is elaborated on in the next chapter. In the next section, which covers the concept of hope, a completely alternative view to these negative themes is also presented.

## **5.10 Hope, Priorities for Action**

One last indicator explored in this chapter under the heading of empowerment is the capacity to envisage change, in other words, to have hope for the future. Hope is considered

an indicator of psychological assets related indirectly to forms of empowerment (Alsop, 2007). As mentioned previously, hope, together with happiness, was mentioned in three of the four focus groups. One focus group in particular described encouragement and cheer (“*ánimo*”) as an indicator for hope and equality. These positive traits are relevant to explore as elements of wellbeing in and of themselves, but especially in juxtaposition to the negative responses regarding inequality and marginalization. It should be noted that this question on the capacity for change was the second last one asked on the survey. This is relevant since the prior reflection on the comprehensive issues of poverty and wellbeing lasted no less than 10 minutes per respondent.

The consistency of responses regarding a personal capacity for change was surprising and the data irrefutable. When asked: “Do you feel you have the capacity to improve your current quality of life?” in total 94.3% answered yes. This indicates the vast majority felt hope about their own abilities to improve their quality of life. Most of these respondents added additional comments to their “yes” answer by indicating statements such as “oh but of course!”, “we’re still tough / young” (“*todavía estamos duros*”) and the local expression of affirmative emphasis: “¡oh-oh!” (meaning something like “obviously!”). A total of 205 questionnaire respondents further elaborated on their answer to justify why they feel they have the capacity to enact positive change. The breakdown of answers is found next.

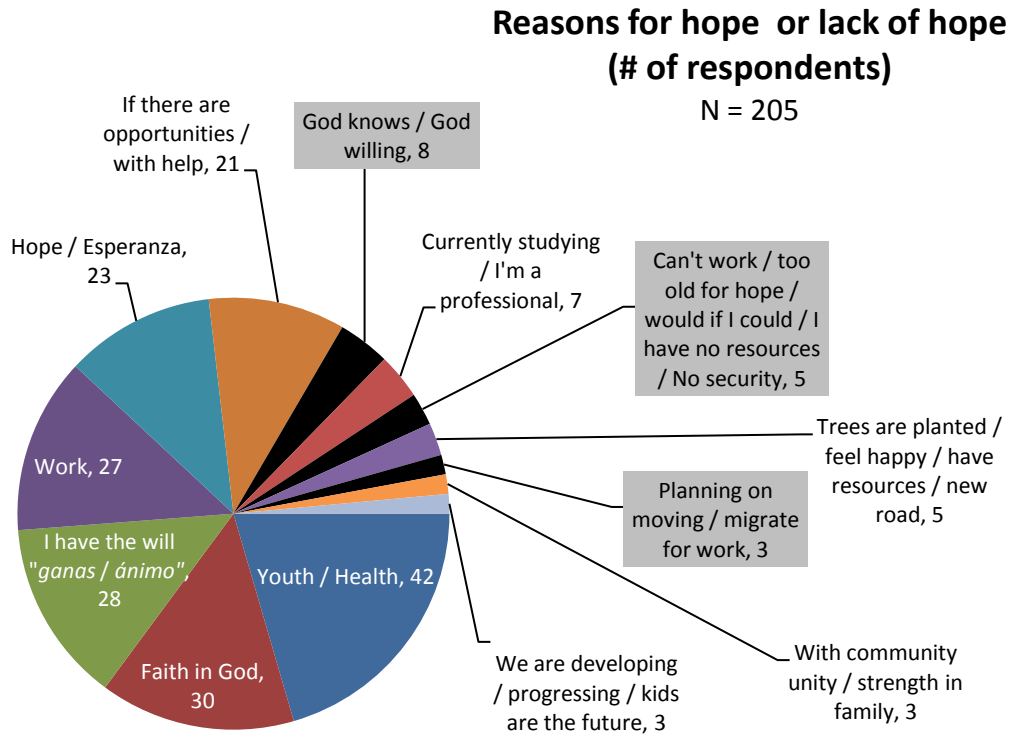


Figure 24: Reasons for hope or lack of hope

The most commonly reported answers include having youth or health at 20%, faith in God at 15%, having the will at 13%, having work available also at 13% and simply having hope in and of itself at 11%. Despite the overwhelming majority of positive responses, the ambiguous nature of the category “God knows / God willing” is interesting because in some ways it implies personal capacity is irrelevant and determined by external forces. In the focus groups, the topic of hope was also raised. Father Juan, who was a resident priest in one of the communities, was said to have sought our many projects by “fighting with equality” (*“luchando con igualdad”*). He is credited with having “created hope”. Some focus group comments equated the worst-off households as having “no discernment, no hope”. However, other comments negated the need for hope, instead elaborating that those households that are better off simply say “I will do, and then go out and do it”. This last

suggestion points to “not needing hope” as an indicator for being better off, and in many ways correlates to the notion of poverty where opportunities to pursue progress are there to take advantage of.

This chapter ends with the results from the last question on the questionnaire: “If you had all the power to make a change to improve your wellbeing, what would you do”. The varied priorities for action as identified by the respondents themselves are presented as follows.

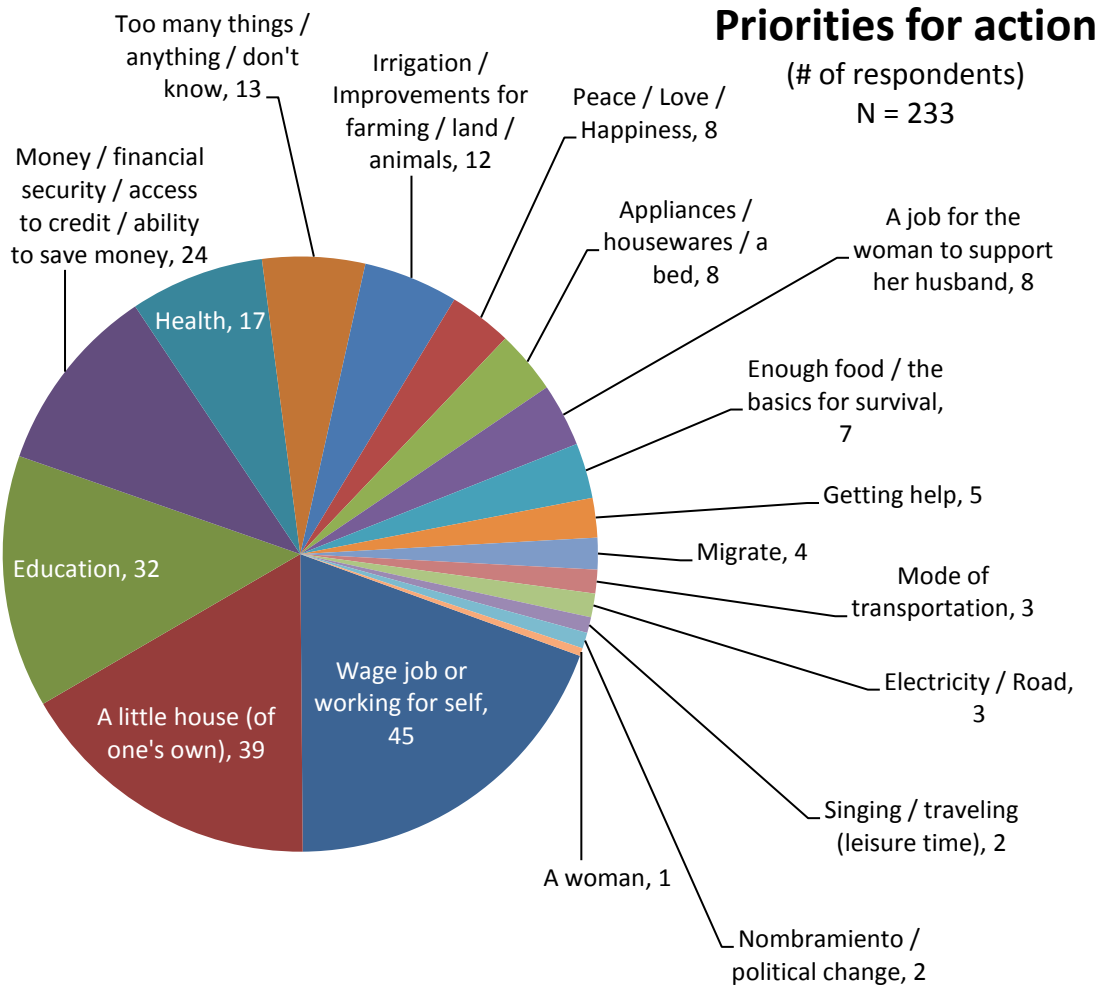


Figure 25: Respondents' Priorities for Action

The most commonly reported answers, in decreasing order of frequency, are fairly self-explanatory: 1) getting a wage job or working for oneself (versus day labouring), 2) a house (of one's own), 3) education, 4) improved financial security and 5) health. Priorities for action comments that stood out from the responses included: "Not giving but working", (*"No dando pero trabajando"*) – in other words "not through handouts", and "commercialize products without intermediaries, they wouldn't exploit [us] as much" (*"comercializar producto sin intermediarios, no explotarian tanto"*). The next catch-all category of unsure responses: "too many things, don't know" illustrate a peculiar finding. Some respondents,

when asked the open-ended question “what would you do to improve your wellbeing” made sure to produce carefully described responses: “[having] a little something more just in case, one can’t be selfish or God punishes”, (*“alguno mas por si a caso, no puede ser uno egoísta o Dios castiga”*), and “[I want] A bit of everything but I don’t aspire either, whatever God has in store for me” (*“De todo pero tampoco ambiciono, sea lo que Dios me tiene”*). One respondent goes further to state: “If God doesn’t want me to be rich or have an elegant house, then amen” (*“si dios no quiere que yo no tenga riqueza o casa de gala, pues amen”*). While this question sought, in part, to probe empowerment, the answers clearly revealed a notion of wellbeing as determined by destiny or God, as well as some healthy scorn for the potentially objectionable trait of ambition. One respondent stated that “poverty is natural” *“la pobreza es natural”*, implying that there should be some acceptance of being poor. These comments are holistically elaborated on in the discussion chapter which follows.

## Chapter 6 Discussion of Research Results

This chapter discusses the results from the case study, using the literature to interpret and analyze the findings specific to a multifaceted concept of poverty and wellbeing. Particular attention is given to the formulation and choice of indicators of the case and on measurement themes more generally.

### 6.1 Discussion on the Case Study Results

#### 6.1.1 Local Definitions for Poverty and Wellbeing

The data generated by the research, especially the variety of responses, supports the view that poverty and wellbeing are very broad concepts interpreted very differently by respondents. The most commonly found poverty and wellbeing definitions included an income or livelihood consideration, although these were found to be more nuanced than merely a reflection of consumption or income itself. The responses given to questions about the perceived cause of poverty indicate that livelihood aspects dominate, thus, an economic understanding of poverty is present, but there are other important considerations also. Few respondents appear to be benefiting from the economic opportunities in agriculture, and many see obtaining wage employment as the most favorable action to pursue. For a number of reasons elaborated on through the responses, the *nature* of agricultural work is equally perceived as a setback to progress. Two important areas regarding agriculture work include: 1) the inequitable opportunities to pursue an improved economic standing based on the relationship between land tenure requirements, and 2) the inherently high economic and environmental risk (vulnerability) especially without adequate safety nets. Local understanding of poverty and wellbeing therefore intertwined the themes of vulnerability and inequality. This interpretation closely mimics the capabilities view of poverty in the literature, which states that it is not a lack of money or physical assets that is the cause of poverty but the lack of opportunities. Successful initiatives to reduce poverty thus rest on a

more nuanced understanding of the causes of poverty and include notions of wellbeing that are broader still.

While both poverty and wellbeing results demonstrated livelihoods-related concerns, the responses for wellbeing revealed more nuanced livelihood issues. Livelihoods when discussing poverty is “having a wage job”, but livelihoods when discussing wellbeing refer to the means to provide for “a little extra as a safeguard” or “*enough* money” (my emphasis) to live a better life. The important distinction between having a “wage job” and a sufficient amount of money to ensure that the livelihood can provide an adequate existence is relevant because this analysis required the contextualization of local opportunities. The former discusses an *end* and the latter a *mean*. This aligns with the new poverty conceptualization that emphasizes means over ends, and increasingly this places emphasis on rights instead of assets.

Overall, the results on the definitions of wellbeing were broader than the poverty definitions. Answers such as health and security ranked higher for wellbeing than they did for the question on poverty. The results also revealed an emphasis on not suffering any shortages which include an obvious indicator of well-defined wellbeing limits. A local and subjective analysis of what “suffering shortages” means ensures the community context gets incorporated intrinsically. In light of the answers on how to increase wellbeing, especially the culturally-sensitive notion of seeking out “too much”, defining shortages locally can be an opportunity to bridge the issue of equitable distribution. Other wellbeing responses that demonstrated the breadth of more subjective analysis included wellbeing as related to quality of life issues, such as having an easier time, living with dignity, and especially healthy (not “bad faith” “*mala fe*”) relationships. These social considerations are harder to capture when discussing the more traditional conceptualizations of poverty in an income-sense, but were elaborated on within the notion of wellbeing. In this way, wellbeing has the potential to move away from understanding poverty only in terms of assets and instead better capture aspects such vulnerability and inequality which are emphasized in the World Bank’s extended definition for poverty.



Given that definitions for conceptual ideas such as poverty and wellbeing remains challenging and contested, it follows that the same applies to the selection of appropriate indicators. Translating poverty and wellbeing concepts into operational measurements is a complex endeavour, even more so if the desire is to track project success among said indicators. The research results reveal a plethora of local interpretations of poverty and wellbeing, sometimes in agreement with prior understanding, and sometimes in opposition to commonly used indicators. Methodological challenges were present throughout the data collection process; some academics would call these “biases” that are not often accounted for (Chambers, 2008). It is not difficult to understand why reports related to the SYS project suggest there were challenges in selecting adequate indicators to properly integrate the notion of poverty reduction within a conservation priority (Henning & Herrera-Moreno, 2009). Often the links between the mere merging of poverty-reduction and conservation was questioned and could appear to be at odds with the stated project goals of sustainable land management. The mid-term specifically questioned the relevance of “basic needs” type indicators such as adequate infrastructure, access to health care and even employment. However, it is these concerns that are of primary interest to the local actors, the very ones being targeted in the intervention. De-linking the mutual goals of development and conservation is not recommended. Instead, finding indicators and conceptual underpinnings that integrate better, is the aim.

### **6.1.2 Who are the Poor? Economic vs. Alternate Indicators**

Although the identification of poor households has historically relied on economic indicators reflecting an income-poverty conceptualization, a shift in poverty concepts and the inclusion of wellbeing promotes the inclusion of alternate indicators also. The income results from the research indicate a high incidence of poverty in both communities. Using the World Bank and USAID’s poverty lines for the DR, which use local poverty measures, over 70% of respondents were categorized in the extreme poverty category. Interestingly, these results were not corroborated with non-economic results from the study: findings

from the wellbeing ranking exercise demonstrated that, as evaluated internally by the community focus group members themselves, only 23.4% of households were considered the 'worst off' (comparable to USAID's 'extreme poverty' category). Self-reported household poverty ranking results from questionnaire surveys also supports this lower figure: 21.2% consider they are doing poorly. Day laboring, an activity identified by respondents as the least favorable of all livelihood options, is the income source for 27.2% of the respondents. In the same range, 29% of respondents do not have any land, or work on lent or leased land. The last indicator often used as proxy for poverty includes food security. This measure shows even fewer households being worst off, with only 5.9% indicating the household "always" experiences food shortage. The congruency between most of these alternate indicators, and large discrepancy between these and the World Bank/s/USAID's economic indicators, reveals important ramifications in identifying the poorest households for particular interventions. This speaks directly to the validity of local knowledge. Importantly, the distinction between what external actors measure and what locals can or cannot corroborate might also help assess what is within the realm of opportunities an intervention can hope to influence and impact.

### **6.1.3 Pro-Poor Targeting via Alternate Indicators**

Although the case study results indicate that economic aspects of livelihoods were important to respondents, the research revealed a more nuanced approach to poverty measurement when using alternate indicators. **Income sufficiency** is tied directly to sources of income for respondents. Respondent's answers demonstrate that *how* one makes their income is indicative of their socio-economic level: those who are **day labourers** without access to land are generally the worst off. The vulnerability of not having stable work (and thus income) was seen by respondents to result in a critical component of poverty and lack of wellbeing. For those that engage in agriculture for themselves, **short-term crop choices** equated to being poorer off. This suggests that the pigeon pea crop may be a good indicator choice for poverty in the case study region. The research also confirmed that **food shortages** could also be used to identify the worst off, and focus groups explicitly suggested that rice

consumption could be a precise indicator for poverty since it is a daily staple. Shortages and poverty lines are particularly correlated in evaluating poverty. In the same way that the placement of a particular household along an externally-constructed poverty line tries to identify those unable to meet basic needs using economic definitions, having local-developed definitions provides a more nuanced perspective. The fact that local analysis (for example in determining food shortages) is recognized as legitimate and valuable provides additional development benefits outside of the very measurement itself. This is elaborated on in the upcoming section on participation. The presence and benefits of these alternative indicators should be evaluated for inclusion in project baselines and ongoing monitoring and evaluation.

The indicators discussed previously may be more relevant and accurate than the traditionally captured economic ones. Consumption levels as indicators of poverty can be misleading in rural contexts because many agrarian societies are not fully embedded within a global economic system. Subsistence farmers, with low consumption levels but not necessarily low levels of wellbeing, do not necessarily or entirely operate on a cash economy. This presents challenges in measurement, especially if focusing in income generation or expenditure through purchases of basic needs. Also, local poverty and wellbeing are not necessarily perceived in material terms, as exemplified by the wide-ranging definitions from this case. For example, measuring the proportion of respondents working as day laborers for their income source produced lower total numbers of “poor” than those calculated using income-poverty techniques, but the findings were broadly congruent with self-reported rankings of poverty. These findings support some of the literature’s claims that wellbeing rankings are, in fact, more robust than economically-derived results and help avoid the problems of false information (often cited regarding measuring income/expenditure) since what is expressed (community rank) is usually agreed-upon common knowledge (Mayoux & Chambers, 2005). This validity of the results can get lost with externally defined indicators.

**Land tenure** is a variable that spans numerous poverty and conservation concerns and requires particular attention in poverty and wellbeing evaluation studies. The historical antecedents for land ownership are a loose management framework (*terrenos comuneros*) where undefined boundaries and loose rules dominated for generations and still do with regards to park boundaries. For many years, livelihood choices were made individually and according to the household needs, however tree legislation and the banning of swidden agriculture has made meeting those livelihood needs more challenging for the last generation. The research results revealed that land is the most important determinant of wellbeing. Land ownership is critical for the promotion of SLM. Since land ownership is a requirement in making investment choices, including making more sustainable crop choices, landlessness can be attributed as a driver of short-term crop production. For example, farmers with land tenure can choose to plant long-term crop choices that reforest areas (for example through avocado or coffee plantations), or include other conservation strategies (such as terraces, barriers, etc.). Lack of land ownership, on the other hand, generally prohibits these choices due to the substantial upfront labour and costs needed, and the time required for the return on investment. Since there would only be return on these financial and time investments through the production that followed in subsequent years, security of land tenure is actually a precursor to these conservation interventions. Without land tenure, pursuing SLM is questioned outright and supported by the conservation findings. Land also translates into access to other important development opportunities, such as credit, which can impact wellbeing greatly. As such, land can be considered a variable related to empowerment and protection from risk, besides being an asset in and of itself. These findings mirror the mid-term report identification of land tenure as a critical issue for conservation, but goes further to state that it is perhaps the central indicator of poverty in the context of this case (Henning & Herrera-Moreno, 2009).

Although income or consumption data has historically been seen as the most “robust” measure of poverty, the findings in this research support critics of this view and question this assumption (Brock & McGee, 2002; Chambers, 2008; Mayoux & Chambers,

2005). More sophisticated indicators such as income or consumption calculations likely require formal education, a grasp of unfamiliar concepts only at the reach of professionals external to the community. The alternatives discussed above all represent easier-to-measure indicators of poverty. By using locally-defined indicators, not only are there benefits in speed, cost, and accuracy, but the local management of indicators create additional social benefits as well as built-in sustainability for the long term.

While lower poverty figures may result from an alternate conceptualization of poverty or from subjective local assessment as compared with economically-dominated data, this should not be regarded as a negative finding. Instead of an assumed diversion of resources away from the communities thought to have been “poorer”, this analysis instead highlights the opportunity to improve the targeting of the most-poor for the highest-impact poverty interventions. In turn, a re-evaluation of intervention strategies based on the more accurate findings and incorporating the particular needs as expressed locally would only serve to benefit development overall.

#### **6.1.4 Conservation and Development: Reflections on the SYS Project Indicators**

Despite the high potential for varied conceptualizations, conservation was mostly viewed as a positive endeavour that would provide benefits. The listing of accurate practices (barriers, trees, decomposition of organic material) reflects existing subject knowledge, even with the inclusion of female perspectives that can often be deemed unsuitable in a natural resource context dominated by male labour. The answers to why conservation practices were not being implemented mostly highlighted issues of access and opportunities and not a lack of knowledge or information. This is relevant in light of the SYS project output 2.3 which sought to improve SLM knowledge among local population as a way of improving implementation,.

Where there were some discrepancies in the conservation results were with the last two categories for why conservation was not being pursued. One category cited “unused lands” and more research is needed to explore this notion. A potential correlation is that

conservation activities are viewed only as beneficial and worthy of pursuit when there are tangible benefits to local stakeholders. This confirms the characteristic of “local perceptions of biodiversity” (found in table 5, section 2.4) which states that the main rationale for conservation from a local perspective is to satisfy local criteria (in this case economic productivity in an impoverished area) and not necessarily to help maintain ecological integrity. To the extent that other competing economic motivations (e.g. cattle ranching) may take precedents over conservation, can be better evaluated within the local socio-economic context and not attributed to a lack of knowledge or interest. The last category, “no desire to pursue conservation”, does highlight the need to promote more knowledge of varying and flexible options that would still produce benefits and could counter perceived conservation limitations. In light of the DR’s restrictive tree policy and illegal slash and burn agriculture, an emphasis towards allowable versus banned practices is encouraged.

The SYS project incorporated land-related indicators to track project success, and invariably this concerns conservation directly. Land was a cross-cutting theme in the results (see section 5.6) and was embedded within various project goals. In particular, land was included in goal four which was related to the improvement of livelihoods and wellbeing of the communities of the watershed. However, take note of the inconsistencies across the following objectives of the SYS project: 1) to increase the amount of land utilizing SLM; 2) to limit the percentage of population who depend on land exploitation, and; 3) to increase access to employment. These objectives point to a desired move away from agricultural-based income. “Employment thinking” promotes wage jobs either external to agriculture or at least to mitigate “land exploitation”. The case study findings indicate that these three objectives conflict, since facilitating access to land on a permanent basis (combined with other strategies) would likely present a greater likelihood that longer-term crops and SLM could in fact be implemented by the most vulnerable. The results included a high number of individuals citing membership in the association Mama Tingo which was created for the purpose of land acquisition for agricultural production. This demonstrates there is indeed interest in farming as a livelihood option and a way to decrease poverty.

Mama Tingo was particularly relevant since it represented an initiative for land tenure to landless families. Contrasting this approach with limited and “politicized” wage jobs, agricultural production is seen as a more feasible and realistic poverty-reduction strategy. The research suggests that those with access to land and those able to make crop choices that are preferable for soil conservation are better off in the communities, and this is, in fact, desired by the residents. Despite obvious benefits to be reaped, at the time of the data collection, there was no known working relationship between the Mama Tingo association and Sur Futuro. Complexities in combining conservation and development are highlighted with this precise example because the optics of clearing new land for farming is seen as contrary to the goals of environmental conservation. However, this perceived juxtaposition need not be contradictory under careful management and as part of a comprehensive approach to both conservation and wellbeing. The use of permanent forest cover crops, as one conservation example, has the potential to actually enhance (crop) biodiversity and soil moisture retention in the drylands and degraded ecosystem context of this case. The rejection of facilitating access to “new” lands for pro-poor benefits (even outside of protected areas) is centered around an apolitical understanding of historical land use in rural Dominican Republic. It discounts the perceived right to provide basic sustenance for rural families. Shifting agriculture has dominated for centuries, the role of cattle ranching by elites is underrepresented and misunderstood, and overall any “pristine” environments have long been impacted by human activity, though notably on a small scale. Instead of continuing to view local impoverished communities as destructive agents, a re-examination of the historical *conuco* landholding systems provide investigative opportunities to reframe them as agent for conservation. The integration of native species alongside agriculturally-dominated ones also makes room for common cultural practices in the pursuit of more sustainable land use practices that include human benefits.

Several key issues need to be reconciled in the study region in order to better integrate land as a variable for both people (wellbeing) and environment (conservation and sustainability). Given the historical challenges with land titling and the perception that

cleared land is owned land, creating proper incentives for conservation continues to be very important. Development interventions facilitating long-term access to land provides necessary incentives for locals to produce long-cycle crops and in doing so, to improve their wellbeing. A second issue relates to perception of root causes of land degradation. The influence of history and disincentives for conservation that have contributed to the perception that the activities of the poorest (“peasant insolence”) is responsible for unsustainable land practices needs to be acknowledged and questioned. Results indicate the poorest face structural barriers (issues of access) to changing land use practices, and not simply a lack of knowledge or a culture of “insolence”, as has been historically blamed. In this way, a more fluid and nuanced distinction is needed between land “exploitation” and permissible agricultural land uses. Instead of highlighting the illegal activities such as slash-and-burn, more effort should be placed on the promotion of many alternatives that are feasible for farmers to implement. When barriers such as a lack of strength or time are presented, local NGOs can play a role in creatively facilitating these needs, through, for example, the inclusion of volunteer brigades, as was pursued by the state and deemed favourable by the respondents. This will not only help achieve conservation outcomes but wellbeing ones also by showing respect for local needs as elaborated by the community themselves. At the core, examining structural barriers is critical to improved wellbeing and conservation, and acting on injustices is needed.

Focusing on themes deemed important by external agents ignores truer interpretations of poverty or wellbeing which are understood and lived locally. Measuring other indicators besides income in particular helps avoid several of the many contentious issues surrounding quantitative measurement concerns. Since livelihoods strategies are recognized as being multi-faceted, dynamic and complex in rural environments, income as a sole indicator of livelihoods has limited value in contributing to a necessary understanding of poverty and wellbeing. Firstly, simply focusing on increasing rural incomes without regard to issues of equity can hide or misrepresent the gains. For example, households that do in fact produce enough income to rank above the poverty line might not necessarily



allocate sufficient funds to meeting minimum needs (for example children's food requirements), but instead the main income-earner may spend too much on other wants (leisure, alcohol or tobacco, etc). This was a highlighted concern by several of the respondents in the case. Secondly, simply measuring household income is known to be insensitive to differences in economic opportunities along social considerations such as gender, age or physical ability. While not a focus of this study, the issue of gender disparity is gaining much ground in both academic and development circles and in this case, many women cited the desire to help out the financial security of the household but lacked opportunities to do so. It is not the lack of income that is significant but the lack of access to female employment. Lastly, using income as a wellbeing indicator promotes a consumptive view of wellbeing. Increasing income, it is argued, leads to increased consumption which is usually less environmentally-benign than remaining in poverty. Thus, the rationale regarding development interventions in natural resource management projects get raised and questioned. Though measuring income has a role within this larger debate, this study points to income indicators, when used primarily or exclusively, as being at odds with conservation and sustainable development. The inclusion of other non-economic, non-asset based indicators, it is argued, can help shift the way these issues are perceived. The integration of poverty reduction and conservation will continue to be questioned so long as development is interpreted as economic development only. Engaging with powerlessness or vulnerability, both as indicators and regarding process, can help achieve integration.

#### **6.1.5 Powerlessness and Vulnerability**

In the expanded definition put forth by the World Bank, powerlessness and vulnerability comprise two of the three themes defining poverty (World Bank, 2000). Academic literature suggests a further engagement with these themes for more comprehensive understanding of a capabilities view of poverty. Although the project indicators chosen did not engage with powerlessness or vulnerability explicitly in relation to outcome 4 of the SYS, (the improvement of community wellbeing), the research revealed

that these themes were present in the local understanding of poverty and wellbeing, just as much as a lack of assets.

Powerlessness is largely defined through social differences and inequitable access to resources and corruption; the research results provided examples of each. Community responses stated that increases in wellbeing are poorly distributed across the socio-economic community strata and are indicative of a perceived growing inequality gap, not a shrinking or even stable one. The ability to pursue increases in wellbeing were also said to be highly contingent on structural issues (such as land tenure or income sources) highlighting inequitable access to resources. Commentary surrounding the disillusionment and exclusionary perception of organizations and associations, (some respondents felt barred from participating in community organizations despite willingness), once again indicates powerlessness and issues of inequality that merit being addressed. Lastly, corruption was also expressed by respondents through the politicized nature of opportunities – especially formal employment (“*nombramientos*”). Although the illegal Haitian workers were not included in this study, they are the starkest example of powerlessness in the DR where national policies lack any sort of recognition of needs or basic human rights. The SYS project in turn, also did not engage with this politically sensitive, yet relevant, group of local actors.

Vulnerability, defined as risk resulting from social, economic or natural crisis, was also well evidenced in the research results. A majority of survey respondents considered themselves to be vulnerable, in general terms, but cited elements related to natural risks in particular. Hurricanes or intense rainfall events were often cited, and this risk applies to potential damage to their homes, but also their economic standing due to flooding of agricultural crops. In a drylands context such as the case study region, periods of drought also expose vulnerability since most of the crops are rain-fed. Also articulated was that agricultural production takes on the inherent risk of pests, strong winds, and other factors that can be outside the control of a local farmer. Transportation, specifically road access, also embodied the cross-cutting theme of vulnerability. Without road access, these communities are isolated and access to health care (for emergencies for example) is hampered and

economically, producers cannot get their harvests to markets at competitive prices. Relying on intermediaries as a coping mechanism further exposes farmers to economic risk since bargaining power for pricing is affected. Lastly, divisive attitudes, such as people or associations acting in “bad faith” *“mala fe”*, expressed by respondents also suggest social vulnerability in terms of local relationships.

Vulnerability and empowerment are more subjective measures of poverty with limited well-defined or universally-accepted indicators. However, they are themes with many inherent benefits worthy of pursuit. Vulnerability, as demonstrated above, can more adequately capture poverty aspects, including the three I’s: incidence, intensity and inequality. In a rural context such as the case study, the three I’s can be particularly important. The research results suggest that the seasonality of poverty, that is to say how poverty might fluctuate depending on the time of year, can be a significant concern to agriculturally-dependent regions. A seasonal strategy such as selling “in flower” to access needed credit before harvest, is but one example of seasonal poverty and more complex livelihood strategies that are obfuscated by focusing on formally defined employment or strict economic categories. The number of respondents who pointed out the challenging months of May and June is another critical example of temporal poverty. A comprehensive understanding of poverty would need to include these dimensions. These findings contradict suggestions in the literature to continue with economically-dominated measurements, despite recent broader conceptualizations (Angelsen & Wunder, 2003).

These findings on powerlessness and vulnerability support similar themes found in the historical context and literature. References to Trujillo’s politics and the prevailing conflicting view on peasant’s role set precedents for disempowered communities. Carruyo’s (2008) ethnographic study from a nearby region in the DR labels this oft-cited disempowerment as a local “discourse of nothing” (Carruyo, 2008, p.60). The UNDP’s 2005 report expresses a unique Dominican culture of pessimism and externalism. Externalism, the report states: “is the perception that one cannot exercise control over the conditions of one’s destiny and life” (PNUD, 2005, p.33). This, the authors cite, results in paternalism and

clientelism (PNUD, 2005). It can be easy to see how these negative effects form part of a vicious cycle of powerlessness and vulnerability that can be challenging for any intervention to influence culturally, much less break.

Engaging with powerlessness and vulnerability, however, can facilitate a more nuanced understanding of problem framing and in the more effective prescription of solutions. Targeting the most powerless or the most vulnerable aligns with pro-poor approaches and can highlight the most significant root problems that need addressing. Since risk mitigation processes often involve political solutions, powerlessness and vulnerabilities are themes that force a discussion around community vitality (for example social supports through associations) and policies (government safety nets). That vulnerability is a moving target, especially in a rural context, does highlight the complexity for measurement protocols but should not preclude engagement with this theme. Vulnerability is so well correlated with the capabilities view of poverty that seeks to promote the agency of the individual in meeting his or her needs that its inclusion is very relevant. So while recognizing the particulars of vulnerable populations or households more specifically is a needed first step, the prescribed solutions need to be very carefully considered. In particular, interventions need to engage with political and structural dimensions of vulnerability for lasting impacts.

The opposite of powerlessness and vulnerability is empowerment and security, and interventions should aspire to both these end goals. An illustrative example can be found with housing: while construction projects prevail in the region, executed by Sur Futuro and many other NGOs, ultimately they do not contribute to ongoing empowerment and only in limited fashion to building up security. Providing free or heavily subsidized housing addresses the temporal alleviation of poverty. But, the “awarding of” houses can actually contribute to social vulnerability since often the process of selection is not transparent or can be perceived to be unfairly awarded through personal connections and favourable relationships. Improved housing fixes a natural risk, but may increase a social one due to process. In this example, although a family has improved their physical assets the opposite

was achieved, the process was not empowering in any way. It might be said that an asset-based intervention might even foster an ongoing culture of dependency and promote clientelism and paternalism indirectly. This contrasts with the finding from wellbeing as defined as healthy relationships. The reversal of this approach is to focus on the prevention of poverty in the first place, and concentrating on improving livelihoods to enable families to make these improvements themselves, in a manner that is just and equitable given the context. A focus on empowerment thus requires engaging with political topics such as voice and power, access and opportunity, as described by the capabilities view of poverty.

#### **6.1.6 Empowerment and Hope**

Empowerment is, by the World Bank's definition, a sought-after response to poverty, especially powerlessness. Empowerment is theoretically related to the capabilities approach for poverty reduction since agency is what a person is free to achieve in pursuit of personal goals (Sen, 1985). Put another way, someone without agency is someone who is coerced, oppressed or passive, thus empowerment follows as an expansion of agency. Empowerment can help give voice to the local viewpoints, especially those often silenced by marginalization. Formally, it is defined as a "processes through which individuals and social groups come to recognize, value and use their own knowledge, abilities and sources of power to participate in and control the decision-making practices that affect the conditions in which they live and work" (Fortmann, 2008, p.248). This definition shows how empowerment certainly enhances capabilities and contributes to poverty reduction (Fisher et al., 2008). Empowerment is thus important for conservation as it can lead to strengthening a collective political voice to ensure rights are respected and locally-relevant wellbeing is being pursued. As previously elaborated, powerlessness can relate to isolation and so a logical response was to measure how the case study communities engaged with associations as tools to assert power and collective voice.

The results revealed some challenges and some opportunities with associations in the case study communities. The most commonly cited associations were dominated by producer groups (Santa Clara, San Isidro) or a group dedicated to land acquisition for

agricultural production (Mama Tingo), the top two responses comprising over 60%. Although both groups are driven to improve livelihoods, it could be said producer groups organize already empowered individuals: self-employed landowners. Mama Tingo, on the other hand, is an empowering organization in and of itself as it seeks to facilitate agency by providing access to land and thus provide livelihood opportunities to those least empowered: the landless. This is a great example of how associations are empowering those most marginalized. However, since men are the ones almost exclusively engaged in agricultural work, and based on responses to other questions, there appears to be a missed opportunity for women's-oriented engagement in associations and empowerment. A woman's only association was listed but made up only 7% of responses. The more generic association "Mutual Help" ("*Ayuda Mutua*") also seems to provide an opportunity for those who most need it, members seeking out insurance at the community level, (though again, only cited by 10% of respondents). These existing associations provide opportunities to engage with the more vulnerable populations in the communities through vehicles with which some are already familiar and using.

Overall though, the results revealed that associations do not currently have an important role for empowerment in these case study communities. A recurring theme of relationships and associations that were affected by "bad faith" pointed to deficiencies in process at an organizational level. This was found to be a significant barrier hampering involvement and thus empowerment. These expressions of negativity mimic what in the literature is referred to as Dominican cultural traits ("externalism", "pessimism"), (PNUD, 2005, p.33). But, instead of accepting this commentary as a cultural expression, the feelings of aloneness and disappointment in the flawed associations expressed in the results may highlight just how much empowerment and social capacity is perceived to be lacking by the respondents. In the expanded notion of poverty, social networks serve important safety net functions and can help foster empowerment. Strengthening the equitable, transparent processes that are required for well-functioning associations would thus achieve improved empowerment in turn.

Interestingly, some of the results did not align with negative views expressed so commonly regarding associations and interpreted as disempowerment. Survey results to the question on “do you have the capacity to improve your current quality of life” contradict the findings elaborated above. A vast majority, 94% of respondents, expressed yes, in other words, they felt empowered. Moreover, respondents identified specifically what that capacity entailed; including the 3rd most popular category which was simply “I have the will”. Focus groups discussed empowered individuals who are savvy (have “*chispa*”) or simply say “I will do” and don’t even have to rely on hope to achieve goals. These were unexpected results in light of the literature and other questions posed and suggest there is unexplored potential for leveraging these positive, not negative, sentiments.

When this question was probed further, however, the answers diverged somewhat. Some respondents had a clear path towards the specific improvements to pursue, such as increasing assets be it physical (a house, agricultural infrastructure), or social (education), but for other respondents, how to pursue wellbeing was less defined, answering: “God knows”, “If there are opportunities”, “With help”. These differences merit further study. There were also cautionary responses indicating a certain resignation to one’s quality of life was an appropriate position, possibly one that is difficult to influence or change. “Poverty is natural” was cited, for example.<sup>8</sup> This resignation to one’s current wellbeing state may simply be a response to a highly vulnerable context where natural phenomena have the potential to impact livelihoods and thus wellbeing greatly. However, this “resigned” view discounts the potential for political responses to appropriately address to this vulnerability. An example would be insurance safety nets for natural phenomena impacts. Resignation could thus also point to heavily entrenched political and structural processes where empowerment and change is seen as limited. This was articulated in the responses to

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<sup>8</sup> *The morality of ambition would be worthy of further academic pursuit in relation to empowerment, as another respondent articulated: “if God doesn’t want me to have [wellbeing / assets...], then Amen”. Generally, empowerment and the relationship between success and God / luck / external forces, (particularly spiritual), would benefit from further exploration.*

associations as being deficient and “don’t work here”. This resigned view also could mark instances when environmental harm is enacted or heavily influenced by alternate forces external to the community. Examples include powerful actor groups such as cattle ranchers or larger macroeconomic forces such as volatile export crop prices that result in short-term crops as a sort of wellbeing “insurance”. Having empowered local actors can ensure these potential “cause and effect” relationships are not only adequately articulated and accounted for in problem framing, but more importantly, are accounted for in the prescribed policy solutions. The incorporation of on-the-ground perspectives can thus lead to better developed conservation and development strategies, but requires that this local perspective be considered valid and worthy. Because marginalized voices are often discounted, they are not articulated in the first place. Ultimately, for empowerment to be fostered and agency promoted relies on political frameworks that have the potential to validate local actors and their perspectives.

Inclusiveness and empowerment as concepts elaborated above are fundamentally linked to political processes. Local power-devolution requires participating in, and quite possibly changing, an existing structure. Viewed in this way, recognizing the importance of the local perspective presents particular challenges, especially in the field of conservation that may be unfamiliar with these more subjective themes. From the natural science literature, conservation and development case studies have been deemed difficult to evaluate because they “do not use the analytical and empirical methods required to make reliable inferences about the actual impact of a conservation intervention on measureable poverty indicators” (Secretariat on the Convention on Biological Diversity, 2010, p.44). However, it is increasingly being recognized that universal causal linkages may be impossible to determine given the particular context of local socio-economic circumstances (Fisher et al., 2008). While standardization is essential for cross-comparison analysis and one method of achieving this is through universal indicators, this negates the context and need for local indicators which can be so critical. It is here where a local voice is essential to provide a meaningful context which can, in turn, ensure logical rationales are being



articulated with regards to local problems from local perspectives in the first place. Fundamentally, engaging with political topics of power, voice and agency are required for solving poverty and improving wellbeing. Since wellbeing is a highly subjective topic, it requires the inclusion of subjective analysis by local actors. The way to achieve this is to ensure processes are in place to acknowledge the role of the local population themselves. Empowerment is in this way, very much tied to participatory processes, elaborated on as follows.

#### **6.1.7 Participatory Approaches: Inclusiveness**

For effective participation, inclusiveness is an important concept, especially within the context of rights-based approaches to poverty reduction. The poverty literature recognizes that communities are non-homogenous, and are composed of divergent subgroups (Brown, 2003). To ensure the breadth of ideas and view points are considered, and to ensure a complete perspective on poverty and wellbeing is included, each subgroup should be carefully considered in any poverty and conservation initiative.

This case study revealed issues with a lack of inclusiveness, on many fronts. In the research methods literature, missed participants is referred to as a type I error or “coverage bias” when sampling does not account for the entire possible population (Khandker, 2010). With inadequate information or estimates to begin with, type I errors are unavoidable. In the case this was firstly seen with the politically sensitive issue of illegal Haitians who are not accounted for in any estimates or censuses. They have limited recognized rights through the national government and were not included in any interventions strategies by Sur Futuro whatsoever. Given that the Haitians are also day labourers who work in the natural resources sectors, excluding this group entirely presents a relevant gap in a comprehensive analysis of actor groups. Secondly, within the Dominican resident population, there were inaccuracies in population numbers rooted in outdated census data, and sustained by inadequate Sur Futuro estimates. The number of households in Monte Bonito was estimated at 133 for the socio-economic baseline established in 2007 but was actually determined to be 278 during the creation of the sampling frame for this study in 2010, more than double.

While population growth between these years is possible, the SYS project concurrently cites outmigration as topic of concern. This inconsistency demonstrates a lack of fundamental knowledge regarding community composition, demographic patterns and drivers of these patterns. Furthermore, errors in factual baselines negate the possibility of conducting quantitative statistical analysis or impact evaluations with scientific rigor, the very justification for quantitative and “objective” data. The most recent national census conducted in 2010 has potentially alleviated this concern for the near future, but also points to the need for greater awareness of who makes up the beneficiaries on an ongoing basis between censuses. Participatory methods, such as wellbeing ranking, that provide accuracy and also foster empowerment, in particular, can help reverse the “culture of nothing” sentiments that entrench the need for externally-driven solutions to poverty and wellbeing. The local community has the greatest role to play in satisfying the essential baseline requirement of community composition accurately, expeditiously and at low-cost. Not involving local actors more significantly is a lost opportunity.

Missed participants, (type I errors) are problematic, but so is inadequate targeting of participants, known as type II errors. Participation by non-poor actors is also called “elite capture” (Classen, 2008; Khandker, 2010). **Elite capture** is when prominent community members (commonly leaders) gain benefits of different kinds by liaising with external agents, such as NGO staff (Brock & McGee, 2002; Classen, 2008; Fortmann, 2008). These benefits often result in harmful effects as outsiders and projects end up contributing to social disruption by introducing selectivity and inequality in a process that can result in resentment. Development projects are often implemented at the expense of ignoring the poorest of a community (who can be harder to reach and work with) but who can, in turn, be further marginalized by an intervention (Agrawal & Gibson, 1999; Brock & McGee, 2002; Classen, 2008; Fortmann, 2008).

There were concerns with various type II errors in the Dominican Republic in the grey literature and in the case. Targeting with the “Comer es Primero” program, which redistributes food aid to needy families and is a feature of the solidarity card, was raised by

World Bank staff (World Bank, 2006, p.163). A local case study respondent expressed this sentiment by stating the solidarity card “is only for the rich”. Anecdotal stories of difficulty navigating the required paperwork, and the selling, sharing and misuse of this card were brought up. Respondent sentiments on inequality, vulnerability and empowerment also corroborate type II errors. Examples include corruption in job allocation (“*nombramientos*”), targeted beneficiaries being limited to association members or agricultural producers instead of the most-poor. One respondent clearly articulated the perception that help *always* reaches those that *need it least*. The SYS targeted farmers to educate and encourage sustainable land management (SLM). However, when compiling the population lists for this case study, it became apparent that a number of these benefitting farmers are either only occasional residents of the local community (maintaining an often smaller “country” house), or do not own a house in the community altogether. The land they work, (or oversee work on) is at the periphery of the community, but they choose to live in better accommodations in larger cities, probably for a variety of unexplored reasons. It stands to reason, though, that being more central to influential actors is a consideration. The perception of elite capture is thus raised, but requires further corroboration. So, while the promotion of SLM is pursued, it is at the expense of the concurrent goal of improving the wellbeing of local inhabitants who grow disenchanted at the lack of transparent processes and perceived growing inequality. This can actually negatively influence future engagement with other projects and initiatives.

When targeting participants for interventions, pro-poor approaches are thus encouraged through the use of meaningful indicators. The most marginalized in agricultural-based communities can be the elderly or physically impaired. Gender sensitivity is noted in the natural resources literature as particularly lacking attention and indeed there was no mention of women’s particular needs in the SYS whatsoever (Bednarz & Krain, 1999; Classen, 2008). This thesis explored the following potentially useful indicators: sources of income (especially day laboring), land tenures (landlessness), frequency of food insecurity, and a lack of participation in associations. Ultimately, a

participatory wellbeing or wealth ranking exercise enacted by the local inhabitants themselves is considered one of the strongest methods since indicators are locally relevant. Furthermore, the act of accepting local knowledge is a politically relevant choice. The devolution of decision-making power to the grassroots, even in establishing baselines and informing project design, can help foster agency and be empowering. In this way, the targeting of participants can be accurate, and the way this was done can help achieve development goals aligned with the capabilities view of poverty.

Engaging the right stakeholders and in the right way, is relevant for a variety of reasons. Most important, local stakeholders are the only ones that can fundamentally explore context comprehensively. Political Ecologist Robbins (2004) goes further to state that despite good intentions, environmental and development projects are usually “based on assumptions that are classed, gendered, and raced. In particular, development plans tend to imagine the subjects of development – the local farmer, herder, or fisher – with assumptions about their outlook, behaviour and interests that reflect the socially situated imaginaries of the planner” (Robbins, 2004, p.175). Many of these misgivings can be easily solved through true decision-making participation by stakeholders at the local level, because it is they who know their communities better than any outsider. Local stakeholders are thus critical for accurate problem framing. Furthermore, as elaborated on in the previous section, participation can foster empowerment which can be a development aim in and of itself.

While genuine participation needs to employ proper targeting, to ensure inclusiveness and adequate representation of the range of community members themselves, this can often be challenging. The inclusion of a multiplicity of voices will facilitate a more comprehensive and accurate evaluation of the causes of poverty and overexploitation, leading to improved project design. The challenge can lie in having managers and technicians acknowledging that resource management is a political activity as much as an environmental one. “Unless issues of political decision making and social inclusion are tackled at the same time, resource-based interventions may do little to help the resource-dependent rural populations who are their intended targets” (Secretariat on the Convention

on Biological Diversity, 2010, p.15). So while it would seem counterintuitive to work with landless day labourers who have the least control over land use decisions, the research suggests these are precisely the marginalized voices that are central to a politically-aware model of conservation and development.



## **Chapter 7 Conclusions and Recommendations**

This chapter reaches conclusions by discussing the wider implications of the research for other conservation and development initiatives and for academic inquiry. Specifically, indicators and measurement approaches are discussed, problem framing and policy prescriptions are elaborated on. The first section ends by highlighting the potential of the capabilities view of poverty in the context of implications for natural resource management initiatives beyond the scale of the case study alone. The chapter concludes with specific recommendations for implementing bodies and government agencies, as well as areas for further academic research.

### **7.1 Conceptual Implications from the Results**

#### **7.1.1 Discussion on Indicator Choice and Indicator Selection Process**

The selection of indicators to capture the intended poverty and wellbeing information will continue to face challenges, especially for integrated natural resource initiatives. Multifaceted poverty necessarily implies that poverty aspects are methodologically very challenging to grasp. The development or project staff, for example, may conceptualize indicators along a spectrum whereas, for rural people, an indicator could be interpreted quite differently. An animal, in an underdeveloped rural context, can be food, transportation, insurance, a combination, etc; land tenure can represent access to credit (a sort of insurance) as well as a livelihood requirement in farming regions. This multiple indicator meaning was discussed previously in the context of poverty being increasingly defined as a lack of means (opportunities) rather than ends (a lack of assets). However, this divergent conceptualization is not always recognized. Chambers states: "Not only do urban-based professionals and officials often not know the rural reality; worse they do not know that they do not know" (Chambers, 1983, p.6). Instead, the quantification and reductionist

nature of more traditional economic indicators wrongly assume rigor in measurement as more important than rigor in concept.

In the academic literature, there is also ongoing debate regarding the indicator selection process. The trend seems to be to add newer indicators by academics, for example the UN has sanctioned over 49 at present (Alkire, 2007b). Specifically, UN advisers have identified five areas that lack sufficient data and thus merit particular attention: employment (especially informal), empowerment, physical safety, the ability to go without shame, and psychological and subjective wellbeing (Alkire, 2007b). When attempting to measure changes to poverty, an often-made suggestion includes measuring changes against a poverty line, often a measure that includes a composite indicator for basic needs (Kakwani & Silber, 2007). However, this approach goes against the capabilities poverty concept that views poverty through, again, a lens of opportunities and not assets. However, groups like the World Bank and GEF are recognizing benefits of incorporating subjective poverty as understood by the local population as are citing participatory methods as acceptable alternatives to generate locally-relevant data (Global Environmental Facility, 2010b). This includes participatory wealth ranking as an adequate method to devise a local poverty baseline too. Moreover, while the quality of data garnered through participatory processes are cited as more accurate, the process of obtaining this local information also has positive ramifications as emphasized in the prior discussion on empowerment and capacity building.

However, despite the acknowledgement by large and influential global organizations that broadening out indicator choice and process is beneficial, there continues to be resistance to more qualitative measurement methods in integrated initiatives for a number of reasons. In evaluation studies and impact assessments, comparison and causality are central tenets. Comparative analysis is deemed necessary in determining causality, the idea that changes have resulted *because of the project* and not due to other factors. The suggestion made is that, since empirical and quantitative data is required to conduct the statistical analysis, this kind of data is therefore prioritized over more subjective qualitative



types. Groups such as those engaged in conservation at scales broader than at the community and who attempt to understand wider cause-and-effect relationships reject case-specific data and subjective indicators. Some natural scientists view as highly problematic the ongoing development in poverty research. They call for a return to simple economic measurements for poverty (Secretariat on the Convention on Biological Diversity, 2010). They raise practical issues, such as the added scope, time and cost of pursuing participatory approaches on top of the pursuit of empirical and more traditionally sought data (through standard questionnaires, for example). More importantly though, qualitative-based data will make comparison or longitudinal analysis “difficult or even infeasible” (Hulme & McKay, 2007, p.199). However, this research has shown that negating the complexity of the new poverty paradigm is not the solution. Inaccurate claims unverified by a statistical emphasis will affect the fundamental understanding of the drivers of poverty, rendering qualitative and larger scale analysis irrelevant.

In addition, great difficulty with causality and counterfactuals has been identified in practice. An “attribution gap”, whether measurable results can be attributed to project activities or a handful of variables, continues to question an ability to measure causality (Thorbecke, 2005, p.8). Chambers also criticizes these themes:

“For project baselines and later impact assessments, questionnaire surveys pose horrendous problems: of comparability of sample; of assessing what would have happened anyway; of finding comparable control areas; and of disentangling multiple causality and knowing what caused what. In consequence, conventional baseline surveys are virtually useless for impact assessments”. (1997, p.123).

As a result of this analysis, some have suggested in the literature that project impact assessment’s role is to find plausible indications – and not scientific proof – of a project’s impact (Herweg & Steiner, 2002). This last statement opens the possibility of placing greater value on the role of qualitative data with regards to plausibility, which is more subjective than proof. This thesis supports the view that a qualitative approach must very comprehensively inform any assumptions made in rationale in particular. The principles

that guide the selection of indicators must be identified and then critically analyzed as they relate to the objectives of the intended initiative. Involving local actors in indicator development is thus seen as an even better method to achieve accuracy.

While project evaluations and impact assessments will continue to be pursued, various suggestions have been made to breach the qualitative versus quantitative and questionnaire versus participatory approaches impasse. Separating out larger project needs, such as proving causality and impact at larger scales from local project needs, such as ongoing monitoring and evaluation, is suggested as one way of moving forward. In this context, embracing a notion of different data types for different needs can facilitate this process. As poverty measurement becomes more complex, there are more and varied data needs that need to be met. To satisfy the requirements of groups relying on cross-comparable data, there are already large international surveys currently used to collect data on poverty, these were listed in chapter two. Especially regarding economic analysis that requires highly quantitative data, panel sets focusing on employment, income and other economic indicators will continue to be produced, often through national departments. Leveraging these surveys usually carried out by experts is suggested, especially to ensure robustness and comparability of quantitative data with increased confidence. However, In order to avoid poverty analysis that produces an understanding of poverty equaling what “has been measured and is available in statistics” (Chambers, 1997, p.46), this thesis supports the view that local data be generated through subjective and participatory frameworks, in the very least for local or regional efforts. Chambers suggests specifically moving away from “long-and-dirty” (lengthy and not useful social anthropological immersion and extensive economic questionnaires) approaches to “fairly-quick-and-fairly-clean” methods (a middle zone where “statistics are servant rather than master”) (Chambers, 1997, p.46). The case presented supports the view that local projects should not default to globally-devised indicators which may be insensitive to local context and variances. Chambers suggests clearly that local data and analysis is appropriate for smaller-scale analysis: “The question now is how widely local people can be enabled to identify

their own indicators, establish their own participatory baselines, monitor change, and evaluate causality, for example through...their personal experience over seasons and years.” (1997, p.123). This thesis supports an active role for the local stakeholders in achieving true participation.

Encouraging local indicator selection and creating more room for local analysis is beneficial for many reasons. In part, including local subjectivity would address what anthropologists critical of “the development enterprise” cite as “the hegemony of the measurable” (Lister, 2004, p.38). More accuracy results from collaboratively-generated data, especially incorporating local views for guiding themes of local importance. Poverty aspects, such as whether the poverty is temporal or chronic, are better addressed. Issues such as equity and vulnerability, which can be hard to define across different contexts, can be elaborated locally. The process of selecting indicators upfront that are deemed relevant can then make room for more participatory forms of post-project and ongoing monitoring, something that is required for sustainability. The very act of sticking to easily measurable indicators, to be done by external agents, undermines vast opportunities inherent in a more inclusive and equitable process. Focusing on wellbeing versus poverty also presents particularly interesting opportunities. Wellbeing, being inherently more subjective than income-poverty, necessitates more participation and can be a good starting point to engage with the political elements of development and conservation that are often ignored.

In the search for integrating the benefits of traditional and often quantifiable indicators and newer subjective indicators, many emerging options are possible. There are ways of quantifying participatory approaches by counting to generate numbers (Mayoux & Chambers, 2005), Q-squared or mixed methodologies capitalize on the strengths of both qualitative and quantitative approaches and recognize the value of integration inherently (Kanbur, 2003). There is generally, however, more impetus to enhance our understanding away from “numbers are king” and increase the local perceptions and nuanced understanding of the poor themselves (Brock & McGee, 2002, p.149). Toward this end, an entire participatory monitoring and evaluation framework for use specifically in the natural

resources sector has been developed (Guijt, 1999). As another possibility, the emerging field of political ecology is challenging the typical understanding of human and nature interactions on conceptual levels and is highly encouraged as background reading (Robbins, 2004). A further discussion on the conceptualization of poverty problems and solutions follows.

### **7.1.2 Conceptual Influences on Problem Identification and Prescribed Solutions for Development**

The definition of poverty is expansive, the causes of poverty varied, and these issues continue to be debated and explored in theory and in practice. Despite the breadth of knowledge on these topics, the conceptual underpinnings of an intervention are not often articulated. Firstly, an intervention must be clear about how poverty or wellbeing is defined specifically. Secondly, clear rationale should explain how the strategies pursued hope to address poverty. The model presented in figure one of chapter two clearly distinguishes between alleviating poverty, reducing poverty and or preventing poverty and this can be a useful model to employ when conceptualizing the role of a natural resource intervention. There will likely be multiple ways a project can integrate a poverty dimension, and these tradeoffs need to be negotiated carefully. Fundamentally though, the different theories on the causes of poverty need to be addressed. Diverging policy responses will be centered on the theory espoused as demonstrated in tables two and three. Some theories identify barriers that are structural in nature, others socio-economic – these nuances should be well evaluated at the project development stage. Lastly, particular attention to understanding the composition of the local population and then targeting subgroups is essential. Though conceptual and challenging, these themes should inform the foundation of any integrated natural resource project. Bridging with local stakeholders and facilitating joint-decision making can ensure rationales are well-reasoned and applicable to a given context.

Central to an analysis of which theory and intervention to support is an understanding of what knowledge is given precedence. In this way, the constructivism (multiple participant meanings) approach which includes subjectivity is very different from

the scientific tradition of positivism. It should be highlighted that the development of the income-poverty perspective in the 1970s resulted from this tradition which has since been found to be incomplete on its own. This thesis has argued that including a local perspective can be very valuable for accurate problem framing and successful policy implementation. This reflects what is clearly cited in the poverty literature:

“The simple definition of the bad condition – poverty – is made, then, not by the poor, from their experience, but by the well-off, for their convenience. Planners’ and academics’ need for a single scale of numbers narrows, distorts and simplifies their perceptions. Deprivation and poverty come to be defined, not by the changing and varied wants and needs of the poor, but by the static and standardized wants and needs of professionals. Conceptually, professionals are then caught in their own reductionist poverty trap. Poverty becomes what has been measured.” (Chambers, 1997, p.46)

In other words, it is undeniable that *how* and *by whom* the poverty problem is framed and which policies will be prescribed is influenced by underlying assumptions. Wrong assumptions will thus inevitably lead to failed or weak interventions. The way to mitigate these erroneous assumptions is by paying attention to indicators, as elaborated earlier in this chapter, but also by acknowledging the important role of all actors, especially those most local to the issue at hand.

Evaluating the chosen *metrics* (indicators) for poverty and wellbeing cannot be done in isolation; they are correlated to the framing of the problem. In order to highlight potentially inadequate conceptual concerns requires the commitment to question the basic assumptions being made via input from all stakeholders. In the field of impact evaluation, some have suggested a move away from output (performance) indicators that monitor and evaluate a project’s *efficiency*, towards impact indicators that monitor and assess a project’s *effectiveness*. In other words, “are we doing things right, or are we doing the right things” (Herweg & Steiner, 2002, p.2). This very much mimics the shifts in adaptive management from proving impact to improving performance (Hulme, 2000). Both of these statements suggest a recognition that process matters more than previously acknowledged. Instead of

the positivist/reductionism science versus social constructivism dichotomy, proponents in the discipline of geography support a truly collaborative approach one that can bridge the disciplinary divide along the continuum and be incredibly relevant in applied policy responses (Pacione, 1999). However, true involvement, as indicated by the theory in figure 2, requires that stakeholder participation evolve from tokenism (consulting where citizens are heard but not necessarily heeded) to local management where decision-making power rests wholly or in part with the local stakeholders.

### **7.1.3 Achieving Measurement Integration: Discipline-based Challenges and Opportunities**

Epistemological, or 'grounds of knowledge', differences can be partly at the root of measurement challenges. In natural resources management, measurement using colonial science, or an expert-only driven approach, has dominated instead of *democratic* science which incorporates local knowledge and encompasses the ends and especially means of scientific inquiry (Brown, 2003; Wallington, Hobbs, & Moore, 2005). Since some claim "the age of management is over" (Ludwig in Berkes, 2004), decreasing reliance on highly specialized experts gives way to involve active participation from many actor groups. The multi-stakeholder *means of science* necessarily dictates active participation. Without local involvement, poverty and conservation are likely to suffer from faulty problem framing and flawed cause-and-effect thinking that emerges from a "single-hypothesis approach" (Sundberg, 1998). Whereas a natural scientists might scoff at the notion that linking conservation and poverty reduction is "more of an art than a science" (Fisher et al., 2008, p.125), their skills are still essential in intertwining scientific concepts together with social science understandings. A bridge between different disciplines or the increased incorporation of multidisciplinary is needed to encourage more useful approaches, especially towards measurement, within natural resource and poverty reduction initiatives.

Historically in the field of geography, the Saurian turn changed the perspective used when analyzing land and people interactions: "Inverting [environmental] determinism, historical landscape studies sought to explain the physical patterns on the land (forest cover,

soil erosion, stream flows) in terms of human culture rather than the other way around" (Robbins, 2004, p.29). The literature suggests a very similar shift is now needed in the integration of conservation and development. The problem is not (only or necessarily) "how are local populations degrading local landscapes" but instead "what processes and politics foster unsustainable decisions, at the local level and otherwise?". Changing the questions intrinsically will change the metrics though professional challenges remain in reversing entrenched views. One particular example includes a move away from supposed "long and legitimate" questionnaires as better than so-called "short and suspect" alternatives including PRA methodology (Chambers, 2008, p.72, 73) for poverty measurements. Disciplines accustomed to engaging in different methods and breaching the social and natural science divide, (for example Geography), are well-suited to engage in critical examinations of the reversals of concepts in the pursuit of more successful theoretical applications.

Allowing for subjective definitions of poverty and wellbeing, as promoted by the capabilities framework, is a better approach for different reasons. Local views are essential when determining the perceived causes of poverty in question because they account for context and can adequately inform the poverty theory espoused. Within a subsection of economic-development theories, the difference between seeking development through modernization theory would imply a vastly different focus on indicators and activities than if the dependency theory were to be emphasized. Modernization theory suggests embedding more fully into the globalized economic system is the answer to poverty. Dependency theory seeks the opposite, the challenging of the trade framework that limits opportunities. Local people are in a better position to understand the fundamental barriers being faced to pursue local progress. Pursuing local definitions of poverty and wellbeing concepts also require a highly participatory process which incorporates political and decision-making issues. However, reversing top-down development approaches remain the challenge. Divergent subjective views can highlight the gains to be had from participatory approaches. This change is especially needed to now understand, design and evaluate the

combination of conservation and development actions. Instead of blaming culture or the locals who may have limited ability in influencing change, a shift to encompass a stronger role for structural underlying explanations for changes in the natural environment is encouraged. However, there is resistance to this politically-sensitive shift. An emphasis on changing the process of knowledge production, through participatory methodology, has been argued in this thesis as one way forward.

#### **7.1.4 Future Trends on Measuring “Progress”: from Poverty Reduction to Wellbeing to Participatory Approaches that address Inequality for Integrated Initiatives**

The field of poverty studies has undergone great transformation in the past century. This thesis argues that such transformation should be fundamentally recognized and leveraged in the field of development but particularly in integrated conservation initiatives. The concept of poverty went from being defined as income-poverty by external actors to being defined through the more encompassing capabilities concept. Capabilities poverty requires understanding what deprivations are preventing a person’s agency. Capabilities poverty is not static but fluid and highly dependent on context that requires local understanding and subjectivity. As a way of reflecting this change, wellbeing is now the operative word being used in policy and projects, not poverty, though they are related. Economic development continues to be pursued as a response to poverty, but has not been able to encompass the holistic poverty or wellbeing concept adequately. As a result, defining the components that make development equitable and addresses rights has emerged as a focal area. Equity, or a right’s based approach, includes a fair process in defining and decision-making with regards to a person or a community’s goals. For integrated conservation and development initiatives, this shift has not yet been adequately recognized. The metrics to shift to this new paradigm need further development, especially metrics that are centered on the role of politics and processes. Instead of expert-driven development, progressive alliances that include a rightful place for local actors should be fostered. As Carruyo states, what is needed are: “partnerships not paternalism” and work that is based on “politics of respect and not of rescue” (2008, p.109). This fundamental view



is required to make space for local knowledge and involvement at finer grains of work, including the definition and selection of indicators as useful benchmarks. This research supports some of the literature-based arguments for pluralist and/or participatory strategies which identify community capabilities (Alkire, 2007a).

Poverty reduction, the development of wellbeing and sustainable livelihoods all while conserving natural resources remain as challenging, but very much interrelated goals. Conservation groups are correct in questioning the inclusion of poverty reduction goals when these are in juxtaposition to conservation-related goals such as limiting sensitive access or preventing the unsustainable use of resources. When poverty is framed in income and economic growth terms, the reluctance to engage in these issues is clear since pursuing those goals is contradictory. However, this thesis highlights how returning to more “protectionist” philosophies are completely at odds with current development thinking. Moreover, conservation policies that limit access and exert external power and authority over local views will hamper present and future potential for consciousness-raising and learning through trial and error. This is significant since these are the very mechanisms that led to the development of the West’s “conservation ethic” in the first place. With collaborative frameworks based on mutual respect, other possibilities for successful integrated models exist that stand a better chance of incorporating the needs and concerns of all stakeholders. While win-wins may not always or even often actually be possible for conservation and development, accounting for the role of power and politics in the decisions around tradeoffs can help highlight who consistently gains and losses, and what can be done to mitigate injustices. A fundamental understanding of the themes discussed in the literature and in this thesis are essential to begin to understand these future trends.

The findings from this thesis are well-aligned with the criteria deemed essential in the literature for a successful poverty and conservation model. These included: 1) addressing multifaceted dimensions of poverty. 2) including subjectivity and participation as originally defined and effectively managing resources, 3) paying attention to context, and 4) taking into account equity and rights. This thesis has explored all these concerns. The

multifaceted dimensions of poverty are best viewed through the capabilities poverty view which focuses on opportunities and not assets. Though these can have an economic dimension, it is about access to opportunities that is relevant. The inclusion of subjective metrics around wellbeing, through local participation, is conceptually more aligned with the goals of sustainable livelihoods, healthy relationships and equitable communities. Wellbeing is not about economics, it is more about empowerment and security fundamentally. Since as the literature attests, conservation is a social process, the importance of engaging with perceptions and subjective views can be critical, and equally how those processes are pursued. Participatory approaches, especially those that remain true to the devolution of decision-making power, will inherently pay attention to the local context and stand better chances at success. Lastly, the management of natural resources as well as poverty reduction can be political activities that require a central focus on rights and equitable development. Failure to involve the local inhabitant perspectives will ensure the repetition of flawed rationale. Outsider-driven concepts will potentially repeat outdated poverty approaches with an emphasis on income or economic indicators. The quest for progress requires the integration of outsider and insider knowledge, expert and amateur, global and local in combination. Some specific recommendations to this end follow.

## **7.2 Recommendations on Integrating Poverty Measurements for Conservation**

In the pursuit of integrating conservation and development, existing knowledge has been reviewed and in particular 4 gaps in the conceptual integration of conservation and development have been identified. These gaps include: 1) embracing multifaceted poverty, 2) including subjectivity, 3) recognizing the role of context, and 4) focusing on equity and rights. This thesis has explored these gaps and makes the following recommendations to help address these voids in current knowledge.

## **7.2.1 Recommendations for implementing bodies (local or regional NGOs)**

### 7.2.1.1 Conceptual Recommendations

Recommendation #1: To subscribe to a rights-based philosophical approach, inherently this implies being politically-sensitive and committed to social justice.

Fundamentally, the view that both conservation and development are political activities needs to be recognized. Failing to recognize this will ensure the contested nature of these activities is misunderstood as delinquency, disinterest or ignorance. The inclusion of local views, through decentralized decision-making, is one way to reverse entrenched power and may facilitate greater success with complex initiatives.

The guiding philosophy of a project, the implementing NGO and the actions of its staff, have the ability to influence a project or program as much as the planned activities themselves. All actions and the overall approach should be strongly committed to equitable and transparent processes. This commitment requires careful consideration of the gains of program efficiency (for example meeting targets, timelines) at the expense of longer term trade-offs such as elite capture and corrupt (“bad faith”) relationships. Subscribing to a rights based approach in particular de-emphasizes handouts or other asset-based activities that do little to contribute empowerment or an active role for local populations with regards to their development. Instead of working with the most well-off in communities, efforts to incorporate activities that target the most poor is a focus of this approach. One illustrative example is fostering opportunities, through greenhouse efforts, for landless day labourers, women or other disadvantaged groups.

Recommendation #2: To articulate a clear poverty and/or wellbeing definition from the onset of an initiative, ideally in a project development phase.

An active process of defining poverty or wellbeing is positive since it can help articulate what is specifically being sought. By providing specifics through a definition, it will also be

easier to determine if the concept defined and employed is well aligned with current research and practice. The use of existing poverty definitions is not discounted as one method to achieve this, but there are more participatory methods that are also proposed. By using the concept of wellbeing instead of poverty, there is more opportunity to engage in subjective definitions likely of greater importance to local actors. In either regard, the process of deciding on a definition has the potential to reveal underlying beliefs about the phenomenon in question that an intervention hopes to target, address, and is required to measure.

Recommendation #3: To identify the attributed causes of the poverty or lack of wellbeing with an understanding of conceptual differences. Ideally this is done concurrently with the selection of an appropriate definition.

Given that questionable rationale is cited as a justification for decoupling conservation and development initiatives, a strong rationale requires a robust understanding of the different drivers of both unsustainable resource use issues as well as underdevelopment rooted in theory. Here the avoidance of circular arguments such as poverty is both a cause and result of environmental mismanagement is encouraged. Instead, ensuring explicit and accurate links between these themes is required to make a clear case for their integration. Furthermore, the identification of root causes may reveal important considerations for the intervention philosophy being planned overall, especially as projects seek to correct drivers of unsustainable behaviour and promote increased wellbeing. A notion of scales can be critical in deciphering the likelihood that a project has impact potential, especially if the biggest influences are at the macro-level and not amenable to any realistic influence. As one example, this case brought up the vulnerability to detrimental variations in international market prices for the export crops that form the basis of the local economy.

Recommendation #4: To shift the focus of development projects away from traditional 'poverty' concepts rooted in economic terms and towards a capabilities poverty framework or 'wellbeing'.

Wellbeing embraces multi-faceted poverty since it is conceptually very ample. Wellbeing is a subjective measure that is context-dependent and requires the input of local participants, especially if considering subjective wellbeing. Wellbeing measurement also tends to move away from material-based indicators to more complex but important notions of empowerment and vulnerability that play important roles in both wellbeing but also within issues of resource management in a developing country context. Choosing to root integrated projects within wellbeing instead of poverty will also encourage a move away from economic development as the poverty policy.

#### 7.2.1.2 Operational Recommendations

Recommendation #5: To pursue initiatives through participatory frameworks from the onset.

Participatory frameworks, by definition, incorporate a multiplicity of views that are subjective by the very nature of engaging with local knowledge. By leveraging participation, attention to context is guaranteed since ideas are locally-driven. A particular emphasis on incorporating local views well before project plans get elaborated (during problem framing) can help ensure rationales are well developed and justifiable from a local perspective. Local interpretations often highlight inadequate suggestions put forth regarding local drivers of environmental harm, for example. The barriers to implementing feasible changes are also evaluated adequately based on local context and opportunities to leverage win-win opportunities can also be revealed, for example by better integrating program activity

targeting and timing to those who need it most, at critical times, etc. Poverty's three I's (incidence, intensity and inequality) can thus be engaged more adequately.<sup>9</sup>

Participation, in its truest decision-making theoretical form, fundamentally engages with equity and rights issues because it is about power devolution. As a result, a participatory framework is well-aligned with the capabilities view of poverty. Two notable authors to reference include any of Robert Chambers' publications and author Irene Guijt (1999) who has developed a participatory monitoring and evaluation framework for use in the natural resources sector specifically.

Recommendation #6: To improve identification methods to ensure comprehensive population coverage.

The adequate targeting of the most-marginalized stakeholders can only be undertaken with a well-defined and inclusive understanding of the local population. The most marginalized community members are often excluded in project plans because they may have been missed by previous inadequate identification methods. Particular attention needs to be paid to comprehensively identify all members of a community to ensure politically-sensitive and equitable development and conservation activities are implemented. The inclusion of a community-wide multiplicity of views is required, especially perspectives that have been historically silenced or ignored. Failure to account for these marginalized viewpoints can impede project initiatives both in the short and long-term. Some key recommendations to this end include the following:

- Participatory mapping can help identify, for example, all households in a geographic area within the context of deficient or outdated data. Local knowledge can help ensure

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<sup>9</sup> Appendix J contains a brief list of recommendations elaborated by participants themselves via the questionnaires or focus groups.

the inclusion of politically sensitive issue such as illegal settlements, one-parent households, community members that are most marginalized by issues such as physical or mental impairments, and others.

- Participatory wellbeing or wealth ranking can then help stratify and reveal population differences; often this is local and widely-held knowledge. For example, the community itself may be in the best position to identify those most marginalized using a variety of variables including but not limited to economic considerations, social vulnerability, seasonal or chronic poverty.
- For NGO activities, it is imperative to ensure the transmission of information is comprehensive and reaches those at the geographical and social periphery. This includes, for example, announcements regarding community meetings, events, and especially information where benefits are concerned such as an opportunity to participate in a workshop, learn a new skill, get on an eligibility list, etc. Though more time-consuming and costly for NGO staff, benefits gained by trust and goodwill in a transparent and equitable process can greatly facilitate future community work. Streamlining processes for information dissemination could eventually be pursued collaboratively to ensure a system is in place that will reach all community members.

Recommendation #7: To leverage existing data sources for broader project needs, but aim for subjective and local data generation for applied project needs.

In most countries, socio-economic data is already produced by regional or national government departments, or coordinated through bodies such as the UN, the World Bank, etc. Examples include national censuses, the world-wide surveys cited in chapter two and others. Survey sources specific to the DR are listed in appendix I. NGO staff should familiarize themselves with what data is already available before undertaking any extensive

data acquisition directly. Existing data, which is institutionally captured and often quantitative in nature, can satisfy more traditional measurement needs with the appropriate scientific rigor (for example from an income-poverty perspective). Leveraging these existing sources can free up time and resources for the collaborative production of context-specific subjective data for project purposes. Generating this subjective data is an activity that can only be done in an applied way at the most local level and is thus a more appropriate focus for NGOs and implementing bodies.

## **7.2.2 Recommendations for Funding and Government Agencies**

### 7.2.2.1 Conceptual Recommendations

Recommendation #8: To shift development and conservation thinking towards rights-based approaches that have “people-centered” and not “asset-based” goals reflective of current academic theory.

A fundamental recognition is needed that development is not aid. Avoiding a focus on the provision of things and instead fostering knowledge and management capacity at all levels can help breach the conceptual difference. Development is politically-oriented towards addressing the root causes of social and natural resource-based problems. A particular focus on capacity development, empowerment and issues of equity can ensure the right elements are targeted in work being proposed.

Recommendation #9: To acknowledge that the most marginalized stakeholders need to be taken into account for comprehensive work on poverty and conservation issues.

Though working with the most marginalized community stakeholders may have legal limitations (for example illegal residents, landless farmers), finding creative ways to engage



with these most vulnerable populations is essential for a politically-sensitive approach. The above recommendation to focus on empowerment and capacity-building instead of the provision of assets is one way to avoid legal restrictions.

#### 7.2.2.2 Operational Recommendations

Recommendation #10: To guide the appropriate selection of indicators that are well-aligned with an overarching rights-based approach.

Project metrics should not automatically default to easily measurable indicators as the most important criteria. Instead, a focus on the meaningfulness of the data acquired should guide indicator selection towards accounting for political implications. For conservation and development initiatives, an emphasis on land tenure together with crop choices is essential, for example. Attention to how the data acquisition process is undertaken can also help anticipate deficiencies. If participatory processes are not incorporated adequately, for example beyond consultative tokenism, indicators risk not capturing the intended data.

Recommendation #11: To include social scientists, (especially human geographers, applied anthropologists or political ecologists) on project development and evaluation staff.

A cross section of professionals is required to adequately work the multidisciplinary themes of poverty and conservation. Ensuring the inclusion of staff trained in the social sciences for project development and implementation teams can help highlight the political and constructionist nature of both conservation and development initiatives. In particular, they can help reveal unintended social consequences of actions and scientific philosophies grounded in hard truths and sometimes considered apolitical.

### 7.2.2.3 Process Recommendations

Recommendation #12: To facilitate the access of new poverty and conservation theories and practices to stakeholders, especially implementing bodies such as NGOs and students.

Making ideas accessible locally is necessary to teach the important conceptual shifts elaborated in the recommendations above. Facilitating access to these ideas especially includes the translation of key reference works into local languages. Hosting teaching workshops, inviting key authors, and targeting the next generation of development workers through universities is needed. Web-based communication presents affordable opportunities to engage with stakeholders virtually, through webinars, for example. In contexts with colonial histories, large class differences and where paternalism is a concern, communicating the new theories regarding capabilities poverty, participatory methods and bottom-up development is essential to foster the new best practices.

Recommendation #13: To highlight and advocate the best practices through development practitioner networks

Learning about the application of ideas in practice can be a powerful learning tool. Government and funding agencies can play a role in the promotion of the new shifts in poverty and conservation thinking by facilitating stakeholder events, workshops, awards, etc. Field-based experiential learning is especially highlighted to enable the interaction with the most local actors in the initiatives. An open culture of sharing both findings and failures should be encouraged.

### **7.2.3 Recommendations for further academic research**

Below are issues that fell outside the scope of this research but present interesting new opportunities for engaging with the broad topics of conservation and development and themes of particular relevance for their integration.

- There is an ongoing need to continue to promote the use of **political ecology analytical frameworks**, especially “chains of explanations” that integrate global and local analysis to help inform multiple-causality problem formulation. Particular attention to this debate should be paid to **the role of macro forces** for environmental harm (for example large swathes of cattle ranching) versus other local causes that are more commonly cited as a root problem (such as slash and burn or shifting agriculture). Political ecology is particularly well-suited to this analysis that takes into account dominating and silent narratives, the different politically-sensitive scales of influence, and fundamentally, issues of power in the formulation and conceptualizations of problems and solutions.
- Though there are academic studies which focus on the role of institutions, **local culture** does not seem to be fully explored in the literature of conservation and development. The very social role of culture in conservation is not engaged generally in any serious way. Although trends point away from culture since its contextual nature hampers wider theory-development, opportunities are present in engaging with culture as an informal institution guiding significant actions on the ground. Culture is indeed central to changing practices and can be linked to empowerment. In the DR the culture of nothing discussed in the literature versus the empowered statements from the survey results point to a disconnect worth investigating.
- In the case, the role of God / luck / Baca in improving one’s wellbeing status is deemed highly relevant but not well aligned to questionnaire or focus-group based methods. The morality of ambition was highlighted as an interesting area combining these themes. Likewise, **Spiritual wellbeing**, especially if found to be linked to limiting capabilities through disempowerment, needs further investigation through ethnographic research. References to the “will of God, witchcraft, evil eye” have been traced to local chronic poverty understandings (Hulme & McKay, 2007, p.193) but linking this to psychological aspects, especially the capacity to aspire (Alsop, 2007) has not been investigated to date.

- **Conuquismo**, or other similar historical local land use practices (especially in dryland regions), require more attention. Conuquismo presents a model of agriculture that was historically entrenched, common, and by some accounts sustainable (although likely low-yielding). The swidden nature of conuquismo or other land uses such as pastoralism, are interesting focal areas when intersected with the poverty themes of risk aversion, food security, and environmental themes such as climate change adaptability. Although possibly incompatible with traditional notions of private land tenure, there may be sustainability applications worth investigating from an ecosystems-scale perspective.

### **7.3 Final Comments**

The themes explored in this thesis are not new, and often they are already part of the definition of poverty. Finding ways to more fully embrace and implement these ideas meaningfully and through appropriate actors and processes continues to be sought in operation terms. This thesis has argued that the way the themes of poverty, wellbeing and resource management get conceptualized, and in turn, measured, demands greater attention still. Analyzing the framing of these themes by outsiders can reveal idiosyncrasies that may be at odds with local understandings. Any attempt at long term solutions, both from a poverty or a conservation perspective, must emphasize a leading role for those often most affected by policy. As together we seek to address gross inequalities of assets and opportunities at the global level, while simultaneously fostering a sustainable and stewardship mindset, it is implicit upon researchers and readers alike to be mindful of our own roles in the debate. When the complexity and despair appear as seemingly insurmountable challenges, we might just summon a little hope, exclaim “Oh-Oh” as the rural Azuanos do, and imagine a brighter future.

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## Appendix A

### List of Variables for Questionnaire Data

#### Methodological: Study-specific

Sampling Breakdown by Neighbourhoods in Monte Bonito

Age of Respondents

Gender of Respondents

Age of Survey Respondents (categorized)

#### Demographic

Age Distribution of Population

Total Household Population

Two-parent households

#### Perceptions on Poverty and Wellbeing

Causes of Poverty

Perceptions of the Causes of Poverty

Wellbeing Definitions

Wellbeing Indicators

Perceptions on Increases in Wellbeing

Causes of Current Wellbeing Status

Perceptions of Income Sufficiency

Perception of Household Status

Biggest Worries of Monte Bonito Residents

#### Income-Related

Sources of Household Income

Daily Per Capita Income in USD of Monte Bonito and El Recodo Residents (Using World Bank / USAID poverty categories)

Monthly Per Capita Income of Monte Bonito and El Recodo Residents in RD

#### Sur Futuro Specific

Sur Futuro Name Recognition

Sur Futuro Work Activities Cited

#### Land-Related

Resident's Land Status

Resident's Land Ownership Distribution by Number of Tareas

### Conservation Specific

Self-reported Knowledge of MST / Soil Conservation

MST Practices Cited

Perception of MST as Beneficial

Cited Benefits of MST

Land Owners Using MST / Soil Conservation

Distribution of Self-reported MST / Soil Conservation application on Tareas

Landowners' Reasons for not applying MST / Soil Conservation

### Education Related

Number of Male and Female Students

Ages of Students

Students in Post Secondary

Reasons Given for Abandoning Studies

Ages of Illiterate in Monte Bonito and El Recodo

Number of Illiterate Household Members

### Infrastructure / Asset Specific

Households with Electricity

Types of Fuel used by households

Locations for Fuel Sourcing

Sources of Household Water

Household Washroom Infrastructure

### Capacity / Vulnerability

Percentage of Households with Membership in an Organization

Active Community Associations with Membership Percentage

Resident's Reasons for not belonging to an Association

Perception of Ability to Change Current Household Situation

Household Decision Makers

Government Assistance Recipients (Solidarity Card)

Perception of Vulnerability to Natural Disasters

Household Frequency of Food Shortage

## Appendix B

### Encuesta Socioeconómica / Socioeconomic Questionnaire

[English Translation Follows]

Entrevistador \_\_\_\_\_ Fecha \_\_\_\_\_ Encuesta No. \_\_\_\_\_  
Nombre del entrevistado \_\_\_\_\_ Sexo: M F Edad: \_\_\_\_\_ Finca Modelo: SI NO

#### OBSERVACIONES:

1. Material de las **paredes** de la vivienda: a) Block/concreto b) Madera c) Tabla de palma d) Zinc e) Otro \_\_\_\_\_
2. Material del **piso** de la vivienda: a) Mosaico b) Granito c) Cerámica d) Cemento e) Tierra f) Otro \_\_\_\_\_
3. Material del **techo** de la vivienda: a) Concreto b) Zinc c) Cana d) Otro \_\_\_\_\_

#### CARACTERISTICAS DEMOGRAFICAS

4. ¿Cuántas personas viven en la vivienda (total)? \_\_\_\_\_
5. ¿Sus edades: a) <5 \_\_\_\_\_ b) De 6 a 18 \_\_\_\_\_ c) De 19-30 \_\_\_\_\_ d) 31+ \_\_\_\_\_
6. ¿Cuántos de los que viven aquí son? a) Hembras \_\_\_\_\_ b) Varones \_\_\_\_\_
7. ¿Viven padre y madre juntos en este hogar? Si No

#### DEFINICIONES DE POBREZA Y BIENESTAR

8. ¿Cómo considera la situación de su hogar? Estamos bien / regular / mal
9. (En caso de estar regular o mal) ¿Por qué, o cuál es la causa principal de su pobreza?  
\_\_\_\_\_
10. ¿Qué significa para Uds. lo que es tener bienestar?  
\_\_\_\_\_
11. ¿Conoce usted los trabajos que realiza la Fundación Sur Futuro, en esta zona? a) Si b) no  
a) En caso de Si ¿Cuál (es)? \_\_\_\_\_
12. ¿Piensa Ud. que desde hace 4 o 5 años atrás se ha aumentado el bienestar en su comunidad?  
no/un poco/regular/mucho?  
Explique porqué \_\_\_\_\_

#### INGRESOS Y EMPLEO

13. ¿De dónde viene la mayoría del ingreso de la vivienda? \_\_\_\_\_ (Especificar: Agricultura-Ganadería-Foresta-Combinación)
14. ¿Los terrenos que cultiva son:  
a) Propios, con título b) Propio sin título c) Prestados e) Arrendados e) A medias f) Por un % de la cosecha  
g) otro \_\_\_\_\_
15. ¿Cuántas tareas tiene en total? \_\_\_\_\_ tarea
16. En caso de no tener título, ¿cómo le afecta no tener su propio título?  
\_\_\_\_\_

17. Cuanto le gano al los siguientes productos:

Café: \_\_\_\_\_ Quintales a qué precio \_\_\_\_\_ RD  
Aguacate: \_\_\_\_\_ Unidades a qué precio \_\_\_\_\_ RD  
Tayota: \_\_\_\_\_ Docenas a qué precio \_\_\_\_\_ RD  
Guandules: \_\_\_\_\_ Quintales a qué precio \_\_\_\_\_ RD  
Habichuelas: \_\_\_\_\_ Quintales a qué precio \_\_\_\_\_ RD  
Guineo: \_\_\_\_\_ Racimos a qué precio \_\_\_\_\_ RD  
Manzanas: \_\_\_\_\_ Unidades a qué precio \_\_\_\_\_ RD  
Producto: \_\_\_\_\_ Quintales/Unidades a qué precio \_\_\_\_\_ RD  
Producto: \_\_\_\_\_ Quintales/Unidades a qué precio \_\_\_\_\_ RD

18. ¿Tiene algún animal? ¿Cuántos? Caballos \_\_\_\_\_ Burros \_\_\_\_\_ Mulas \_\_\_\_\_ Vacas \_\_\_\_\_  
Chivos \_\_\_\_\_ Ovejas \_\_\_\_\_
19. ¿Hay otras fuentes de ingreso? Si No  
Cuales? \_\_\_\_\_, \_\_\_\_\_ (i.e. remesas, jornal, motoconcho, especifique frecuencia)
20. ¿Tiene una tarjeta de solidaridad? Si No
21. ¿Cree Ud. que los ingresos de la familia son suficientes para vivir adecuadamente? Si No
22. ¿Conoce lo que es la ley de foresta? Si No En caso de sí, cómo le afecta: No me afecta/me afecta un poco/Me afecta mucho  
¿Cómo?: \_\_\_\_\_
23. ¿Conoce algún método o práctica para conservar el suelo o la tierra? Si No  
Cuales: \_\_\_\_\_, \_\_\_\_\_
24. ¿Están usando alguna de estas prácticas en su terreno? Si No  
a) ¿En caso de no, porque no? \_\_\_\_\_  
b) En caso de si, ¿cuales practicas? \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_  
c) ¿En cuántas tareas en total? \_\_\_\_\_
25. ¿Piensa Ud. que las practicas de conservación de suelo han sido beneficiosas? Si No  
¿Por qué? \_\_\_\_\_

#### INFRAESTRUCTURA Y SERVICIOS:

26. ¿Tiene energía eléctrica en la casa? Si No
27. ¿Qué combustible usa usted para cocinar? a) Gas b) Carbón c) Leña d) Otro \_\_\_\_\_
28. ¿Donde buscan \_\_\_\_\_ para cocinar?  
a) Bosque b) Sus fincas c) Lo compran en su comunidad d) Lo compran en una comunidad vecina  
e) Otro: \_\_\_\_\_
29. ¿De dónde viene el agua del consumo de la casa?  
Por tubería b) Pozo c) Río d) Lluvia e) Otra \_\_\_\_\_
30. Si no es por tubería, ¿En qué tiempo busca el agua que necesite cada día? \_\_\_\_\_ min. / horas
31. ¿Donde hacen sus necesidades? a) letrina b) inodoro c) a campo abierto d) otro: \_\_\_\_\_

#### SALUD

32. En caso de enfermedad ¿dónde va para ser atendido?  
Centro de salud de aquí b) En el pueblo más cercano c) Curandero de aquí  
d) Otro (especifique) \_\_\_\_\_

33. ¿Donde son atendidas las embarazadas? Centro de salud de aquí b) Hospital del pueblo más cercana c) Partera de la comunidad d) Otro (especifique) \_\_\_\_\_
34. ¿Cuántas de las mujeres de la casa son madres? \_\_\_\_\_
35. ¿Ha fallecido alguna mujer de este hogar por problemas de embarazo, sea antes, durante el parto, o después? Si cuantas:\_\_\_ No

**EDUCACIÓN**

36. ¿Cuántos de la vivienda estudian: \_\_\_\_\_ Hembras \_\_\_\_\_ Varones \_\_\_\_\_ Edades: \_\_\_\_\_
37. ¿Alguien de la vivienda estudio en la universidad? Si No
38. ¿Cuántos abandonaron los estudios \_\_\_\_\_ Hembras \_\_\_\_\_ Varones \_\_\_\_\_ Edades: \_\_\_\_\_  
¿Porqué \_\_\_\_\_
39. ¿Cuántos de su vivienda **NO** saben leer y escribir: \_\_\_\_\_ sus edades: \_\_\_\_\_

**VULNERABILIDAD / CAPACIDAD SOCIAL**

40. ¿Quién toma las decisiones del hogar (quien manda)? \_\_\_\_\_
41. ¿Su hogar carece de escasez de comida? Si todo el tiempo / a veces sí a veces no / nunca
42. ¿Pertenece alguien de la vivienda a alguna asociación?  
Si, cual (es) \_\_\_\_\_, \_\_\_\_\_ No  
a) En caso de no, ¿Por qué?: \_\_\_\_\_
43. ¿Cuál es su mayor mortificación o preocupación?  
\_\_\_\_\_
44. ¿Aquí en Monte Bonito/El Recodo se siente Ud. en peligro de eventos naturales como por ejemplo huracanes? a) No me siento en peligro b) Me siento un poco en peligro c) Me siento en mucho peligro
45. ¿Si siente Ud. con capacidad para mejorar su calidad de vida actual? Si No  
¿Por qué? \_\_\_\_\_
46. ¿Piensa Ud. que su bienestar está controlado por otros factores fuera de lo natural? (como son los hechizos) Si No  
Explique: \_\_\_\_\_
47. Si tuviera todo el poder de hacer un cambio para incrementar su bienestar, ¿qué haría?  
\_\_\_\_\_  
\_\_\_\_\_
48. ¿Hay algo más que quiere añadir? ¿Me falto algún tema que considera importante en un estudio de pobreza y bienestar?  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**NOTAS:**

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

## Socioeconomic Survey in Monte Bonito y El Recodo (English Translation)

Interviewer \_\_\_\_\_ Date \_\_\_\_\_ Survey # \_\_\_\_\_

Name of Respondent \_\_\_\_\_ Sex: M F Age: \_\_\_\_\_ Model Farm: YES NO

### OBSERVATIONS:

1. Materials for the **walls** of the home: a) Block/Concrete b) Wood c) Palm Thatch d) Zinc  
a. e) Other: \_\_\_\_\_
2. Materials for the **floor** of the home: a) Mosaic b) Granite c) Ceramic d) Cement e) Earth  
a. f) Other: \_\_\_\_\_
3. Materials for the **roof** of the home: a) concrete b) Zinc c) Cane d) Other: \_\_\_\_\_

### DEMOGRAPHIC CHARACTERISTICS

4. How many people live in the home (total): \_\_\_\_\_
5. Ages: a) <5 \_\_\_ b) 6 – 18: \_\_\_ c) 19-30: \_\_\_ d) 31+: \_\_\_\_\_
6. How many a) Females \_\_\_\_\_ b) Males \_\_\_\_\_
7. Do the mother and father live together? Yes No

### POVERTY AND WELLBEING DEFINITIONS

8. What do you consider to be your household Situation? We're Well / So-so / Doing Poorly
9. (In the case of answering So-so or Doing Poorly) Why or what is the principal cause of your poverty? \_\_\_\_\_
10. What does wellbeing mean to you?  
\_\_\_\_\_
11. Are you familiar with the work Sur Futuro carries out in this area? a) Yes b) no  
a. If Yes, what? \_\_\_\_\_
12. Do you believe there has been an increase in wellbeing in your community in the last 4 to 5 years? no/a Little /so-so/a lot  
Explain why \_\_\_\_\_

### INCOME AND EMPLOYMENT

13. Where does most of the household income come from? \_\_\_\_\_  
(Specify: Agriculture/Ranching/Forestry, etc)
14. The land you cultivate is:  
a) Own, with title b) Own without title c) Lent ) Leased e) Combination f) For a % of the crop g) Other \_\_\_\_\_
15. How many tareas do you have in total? \_\_\_\_\_ tareas
16. In the case of not having a land title, how does this affect you?  
\_\_\_\_\_

17. How much did you produce and earn from the following products:

Coffee: \_\_\_\_\_ Quintales at what price \_\_\_\_\_ RD  
Avocado: \_\_\_\_\_ Units at what price \_\_\_\_\_ RD  
Tayota: \_\_\_\_\_ Dozens at what price \_\_\_\_\_ RD  
Guandule: \_\_\_\_\_ Quintales at what price \_\_\_\_\_ RD  
Beans: \_\_\_\_\_ Quintales at what price \_\_\_\_\_ RD  
Banana: \_\_\_\_\_ Bunches at what price \_\_\_\_\_ RD  
Apples: \_\_\_\_\_ Units at what price \_\_\_\_\_ RD  
Product: \_\_\_\_\_ Quintales/Units at what price \_\_\_\_\_ RD  
Product: \_\_\_\_\_ Quintales/Units at what price \_\_\_\_\_ RD

18. Do you have any animals? How many: Horses \_\_\_\_\_ Donkeys \_\_\_\_\_ Mules \_\_\_\_\_ Cows \_\_\_\_\_  
Goats \_\_\_\_\_ Sheep \_\_\_\_\_

19. Are there any other income sources for your household? Yes No

If yes, what and how much do they contribute? \_\_\_\_\_ (remittances, day laboring, enterprises, specify frequency)

20. Do you have a solidarity card? Yes No

21. Do you believe your household income is enough to live adequately? Yes No

22. Are you familiar with the forestry law? Yes No

If yes, how does this affect you: it doesn't / affects me a little / affects me a lot

How?: \_\_\_\_\_

23. Do you know of any method for sustainable land management or soil conservation practices?

Yes, Practices: \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_ No

24. Are you using any practices on your land? Yes No

If not, why not? \_\_\_\_\_

If Yes, Which practices? \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

On how many areas in total? \_\_\_\_\_

25. Do you believe these practices have been beneficial? Yes No

Why? \_\_\_\_\_

### INFRASTRUCTURE AND SERVICES

26. Do you have electricity in your home? Yes No

27. What fuel do you primarily use for your cooking? a) Natural Gas b) Charcoal c) Wood

d) Other \_\_\_\_\_

28. Where do you obtain this? a) forest b) farm c) purchased in community d) neighbouring

community e) Other: \_\_\_\_\_

29. Where does the water for the household come from? a) plumbing b) well c) river d) rainwater

e) Other: \_\_\_\_\_

30. If it is not piped, how long does it take to fetch water each day? \_\_\_\_\_ minutes / hours

31. Where does your household go to the washroom: a) latrine b) toilet c) in the field

d) other: \_\_\_\_\_

**HEALTH**

- 32. In the case of illness, where do you go for medical attention?  
a. local health centre b) health centre in closest town c) local healer d) Other (specify)  
\_\_\_\_\_
- 33. Where are pregnant women attended to?  
a) local health centre b) health centre in closest town c) community midwife d) Other (specify)
- 34. How many of household women are mothers? \_\_\_\_\_
- 35. Have any women in this household died from complications due to pregnancy, be it before, during labour, or afterwards? Yes, how many: \_\_ No

**EDUCATION**

- 36. How many in the household study: \_\_\_\_ Females \_\_\_\_\_ Males \_\_\_\_\_ Ages: \_\_\_\_\_
- 37. Has anyone attended university? Yes No
- 38. How many have abandoned studies? \_\_\_\_ Females \_\_\_\_\_ Males \_\_\_\_ Ages: \_\_\_\_\_  
¿Why \_\_\_\_\_
- 39. How many in the household **DO NOT** know how to read and write? \_\_\_\_ Ages: \_\_\_\_\_

**VULNERABILITY / SOCIAL CAPACITY**

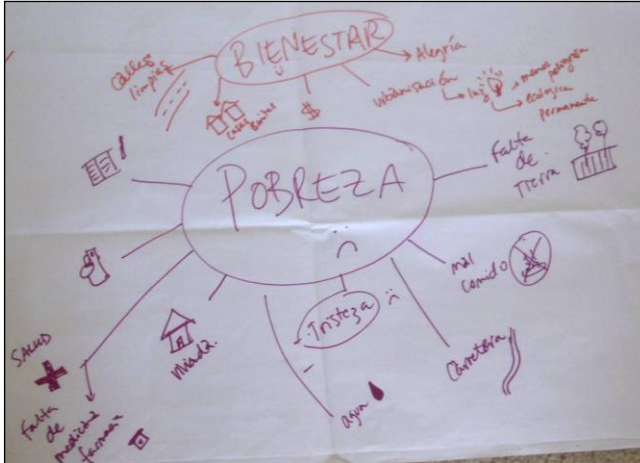
- 40. Who's the boss in the household? \_\_\_\_\_
- 41. Does your household suffer food shortages? Yes all the time / sometimes / never
- 42. Does anyone in the household belong to an association?  
Yes, please list \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_  
No, if not, why not? \_\_\_\_\_
- 43. What is your biggest worry? \_\_\_\_\_
- 44. Here in Monte Bonito/El Recodo do you feel in danger of natural events such as hurricaines?  
a. I don't feel in danger b) I feel in a little danger c) I feel I'm in a lot of danger
- 45. Do you feel you have the capacity to improve your current quality of life? Yes No  
Explain? \_\_\_\_\_
- 46. Do you feel that wellbeing could be controlled by non-natural factors (such as spells) Yes No  
Explain? \_\_\_\_\_  
\_\_\_\_\_
- 47. If you had all the power to make a change to improve wellbeing, what would you do?  
\_\_\_\_\_  
\_\_\_\_\_
- 48. Is there anything you would like to add? Did I miss any idea that you consider important in a study about poverty & wellbeing? \_\_\_\_\_

NOTES: \_\_\_\_\_



# Appendix C

## Focus Group Activity Sheets



Indicador	Muy Alto	Medio	Baja	Muy Baja
Tierra (Hectáreas)	1000+ 4	50-100 tarea	50- tar	0
Vivienda	block de casas de materia plástica	Casas de materia plástica	casas de materia plástica	casas de materia plástica
Tecnología	Internet Fijo			
Capacidad	plástico	plástico	plástico	plástico
Transporte	Caminión / Camión	Caminión / Camión	Caminión / Camión	no tienen
Comida	No tienen de comida	No tienen de comida	comida de comida	comida de comida
Salud	no tienen indicio			
Ingresos	3 millones	100,000 -	50,000 -	10,000 0 - 20,000
Diversidad	no tienen	proceso de cambio	proceso de cambio	X

	MAL	MÁS O MENOS REGULAR	MUCHO BIEN
Tierra	depende del tiempo A HE 3 Km		depende del tiempo depende del tiempo
Vivienda		de tiempo a tiempo algo, pero también prestado	de tiempo a tiempo de tiempo a tiempo
Tecnología		TODOS LE AGRADA BENEFICIOS PARA TODOS	
Capacidad		depende del tiempo	depende del tiempo
Transporte			
Comida			
Salud			
Ingresos			
Diversidad			

Handwritten notes at the bottom: 'MI PROBLEMA ES LA... CAMBIOS'.

Indicadores	Clase Baja	Clase Media	Clase Alta
Organización	✓	Organizaciones por la tierra	
Tiempo disponible	NO cuenta	tierras disponibles	
\$\$\$	← No cuenta	Costa es necesario se sacrifica.	
Por tiempo por dinero	[Wavy line]		
fe	NO Hay fe.	NO cuenta con no fe.	Hay fe. DISCERNIMIENTO

	ROJO	AZUL (w)	VERDE
Indicadores	0 TAREAS	1 - 10 TAREAS	10 + TAREAS
Organización	Organizaciones por la tierra	Organizaciones por la tierra	Organizaciones por la tierra
Tiempo disponible	NO cuenta	tierras disponibles	tierras disponibles
\$\$\$	← No cuenta	Costa es necesario se sacrifica.	Costa es necesario se sacrifica.
Por tiempo por dinero	[Wavy line]		
fe	NO Hay fe.	NO cuenta con no fe.	Hay fe. DISCERNIMIENTO

	ROJO	AZUL
Indicadores	Clase Baja	Clase media (pero todavía pobre)
Organización	No Licencia o apenas instituciones asociadas grupo institucionales	Alta de poder o fuerza
Tiempo disponible	NO cuenta	tierras disponibles
\$\$\$	← No cuenta	Costa es necesario se sacrifica.
Por tiempo por dinero	[Wavy line]	
fe	NO Hay fe.	NO cuenta con no fe.



## Appendix D

### Associations cited for Monte Bonito and El Recodo

- Mama Tingo
- Santa Clara
- Ayuda Mutua o funeraria
- La Esperanza
- San Isidro
- Juan Pablo Duarte Invernadero
- Nuestra Señora del Carmen
- Asociacion de mujeres fe y esperanza
- Sur Futuro
- Codocafe
- Church
- Padres, madres e amigos de la escuela
- Aguacateros los Indios
- Caficultores Guayabal
- Comite Energia
- Consejo Comunitario
- Jovenes
- Nueva Amistad
- Progresando (de la primera dama)
- San Rafael

# Appendix E

## El Recodo Road Construction Article



La Voz de Todos

PORTADA | EDITORIAL | BUFEO | EDICIONES ANTERIORES | ENLACES | PUBLICIDAD | CONTACTE

Inicio | Nacional | Economía | Internacionales | Deportes | Editorial | Opiniones | ¿Qué Pa...

### Nacional



Estas mujeres de El Recodo se unieron a la brigada de construcción de lo que esperan sea una carretera. Foto Diomelo Martínez

Agrandar

Seleccione el tamaño del texto:  

19 Noviembre 2010, 1:02 PM

## Habitantes El Recodo construyen carretera

Hombres, mujeres y hasta niños de esa comunidad de Azua, decidieron hacerla con sus propias manos y recursos

Escrito por: **Diomelo Martínez**

**AZUA.** Hombres, mujeres y hasta niños de la la sección El Recodo, Azua, cansados de pedir al Gobierno una carretera que los una a la civilización decidieron hacerla con sus propias manos.

Sin la ayuda de maquinarias y bajo el lema "La unión hace la fuerza" los habitantes de esa comunidad están abriendo el trillo para una carretera de unos siete kilómetros que les permita descender la montaña con facilidad. En la actualidad sólo existe un camino.

El Comité de Desarrollo Comunitario, encabezado por Arismendy Mata, Yuden de La Cruz e Ignacio Custodio, informó que El Recodo necesita del auxilio del Gobierno, ya que es un pueblo de casi mil habitantes, que queda aislado cada vez que llueve por la crecida del río Las Cuevas.

El Recodo queda a siete kilómetros del municipio Guayabal y a 25 de Padre Las Casas, de Azua. Se encuentra en la región de El Valle, enclavado entre montañas, en la parte alta de la cuenca del río Las Cuevas, en el sur de la Cordillera Central.

"Apelamos al Poder Ejecutivo, porque cuando se nos enferman las gentes hay que recorrer varios kilómetros en literas, dando tres pasos al río Las Cuevas", dijo Ignacio Custodio, secretario del comité y diácono de la Iglesia Católica.

El equipo de trabajo lo componen cinco brigadas de 20 hombres que trabajan a pico y pala de lunes a viernes.

"Con la construcción de esta carretera nos libraremos de darle tres pasos al río Las Cuevas y no tendremos preocupación de que ocurran todos los problemas y trabajo que estamos pasando en la actualidad", aseguró Arismendy Mata, presidente del Comité comunitario.

Subrayó que la comunidad cuenta con servicios muy limitados de educación, salud y comunicación. En la actualidad, hay 140 viviendas y 215 familias, cuenta con una población que supera los mil habitantes.

La población creció en gran manera por el resultado de la reubicación de familias de otras comunidades cuyas viviendas fueron afectadas por el huracán Georges en 1998.

Es un sitio con altos niveles de pobreza, caracterizado por elevada degradación y vulnerabilidad del territorio. Su principal fuente de ingreso depende de la agricultura de montaña.

La voluntad y decisión de progresar los mantiene aferrados a su objetivo.

### Pobreza y falta de servicios

El Recodo es una comunidad rural de unos mil habitantes ubicada en la Cordillera Central, en Azua. Allí prima la pobreza, acentuada por la dificultad de sus habitantes a los servicios mínimos como la salud. Con cada lluvia esta sección queda incomunicada.

## Appendix F

### Sampling Details

For the purposes of ensuring the random sample included all neighbourhoods, and avoided spatial bias that results from over sampling more accessible homesteads, the figure below shows the breakdown by neighbourhood.

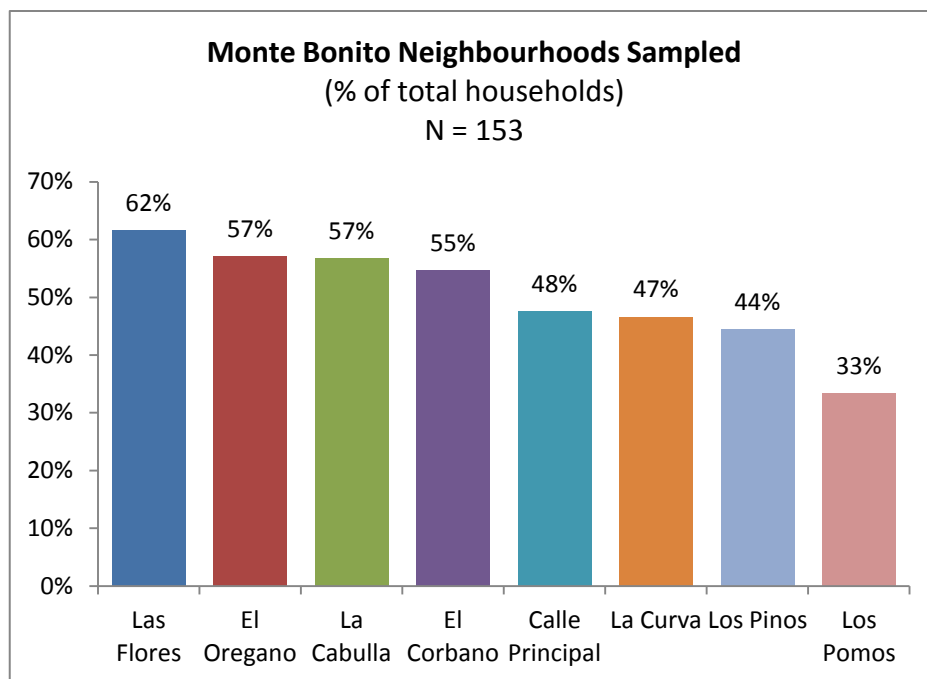


Figure 26: Breakdown of neighbourhood sampling representations in Monte Bonito

All 8 neighbourhoods were sampled, including Los Pinos and Los Pomos that are at the periphery and less dense. Likewise, “person bias” or over sampling healthy, able, and usually younger individuals (Chambers, 1983, p.19), was cross checked by providing an age breakdown of the survey respondents as seen in the following table.

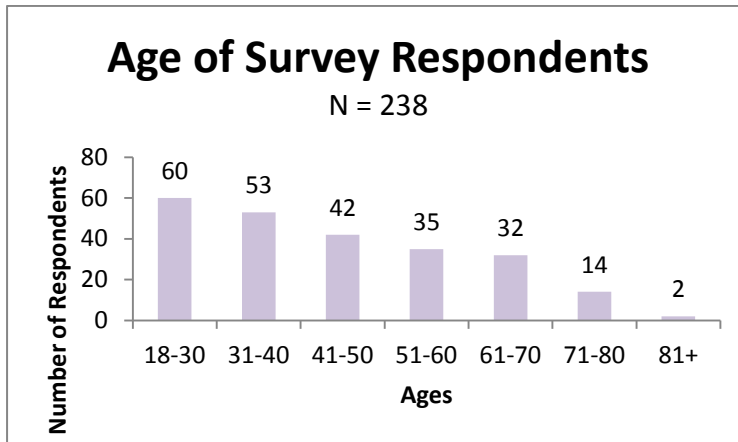


Figure 27: Ages of Adult Survey Respondents in Monte Bonito and El Recodo

## Appendix G

### Ranking of wellbeing categories from focus groups results

Wellbeing Category	Common to the number of focus groups
Land	4
*Income, access to credit	3
*Housing	3
*Hope, happiness	3
Planning capacity, organization	3
Food	3
Water	3
Road	3
Transportation	2
*Health	2
*Disposable time, not working too hard	2
Toilets / Sanitation	2
Crop choice / reforestation	2
Electricity	2
Education	2

*\*Wellbeing categories common to the top 5 survey results*

## Appendix H

### Income Assumptions

If respondents mentioned agricultural production, the quantities of production and the price at which products were sold was obtained in order to calculate the income generated. For fact checking and comparison purposes, the price variability for the typical crops was obtained through several key informants and is provided below:

#### Crop Prices for the Azua Region for 2010

<b>Crop</b> <i>1 Quintal = 50kg</i>	<b>2010 Prices</b> In DOP (Dominican Pesos)	<b>Crop Type</b>
Coffee (quintal)	Quintal: 4200 = low, 7200 = high Hand-picked (left-over cherries): 80-120 DOP / box (3 latas in a box)	Long-term, permanent tree cover
Avocado (unit)	4 RD = rechazo or lesser quality 8 RD = good quality	Long-term, permanent tree cover
Tayota (dozen)	12 low 30 high	Short term
Guandul (Pigeon Pea) (quintal)	800 low 1200 high	Short term
Beans (quintal)	1200 red variety = 3000	Short term
Banana (racimo)	200 for a bag, (5 to 10 racimos in a bag)	Short term
Lemon (unit)	2.5	Long-term, permanent tree cover
Apples (unit)	22	Long-term, permanent tree cover
Yucca (pound)	8 low 10 high	Short-term, Tuber
Corn (quintal)	300 to 600	Short-term
Auyama (kg or quintal)	8 low 12 high	Short-term, Tuber



For “*jornaleros*” or **day labourers**, a 44 week working year (at 6 days a week) was calculated. The two month break represents the months of May and June when the fields are not being tilled, planted, or harvested and also coincides with climate considerations such as excessive rains. Thus, the two month hiatus is considered to err on the generous side since no additional time was factored for sickness or other reasons for non-working days. A daily wage rate of 250 Pesos per day was used since this was the most commonly cited amount, although 200 pesos was also cited, especially for lighter harvesting duties. A maximum day labourer’s annual salary was thus calculated to be 60,000 DOP.

**Women’s agricultural day labour** was calculated differently as they only participate in harvesting coffee cherries or guandul (pigeon pea) pods. This work is usually paid out at 200 DOP / day (although some women are paid, depending the number of boxes of cherries they pick, at most 3 boxes a day paid out at 120 DOP). The coffee harvest lasts two months and the pigeon pea harvest one. Assuming 6 days a week of picking for 48 days for coffee and 30 days for guandul, an upper amount of 15,600 DOP / year for women’s agricultural wage labour was calculated.

*Please note these assumptions were only applied when more detailed information was lacking. When more specific information was provided, such as a modified day laboring frequency, the specific amounts were calculated.*

Methodological deficiencies are wholly acknowledged in calculating **remittances** as these are often varied amounts at irregular times. The survey sought to be as thorough as possible asking respondents for their best estimates with regards to frequency and amounts.

The national **conditional cash transfer program** for the Dominican Republic, (known locally as the Solidarity Card), also presented some challenges in calculating cash benefits such as gas and food subsidies. If the respondent cited having a card (and thus participating in the program), an assumed 4000 DOP / year (330 DOP / month) in aid was factored in, although this is considered to be a generous calculation since not every solidarity card owner would likely have access to all the different subsidy programs available (such as gas, food and medications subsidies).

The “*Regalia Pascual*”, a financial Christmas bonus, was not specifically asked about or mentioned by any participant and may have been overlooked in the study.

## Appendix I

### Dominican Republic Specific Sources

#### Survey Sources for Socio-Economic Data

The following list includes national sources of socio-economic data generated at regular intervals and of potential use in project formulation, establishing baselines, for comparison purposes, and more.

- Encuesta Demográfica y Salud (ENDESA, 1996, 2002, y 2007)
- Encuesta Nacional de Hogares con Propósitos Múltiples (ENHOGAR, 2005, 2006 y 2007)
- Encuesta Nacional de Ingresos y Gastos de los Hogares (ENIGH, 2007)
- Encuesta Nacional de Fuerza de Trabajo (ENFT, 2002-2007)
- Censo Nacional Agropecuario 1971 y 1982
- The following Spanish report by the National Statistical Office (ONE) published in 2009 presents a good overview of the above sources. “Las encuestas socioeconómicas y demográficas con periodicidad definida en la República Dominicana: Una revisión a su contenido temático”.

#### Participatory, Right’s-based Development models

- Near Padre las Casas, in San Jose de Ocoa, ADESJO is a community organization formerly led by Father David Quinn with a big emphasis on expanding social capital. Key philosophical underpinnings include participation, capacity-building and solidarity to build up self-management and agent-oriented development. Mutual help was emphasized through local processes and means, and includes common rural practices such as mutual aid (*Ayudua Mutua*).
- This next example comes from Honduras which contains very poor, rural dryland regions similar to southwestern DR. Here CIALS (farmer-researcher teams) are empowering local populations via highly participatory and collaborative processes. See USC for more information, [www.usc.ca](http://www.usc.ca) or, the paper by Classen in the references.

## Appendix J

### Monte Bonito and El Recodo Residents' Recommendations

While conducting the focus groups and questionnaires, a number of specific recommendations were put forth by the respondents themselves and these are briefly conveyed below in no particular order.

- Ensuring the **local roads** are functional, including for use by heavy trucks to pick up local export crops, is considered the most critical issue for many residents. Besides the economic ramifications, the road is also a security and safety issue. They state a good road affects the entire community, and as such, should carry priority over other initiatives. This comment applies to both the road up to Monte Bonito, as well as the lack of a paved road into El Recodo.
- **More agricultural technology** is regarded as beneficial. For example, greenhouses are “sure markets” (for the products grown such as peppers) and can combat unemployment.
- Irrigation, even micro-**irrigation technologies** is crucial for dry lands which abound in the region. Increasing access to these resources was requested.
- Formal **conservation brigades** to create barriers, such as the MARENA brigades of past years, are regarded as a successful model to copy. These paid brigades not **only reforest areas** but offer seasonal short-term **employment** during harsh months.
- Several of the women respondents appreciated the **workshops** put on by Sur Futuro on parenting, asking for more opportunities to attend these helpful events.
- There was concern about **the lack of meeting space** for women’s groups, in particular in Monte Bonito where a new technological centre has allegedly displaced prior meeting space. Allocating an appropriate space was said to carry a big impact to the women.
- Finding appropriate **paid work for women** was mentioned since they cannot be day labourers and there are very few alternate economic opportunities. Child care support to free up time to work was cited as a necessary requirement to including women in more active roles.
- **Adult education** in general was supported, specifically to combat illiteracy.
- Concern was expressed regarding cases of **open defecation**, blamed on the illegal population. Request for assistance in engaging with homeowners who rent rooms but do not provide adequate sanitation facilities was made.