

**CONTENDING APPROACHES TO DEVELOPMENT: COMPARING A LARGE-  
SCALE DAM AND LOCAL INITIATIVES IN RURAL ECUADOR**

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### **ABSTRACT**

The government of Ecuador plans to build the Manduriacu Dam in the northwest region of Los Manduriacos. The state has echoed the recent global consensus that successful development must be sustainable and equitable. This consensus emerged amidst a long-standing debate between the proponents and opponents of large-scale dams—between those in favor of a dominant, neoliberal approach to development versus those in favor of alternative approaches. A case study was conducted in the region to be impacted by the Manduriacu Dam in order to assess whether or not the emergence of reformist approaches within major development agencies have delivered sustainability, local participation, and gender equity for impacted peoples. Comparatively, this study examines local, alternative approaches to development in the region and reviews projects completed in Ghana and Indonesia in order to derive comparisons and recommendations regarding the attainment of sustainable and just outcomes. Research found the Manduriacu Dam Project to lack greatly in the fulfillment of social rights, particularly Free, Prior and Informed Consent. Furthermore, women and other vulnerable peoples would bear a disproportionate amount of the health and safety hazards associated with the project. However, findings surrounding local initiatives in Los Manduriacos, and projects in Ghana and Indonesia, conclude that locally driven, asset-based approaches that mobilize women are some of the most effective ways to achieve sustainability. This suggests that such approaches should be integrated into large infrastructure projects, including dams, in order to achieve just and sustainable development.

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Dedicated to Linda McCaskie, the home in my heart and inspiration for my life.

## 1.0 INTRODUCTION

In the region of Los Manduriacos in the northwest of Ecuador, the Guayllabamba River passes between the provinces of Pichincha and Imbabura. The area is rural—a collection of primary and secondary subtropical forests, farms, and small towns which were erected in the last four decades. Here in the watershed of the Guayllabamba River, near the towns of Cielo Verde (Imbabura), Santa Rosa (Pichincha) and Guayabillas (Pichincha), the government of Ecuador plans to build the Manduriacu Hydroelectric Dam. If constructed, this dam would form part of a series of seven large dams titled the Guayllabamba Integrated Hydroelectric System. It has been 20 years since the project’s potential was first studied. In 2008, the government of the Pichincha province revisited these studies, and thereby formed HidroEquinoccio EP (HEQ), the public company charged with the executing, administering, and overseeing the construction, installation, and operation of the Guayllabamba Integrated Hydroelectric System. There are three phases of the project: preconstruction, construction, and operation. The preconstruction phase is comprised of preparatory plans and studies in order to determine the viability of the project and its potential impacts. As of November 2011, HEQ had completed its Preliminary Environmental Impact Assessment, and planned to complete the preconstruction phase by 2012.<sup>1</sup>

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<sup>1</sup> HEQ staff, interviewed by Keely McCaskie on October 31, 2011; McCaskie, Keely. “Redefining ‘Sustainable Development’: a Case Study of a Large-scale Hydroelectric Dam in Ecuador.” SIT Study Abroad. 2011.

According to the World Commission on Dams (WCD), “More than 45,000 large dams exist in the world...and today, almost half of the world’s rivers have at least one large dam.”<sup>2</sup> While hydroelectric power is renewable (i.e. the source of the energy, the flow of water, regenerates itself), large dams are not without harmful consequences. The WCD found that, to obtain the benefits of large-scale dams, “an unacceptably high and frequently unnecessary price has been paid, especially in social and environmental terms, on the part of displaced persons, communities downstream, fiscal earnings, and the environment.”<sup>3</sup> Also, “In general, the participation and transparency of planning processes of large dams were neither inclusive nor open,” and “among communities affected, inequalities between the sexes has increased and women often bear a disproportionate amount of the social costs.”<sup>4</sup>

As a result, large-scale dams have been at the center of highly visible campaigns to reform dominant development practices of multilateral organizations (e.g. the World Bank), multinational corporations, and other development agencies.<sup>5</sup> These debates over large-scale dams underscore the broader struggle between competing visions of ‘development’; dominant practices having equated development with a “large-scale, top-down, and technocratic pursuit of economic growth through the intensive exploitation of natural resources,” and resistance movements promoting “bottom-up and participatory processes directed toward socially just and ecologically sustainable outcomes.”<sup>6</sup>

Widespread criticism of the dominant model has led major development agencies (e.g. the World Bank), to adopt ideals such as ‘sustainability,’ ‘local participation,’ and ‘gender

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<sup>2</sup> World Commission on Dams (WCD). “*Dams and Development: a new framework for decision-making.*” Final Report. Nov. 2000.

<sup>3</sup> Ibid.

<sup>4</sup> Ibid.

<sup>5</sup> Khagram, Sanjeev. *Dams and Development: Transnational Struggles for Water and Power.* Ithaca: Cornell University Press. 2004.

<sup>6</sup> Ibid.

equity.’ Although the definitions of these terms are debated, this study commenced with the understanding that ‘sustainability’ can be defined as the long-term maintenance of environmental, social, and economic health. ‘Local participation’ refers to the meaningful involvement of community members impacted by a project, and ‘gender equity’ connotes equal benefits accrued to women.<sup>7</sup> It is now agreed that by including social and environmental dimensions in project design, development agencies increase the effectiveness of their projects.<sup>8</sup> The government of Ecuador, headed by President Rafael Correa, echoes this new consensus; the Preliminary Environmental Impact Statement of the Manduriacu project states that “the commitment of the state of Ecuador will be to initiate the construction of new hydraulic centers as sources of clean and renewable energy and furthermore, to execute these projects in an environmentally sound way.”<sup>9</sup>

However, alternative perspectives continue to question the motivations and outcomes of dominant development practices. Critics argue that discursive changes have been ineffectual, and that ‘buzz-words’ such as sustainability, local participation, and gender equity have merely been co-opted and neutralized in the service of major developers.<sup>10</sup> Alternative approaches to development (or, *against* development) question the extent to which dominant institutions, such as the World Bank, can truly deliver such objectives.

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<sup>7</sup> This study does not aim to establish definitive definitions of sustainability, local participation, or gender equity. Rather, it hopes to complicate and qualify our understanding of such terms. As such, quotation marks have been used in order to indicate the contentions surrounding these terms. For the sake of discourse, these terms will no longer be placed in quotes. However, the author still wishes to convey their subjectivity.

<sup>8</sup> World Bank. “The World Bank and the Copenhagen Declaration: Ten Years After”. 2004.

<sup>9</sup> HidroEquinoccio EP (HEQ). “Estudio de Impacto Ambiental Preliminar (EIAP) del proyecto hidroeléctrico Manduriacu y su línea de transmisión a 230 KV (Preliminary Environmental Impact Statement of the hydroelectric Manduriacu project and its line of transmission at 230 KV).” 2011. (Translated by Keely McCaskie, December 2011)

<sup>10</sup> See Cornwall and Brock (2005), De Sousa Santos (2007), and others referenced in section 1.1.2.

As a result, this study asks: what are the on-the-ground impacts of dominant approaches? Have changes in dominant development discourse benefited impacted communities? Do these practices deliver sustainability, local participation, and gender equity? What values and practices drive alternative approaches? Are they more likely to achieve their visions of sustainability, local participation, and gender equity?

An ethnographic research study was conducted in the region of Los Manduriacos, primarily in the towns of Santa Rosa, Guayabillas, and Cielo Verde—the communities to be most directly affected by the Manduriacu Dam. This study helps to answer the above questions by uncovering the perspectives of community members both subject to a dominant development model (i.e. the Manduriacu Hydroelectric Dam) and engaged in alternative models such as local initiatives.

The goal of this analysis is not to promote one form of development over another. Rather, it is the aim of this study to illustrate the landscape of development in Los Manduriacos and beyond in order to help communities and policy-makers reach the best decisions regarding development practice in their area.

An assessment of local attitudes in Los Manduriacos concludes that, despite the promises of the state, the Manduriacu Hydroelectric project fails to deliver adequate sustainability, local participation, and gender equity. Meanwhile, local initiatives in the area provide great promise for the future; they testify to the effectiveness of locally driven operations centered on environmental stewardship and the voices of women and other vulnerable peoples. A review of certain projects in Ghana and Indonesia illustrates the positive outcomes that can occur when major development agencies embrace these alternative development practices.

## 1.1 THE EMERGENCE OF DOMINANT AND ALTERNATIVE APPROACHES TO DEVELOPMENT

Before commencing with an analysis of the contending development models in Los Manduriacos and beyond, it is necessary to trace the historical origins of dominant and alternative approaches to development over the course of the 20<sup>th</sup> and 21<sup>st</sup> centuries. The word ‘development’ and related phrases, such as ‘sustainable development,’ ‘growth,’ and ‘empowerment,’ are so often used that they are often taken for granted as a perfectly objective goals of policy. However, the term ‘development’ has only recently arisen in the past half century, and with it, a whole series of economic theories, programs of international assistance, and global infrastructure aimed at helping the ‘underdeveloped’ become ‘developed.’<sup>11</sup> The Bretton Woods System was created in 1944, and established what would become today’s major development institutions, the World Bank and the International Monetary Fund (IMF). It wasn’t until 1960, however, that these institutions shifted their focus from post-war reconstruction to poverty-alleviation through development. U.S. President Harry S. Truman declared a commitment to, “a bold new program for making the benefits of our scientific advances and industrial progress available for the improvement and growth of underdeveloped areas.”<sup>12</sup> The birth of the development discourse was linked to the Cold War political strategies of the U.S., “using development aid to poorer countries as one way of securing strategic political and military alliances.”<sup>13</sup>

Beginning in the 1970’s, neoliberalism gained unprecedented power in light of the global Debt Crisis, the election of US President Ronald Reagan and British Prime Minister Margaret

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<sup>11</sup> Shakow, Aaron and Alec Irwin. “Chapter 3: Terms Reconsidered: decoding development discourse.” *Dying for Growth: Global Inequality and the Health of the Poor*. Common Courage Press. 2000.

<sup>12</sup> Ibid.

<sup>13</sup> Ibid.

Thatcher, and the fall of Communism.<sup>14</sup> Development efforts took on a distinctly neoliberal character. The tenets of neoliberalism suggested that development was best achieved through economic growth in a deregulated global marketplace, making the assumption that benefits would ‘trickle down’ to whole populations as a result. This advice was linked to adjustment policies of the World Bank and IMF. These policies forced nations, as a condition attached to loans, “to cut what was regarded as excessive public spending to balance their books and enable development of their private economies, often through a strategy of export-led growth.”<sup>15</sup> This strategy became known as the Washington Consensus. But, major development agencies were soon under attack, because, “under structural adjustment, poor countries...have experienced a dramatic degradation of their social fabric through increased poverty, widespread suffering, social disorientation, and a growing gap between rich and poor.”<sup>16</sup>

The construction of large dams had come to represent the dominant development model: the “large-scale, top-down, and technocratic pursuit of economic growth through the intensive exploitation of natural resources.”<sup>17</sup> The ‘big dam’ regime, composed of powerful, transnationally-allied groups including politicians, associations of engineers and scientists, and the World Bank, began in the 1950’s, and dams came to symbolize “the progress of humanity...and tradition supplanted by science.” Large-scale dam construction peaked in the 1970’s, with 5,400 dams constructed annually, and 90 percent of big dams were built in the last forty years.<sup>18</sup> Neoliberal ideologies were compatible with and encouraging of this large-scale model of development, and therefore facilitated this peak in construction. However, the rate of

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<sup>14</sup> Ibid.

<sup>15</sup> Deacon, Bob. *Global Social Policy and Governance*, Sage Publications, 2007.

<sup>16</sup> Shakow, Aaron and Alec Irwin. “Chapter 3: Terms Reconsidered: decoding development discourse.” *Dying for Growth: Global Inequality and the Health of the Poor*. Common Courage Press. 2000.

<sup>17</sup> Khagram, Sanjeev. *Dams and Development: Transnational Struggles for Water and Power*. Ithaca: Cornell University Press. 2004.

<sup>18</sup> Ibid.

construction of large dams declined after the 1980s. This decline was due to intensified transnational contestation of big dam projects. Like structural adjustment Policies, large dams had proven detrimental to social and environmental health. The activities of an emerging transnational advocacy network contributed to the creation of the World Commission on Dams (WCD), an independent, multi-stakeholder group charged with “the first ever comprehensive review of the development effectiveness of big dams around the world and the formulation of new global norms for the planning, implementation, operation, and decommissioning of these projects.”<sup>19</sup> Indeed, after an extensive study of 125 dams in 56 countries, the findings of the WCD included the following:

*In order to obtain the benefits of large dams, an unacceptably high and frequently unnecessary price has been paid, especially in social and environmental terms, on the part of displaced persons, communities downstream, fiscal earnings, and the environment...Dams have all too often failed to deliver on promised financial and economic profitability...Large dams have had profound and irreversible environmental impacts including extinction of species, loss of forest, wetlands and farmland...between 1 to 28 percent of global greenhouse gas emissions comes from reservoirs...40-80 million people have been resettled for dams...[and] the direct adverse impacts of dams have fallen disproportionately on rural dwellers, subsistence farmers, indigenous peoples, ethnic minorities, and women, while they have often been excluded from the benefits.<sup>20</sup>*

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<sup>19</sup> Ibid.

<sup>20</sup> World Commission on Dams (WCD). “Dams and Development: a New Framework for Decision-Making.” Final Report. Nov. 2000.

Out of the controversies surrounding neoliberalism and the construction of large-dams, understandings of development crystallized into the dominant and alternative approaches seen today. These movements have involved various social actors, from policymakers at development agencies, such as the World Bank, to national governments, to civil society groups. Borrowing from Holt-Giménez and Shattuck’s analysis of global food movements, this study identifies four approaches to development that emerged: (1) The Neoliberal approach, led by the IMF and the World Bank, maintains that development should continue to focus on economic growth and top-down administration of large-scale projects, such as large dams. It encourages patience—that it takes time before the benefits of structural adjustments can ‘trickle down’ to everyone. (2) The Reformist trend, spearheaded within offices of the World Bank and other international organizations, advocates for mild reforms in order to mitigate the social and environmental externalities of development practice. However, its ‘job’ is identical to that of the neoliberal trend: creating conditions for economic growth. (3) The Progressive approach calls for practical alternatives to the dominant model, such as local and organic agriculture, that are willing to operate within the economic and political frameworks of the capitalist world system. And (4) the Radical approach, like the progressive approach, calls for changes on the basis of social rights. The radical approach, however, demands more structural reforms and alternatives to development; it attempts to reject the imperialism, neocolonialism, and neoliberal capitalism underlying the very concepts of economic growth and development.<sup>21</sup> It should be noted that development projects may exhibit elements of multiple approaches, as well as collaborations between approaches.

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<sup>21</sup> This framework was adapted from that put forth in Holt Giménez, Eric and Shattuck, Annie. “Food crises, food regimes and food movements: rumblings of reform or tides of transformation?”. *Journal of Peasant Studies*, 38: 1, 109-144. 2011.

This report refers the neoliberal and reformist approaches, which are promoted mostly by intergovernmental organizations and state governments, as dominant approaches to development. Conversely, progressive and radical approaches, which are taken up mostly by civil society, non-governmental organizations, and transnational networks among social movements, constitute alternative approaches to development. The following sections map reformist, progressive and radical trends since the 1980's in response to criticisms of the neoliberal model of development.

### **1.1.1 The Reformist Approach: Integrating Sustainability, Local Participation, and Gender Equity**

Due to the harm done by neoliberal programs, including the construction of large dams, throughout the second half of the 20<sup>th</sup> century, a reformist trend within major international organizations conceded that an “inclusion of the social dimension...is one of the major prerequisites for successful development.”<sup>22</sup> Since the 1990s, terms such as ‘sustainable development,’ ‘people-centered development,’ and ‘gender in development’ are used widely within major development agencies. The concept of ‘sustainable development’ arose from the expansion of the global capitalist economy in the late 20<sup>th</sup> century and a growing ecological crisis. As such:

*The concept of ‘sustainable development’ was invoked in 1987 as a way to reconcile these forces. Sustainable development implies the need for continued economic development as a way to save the planet. Defined as “development that meets the needs of the present without compromising the ability of future generations to meet their own needs” (World Commission on Environment and Development, 1987, p.8), sustainable*

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<sup>22</sup> Hall, Anthony and James Midgley, *Social Policy for Development*, Sage Publications, 2004.

*development...emphasizes that it is in the common interest of all countries to establish development policies that are sustainable.*<sup>23</sup>

The World Bank has adopted this definition, and identifies three pillars to sustainable development: social inclusion, economic growth and environmental sustainability.<sup>24</sup> Remaining true to its mandate of economic growth, the World Bank espouses a commitment to “green growth,” or “a part of sustainable development that includes environment as a source of economic growth and welfare gains through innovation, efficiency, resilience to shocks, job creation, and poverty alleviation.”<sup>25</sup>

However, within reformist efforts, the definition of sustainable development is debated. In 2005, Rosina Wilshire, director of the Gender in Development program at the United Nations intentionally shifted the focus away from economic growth by arguing that sustainable development is, “development which promotes the well being and dignity of human beings while generating and protecting natural resources whereby the themes of empowerment and equity are central to development, that which cannot necessarily be equated with economic growth.”<sup>26</sup> Such adaptations prioritize people over growth, because more and more research has shown that:

*People who belong to marginalized socio-cultural groups (women, Indigenous people, people of color, the poor, the very young and the very old, and the infirm) disproportionately experience the environmental effects of globalization. This is because*

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<sup>23</sup> Isla, Ana, and Trina Filan. "Women and Environmental Politics." *Women Worldwide: Transnational Feminist Perspectives on Women*. By Janet Lee and Susan M. Shaw. New York: McGraw, 2011. 445-73. Print.

<sup>24</sup> Ahmad, Nilufar and Mari Clarke. *Linking Gender, Environment, and Poverty for Sustainable Development: A Synthesis Report on Ethiopia and Ghana*. The World Bank. 2012.

<sup>25</sup> Ibid.

<sup>26</sup> Burn, Shawn Meghan. *Women Across Cultures, a Global Perspective*. 2005. McGraw-Hill: New York.

*they possess little political or social power to bring about changes either to policy or to practice.*<sup>27</sup>

Therefore, concepts such as local participation and empowerment of marginalized groups have also entered into the dominant discourse. The final report of the WCD recommended that, “demonstrable public acceptance of all important decisions should be reached through agreements negotiated in a open and transparent way, realized in good faith and with the participation of all impacted having been fully informed.” This recommendation helped lay the foundation for the principle of Free, Prior, and Informed Consent (FPIC), which entails the following:

*(1) All members of the community affected consent to the decision, including women and poorer people; (2) Consent is determined in accordance with customary laws and practices; (3) Freedom from external manipulation, interference or coercion; (4) Full disclosure of the intent and scope of the activity; (5) Decision is made in language understandable to the community; (6) Decision is made in process understandable to the community.*<sup>28</sup>

Indigenous Peoples’ right to FPIC has been recognized by a number of intergovernmental organizations, international bodies, conventions and international human rights law in varying

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<sup>27</sup> Isla, Ana, and Trina Filan. "Women and Environmental Politics." *Women Worldwide: Transnational Feminist Perspectives on Women*. By Janet Lee and Susan M. Shaw. New York: McGraw, 2011. 445-73. Print.

<sup>28</sup> Mehta, Lyla and Maria Stankovitch. “Operationalisation of Free Prior Informed Consent.” Institute of Development Studies, UK. 2000.

degrees, and increasingly in the laws of states.<sup>29</sup> The operationalization of FPIC, and local participation in general, is just beginning. However, the dominant development model has formulated various means of local participation, as seen in Table 1.

**Table 1. Participation Ladder<sup>30</sup>**

<b>Levels of participation</b>	<b>Techniques</b>
HIGH	Joint decision-making Conciliation/mediation
Forming/agreeing to decisions	Assisted negotiation Collaborative problem-solving
Having an influence on decisions	Facilitation/interactive workshops Task forces/advisory groups
Being heard before decisions	Conferences Public hearings
Knowing about decisions	Public information
LOW	

The participation of women in development has received particular attention. Development efforts did not focus on gender dynamics until 1970, when Ester Boserup published *Women's Role in Economic Development* and described women's role in subsistence agriculture in Africa and the impacts of agricultural modernization on gender relationships.<sup>31</sup> Women are seen as essential to sustainable development because they “produce 60 to 80 percent of the household food supply in most developing countries and have long experience in coping

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<sup>29</sup> MacKay, Fergus. “Forest Peoples Programme Briefing Paper: Indigenous Peoples’ Right to Free, Prior and Informed Consent and the World Bank’s Extractive Industries Review.” *Sustainable Development Law & Policy*. 2004.

<sup>30</sup> Le Moigne, Guy et al. “A Guide to the Formulation of Water Resources Strategy.” Washington, D.C: World Bank. 1994. World Bank technical paper, ISSN0253-7494; no. 263

<sup>31</sup> Ibid.

with environmental shifts...Women manage household resources worldwide. They are also the chief caregivers for victims of [environmental] disasters...[and] acknowledging gendered divisions of labor...is essential in drafting policy, not only to support the most vulnerable populations but also to enlist their knowledge.”<sup>32</sup> The acknowledgment of gender in dominant development also came about through the efforts of women’s organizations “strengthened by globalization’s ease of transnational networking.”<sup>33</sup> Through the efforts of activists and UN conferences such as Fourth World Conference on Women in Beijing, the global women’s movement has challenged “women-unfriendly development policies,” and, “arguments about the positive developmental effects of putting women at the center of development...are now accepted as mainstream.”<sup>34</sup> However, the Women in Development (WID) and subsequent Gender and Development (GAD) strategies implemented since the 1990’s have been criticized for lacking cultural sensitivity and failing to embody the perspectives of the peripheral countries they serve.<sup>35</sup> The operationalization of gender equity in development continues to evolve; yet the following main arguments for doing so remain:

*(1) The efficiency argument that including women makes good economic sense; (2) the empowerment argument that women’s lack of power might be redressed through development; (3) the gender and environment argument that women are closer to nature and therefore most affected by environmental degradation as well as best positioned to care for the environment; and (4) the gender mainstreaming argument that women’s*

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<sup>32</sup> Ibid.

<sup>33</sup> Deacon, Bob. *Global Social Policy and Governance*, Sage Publications, 2007.

<sup>34</sup> Ibid.

<sup>35</sup> Isla, Ana, and Trina Filan. "Women and Environmental Politics." *Women Worldwide: Transnational Feminist Perspectives on Women*. By Janet Lee and Susan M. Shaw. New York: McGraw, 2011. 445-73. Print.

*equality with men is a fundamental human right and a prerequisite for successful development efforts.*<sup>36</sup>

Development agencies, including the World Bank, United Nations (UN), IMF, and the Organization for Economic Cooperation and Development (OECD), have integrated these social and environmental dimensions to varying degrees. The UN has perhaps been most responsive. The World Bank maintains that economic growth is a key to development, but has increasingly incorporated residual safety nets, and most recently, the ‘asset-based’ and ‘social-guarantees’ approaches.<sup>37</sup> The Bank’s asset-based policies aim to embody a “holistic livelihoods approach by involving participatory planning to address people’s specific needs.”<sup>38</sup> This is in part due to the realization that vulnerable populations have strengths, assets, and capacities that may be mobilized for proactive participation in the development process.<sup>39</sup> Assets are understood as “resource endowments and capabilities that people have to sustain their livelihoods and to enhance their welfare.” These assets can be categorized into physical capital (e.g. equipment, infrastructure), financial capital (e.g. savings, access to credit), human capital (e.g. investments in health and education of individuals), social capital (e.g. norms of reciprocity and trust within societal relations), and natural capital (e.g. land, water and other natural resources).<sup>40</sup> Asset-based policy attempts to “strengthen the asset-base of poor people and expand their opportunities to accumulate and consolidate their assets in a sustainable way and, thereby, to participate as fully entitled citizens in development processes.” These policies are based, however, on an

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<sup>36</sup> Ibid.

<sup>37</sup> Hall, Anthony and James Midgley, *Social Policy for Development*, Sage Publications, 2004.

<sup>38</sup> Ibid.

<sup>39</sup> Ibid.

<sup>40</sup> Dani, Anis and C. Moser, “Asset-Based Social Policy and Public Action in a Polycentric World”, in *Assets, Livelihoods, and Social Policy*, the World Bank, 2008, pp. 3-18.

understanding that poor people are caught in a web of traps that prevent them from overcoming poverty, and on the assumptions that, people themselves (a) are well placed to utilize their assets, (b) are equipped with the means and skills to obtain value (or valorize) these assets, and (c) have the information and ability to benefit in transformations in the rules governing those assets.<sup>41</sup> These preconditions may not always be met.

Nonetheless, the World Bank's latest approach to gender also focuses on asset accumulation. In the 2012 World Development Report, the World Bank identified three key dimensions to the attainment of gender equality: (1) accumulation of endowments, such as education, health, and assets; (2) the use of those endowments to take up economic opportunities and generate income; and (3) the application of those endowments and opportunities to take actions, or agency, affecting individual and household well being.<sup>42</sup>

While the asset-based approach focuses on the capacities of communities subject to development, the social-guarantee framework focuses on the role of the state in providing “sets of legal or administrative mechanisms that determine specific entitlements and obligations, related to certain rights, and ensure the fulfillment of those obligations on the part of the state”<sup>43</sup> throughout the development process. That is, the social-guarantee approach aims to strengthen the institutional capacities of national governments to deliver social rights, such as citizen's access to health care and education, or in the case of large dams, a community's right to FPIC. According to the World Bank:

*Social guarantees have five key characteristics: 1) they have a legal expression that results in an explicit state responsibility; 2) they are constructed in reference to a specific*

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<sup>41</sup> Ibid.

<sup>42</sup> Ahmad, Nilufar and Mari Clarke. *Linking Gender, Environment, and Poverty for Sustainable Development: A Synthesis Report on Ethiopia and Ghana*. The World Bank. 2012.

<sup>43</sup> World Bank. “Increasing Social Inclusion Through social Guarantees: A Policy Note”. 2007.

*rights-holder; 3) they involve mechanisms of access and redress; 4) the mechanisms that they envision are defined in a precise manner; 5) they are flexible and revisable. As a result, they facilitate reducing opportunity gaps across social groups.*<sup>44</sup>

Therefore, the reformist approach to development has responded to the failings of the neoliberal model by complementing the goal of economic growth with attention to environmental sustainability, local participation, and gender equity. The operationalization of this focus has evolved into the World Bank's most recent asset-based and social-guarantee approaches to development. In 2004, the World Bank's independent Operations Evaluation Department reviewed over 4,000 Bank projects during the past 30 years. This study found that "about 40% of all Bank projects address some social dimension of development and that such projects have better outcomes, sustainability is more likely and have greater impact on institutional development than projects that do not address social dimensions."<sup>45</sup> Therefore, some would argue that dominant institutions have reformed and are on their way to securing sustainable and participatory development.

### **1.1.2 The Progressive and Radical Approaches: Resisting Ideologies and Formulating Alternatives**

The progressive and radical trends have remained doubtful of the progress made by dominant approaches. Generally, their proponents believe that certain fundamental shifts have not occurred, as "the World Bank and the IMF are clearly owned by and still acting for the Global

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<sup>44</sup> Ibid.

<sup>45</sup>World Bank. "The World Bank and the Copenhagen Declaration: Ten Years After". 2004.

North.”<sup>46</sup> Shakow and Irwin argue that the evolved discourse has not necessarily led to an increase in the resources available to poor, impacted communities.<sup>47</sup> Such scholars point to findings that, to this day, “development projects are often developed and implemented without consulting or obtaining consent from those most impacted by those projects.”<sup>48</sup> Critics argue that development agencies have co-opted terms first used by resistance movements only to neutralize their power. Cornwall and Brock explain:

*‘Poverty reduction’, ‘participation’ and ‘empowerment’ are feel-good terms...conferring on their users that goodness and rightness that development agencies need to assert in order to assume the legitimacy to intervene in the lives of others...‘Participation’ has been used for centuries as a means to enable ordinary people to gain political agency...but also as a powerful means of maintaining relations of rule...And while ‘empowerment’ retains a prominent place in agencies’ policies concerning gender, it often appears in mainstream policy discourses in a diluted form, neutralizing its original emphasis on building personal and collective power in the struggle for a more just and equitable world.*<sup>49</sup>

In response, alternative camps, and the radical approach in particular, have questioned the ideological foundations of dominant approaches. Boas and McNeill’s studied the policies of international financial institutions and concluded that “powerful states (e.g. the USA), organizations (e.g. IMF), and even disciplines (e.g. economics) exercise their power largely by

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<sup>46</sup> Deacon, Bob. *Global Social Policy and Governance*, Sage Publications, 2007.

<sup>47</sup> Shakow, Aaron and Alec Irwin. “Chapter 3: Terms Reconsidered: decoding development discourse.” *Dying for Growth: Global Inequality and the Health of the Poor*. Common Courage Press. 2000.

<sup>48</sup> Oxfam America. *Oxfam Fact Sheet: Protect community rights and resources*. Boston: Oxfam America Inc., 2010. PDF file.

<sup>49</sup> Cornwall and K. Brock. “Beyond Buzzwords ‘Poverty Reduction,’ ‘Participation,’ and ‘Empowerment’ in Development Policy.” UNRISD. *Overarching Concerns Programme Paper N. 10*. Nov 2005.

‘framing’: which serves to limit the power of potentially radical ideas to achieve change.”<sup>50</sup> Proponents of alternative approaches aim to contradict the “neo-liberal illusion of inevitability” inherent in this framing. This illusion is dependent on perpetuating universalistic definitions through which science gains more authority.<sup>51</sup> This is evident in the case of large-dams, which were extolled as symbols of “tradition supplanted by science.”<sup>52</sup> Scholars like Boaventura de Sousa Santos have highlighted the bias propelling the seemingly objective and neutral authority of this hegemonic scientific paradigm.<sup>53</sup> In the name of modern science, “many alternative knowledges and sciences have been destroyed, and the social groups that used these systems to support their own autonomous paths of development have been humiliated.”<sup>54</sup> According to this argument, the scientific framework of the Global North is used in service of the neoliberal project and its own interests.

Therefore, many scholars reject the premise of unlimited economic growth and emphasize the natural limits of the planet to industrialization and consumerism.<sup>55</sup> From the standpoint of World Systems Theory, “Core (‘First World’) nations have instigated global trade practices that result in peripheral (‘Third World’) nations paying higher prices for imports while receiving lower prices for exports...this price differential has meant that peripheral countries have had to export more...resource-extractive crops in order to pay their debt and to maintain access to development assistance.”<sup>56</sup> Because neoliberal policies and mandates for economic

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<sup>50</sup> Deacon, Bob. *Global Social Policy and Governance*, Sage Publications, 2007.

<sup>51</sup> Ibid.

<sup>52</sup> Khagram, Sanjeev. *Dams and Development: Transnational Struggles for Water and Power*. Ithaca: Cornell University Press. 2004.

<sup>53</sup> De Sousa Santos, Boaventura. *Democratizing Democracy*. Vol 1 of *Reinventing Social Emancipation: Toward New Manifestos*. 2007.

<sup>54</sup> Ibid.

<sup>55</sup> Isla, Ana, and Trina Filan. "Women and Environmental Politics." *Women Worldwide: Transnational Feminist Perspectives on Women*. By Janet Lee and Susan M. Shaw. New York: McGraw, 2011. 445-73. Print.

<sup>56</sup> Ibid.

growth have resulted in further exploitation of marginalized societies, the radical approach rejects the very concept of development. The promotion of sustainable development is resisted, as well, because the pursuit of development and sustainable growth disguise the fact that a higher standard of living in the industrialized world depends on the extraction of resources from peripheral nations through debt and trade.<sup>57</sup> Thus, the radical approach to development disposes of the ideological foundations of development and sustainable development promoted by the Global North.

Feminist scholar Vandana Shiva exemplifies this resistance to the dominant model of development. She rejects the neoliberal justification that economic growth is essential for poverty alleviation and argues that poverty is, “the perversion and externalities of a non-sustainable, unjust, inequitable economic growth model.”<sup>58</sup> She turns the tables on the Global North and adds that, “Economic poverty is only one form of poverty. Cultural poverty, social poverty, ethical poverty, ecological poverty, spiritual poverty are other forms of poverty more prevalent in the so called rich North than in the so called poor South.”<sup>59</sup> She frames global powers as being contributors to global suffering, rather than as innocent bystanders lending a hand to developing nations; the growth of capital is tied to the destruction of nature and sustenance economy. With regards to gender, Shiva promotes subsistence Eco-feminism as a way to address the interconnectedness of women’s well-being with that of the environment. Going beyond Western goals of ‘gender mainstreaming’ or ‘equality for women,’ Shiva sees that the goals of feminism and the environmental movement are one in the same:

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<sup>57</sup> Ibid.

<sup>58</sup> Shiva, Vandana. “Response to ‘How to End Poverty: Making Poverty History and the History of Poverty’”. May 11, 2005.

<sup>59</sup> Ibid.

*We see the devastation of the earth and her beings by the corporate warriors, as feminist concerns. It is the same masculinist mentality which would deny us our right to our own bodies and our own sexuality, and which depends on multiple systems of dominance and state power to have its way... If the definition of 'equality for all' is that all people in the world are able to live at the same level of consumption of resources enjoyed by men in advanced societies, this equality is quite simply impossible... With a limited planet, there can be no escape from necessity. To find freedom does not involve subjugating or transcending the 'realm of necessity,' but rather focusing on developing a vision of freedom, happiness, the 'good life' within the limits of necessity, of nature.<sup>60</sup>*

Shiva rejects the Western worldview, which operates on hierarchical assumptions that humans are separate from and superior to nature, men are superior to women, and technology is superior to Indigenous knowledge. Shiva promotes an alternative paradigm based on subsistence, diversity, cooperation, and “inclusivity and the recovery of creative forms of being and perceiving” or what she calls the feminine principle.<sup>61</sup>

Therefore, in place of the values and practices of the dominant paradigm, the progressive and radical wings have come to articulate more substantial reforms based on a “broad notion of the economy and development, which goes beyond [or rejects] economic growth to include such key goals as democratic participation; environmental sustainability; social, gender, racial and ethnic equity; and transnational solidarity.”<sup>62</sup> This movement (1) stresses the need to treat the economy as an integral part of society that is dependent upon society, and to subordinate

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<sup>60</sup> Shiva, Vandana and Maria Mies. *Ecofeminism*. Halifax: Fernwood Publications. 1993.

<sup>61</sup> Shiva, Vandana. *Staying Alive: Women, Ecology and Development*. London: Zed Books. 1989.

<sup>62</sup> De Sousa Santos, Boaventura and A. Rodríguez-Garavito. *Another Production is Possible*. Vol. 2 of *Reinventing Social Emancipation: Toward New Manifestos*. 2007.

economic goals to the protection of such goods and values, (2) proposes bottom-up instead of top-down development, (3) gives priority to the local scale, and (4) tends to propose alternatives based on collective initiatives.<sup>63</sup> The form of alternative development visions can “range from ambitious proposals for neo-Keynesian, progressive macro-economic policies—e.g. selective protection of key national industries...to micro-initiatives undertaken by marginalized sectors in the Global South seeking to gain control over their lives and livelihoods by organizing into cooperatives of informal workers.” The scale of alternative initiatives also varies, from small local production units in rural areas to proposals designed to guarantee respect for basic labor and environmental standards worldwide.<sup>64</sup>

Thus, since the second half of the 20<sup>th</sup> century, there has been a proliferation of dominant and alternative approaches to development, which can be subdivided into neoliberal and reformist, and progressive and radical agendas, respectively. From this history, the goals of sustainability, local participation, and gender equity have come to feature in both dominant and alternative approaches. These terms have contending meanings, and this report will attempt to complicate and qualify the meanings of such terms. At the outset, however, this study rests on the following general definitions: ‘sustainability’ is the long-term maintenance of environmental, social, and economic health; ‘local participation’ refers to the meaningful involvement of community members impacted by a project; and ‘gender equity’ connotes equal benefits accrued to women.

This report now turns to the case of Los Manduriacos, where one finds manifestations of both dominant approaches to development, such as the Manduriacu Dam, and alternative

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<sup>63</sup> Ibid.

<sup>64</sup> Ibid.

approaches to development, such as local initiatives. The following sections assess the ways in which various approaches to development have played out in this region of Ecuador and how voices from these communities can influence the current discourses on development.

## 2.0 DEVELOPMENT IN LOS MANDURIACOS

The region of Los Manduriacos in the subtropical northwest of Ecuador has felt the effects of both dominant and alternative approaches to development. Proponents of the Manduriacu Dam have approached the project from a dominant, reformist perspective. They have used a top-down planning process aimed at achieving economic growth; but they have also expressed a commitment to minimize any social and environmental harm that may result. From a progressive or radical perspective, this approach is fundamentally unsustainable. Local initiatives in the area are driven by alternative approaches whose primary goals are decision-making, equity, and environmental and economic wellness at the local level.

The Manduriacu Hydroelectric Dam is proposed for a section of the Guayllabamba River near the towns of Cielo Verde, Guayabillas, and Santa Rosa, between the provinces of Imbabura and Pichincha. In 2008, the public company, HidroEquinoccio EP (HEQ), was formed in order to plan and execute the construction and operation of the dam. The Manduriacu Hydroelectric Dam is proposed as a ‘sustainable development,’ as the Preliminary Environmental Impact Statement (PEIS) of the Manduriacu project states that “the commitment of the state of Ecuador will be to initiate the construction of new hydraulic centers as sources of clean and renewable energy and furthermore, to execute these projects in an environmentally sound way.”<sup>65</sup> Due to rising energy

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<sup>65</sup> HidroEquinoccio EP (HEQ). “Estudio de Impacto Ambiental Preliminar (EIAP) del proyecto hidroeléctrico Manduriacu y su línea de transmisión a 230 KV (Preliminary Environmental Impact Statement of the

demands and the abundant untapped potential of hydroelectric power, the government of Ecuador is following a regional trend of prioritizing new hydroelectric dams in long-term energy plans.<sup>66</sup> As of 2009, hydroelectric power accounted for 41.7 percent of Ecuador's total electricity generating capacity.<sup>67</sup> Having completed the Preliminary Environmental Impact Assessment in November 2011, HEQ planned to begin the construction phase of the project in 2012.

Meanwhile, residents in Los Manduriacos are engaged in local initiatives for the well-being of their communities and environment. These initiatives take various forms: from *mingas* (work parties) tending communal gardens, to region- and province-wide *asambleas* (assemblies), to local industries and collectives engaged in craft production and eco-tourism ventures. Women often play a central role in these efforts, and environmental conservation is a common objective.<sup>68</sup>

For all development projects, the 2008 Constitution of Ecuador states, "It will be guaranteed to communities...the collective right to free, prior and informed consent (FPIC), surrounding plans and programs of prospection, exploitation and commercialization of resources...that affect them environmentally or culturally (Article 57.7)."<sup>69</sup> Similarly, the state prohibits, "development...harmful to human health or...ecosystems (Article 15)."<sup>70</sup> But has the government of Ecuador managed to realize its own objectives for communities that will bear the Manduriacu Dam? What are the opinions and experiences of community members impacted by

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hydroelectric Manduriacu project and its line of transmission at 230 KV)." 2011. (Translated by Keely McCaskie, December 2011)

<sup>66</sup> Finer, Matt and Clinton Jenkins. "Proliferation of Hydroelectric Dams in the Andean Amazon and Implications for Andes-Amazon Connectivity." 2012. PLoS ONE 7(4): e35126. doi:10.1371/journal.pone.0035126.

<sup>67</sup> Central Intelligence Agency. "Ecuador." *The CIA World Factbook*. Web. 31 Dec. 2012. <<https://www.cia.gov/library/publications/the-world-factbook/geos/ec.html>>.

<sup>68</sup> McCaskie, Keely. "Redefining 'Sustainable Development': a Case Study of a Large-scale Hydroelectric Dam in Ecuador." SIT Study Abroad. 2011.

<sup>69</sup> Republic of Ecuador. *Constitution of the Republic of Ecuador*. Corporación de Estudios y Publicaciones, 2008. (Translated by Keely McCaskie, December 2011)

<sup>70</sup> Ibid.

the Dam? What principles and practices underlie alternative approaches to development in the area?

## 2.1 METHODOLOGY

To answer these questions, field research was conducted in November 2011 in the region of Los Manduriacos focusing on the three towns that will be most directly impacted by the Manduriacu Dam—Guayabillas, Santa Rosa and Cielo Verde. The study utilized three principal methods: observation, participant observation, and formal and informal interviews.<sup>71</sup> Various forms of reciprocity were also incorporated: i.e. teaching English and hosting educational workshops about dams. While living with local families, data were collected in and around the towns of Santa Rosa, Guayabillas, and Cielo Verde. Observations and interviews were conducted in both private and public spaces, including various community meetings regarding the Manduriacu Dam. During the second half of the data-collection period, particular attention was paid to Cielo Verde, the largest of the three and most directly impacted by the dam. Data were also collected at a Zonal Assembly of the zones Los Manduriacos and Intag in the town of Chontal, and a Cantonal Assembly of Cotacachi in the town of Cotacachi. As such, this study represents voices from all three towns, from surrounding farms, and from other communities in the zones of Los Manduriacos and Intag and in the Canton of Cotacachi. In total, 37 interviews were conducted

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<sup>71</sup> While observation is noting the evident characteristics of places and people from a distance, participant observation is collecting that data while engaging in the activities being observed. An example of the former is taking note of physical surroundings, such as crops grown on farms, HEQ posters on buildings, and river water levels. An example of the latter is witnessing the roles taken up by women in a *minga* (work party) while the researcher also takes part as a member of the *minga*.

(18 formal) with a total of 30 people.<sup>72</sup> A standardized list of questions was used,<sup>73</sup> and attention was paid to the equal representation of all genders, age groups, and economic circumstances. Written consent was obtained from those informants directly quoted in this report. See the photos in Figure 1 for an overview of the area of impact where this study was conducted.

Field research was complemented by a review of numerous secondary sources. This review had several aims: (1) To understand the Manduriacu project from the official perspective of the state and HEQ. This was achieved by examining the Preliminary Environmental Impact Assessment and online publications produced by HEQ, as well as news releases quoting proponents of the project. (2) To contextualize the Manduriacu project within the history of large-scale dam development. This aspect was informed by the final report produced in 2000 by the World Commission on Dams, and other scholarly articles, manuals, and books written on the subject.<sup>74</sup> (3) To understand the situation in Los Manduriacos within the context of the latest scholarship and approaches in the field of development. This was done by analyzing some of the latest reports produced under the World Bank and other development agencies, most notably the project documents pertaining to the comparative cases in Ghana and Indonesia (see section 3.0)

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<sup>72</sup> Interviews were conducted twice with seven individuals.

<sup>73</sup> The researcher used the following set of questions:

(1) Are you aware of the Manduriacu Hydroelectric Dam that the Government of Ecuador is planning to build here on the Guayllabamba River? (If yes...) (1a) What have you learned about the project? (1b) How did you learn what you know about the project? (1c) What positive and/or negative impacts do you think may occur in your community? (1d) Do you feel fully-informed, and why? (2) Have you interacted with state or construction company officials (either in person or through distributed materials)? (If yes...) (2a) What have been these interactions? (2b) What is your level of satisfaction with their efforts? (2c) What is your opinion on the project (i.e. in favor, against, or neutral), and why? (2d) What is your sense of your community's opinion on the project? (3) What do you wish for the future of your community? (4) What is your opinion on the concept of 'development,' 'sustainability'? (5) What do you feel is the status of women in your community? (6) What factors have or have not changed in the lives of women? (7) Are you aware of any local-level initiatives for the betterment of the community? (If yes...) (7a) What are the forms, goals, and successes of these initiatives? (7b) What barriers (if any) do they face to achieving their goals?

<sup>74</sup> See Khagram (2004), Finer and Jenkins (2012), and International Rivers Network (2000).

and the report “Linking Gender, Environment, and Poverty for Sustainable Development.”<sup>75</sup> In this report, staff members at the Social Development Department of the World Bank detail the links between gender inequality, poverty, and environmental degradation in order to acknowledge “the ways in which nature-society relations are gendered,” and “develop approaches that can accelerate the positive synergy and better social/gender, environment, and poverty outcomes.”<sup>76</sup> After analyzing the outcomes of eight Bank projects, the report identified several approaches that are effective in creating socially and environmentally sustainable outcomes in development. These strategies include “reducing marginalization of poor women...and other excluded groups by increasing...control over natural and productive resources...and (2) promoting collective actions in policy and program formulation, especially establishing mechanisms for improved agency...at the community and project levels.”<sup>77</sup> Therefore, a review of secondary sources provided a context from which to analyze the researcher’s findings in the region of Los Manduriacos.

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<sup>75</sup> Ahmad, Nilufar and Mari Clarke. *Linking Gender, Environment, and Poverty for Sustainable Development: A Synthesis Report on Ethiopia and Ghana*. The World Bank. 2012.

<sup>76</sup> Ibid.

<sup>77</sup> Ibid.



**Figure 1. The Region of Los Manduriacos<sup>78</sup>**

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<sup>78</sup> Photo credit: Keely McCaskie, November 2011; (top left and right) the Guayllabamba River; (bottom left) a view of Cielo Verde; (bottom right) school children in Cielo Verde.

## 2.2 FINDINGS

### 2.2.1 A Background of the Region

In order to understand local views of the Manduriacu Dam and their broader ideas about ‘development,’ it is necessary to detail a brief history of the region. Mixed-descent settlers began to arrive in this region in the middle of the 20<sup>th</sup> century to take advantage of land made available. The small towns of Guayabillas, Santa Rosa, and Cielo Verde appeared in the last four decades, as groups of families organized themselves around these centers. Infrastructures started to arrive and continue to change the economic livelihoods of the settlers. Before the construction of a main road, many residents cut down forests to create pastures for raising cattle, the most lucrative activity at the time. When a main road was built, more men became loggers because it became easier to transport timber outside of the area. One man, who has lived on a farm outside of Santa Rosa for more than 30 years, said that, “before, it was all mountain, and there were only eight farming families [in Santa Rosa]. It was generally hotter and rained more. Also, there were many more animals, such as monkeys. With the highway, people could cut down and remove the trees, and the animals disappeared.”<sup>79</sup> Another man who has lived his whole life in Guayabillas remembers, “there were only seven families [in Guayabillas]. In 1979, the school came; in 1993, the electricity. And in 2001, they built the highway. There has also been much immigration.”<sup>80</sup> Today, Santa Rosa remains the smallest of the towns, with approximately 15 families. Guayabillas is home to about 70 families. In these two towns, the majority of families still

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<sup>79</sup> Interviewed by Keely McCaskie on November 16, 2011; McCaskie, Keely. “Redefining ‘Sustainable Development’: a Case Study of a Large-scale Hydroelectric Dam in Ecuador.” SIT Study Abroad. 2011.

<sup>80</sup> Interviewed by Keely McCaskie on November 8, 2011; Ibid.

subsist on agriculture and ranching.<sup>81</sup> Cielo Verde, the largest of the three, has hundreds of residents, and a larger portion of men earns income from logging.

Despite their variations, the towns share certain concerns. (1) Communication technologies (e.g. landline and mobile telephones, access to the Internet) are scarce. (2) Prior to 2012, there was no bridge over the Guayllabamba River, making communications between Cielo Verde (in Imbabura province) and Santa Rosa and Guayabillas (in Pichincha Province) uncommon. Due to growing interprovincial concerns and of communications, one long-term resident reflected that, “in the past, people here were independent, but now they are isolated.”<sup>82</sup> (3) Although electricity and potable water recently arrived to the area, there remains a lack of access to basic services (e.g. a health clinic). (4) Growing population has put pressure on the existing infrastructure (e.g. water supply), which has resulted in degradations of the environment.<sup>83</sup> (5) Deforestation in the area is a major issue. A logger can earn up to double the income of a farmer, and truck drivers transporting wood can earn even more.<sup>84</sup> This incentive, among other factors, has led to a rate of deforestation in the zone of Manduriacos nearly double the national average.<sup>85</sup> These forests form the watershed of the Guayllabamba River, and their destruction threatens the quality of the river ecosystem. (6) Mining operations (for gold, silver, and other precious metals) have continued to encroach on the area. According to a man in Cielo Verde, there are nearly ten mining concessions to in the area, one of which is very close to Cielo Verde; the majority of community organizations in the area are against the mining.<sup>86</sup> Other

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<sup>81</sup> Ibid.

<sup>82</sup> Interviewed by Keely McCaskie on November 17, 2011; McCaskie, Keely. “Redefining ‘Sustainable Development’: a Case Study of a Large-scale Hydroelectric Dam in Ecuador.” SIT Study Abroad. 2011.

<sup>83</sup> Ibid.

<sup>84</sup> Goldstein, Allie. “Grupos comunitarios administrarán el bosque protector.” *Intag*. Sept.-oct. 2011.

<sup>85</sup> Ibid.

<sup>86</sup> Interviewed by Keely McCaskie on November 9, 2011; McCaskie, Keely. “Redefining ‘Sustainable Development’: a Case Study of a Large-scale Hydroelectric Dam in Ecuador.” SIT Study Abroad. 2011.

communities have been severely harmed by contamination of river water due to mining.<sup>87</sup> See the photos in Figure 2 for an overview of several economic livelihoods and concerns facing Los Manduriacos.



**Figure 2. Economic Livelihoods in Los Manduriacos<sup>88</sup>**

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<sup>87</sup> Ibid.

<sup>88</sup> Photo credits: Keely McCaskie, November 2011; (top left) cattle near Cielo Verde; (top right) banana trees in a local *finca* (farm); (bottom left) mules transporting lumber near Cielo Verde; (bottom right) a leaching pond at *Las Minas de Corazon* (the gold mines of Corazon) in Los Manduriacos.

### 2.2.2 The Manduriacu Hydroelectric Project

The Manduriacu Hydroelectric Dam is one of seven dams proposed to form the Guayllabamba Integrated Hydroelectric System on Ecuador's Guayllabamba River (see Figure 3). It has been 20 years since the project's potential was first studied. In 2008, the government of the Pichincha province decided to revisit these studies, and thereby formed HEQ. According to the WCD, a large-scale dam has a height of at least 15 meters. The most recent plans suggest the Manduriacu Dam will be at least 40 meters high.<sup>89</sup> The total volume of the reservoir of the Manduriacu Dam will be 9,600,000 m<sup>3</sup>, 3,500,000 m<sup>3</sup> of which will be used daily in the operation of the dam. The Manduriacu reservoir would reach 493 meters above sea level, and the reservoir will be 5.5 km long from the dam to upstream near the town of Santa Rosa. The anticipated cost of the Manduriacu Dam is \$165 million US dollars, with an estimated 385 Giga-Watts per hour (GW/H) generated each year.<sup>90</sup> Figure 4 is a preliminary project map from HEQ detailing the projected reservoir, affected land-holdings, areas of direct and indirect impact, and the location of the transmission lines, access roads, and other infrastructure. The left margin, or southern side, of the river forms part of the Natural Protected Area Mashpi-Guaycuyacu-Saguangal of the Metropolitan District of Quito (see Figure 4).

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<sup>89</sup> Hidro Equinoccio EP. "Proyectos Chirapi y Manduriacu" ["Chirapi and Manduriacu Projects"]. *Hidro Equinoccio: Sistema Hidroeléctrico Integrado Guayllabamba*. 2013. Web. <<http://heq.com.ec/>>.

<sup>90</sup> Ibid.



Figure 3. The Guayllabamba Integrated Hydroelectric System<sup>91</sup>

<sup>91</sup> Hidro Equinnocio EP. "Proyectos Chirapi y Manduriacu" ["Chirapi and Manduriacu Projects"]. *Hidro Equinoccio: Sistema Hidroeléctrico Integrado Guayllabamba*. 2013. Web. <<http://heq.com.ec/>>.



It can be argued that the Manduriacu Hydroelectric Dam (and the Guayllabamba Integrated Hydroelectric System) will have a relatively low impact compared to other large-scale dam projects. While the Manduriacu Dam would likely reach 40 meters in height, other ‘major’ dams are significantly larger. For example, the Narmada Projects in India, the largest river basin scheme proposed for India in 1978, would have entailed 3000 ‘small dams’ and 30 ‘big dams’— including the 455-foot-tall Sardar Sarovar and 865-foot-tall Narmada Sagar ‘major dams.’<sup>93</sup> Had it been completed, the Narmada Projects would have submerged thousands of villages, displaced millions of people, and destroyed thousands of hectares of forests.<sup>94</sup>

Nonetheless, the findings of the World Commission on Dams (WCD) final report (2000) suggest that the Manduriacu Dam could have significant consequences. Interviews and documents from HidroEquinoccio EP (HEQ) suggest a number of benefits and risks of the dam. According to HEQ, 23 land-holdings will be directly affected by the reservoir and 740 rural families live in the total zone of impact.<sup>95</sup> They proclaimed that the project would employ approximately 900 persons (600 directly, 300 indirectly); this estimate includes specialists that would need to be brought from outside of the community. The vast majority of these positions would last only during the period of construction (2-3 years). Staff said that 15% of project funds are “invested in the community.” HEQ claims the project is “green,” and is seeking international commendation of the project.<sup>96</sup>

At the same time, the Preliminary Environmental Impact Statement confirmed threats to impacted communities. During the construction phase, these would include: (1) degraded quality

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<sup>93</sup> Khagram, Sanjeev. *Dams and Development: Transnational Struggles for Water and Power*. Ithaca: Cornell University Press. 2004.

<sup>94</sup> Ibid.

<sup>95</sup> Interviewed by Keely McCaskie on October 31, 2011; McCaskie, Keely. “Redefining ‘Sustainable Development’: a Case Study of a Large-scale Hydroelectric Dam in Ecuador.” SIT Study Abroad. 2011.

<sup>96</sup> Ibid.

of air (e.g. increased emissions and dust from traffic and construction); (2) contamination of water and soils from disposed waste; (3) changed morphology and increased erosion of the land; (4) destruction of forests and natural habitats; (5) proliferations of invasive species; (6) extinction of land-based animals, plants, and aquatic species; (7) flooding and diminished value of land-holdings; (8) insecurity and health risks from the influx of outside male workers; (9) loss of agricultural areas and reduced potential of tourism industries; (10) destruction of historical sites. The operation phase entails a continuation of these risks and others, such as: (11) degradation of water quality sedimentation and eutrophication in the reservoir; (12) permanent changes in flow and composition of the Guayllabamba River; (13) emigration and deteriorated health of local populations due to effects of the reservoir.<sup>97</sup> Furthermore, HEQ determined that the populations in the area are subject to high social vulnerability to the impacts of the dam, due to deficient roadways, low flow of public transportation, limited basic services, nearly total absence of telephones, and high dispersion of the population.<sup>98</sup> Due to these factors, it is difficult for community members to mobilize quickly in search of services, such as a health clinic, or to communicate with those outside of the community. HEQ found the level of *sensibilidad social* (social awareness) to be medium in Pichincha Province (Santa Rosa and Guayabillas) and low in Imbabura Province (Cielo Verde)—the difference being the influence of the owners of the *Reserva Guaycuyacu* (Guaycuyacu Reserve) and other community organizers on the Pichincha side. Due to low awareness, HEQ does not anticipate opposition to the project on the Imbabura side (Cielo Verde).<sup>99</sup> The Preliminary Environmental Impact Statement of the Manduriacu

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<sup>97</sup> Hidro Equinoccio EP. “Estudio de Impacto Ambiental Preliminar (EIAP) del proyecto hidroeléctrico Manduriacu y su línea de transmisión a 230 KV (Preliminary Environmental Impact Statement of the hydroelectric Manduriacu project and its line of transmission at 230 KV).” 2011.

<sup>98</sup> Ibid.

<sup>99</sup> Ibid.

Project recommended that the project should proceed. However, it is important to note that, according to the WCD, such assessments often “consist mostly of measures to compensate or mitigate the planned impacts and render them acceptable when the decision to proceed has already been taken,” and that “most dam proponents see an [environmental impact assessment] as an administrative hurdle to be cleared, or a requirement to secure funding.”<sup>100</sup>

Unnoted by HEQ is that the negative impacts of the Manduriacu Dam will fall disproportionately on women. In this region, women are often primary caregivers, attending to the health of their families and the ill. The increased incidence of vector-borne diseases, as well as greater contamination of air, land and water sources, will increase women’s workload as caregivers. In addition, the influx of male workers and temporary visitors from outside the community will threaten the safety of women and girls, who may fall victim to harassment and attacks. Finally, the short-term benefits of the dam (i.e. jobs during the construction phase) will accrue to males in the community, leaving women excluded from greater income-earning potential. The government of Ecuador had not accounted for these gendered impacts in its planning or reporting.

We will now turn to an analysis of the perspectives of community members in the region concerning the Manduriacu Dam. Local insights help establish if, and to what extent, the state’s commitments to goals such as sustainability, local participation, and gender equity have been delivered.

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<sup>100</sup> World Commission on Dams (WCD). “*Dams and Development: a New Framework for Decision-Making.*” Final Report. Nov. 2000.

### 2.2.3 Public Understandings: Levels of Awareness, Opinions, and Interactions with HEQ

In November 2011, the great majority of the people knew very little about the project. Various people had no prior awareness of the dam proposal's existence, even though HEQ aimed to commence construction within the following year. According to one informant who lived in a farm that will be partially flooded by the reservoir, "the people here do not understand dams and don't have basic information about the project." Another resident, who has land near the town of Cielo Verde, said that, "People are not decided because we are blind to the impacts."<sup>101</sup>

While there was a general trend of low awareness surrounding the Manduriacu Project, the content of that which people claimed to know was diverse. For example, some expressed that the project would be positive, others that it would be negative, and others were neutral to the proposition. Of the 24 informants (10 women and 14 men) that identified with one of the three positions above, five were in favor of the dam (two women and three men), 12 were against the dam (five women and seven men), and seven were neutral (three women and four men) (see Table 2).

**Table 2. Sample of Public Opinion Concerning the Manduriacu Project<sup>102</sup>**

	Women	Men
"In Favor"	2	3
"Against"	5	7
"Neutral"	3	4
Total	10	14

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<sup>101</sup>Interviewed by Keely McCaskie on November 7, 2011; McCaskie, Keely. "Redefining 'Sustainable Development': a Case Study of a Large-scale Hydroelectric Dam in Ecuador." SIT Study Abroad. 2011.

<sup>102</sup>McCaskie, Keely. "Redefining 'Sustainable Development': a Case Study of a Large-scale Hydroelectric Dam in Ecuador." SIT Study Abroad. 2011.

All of those in favor of the dam focused on expanded opportunities for work and infrastructure in the area during the construction phase of the project. The driver of a truck which transports passengers on the highway between Santa Rosa and Guayabillas said the dam will lead to more income and more work in construction, and for mechanics, drivers and administrators. A young man in Cielo Verde also believed that the dam would be progress for the people and that it would open the door for more schools, universities and infrastructure for tourism. Some in favor of construction of the dam were under the impression that the community would have to accept either the dam or mining, and that the dam would be the better choice.<sup>103</sup>

At the same time, a larger percentage of respondents claimed that the Manduriacu Project would have mostly negative consequences. Like those in favor of the dam, those against the dam were concerned with the well-being of the community. However, they preferred that the dam not be built, due to social and environmental risks during the construction and operation phases of the project. They referenced one or more of the following potential impacts: (1) Harm would likely be done to the natural environment from the disappearance of forests and species. In order to construct the dam, it would be necessary to remove vegetation in the area of the reservoir. Through loss of habitat, obstruction of sediment and water flow, and change in water composition, various species of fish, plants and animals would likely disappear. (2) The arrival of hundreds of male workers from outside of the communities may threaten the security of local populations, especially women. (3) The service infrastructures of the towns may not have the capacity to support the influx of workers. For example, there are already pressures on water supplies and trash collection programs. (4) It is likely that work opportunities relating to the dam would only last 3-4 years during the construction phase and the best jobs would only be available

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<sup>103</sup> Ibid.

to those already trained in specializations. (5) More work on the dam may lead to fewer workers on the farms, and as a result, less access to food in the communities. (6) The Guayllabamba River, which carries the waste of Quito, is one of the dirtiest rivers in Ecuador. Creation of the reservoir would likely worsen contamination of the water and soils. (7) There may be unexpected floods for communities downstream of the dam when the dam is opened to release sediment. (8) The reservoir would likely create a favorable habitat for mosquitoes and other vectors that transmit diseases such as malaria and leishmaniasis.<sup>104</sup>

Still others claimed to be neutral or undecided with regards to their support of the project. For example, one resident in Cielo Verde said he'd need a third-party professional to explain the studies before reaching a decision.<sup>105</sup> Another woman in Cielo Verde said she would approve of the dam if HEQ provided a health clinic.<sup>106</sup> In all, the people who claimed a strong, informed position were in the minority. The overwhelming content of responses reflected a grave lack of complete and comprehensive information about the project and its potential impacts. And due to lack of reliable information, other factors, such as the expansion of mining in the area, economic dependence on logging, and the politics of community life, colored popular perceptions of the dam project.

Furthermore, public opinion was very dissatisfied with the social dimensions of the preparatory phase of the project. According to interviewees, notifications, meetings, and other relations with HEQ were sparse, abrupt, and vague. The physical remnants of HEQ included posters announcing job trainings, poles planted in the earth, a bridge being built over the Guayllabamba River, and teams of technicians conducting tests in the soils. Such observations

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<sup>104</sup> Ibid.

<sup>105</sup> Interviewed by Keely McCaskie on November 9, 2011; McCaskie, Keely. "Redefining 'Sustainable Development': a Case Study of a Large-scale Hydroelectric Dam in Ecuador." SIT Study Abroad. 2011.

<sup>106</sup> Ibid.

and a lack of comprehensive information had created various expectations and an environment of uncertainty. One landowner reflected that, “HEQ has not led us to understand. They aren’t clear and don’t answer when people ask them questions.”<sup>107</sup> A woman whose land would be flooded by the reservoir reflected on her interactions with HEQ:

*Whenever there are meetings, they give only 2-3 days notice. I first found out about the project by accident in December 2009 when someone told me of a meeting about the issue. In February 2010, HEQ came to my house, and in April 2010, they started interviewing the people. In May 2010, they brought a carnival to the communities to act out skits about the benefits of the hydroelectric energy. In July 2011, HEQ walked through the property of a neighbor without permission, and started enrollment for training courses in various towns. In October 2011, there was a meeting in Cielo Verde for the owners of impacted land-holdings. And in November 2011, there was a meeting to involve the community in the inauguration of the new bridge. HEQ wants to start the construction phase very soon. HEQ acts as if the project were already approved—without informing or obtaining the consent of the people. The social aspects of the project have been a failure.<sup>108</sup>*

Others corroborated her accounts and voice additional grievances: HEQ has not broached the topic of compensation for anticipated damages, or fulfilled various promises. For example, most of the training courses announced in July 2011 have not occurred. A resident of Cielo Verde said that, “HEQ voiced its commitment to four areas of outreach: health, education,

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<sup>107</sup> Interviewed by Keely McCaskie on November 15, 2011; McCaskie, Keely. “Redefining ‘Sustainable Development’: a Case Study of a Large-scale Hydroelectric Dam in Ecuador.” SIT Study Abroad. 2011.

<sup>108</sup> Interviewed by Keely McCaskie on November 27, 2011; Ibid.

highways, and work. But, they haven't taken concrete steps."<sup>109</sup> Furthermore, some members of the community believe that the construction of the new bridge over the Guayllabamba River is a poor investment on the part of HEQ; the bridge will be flooded after the dam is constructed, and there are other basic services that the community needs in the long run. In addition, neither sufficient warning nor assistance was offered to the community for review of impact assessments, and channels for redress were not set up or publicized. See the photos in Figure 5 for an overview of several interactions between HEQ and community members.

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<sup>109</sup> Interviewed by Keely McCaskie on November 9, 2011; Ibid.



**Figure 5. Interactions with HidroEquinoccio EP (HEQ)<sup>110</sup>**

These findings reveal the ideals and practices underlying the Manduriacu Dam Project. The experiences of community members impacted by the project elucidate the extent to which the state of Ecuador has achieved the objectives of sustainability, local participation, Free Prior Informed Consent, and gender equity.

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<sup>110</sup> Photo credits: Keely McCaskie, November 2011; (top left and right) signage from HEQ announcing job trainings; (bottom left) bridge constructed by HEQ over the Guayllabamba River; (bottom right) HEQ representative meets with Cielo Verde community members about an inauguration ceremony for the new bridge.

The Manduriacu Dam was conceived through a reformist approach to development. That is, as a large-scale, top-down project executed by the state that creates renewable energy and is managed in an environmentally and socially sound way. HEQ's goal was to design and implement the project, and along the way, complete a check-list of safeguards: conducting all necessary tests and reports, educating impacted communities, offering participation and benefits to the community members, etc. These safeguards would ensure that minimum damage was done. Regardless of any opposition, however, the project would proceed because President Correa could declare the project to be a 'national priority.'<sup>111</sup> Furthermore, any harm that resulted would be a 'necessary sacrifice' for the good of the nation as a whole.<sup>112</sup>

According to research conducted in the area of impact, this mentality and this strategy failed to deliver sustainability, local participation, Free Prior and Informed Consent, and gender equity. (1) There is little evidence that the project will be sustainable, given the range of harmful long-term environmental, social, and economic consequences reflected in both impact statements and community knowledge. The state has not succeeded in prohibiting, "development...harmful to human health or...ecosystems (Article 15)."<sup>113</sup> (2) There has been a major lack of community awareness and meaningful participation in the Manduriacu hydroelectric project. As of November 2011, public opinion was divided and based on scarce communications and incomplete information from HEQ. On the 'Participation Ladder' (Table 1) one may argue that HEQ barely achieved a low level of local participation; the community hardly knew about decisions and received little public information. Furthermore, the state failed to deliver "the

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<sup>111</sup> Ibid.

<sup>112</sup> HEQ staff, interviewed by Keely McCaskie on October 31, 2011; McCaskie, Keely. "Redefining 'Sustainable Development': a Case Study of a Large-scale Hydroelectric Dam in Ecuador." SIT Study Abroad. 2011.

<sup>113</sup> Republic of Ecuador. *Constitution of the Republic of Ecuador*. Corporación de Estudios y Publicaciones, 2008. Print.

collective right to free, prior and informed consent, surrounding plans and programs of prospection, exploitation and commercialization of resources...that affect them environmentally or culturally (Article 57.7).”<sup>114</sup> Insufficient information was provided in an unreasonable time frame, and the demonstrable consent of impacted community members was neither sought nor obtained. (3) There were no direct efforts to engage women in the process, and project documents failed to reflect an understanding of impacts on women and other vulnerable peoples. The benefits and costs of the project would be distributed unequally. Men are more likely to receive the most jobs and compensation for flooded land, while women and the vulnerable (e.g. youth, elderly, persons with disabilities) would likely bear the greater burden of increased health and safety hazards. Therefore, the project has thus far failed to deliver sustainability, local participation, Free Prior and Informed Consent, or gender equity. We turn now to findings regarding alternative approaches to development in the region of Los Manduriacos in the form of various local initiatives.

#### **2.2.4 Alternative Visions and Local Initiatives in Los Manduriacos**

Despite uncertainty and divided public opinion about the Manduriacu Dam, there was a large degree of consensus in the community when asked the question “What do you desire for the future of your community?” The following quotes represent a majority of responses:

*“That there is no more development, because with more development there will be more exploitation of the environment.”*

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<sup>114</sup> Ibid.

*“That the forests are protected. If we destroy them, there will be no resources for future generations. Also, to be able to sell organic products in the city.”*

*“That everyone has a job.”*

*“To have a health center, clean water, a city hall and a new bridge over the Manduriacu River.”*

*“That the industrialized nations support underdeveloped nations that have natural resources and do not demand their exploitation. And that we have a clean environment, peace, harmony, security and equity.”*

*“Life as it is now...without the dam.”*

*“That we continue building for a better quality of life and that we utilize non-extractive alternatives (tourism, ranching, etc.) that exist in the region.”*

*“That they do not build the dam and that we have colleges and universities for the youth here in our community. Also, that other countries think of Ecuador as a tourist destination.”*

*“People here want basic services, and that their children advance.”<sup>115</sup>*

These quotes reflect a consensus on common interests in the community: a quality environment, sufficient basic needs, peace of mind, and the well-being of future generations. While HEQ prepared its final impact studies to commence construction of the dam, various community members were engaged in local initiatives to realize these visions. The term ‘local initiatives’ is used to refer to community projects or groups organized at the local level with varying formality and duration. Three types of local initiatives examined in this study are: (1)

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<sup>115</sup> McCaskie, Keely. “Redefining ‘Sustainable Development’: a Case Study of a Large-scale Hydroelectric Dam in Ecuador.” SIT Study Abroad. 2011.

*mingas* (work parties), (2) regional and zonal *asambleas* (assemblies), and (3) associations or collectives. *Mingas*, the most informal type of the three, are groups of community members called upon to complete a task for the benefit of the community. In Santa Rosa, *mingas* are regularly held to work on a community garden that was built for a local school. Parents of schoolchildren share in the tasks of cultivating and harvesting the crops, and they keep lists of attendance to hold each other accountable. The crops are then evenly distributed to schoolchildren and their families. *Mingas* are simple yet effective ways to promote sustainable, local food production.

*Asambleas*, or assemblies, are another form of local initiative. They are regularly held at the zonal-level (i.e. the *Asamblea Zonal de los Manduriacos e Intag*) and at progressively broader levels (i.e. the *Asamblea Cantonal de Cotacachi*). *Asambleas* are designed to inform and give voice to the people in the design of future plans. The 15<sup>th</sup> *Asamblea Zonal de los Manduriacos e Intag* (Assembly of the Zones of Los Manduriacos and Intag), for example, was attended by more than 800 people. The program was designed to achieve consent and dialogue surrounding threats to the watershed of the Guayllabamba and Intag Rivers (e.g. mining and hydroelectric projects such as the Manduriacu Dam). After introductory speeches, attendees formed breakout groups to discuss and create goals surrounding a given issue (e.g. deforestation, energy, the involvement of persons with disabilities). Groups reported their goals in a final plenary session. This particular *asamblea* resulted in the formation of the *Mancomunidad de las Comunidades de la Cuenca de los Ríos Guayllabamba e Intag* (the *mancomunidad* of the

communities of the watershed of the Guayllabamba and Intag Rivers).<sup>116</sup> Therefore, *asambleas* are forums for the mobilization of local decision-making and assets.

A final category of local initiatives—associations and collectives—includes formally devised groups with objectives. These objectives range from local agro-industries (e.g. dairy farming, fisheries, organic coffee and produce), to forest conservation, to craft production, to ecotourism. For example, the *Reserva Guaycuyacu* (Guaycuyacu Reserve) is owned by a family near Santa Rosa and specializes in seeds from hundreds of exotic fruit trees. Other families have partnered with the reserve to cultivate these seeds and sell them to consumers in Quito. Other examples include the *Corporación Talleres de Gran Valle*, a group of twelve community organizations in the region of Los Manduriacos. The corporation began in 1998 when a group of women, supported by a foreigner, formed a women’s cooperative working with the local material *estropajo* (loofa). One of the current members of the association, the *Asociación Artesanal Mandusol*, specializes in agri-handicrafts, fair trade, eco-tourism, and the production of organic peanuts, tilapia, sponges, sandals and natural fibers. Another member of the group is the women’s collective *Flor de Pambil* in Cielo Verde. After several years, this group of about fifteen women achieved government-recognized status in 2011. One member explained, “The purpose of our group is to care for the environment and propose alternative economic strategies, like ecotourism.”<sup>117</sup> The group recently became a co-protectorate of a nearby reserve, where they hope to construct a station to be used by scientists and other visitors. This forest forms part of the watershed of the Guayllabamba River; therefore, its protection helps secure the quality of the

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<sup>116</sup> The *mancomunidad* is a local governance structure newly permitted by the 2008 Ecuadorian constitution in which *parroquias* (parishes) from different provinces can form alliances based on common interests; McCaskie, Keely. “Redefining ‘Sustainable Development’: a Case Study of a Large-scale Hydroelectric Dam in Ecuador.” SIT Study Abroad. 2011.

<sup>117</sup> Interviewed by Keely McCaskie on November 5, 2011; Ibid.

river water. Even though the group is committed to acting for the benefit of the whole community, several other interest groups in the area (e.g. loggers) have raised issue.<sup>118</sup> Despite the fact that local initiatives are not immune to such conflicts, they continue to provide examples of community members organizing on behalf of a healthy future for subsequent generations.

In the region of Los Manduriacos, women play a central role in most of these community initiatives. The solutions proposed by these groups (e.g. ecotourism, craft and agri-industries) are conducive to the long-term, equal employment of women and men, whereas mining and large-scale dams mostly provide short-term construction jobs for men.<sup>119</sup> According to a female elected official in the region, elected positions are predominantly held by men in Ecuador's various levels of government. However, the number of women in elected positions is growing, and leadership roles at the local level in the pursuit of environmental and community health are mostly taken up by women.<sup>120</sup> As in any society, these women confront traditional perspectives on gender—what some call *machismo*—which seek to restrict the forms in which they participate. In some cases, this pressure may persuade women to take up more traditional roles within local initiatives; for example, cooking food for the attendees of an *asamblea* rather than providing introductory remarks. Women leaders are tasked with claiming new spheres of influence while facing possible disapproval from their communities. However, local initiatives for the well-being of community and environment are providing unparalleled opportunities for the leadership and participation of women. See the photos in Figure 6 for an overview of several local initiatives and the leadership of women in these efforts.

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<sup>118</sup> Ibid.

<sup>119</sup> McCaskie, Keely. "Redefining 'Sustainable Development': a Case Study of a Large-scale Hydroelectric Dam in Ecuador." SIT Study Abroad. 2011; see Figure 8.

<sup>120</sup> Interviewed by Keely McCaskie on November 14, 2011; Ibid.

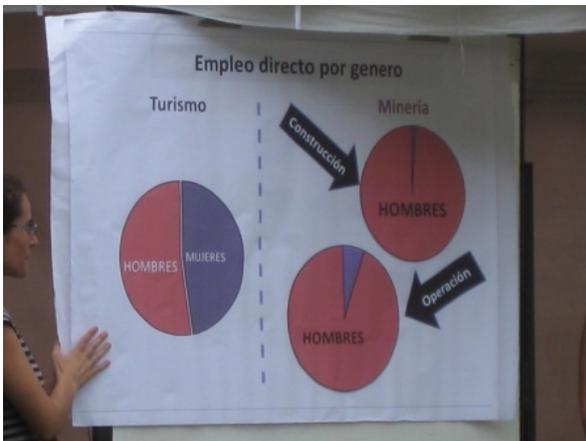


Figure 6. Local Initiatives in Los Manduriacos<sup>121</sup>

<sup>121</sup> Photo credits: Keely McCaskie, November 2011; (top left) a *minga* (work party) in Santa Rosa cares for a community garden; (top right) community members discuss deforestation at an *Asamblea Zonal* (zonal

It is helpful to deduce the principles and practices underlying these alternative approaches to development. Based on their outcomes thus far, we can assess their promise in delivering sustainability, local participation, and gender equity.

Some community members in the Los Manduriacos region have adopted the use of buzz-terms such as ‘development,’ ‘sustainability,’ ‘local participation,’ and ‘gender equity.’ Others reject or are unfamiliar with the terms, because words are imported and interpreted in various ways. Regardless, a bottom-up planning process and a focus on sustainable and just outcomes characterize all local initiatives. Intentionally or unintentionally, these initiatives are best characterized as progressive or radical approaches to development, and they pursue a high degree of sustainability, local participation, and gender equity. (1) With respect to sustainability, projects are designed with the long-term health of environment and community in mind. The sacrifice of natural resources or community health for short-term economic gain is seen as foolish, because the decision-makers—the community members—share in the consequences of this destruction. (2) Local participation is central to planning and implementation of projects. According to local project managers, the voices of the community must be solicited *before* the project is designed or implemented. The goal is to achieve not merely the education and consent of the people, but also their full enfranchisement in the decision-making processes. Such values are put into practice in forums, such as town meetings and regional assemblies, where everyone in attendance is given the opportunity to share their perspectives. From these hearings, goals are established and projects are designed around the needs and demands of local communities.

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assembly) in Los Manduriacos; (middle left) a female elected official addresses the crowd at the *Asamblea Zonal*; (middle right) members of Flor de Pambil prepare food for the attendees of the *Asamblea Zonal*; (bottom left) a team of researchers contrast the lack of employment of women in the mining industry with the equal employment of women in the tourism industry for the crowd at the *Asamblea Zonal*; (bottom right) an Indigenous woman addresses the crowd at an *Asamblea Cantonal* in Cotacachi.

Outsiders may help facilitate the process, but their actions are often subordinated to the visions and decisions of local peoples. Based on the 'Participation Ladder' in Table1, these initiatives obtain a high degree of local participation through the local formation and negotiation of decisions. (3) It is often understood that women's voices must be mobilized and their experiences acknowledged. Alternative models aim to equally distribute the benefits with women and vulnerable peoples (e.g. the disabled, the elderly). There is sizeable representation of women involved in the planning and execution of local initiatives. Women hold a majority of informal leadership positions, and a growing number of formal leadership positions.

Surely, local projects are not immune to conflict or corruption, nor are they bound to achieve their goals. However, these findings suggest that a bottom-up planning process, prioritizing just and sustainable outcomes, promises to achieve a significant degree of sustainability, local participation, and gender equity.

### 3.0 COMPARATIVE DEVELOPMENT PROJECTS

After reviewing the underlying visions and practices of the Manduriacu Hydroelectric Dam Project and of local initiatives in Los Manduriacos, one might wonder if major development agencies, such as the World Bank and national governments, are capable of delivering the same levels of sustainability, local participation, and gender equity as alternative, bottom-up approaches might. Are such institutions bound to fail at delivering these objectives?

Major development agencies have made attempts to utilize bottom-up planning and a focus on sustainability, local participation, and gender equity from the outset. These projects can be understood as collaborations between reformist and progressive approaches to development. Although the following two comparative cases do not constitute large dam projects, lessons from these projects can be applied to the case of large-scale dams. In any development effort, a community's rights (e.g. to participation, equity, etc.) remain unchanged. Both cases—the “Second Land Conservation and Smallholder Rehabilitation Project” in Ghana and the “Third National Program of Community Empowerment in Rural Areas” in Indonesia—provide insight into governmental and developmental practices designed to deliver these rights. Findings in Los Manduriacos, along with these two cases, allow for a better understanding of the impacts of various approaches to development. These conclusions can then be used to recommend strategies for Ecuador and other decision-makers hoping to attain just and sustainable outcomes.

### **3.1 CASE I “GHANA: SECOND LAND CONSERVATION AND SMALLHOLDER REHABILITATION PROJECT”**

The “Ghana: Second Land Conservation and Smallholder Rehabilitation Project” (LACOSREP II) commenced in January of 2000 and concluded in December of 2006. It was designed and funded by the International Fund for Agricultural Development (IFAD), an agency of the United Nations. It was implemented at the national and regional levels by the Ministry of Food and Agriculture (MoFA) in Ghana. The total project cost was USD 11.28 million, for which the IFAD loaned 10.35 million and NGOs contributed 0.23 million.<sup>122</sup>

The LACOSREP II project targeted the at-risk, poor, rural smallholders, landless farmers and women, particularly female household heads, of the Upper East region (UER) of Ghana. The UER is the smallest region of Ghana (slightly over 3% of the total land area), with an estimated population of 920,000 people (80% employed in agriculture) and the highest population density in the country. According to the Ghana Living Standards Survey, the percentage of the population living in poverty is 88% in UER. UER is notable for its high levels of environmental degradation, deforestation and loss of soil cover, broadly as a result of extremely high population densities not accompanied by agricultural intensification. The project design selected communities based on community demand, participatory wealth ranking and technical feasibility studies. This targeting approach took on a strong gender focus, which was integrated into all five components of the project and reinforced by the employment of a gender specialist in project implementation.<sup>123</sup>

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<sup>122</sup> International Fund for Agricultural Development (IFAD). *Republic of Ghana: Upper East Region Land Conservation and Smallholder Rehabilitation Project (LACOSREP) - Phase II; Project Completion Digest*. IFAD, 2008.

<sup>123</sup> Ibid.

The project had four main objectives: (1) further develop irrigation in UER; (2) increase productivity through farmer training and demonstrations of new technologies for increasing productivity of crops, livestock and fish; (3) build the capacity of government institutions which provide technical and social services district and sub-district levels; (4) construct rural infrastructure to reduce the female labor burden and take measures to mitigate the possible risks of health and negative environmental impact.<sup>124</sup>

These objectives were to be met by implementing four main project components: (1) *Agricultural development*, which centered on hosting Farmer Training Demonstrations (FTDs) and introduction of technologies, such as improved food storage structures. Total participating farmers were some 70% of the target. However, introduced technologies spread to non-participating farmers. (2) *Water resources development* through the rehabilitation and construction of dams. This component experienced serious implementation delays. Out of the 32 dams to be constructed or rehabilitated, the rehabilitation of six dams and the construction of one dam had been completed, leaving only 22% of planned irrigable area available for farmers. Catchment protection activities included planting trees and creating bunds, and these targets were largely achieved. (3) *Rural infrastructure* took the form of spot improvements in roads (75 kilometers), although re-graveling was not carried out, and hand-dug wells and latrines, although 60% are not yet fitted with pumps. (4) *Income-generating activities* focused on providing access to rural credit. This component trained some 12,243 individuals in loan management (about 32% of the original target) and provided group loans to 10,251 individuals.<sup>125</sup>

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<sup>124</sup> International Fund for Agricultural Development (IFAD). *Republic of Ghana: Upper East Region Land Conservation and Smallholder Rehabilitation Project (LACOSREP) - Phase II; Interim Evaluation*. IFAD, 2006.

<sup>125</sup> International Fund for Agricultural Development (IFAD). *Republic of Ghana: Upper East Region Land Conservation and Smallholder Rehabilitation Project (LACOSREP) - Phase II; Project Completion Digest*. IFAD, 2008.

Project managers attempted gender-mainstreaming through various means, such as setting a 40% quota for women to have access to irrigated land. To do so, the project negotiated with chiefs, husbands and male leaders to allocate irrigated land to women because customary inheritance practices excluded them. Also, training was provided to both women and men on improved farming/livestock management, economic incentives for participating in environmental conservation, and access to credit. Both women and men involved in catchment protection (i.e. reforestation and maintenance of dams). For example, women planted *vetiver* grass to stabilize dam walls and reduce risk of flash floods. This grass could also be used as alternative material for basket weaving. The project also established a quota of at least 40% membership of women in Water-User Associations (WUAs). At the end of the project, the average membership of women was 38%, reaching 80% in some sites. Some government officials in Accra were unsatisfied with time delays associated with dam construction and other infrastructure. But, the IFAD concluded that the overall impact of LACOSREP II on beneficiary communities has been considerable in the areas of food security, income generation, literacy and promotion of gender issues, in spite of implementation constraints and delays.<sup>126</sup>

The most positive achievements of the project include the creation and institutionalization of WUAs and Functional Literacy Groups (FLGs), which were not foreseen in original design. Training programs and activities were carried out for the newly established WUAs. FLGs are voluntary associations formed to learn to read, count and develop projects which they jointly carried out. Both WUAs and FLGs provided an outlet for community decision-making, capacity building, and leadership in local resource management. Other positive outcomes included the following: (1) Data suggest that physical and financial assets of project

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<sup>126</sup> Ibid.

users had increased significantly in the past years. (2) The evaluation surveys provided quantitative evidence of increased adoption of improved farming practices, including composting and improved seeds. (3) Women's productivity and income increased with access to irrigated land and water, workload was reduced leaving time for additional productive activities, and women's participation in community and household decision-making increased.<sup>127</sup> (4) All the beneficiaries interviewed acknowledged that the project has enhanced their food security, both through access to credit, cash earned during the dry season and better skills in marketing. (5) The project has had a considerable positive impact both on direct increase of soil productivity in project areas and improving participant and neighboring communities' awareness about soil conservation.<sup>128</sup>

Shortcomings of the project included the following: The project contracted out some services to research institutions and non-governmental organizations (NGOs). However it did not fully seize the opportunity to build a real partnership with them, even though some NGOs had accumulated experience that could have been built upon.<sup>129</sup> Also, there are concerns over the maintenance of road and water supply infrastructure. While steps have been made to transfer ownership of dams to District Assemblies, no provision has been made for their maintenance, which has already affected the functioning of dams.<sup>130</sup> As a result, independent evaluators concluded that the project would have been more effective with the use of more interactive approaches integrating ideas from the village into project design. Also, it would have helped to

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<sup>127</sup> Ahmad, Nilufar and Mari Clarke. *Linking Gender, Environment, and Poverty for Sustainable Development: A Synthesis Report on Ethiopia and Ghana*. The World Bank. 2012.

<sup>128</sup> International Fund for Agricultural Development (IFAD). *Republic of Ghana: Upper East Region Land Conservation and Smallholder Rehabilitation Project (LACOSREP) - Phase II; Project Completion Digest*. IFAD, 2008.

<sup>129</sup> Ibid.

<sup>130</sup> Ibid.

take into account simultaneous efforts of other developers in the region. The IFAD could have helped by facilitating communication and dissemination of experiences from the ground.<sup>131</sup>

Nonetheless, this project attests to the power of an asset-based approach in achieving sustainable outcomes. Access to all forms of capital assets (physical, financial, human, social, and natural) was expanded, particularly for women. The agricultural development component demonstrates particular sustainability, as introduction of improved technologies was adopted not only by project communities but also by farmers outside of participating communities. Also, the project “fostered social solidarity among women and men, encouraged them to act together for community development, and ensured women’s participation in water users associations, enabling them to access irrigation water for improved productivity and income.”<sup>132</sup> The project enabled impacted communities, particularly women, to organize themselves, and as a result, to regenerate natural resources, to build the self-sufficiency of their communities, to generate income, and to secure a healthier future. This case attests to the benefits of addressing environmental wellness and local participation—particularly of women—as interconnected and primary in policy design. It suggests that sustainable development is dependent upon a transfer of power to the local level, especially women, at every step of the project’s life cycle.

### **3.2 CASE II “INDONESIA: THIRD NATIONAL PROGRAM FOR COMMUNITY EMPOWERMENT IN RURAL AREAS”**

The National Program for Community Empowerment (PNPM) in Indonesia is the world’s largest community-driven development program. It was launched in 2006. PNPM-Rural benefits about

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<sup>131</sup> Ibid.

<sup>132</sup> Ahmad, Nilufar and Mari Clarke. *Linking Gender, Environment, and Poverty for Sustainable Development: A Synthesis Report on Ethiopia and Ghana*. The World Bank. 2012.

39 million people in 57,000 rural villages throughout Indonesia. The third phase (PNPM-Rural III) commenced in March of 2010, and will conclude December of 2012. The International Bank for Reconstruction and Development (part of the World Bank Group) is the primary sponsor of the project, in addition to the Government of Indonesia. The project also received financial support from bilateral development partners. Overall project oversight is the responsibility of the Ministry of Home Affairs (MoHA) of Indonesia. The total cost of PNPM-Rural III is USD 1,337 million.<sup>133</sup>

The PNPM-Rural III program targets the rural poor of Indonesia, particularly women and vulnerable community members. Since 2006, the PNPM program has reached 4,371 or 68 percent of the sub-districts (kecamatan) in Indonesia, or 59,116 villages. The third phase (PNPM-Rural III) will cover an additional 420 sub-districts and continue to support those 4,371 already participating. Phase III will continue to build on experience and lessons learned in previous Kecamatan Development Program and PNPM projects.<sup>134</sup>

The objective of PNPM is to ensure that the poor benefit from improved socioeconomic and governance conditions. The program aims to consolidate community-based programs of various ministries and institutionalize Indonesia's experience in bottom-up planning and decision-making into a single community-based poverty reduction program. The program's participatory and transparent framework has helped improve local governance by directly involving communities in decision-making and has been successful in increasing the poor's

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<sup>133</sup> World Bank. *Third National Program for Community Empowerment in Rural Areas (PNPM-Rural III)*; *Project Information Document*. Washington D.C.: World Bank Group, 2010.

<sup>134</sup> Ibid.

(including women and vulnerable community members) access to socio-economic infrastructure and other basic services.<sup>135</sup>

The project has four main components: (1) *Kecamatan Grants*. The main activity in PNPM-Rural III, is the construction of economic and social infrastructure that is needed and requested by the target communities. These activities are funded through grants disbursed by the government to the sub-districts (kecamatan) and villages. Through a gender-inclusive participatory approach, community representatives residing within the sub-districts determine the socio-economic infrastructure projects the block grants will fund. The project continues to support revolving funds managed by women's groups' efforts, but focuses on promoting more sustainable access to financial services to the poor. (2) *Facilitation Support*. This component promotes the development of community capacities for planning and project management through support for sub-district technical and social facilitators and kabupaten (district) facilitators. It also includes activities to strengthen inter-village organizations and forums and local government coordination and oversight. (3) *Implementation Support and Technical Assistance*. This component provides implementation support, training and technical assistance to manage the program and strengthen the capacity of local governments. (4) *Project Management Support*. This component provides support for special programs that place several additional demands on normal government budgeting, particularly as the program is operating nationwide.<sup>136</sup>

The project was designed with various safeguard policies, all of which included public consultation, to ensure community-driven development (CDD). The project completed an Environmental Assessment, Natural Habitats Assessment, Involuntary Resettlement Assessment,

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<sup>135</sup> Ibid.

<sup>136</sup> Ibid.

and Indigenous Peoples Assessment. The latter is particularly illustrative of the CDD process. During the 12-year history of the PNPM Rural series, no systematic adverse impacts on IVPs (Isolated and Vulnerable Peoples) have been found. A number of test cases have been supervised to assess impact on IVPs. In each case, the project process proved highly adaptive to local cultures and able to work with local structures. For example: the Baduy people on Java reject outside development projects as a rule. The project did not enter the Baduy area until it was approached by traditional leaders and the terms of encounter negotiated and recorded by both sides. The project also puts a significant emphasis on oral command of local language, and all materials are put into the local language. Their framework for Community Consultation and Development of Sub-Projects has proven very successful, as they provide reliable accountability and grievance procedures; for example, sub-projects do not proceed until all objections have been resolved.<sup>137</sup>

PNPM has proven very successful in achieving its objectives of using a participatory community-driven approach to improve social and economic infrastructure and local governance for rural Indonesia. Evaluations determined greater than 80% satisfaction levels from beneficiaries regarding improved services and local level governance, and there was a 50% participation rate of women and poorest community members in planning and decision-making meetings.<sup>138</sup> The sustainability of PNPM-Rural has already been broadly demonstrated: strong community participation ensures local ownership and investments in demand-driven subprojects; local government participation provides additional support and ensures institutionalization of the process, enabling increased ability to scale-up; and village-level investments are of high quality

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<sup>137</sup> World Bank. *Third National Program for Community Empowerment in Rural Areas (PNPM-Rural III)*; *Safeguards Policy: Isolated and Vulnerable Peoples Planning Framework*. Washington D.C.: World Bank Group, 2010.

<sup>138</sup> Ibid.

and more economical. PNPM programs have already been scaled-up through successive operations that have built upon the successes and have expanded the geographic scope of previous operations. These programs have succeeded despite great socio-political challenges in the nation as a whole. This attests to their effectiveness and adaptability to local contexts.<sup>139</sup> However, evaluations of the project noted that high levels of participation and community oversight are not sufficient in monitoring the financial management of the project. As such, community control must be paired with assistance from facilitators and consultants.<sup>140</sup>

Like the LACOSREP II program in Ghana, the PNPM-Rural III in Indonesia program supports theories that situate local participation, particularly of women and other vulnerable peoples, as a prerequisite for sustainable development. The PNPM project series demonstrates that, indeed, amplifying the voices and assets of community members is a key to effective development policies. Furthermore, PNPM highlights the important role that governments and outside institutions can assume to safeguard this empowerment by implementing social guarantees. Therefore, a state's institutional capacity to design and enforce mechanisms that deliver social rights is also critical for sustainable development.

These two cases—the “Second Land Conservation and Smallholder Rehabilitation Project” in Ghana and the “Third National Program of Community Empowerment in Rural Areas” in Indonesia—provide examples of major development agencies attempting to integrate elements of both reformist and progressive approaches to development. Although these projects

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<sup>139</sup> World Bank. *Third National Program for Community Empowerment in Rural Areas (PNPM-Rural III)*; *Implementation Status Results Report*. Washington D.C.: World Bank Group, 2012.

<sup>140</sup> Ibid.

could be improved upon, they provide examples of governmental and developmental practices that improve the likelihood of sustainable and just outcomes.

In Ghana, the project designers placed a heavy focus on gender from the outset, with an understanding that poverty, environmental degradation, and gender inequality are interconnected.<sup>141</sup> This intervention—focused on increasing the physical, financial, human, social and natural assets of impacted communities—provided a considerable degree of sustainability for its advances in environmental conservation and a moderately high degree of local participation through collaborative decision-making (see Table 1). But perhaps the project was most successful in achieving ‘gender equity,’ for its powerful mobilization of women.

In the case of Indonesia, the PNMP at large proved unequivocally the effectiveness of strengthening local governance. Through its 12-year history of success, the PNMP’s community-driven development model, which grants decision-making power at the district level, exemplifies how community power is sealed with safeguard policies executed by the government of Indonesia and reliable monitoring and mechanisms for redress. Its long history attests to the sustainability of the project. But perhaps this project is most notable for its high attainment of ‘local participation’ through the local formation and implementation of decisions (see Table 1). The project also achieved substantial ‘gender equity’ through the equal participation and benefit of women.

Lessons from these cases and from Los Manduriacos allow us to complicate and qualify the notion of sustainable development and of sustainability, local participation, and gender equity in particular. This greater understanding can then inform strategies to achieve just and sustainable outcomes in Ecuador and beyond.

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<sup>141</sup> Ahmad, Nilufar and Mari Clarke. *Linking Gender, Environment, and Poverty for Sustainable Development: A Synthesis Report on Ethiopia and Ghana*. The World Bank. 2012.

## 4.0 CONCLUSION

The debate over large dams is an entry point through which we may refine our understanding of what constitutes truly sustainable development, and how to obtain it. Since the 1950's, dams had come to represent the neoliberal, dominant approach to development: a “large-scale, top-down, and technocratic pursuit of economic growth through the intensive exploitation of natural resources” and the “progress of humanity...and tradition supplanted by science.”<sup>142</sup> A rich history of progressive and radical discourses emerged to challenge this approach, and as a result, a reformist approach has arisen within dominant development institutions to address calls for sustainability, local participation, and gender equity. Today, as in the case of the Manduriacu Dam, large dams have been subsumed under the discourse of sustainable development. The debate continues, however, over the extent to which this project, and others directed by a dominant approach to development, is capable of fulfilling the goals of just and sustainable outcomes now accepted as mainstream. This study has sought to evaluate the effectiveness of the Manduriacu project in terms of three variables: sustainability, local participation, and gender equity. In turn, local initiatives in the region of Los Manduriacos illustrate alternative approaches and the different outcomes that they can yield. An examination of development projects in Ghana and Indonesia has further informed this analysis. These projects were directed through

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<sup>142</sup> Khagram, Sanjeev. *Dams and Development: Transnational Struggles for Water and Power*. Ithaca: Cornell University Press. 2004.

major development agencies, yet through collaborations between reformist and progressive strategies, have managed to achieve a relatively high degree of sustainability, local participation, and gender equity.

There are various limitations to this study, and its findings may be interpreted in any number of ways. The case study of development in Los Manduriacos centered on field research conducted in the limited time frame of November 2011. The findings are not necessarily applicable to the entirety of the Manduriacu Hydroelectric Project. Nor are they generalizable to the whole region of Los Manduriacos, Ecuador, and beyond. The comparative case studies from Ghana and Indonesia are based on documents produced by the IFAD and the World Bank, respectively. Therefore, the information presented may exclude the perspectives of other stakeholders. In noting various failures of the Manduriacu Dam Project, this study does not mean to imply that goals such as sustainability, local participation, and gender equity are easily achieved or measured. *Any* development project can hardly be expected to materialize exactly as its planners hope. This study does not argue that projects conceived at the local level, by women, or in any other regard, are inevitably more successful. The goal of this study is not to promote one model of development over another. But by illustrating the on-the-ground impacts of various approaches to development, this study has attempted to evaluate their effectiveness in the pursuit of sustainability, local participation, and gender equity.

This study has broadly defined ‘sustainability’ as the long-term maintenance of environmental, social, and economic health; ‘local participation’ as the meaningful involvement of community members impacted by a project; and ‘gender equity’ as the delivery of equal benefits to women. Through a historical analysis of the development of approaches to development, these terms have been shown to have multiple, contended meanings. However,

through an examination of this literature and the perspectives of communities impacted by the Manduriacu Dam, as well as the project documents of LACOSREPII in Ghana and PNPM-Rural III in Indonesia, this study establishes more thorough criteria for measuring sustainability, local participation, and gender equity.

Sustainability must be sought through the recognition and empowerment of the voices of those who are most affected by a project. Sustainable development does not merely inform impacted peoples about the potential consequences of a project, but firstly, the project itself is *informed* by those community members with regards to the specific context and assets of that community. This is not to say that all members of an impacted community are positioned to provide such insight. But research has demonstrated that the experience of impacted community members, particularly of women, qualifies them to determine the best means of securing a healthy future for themselves.<sup>143</sup> Local initiatives in Los Manduriacos were based on a sound understanding of local assets that could be exploited for income-generation or subsistence. For example, exotic fruit trees, which are well-suited for the climate and marketable in cities, natural beauty to attract ecotourism, social networks to maintain *mingas* (work parties), groups of stay-at-home mothers who can organize in-home craft industries.<sup>144</sup> Such locale-specific innovations were also seen during the LACOSREPII project in Ghana. There, community knowledge recommended the planting of *vetiver* grass, which decreases the risk of flash floods and can also be used to generate income through basket-weaving.<sup>145</sup> And again in the PNPM-Rural III project in Indonesia, where kecamatan grants are distributed based entirely on proposals to expand

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<sup>143</sup> See Shiva (2005), Ana and Filan (2011), Nilufar and Clark (2012), and Dani and Moser (2008)

<sup>144</sup> McCaskie, Keely. "Redefining 'Sustainable Development': a Case Study of a Large-scale Hydroelectric Dam in Ecuador." SIT Study Abroad. 2011.

<sup>145</sup> International Fund for Agricultural Development (IFAD). *Republic of Ghana: Upper East Region Land Conservation and Smallholder Rehabilitation Project (LACOSREP) - Phase II; Project Completion Digest*. IFAD, 2008.

and/or valorize district-specific assets. Furthermore, the PNPM-Rural III project shows us the effectiveness of providing social guarantees—such as safeguard policies on behalf of vulnerable peoples and environmental quality—to help secure the just and sustainable use of assets.<sup>146</sup> Also, local initiatives in Los Manduriacos, and the projects in Ghana and Indonesia, are based on the small-scale exploitation and regeneration of local resources, and thereby, environmental quality is never sacrificed or depleted. Combining environmental, social, and economic wellness, local initiatives of this sort have existed in Los Manduriacos since before 1998 and have only grown since then.<sup>147</sup> LACOSREP II and PNPM-Rural III are also continuations of previous projects that have proven durable in the long-term. These histories also attest to the sustainability of an asset-based and social-guarantees approach.

It follows that sustainability positively correlates with our second variable, local participation. A community's assets must be identified, and community members must be central, at every step of the process, to decision-making about the ways in which these assets can be expanded, accessed, valorized, and/or transformed to promote the long-term environmental, social, and economic health of the community. Therefore, perhaps the term 'participation' is inadequate; more than simply being informed about a project, the most successful form of participation is the formation of decisions.<sup>148</sup> This was surely the case for local initiatives in Los Manduriacos. Community members themselves set the agenda, literally and figuratively, at *asambleas* concerning which issues were to be addressed and how to address them, and regarding the functioning of *mingas* or collectives. The most successful components of the

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<sup>146</sup> World Bank. *Third National Program for Community Empowerment in Rural Areas (PNPM-Rural III); Safeguards Policy: Isolated and Vulnerable Peoples Planning Framework*. Washington D.C.: World Bank Group, 2010.

<sup>147</sup> McCaskie, Keely. "Redefining 'Sustainable Development': a Case Study of a Large-scale Hydroelectric Dam in Ecuador." SIT Study Abroad. 2011.

<sup>148</sup> Le Moigne, Guy et al. "A Guide to the Formulation of Water Resources Strategy." Washington, D.C.: World Bank. 1994. World Bank technical paper, ISSN0253-7494; no.263.

LACOSREP II project in Ghana were Functional Literacy Groups and Water User Associations, both of which centered on the ownership and direct decision-making of community members. And again in PNPM-Rural III the design and implementation of projects that received kecamatan grants were under the complete discretion of district-level committees.

Local-level decision-making, however, does not necessarily ensure just representation of all community members. As such, gender equity is central to sustainable and just development. Perhaps the term ‘gender equity’ is also insufficient. It is not enough to ensure that women have equal opportunities for decision-making as men. Men must not be regarded as the ‘default’ and women as the ‘other.’ We must identify the distinct experiences of women and men, and other particularly vulnerable members of a community, such as Indigenous peoples, youth, religious minorities, and persons with disabilities. We must then tailor solutions to mobilize the voices of those who are historically underrepresented and build on their unique assets. It is important to avoid the assumption that all women hold greater knowledge of environmental and familial needs. But, policies should facilitate social and economic conditions that allow women (and all other vulnerable peoples) to benefit from and to employ whatever particular knowledges they hold. This conception of gender equity was a central component of many local initiatives in Los Manduriacos, perhaps because women themselves initiated the majority of projects. Collectives and small-scale industries were built on the assets available to women, and the benefits accrued from these initiatives extended not just to the women themselves, but also to the community and environment as a whole.<sup>149</sup> This attests to the effectiveness of explicitly addressing gender within development policy and, whenever possible, of channeling decision-making power to women. LACOSREP II and PNPM-Rural III incorporated mechanisms in their respective designs to

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<sup>149</sup> McCaskie, Keely. “Redefining ‘Sustainable Development’: a Case Study of a Large-scale Hydroelectric Dam in Ecuador.” SIT Study Abroad. 2011.

facilitate gender equity. Quotas were particularly useful; in Ghana, the project set a goal of 40% female membership in Water-User Associations and in access to irrigated land. Also, project managers aimed to provide equal training opportunities, economic incentives and access to credit to women.<sup>150</sup> In Indonesia, quotas were established as well, and achieved 50% participation rate of women and the poor at community planning and decision-meetings. Also, project managers paid particular attention to building women's access to credit and to other projects managed by and for women.<sup>151</sup> The sustained success of local initiatives in Los Manduriacos and the LACOSREP II and PNPM-Rural III projects is certainly linked to their creation of social and economic conditions that empower women.

The main thrust of these findings is that sustainable development—through the achievement of sustainability, local participation, and gender equity—is best achieved by projects driven by the decision-making of local community members and contextualized to their specific assets. Nonetheless, in large-scale infrastructure projects, the state and outside development institutions have an important role to play in protecting the rights of affected communities. This study finds that the provision of social guarantees can help serve this function. A social guarantees framework entails the legal expression of these rights, the obligations of the state and other institutions, and the delivery of rights through enforceable mechanisms of access and redress. In the case of PNPM-Rural III project, the government of Indonesia was exemplary in fulfilling this obligation. Safeguard policies, all of which included public consultation, were rigorously enforced to ensure community-driven development. The

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<sup>150</sup> International Fund for Agricultural Development (IFAD). *Republic of Ghana: Upper East Region Land Conservation and Smallholder Rehabilitation Project (LACOSREP) - Phase II*; *Project Completion Digest*. IFAD, 2008.

<sup>151</sup> World Bank. *Third National Program for Community Empowerment in Rural Areas (PNPM-Rural III)*; *Implementation Status Results Report*. Washington D.C.: World Bank Group, 2012.

social guarantees framework used centered on Environmental Assessments, Natural Habitats Assessments, Involuntary Resettlement Assessments, and Indigenous Peoples Assessments.<sup>152</sup> These mechanisms infused local power with the support of the state and outside institutions in order to avoid violations of social rights.

Based on the criteria established above, it is possible to assess the degree to which the Manduriacu Hydroelectric Project has or has not achieved sustainability, local participation, and gender equity. While the project planners did identify community members as potential sources of labor for the construction of the dam and will likely create physical infrastructure (e.g. roads) in the process of construction, they did not identify assets unique to the community for the sake of the community itself. Project managers did not design mechanisms to expand access to or valorization of assets such as social networks, local knowledge, education, community and environmental health, and other productive infrastructure. The decontextualized nature of the Manduriacu project is related to a near-total lack of local participation. Community members were hardly informed, let alone granted decision-making power. There was a major lack of public awareness, and public opinion was divided and based on scarce, unsatisfactory interactions with HEQ. Insufficient information was provided in an unreasonable time frame, and the consent of impacted community members was neither sought nor obtained. Nor did any official documents speak to the gendered impacts of the dam. HEQ failed to prevent a disproportionate burden of health and safety risks on women. It did not create conditions for the empowerment of women's particular knowledges or assets. Therefore, it is perhaps not surprising that long-term environmental and social harm are anticipated for communities

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<sup>152</sup> Ibid.

impacted by the Manduriacu Dam. Based on a lack of sustainability, local participation, and gender equity, the Manduriacu Dam cannot be understood as a sustainable or just development.

Using these criteria and findings, the final section of this report sketches various recommendations for decision-makers hoping to secure just and sustainable outcomes from dam projects in Ecuador and development more generally.

#### **4.1 RECOMMENDATIONS: LARGE DAMS, ECUADOR, AND BEYOND**

The World Commission on Dams concluded that the goal of any development project should be the “betterment of human well-being through sustainable means, that is, an advance in human development that is economically viable, socially equitable, and environmentally sustainable.”<sup>153</sup> If the construction of a large dam is the best means of reaching this aim, it should be supported. However, when better alternatives exist, they should be favored.<sup>154</sup> The WCD proposed a new approach to decision-making based on recognizing the rights of, and assessing the risks to, all stakeholders. According to the WCD, this approach “offers an effective way to determine who has a legitimate place at the negotiation table and what issues need to be included on the agenda.”<sup>155</sup> This approach is based on seven strategic priorities: (1) ‘Gaining public acceptance’; no dam should be built without the ‘demonstrable acceptance’ (i.e. Free Prior and Informed Consent) of affected peoples. (2) ‘Comprehensive options assessments’; a transparent and participatory assessment of the needs of water, food and energy, and other options, must precede

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<sup>153</sup> World Commission on Dams (WCD). “*Dams and Development: a New Framework for Decision-Making.*” Final Report. Nov. 2000.

<sup>154</sup> Ibid.

<sup>155</sup> Ibid.

the decision to build a dam. (3) ‘Addressing existing dams’; opportunities should be taken to upgrade and rehabilitate existing dams to maximize benefits and minimize harm. (4) ‘Sustaining rivers and livelihoods’; comprehensive knowledge of ecosystems, social and health issues should be taken into account before deciding to construct a dam in order to avoid impacts and mitigate harm. (5) ‘Recognizing entitlements and sharing benefits’; adversely affected people should be the first to benefit from a project, and should participate in the identification and distribution of benefits. (6) ‘Ensuring compliance’; before a project begins, financial institutions and project promoters must develop a plan for complying with all project-related obligations. And (7) ‘Sharing rivers for peace, development, and security’; countries must develop measures to resolve disputes regarding trans-boundary rivers.<sup>156</sup>

From the recommendations of the WCD, as well as lessons learned from case studies of local initiatives in Los Manduriacos and projects in Ghana and Indonesia, we can derive lessons for Ecuador and other decision-makers regarding development policy.

Perhaps the failures of the Manduriacu Hydroelectric Project were due in part to the fact that the state’s *primary* objectives were not the development of human well-being, but rather the production of hydroelectric power. Although project documents loosely mentioned its commitment to “executing the project in an environmentally sound way,”<sup>157</sup> and included a checklist of safeguards, the project has failed to deliver sustainability, local participation, and gender equity along with various constitutional rights. This points to a curious contradiction in the rhetoric of the Ecuadorian state. Recent analyses have claimed that President Correa forms

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<sup>156</sup> Ibid.

<sup>157</sup> Hidro Equinoccio EP. “Estudio de Impacto Ambiental Preliminar (EIAP) del proyecto hidroeléctrico Manduriacu y su línea de transmisión a 230 KV (Preliminary Environmental Impact Statement of the hydroelectric Manduriacu project and its line of transmission at 230 KV).” 2011.

part of the “Pink Tide” of Latin America.<sup>158</sup> He is said to be one of several left-leaning presidents elected across Latin America because of his avowed opposition to neoliberalist policies. Despite anti-neoliberal sentiment, Correa’s development strategies might be classified as reformist. That is, his primary goal, economic growth, is the same as that of the neoliberal model, even though he recognizes the need for social and environmental protections. One might expect members of the pink tide to associate with the values of progressive and radical approaches to development. But, “despite similar ideological leanings and a shared dislike of U.S. hegemony, Latin America’s leftist governments have not yet developed a cohesive alternative political and economic project”<sup>159</sup> which would allow them to do so. By resorting to the reformist dominant approach to development, the Ecuadorian government has shown its anti-neoliberal sentiments to be somewhat ineffectual.

Nonetheless, Ecuador’s 2008 Constitution is truly progressive, and provides a promising foundation for achieving sustainable and just development from bottom-up and participatory processes. In terms of social-guarantee approach developed by the World Bank, Ecuadorian development policies are “at a level of pre-guarantee, i.e. they ensure only partially the protection and fulfillment of the social rights...the rights are legally stipulated but lack institutional and financial support.”<sup>160</sup>

For all new and existing dam projects, the government of Ecuador should take several steps. Following the recommendations of the WCD, it might establish an independent, multi-stakeholder committee to address outstanding issues with dams, review existing procedures, and

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<sup>158</sup> Allen, Benjamin S. “Pink Tide Rising.” Center for Latin American Studies, UC Berkeley. Fall 2008. PDF file.

<sup>159</sup> Ibid.

<sup>160</sup> World Bank. “Increasing Social Inclusion Through social Guarantees: A Policy Note”. 2007.

develop a policy statement regarding stakeholder participation in assessment and planning.<sup>161</sup> Such policies, and the rights dictated in the 2008 constitution should be institutionalized with the creation of social-guarantees: “Sets of legal or administrative mechanisms that determine specific entitlements and obligations, related to certain rights, and ensure the fulfillment of those obligations on the part of the state.”<sup>162</sup> In doing so, the government of Ecuador might follow Indonesia’s example by designing a strong monitoring and evaluation framework, in addition to social-guarantees regarding Environmental, Natural Habitats, Physical Cultural Resources, Involuntary Resettlement, Isolated and Vulnerable Peoples, and the Safety of Dams Assessments.

If a participatory needs assessment concludes that the construction of a new large dam is the best option to achieve “human well-being in an economically viable, socially equitable, and environmentally sustainable way,”<sup>163</sup> then the state of Ecuador might choose to integrate progressive strategies into its approach. After the aforementioned social guarantee framework is designed, operationalized, and enforceable, the government of Ecuador might do the following when proposing the construction of a new dam:

Regular *asambleas* (assemblies) are already held at the zonal level. In these meetings, community members convene to address issues facing the region. Governmental representatives must establish long-lasting channels to these zonal bodies. A proposal of a new dam must be presented at an *asamblea*, for which communities in the zone must receive sufficient warning and necessary resources, such as transportation, to attend. The government should also ensure

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<sup>161</sup> World Commission on Dams (WCD). “*Dams and Development: a New Framework for Decision-Making.*” Final Report. Nov. 2000.

<sup>162</sup> World Bank. “Increasing Social Inclusion Through social Guarantees: A Policy Note”. 2007.

<sup>163</sup> World Commission on Dams (WCD). “*Dams and Development: a New Framework for Decision-Making.*” Final Report. Nov. 2000.

that quotas are met for the attendance of women and other vulnerable peoples in these instances. Provided that these conditions are met, the *asamblea* will decide whether or not to move forward with an investigation of the possible dimensions and impacts of a dam. If a study is permitted, neutral experts should assist the community in these studies. After the presentation of these studies in subsequent *asambleas*, and after the demonstrable consent of the community is obtained to commence with the design process, community members will collaborate with project managers to identify local assets that can be strengthened in order to facilitate a sustainable future for the community. Women and other vulnerable community members must be allowed to hold particular decision-making power surrounding these plans. As in Water-User Associations in Ghana, committees organized around the design of a dam project must meet quotas for the membership of women and other vulnerable peoples. Local decision-making processes would then inform project overseers as to some of the best ways to distribute the benefits of the project most equally while mitigating its costs with local solutions. This point is extended below.

For dams that are past the design phase, including the Manduriacu Dam, there is still much to be done to secure the well-being of the impacted communities. HEQ must establish a working relationship with existing local government structures (e.g. the inter-provincial *mancomunidad* of the Guayllabamba River watershed). Through coordination with and support of these government structures, *asambleas* must be held to inform local populations of the all current plans and impact assessments concerning the dam and the social guarantees structure available to them, including safeguard policies, rights, and redress mechanisms. After HEQ satisfies all questions, the community must have the opportunity to seek redress for any violations of their rights thus far. Meanwhile, HEQ should initiate partnerships with local

initiatives to determine the best means of mitigating anticipated costs of the dam and of strengthening local assets. The successes of WUAs and FLGs in Ghana, and of kecamatan district committees in Indonesia, urge developers to invest their greatest energies in empowering local initiatives in order to achieve sustainable development. Research has shown that, in many societies, women fulfill social roles that necessitate greater knowledge of their environments. As such, they are positioned to provide insight into the most sustainable and effective strategies for their respective areas. In the zone of Los Manduriacos, many local non-state groups already exist. Partnerships with aforementioned groups such as the *Corporación Talleres de Gran Valle* and *Flor de Pambil* can benefit the community and also minimize social and environmental impacts of the Manduriacu Dam. Local groups can provide knowledge on ways to best protect the watershed against threats from the dam (e.g. protection of certain forests and species). Women, often the driving force behind these groups, can help design programs which rectify gender inequity and accrue benefits of the dam to women and other vulnerable community members with the operation of health clinics, water treatment, access to continued decision-making power, and other assets. For an example of a finished product, the government of Ecuador may look to the zone of Intag, where communities have already developed and managed smaller-scale hydroelectric dams at the local level.<sup>164</sup>

This study has compared the practices and outcomes of the Manduriacu Hydroelectric Dam project to those of local initiatives in Los Manduriacos, and of major development projects in Ghana and Indonesia. Sustainable development—or the achievement of sustainability, local participation, and gender equity—is best achieved by projects driven by the decision-making of

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<sup>164</sup> McCaskie, Keely. “Redefining ‘Sustainable Development’: a Case Study of a Large-scale Hydroelectric Dam in Ecuador.” SIT Study Abroad. 2011.

local community members and contextualized to their specific assets. These processes must entail the active inclusion and voice of women and other community members most vulnerable to the hazards associated with a project. In the case of dams and other large-scale infrastructure projects, the state and major development agencies must adopt these progressive strategies and provide necessary oversight and the protection of social rights.

As seen in the case of the Manduriacu Hydroelectric Dam, it is not enough for dominant development agencies, international organizations, or national governments to adopt the rhetoric associated with sustainable development. If the betterment of human well-being through sustainable and just processes is indeed the aim, then decision-makers must take lessons from alternative approaches, such as those reviewed in this study. These approaches tell us that the some of the surest ways to achieve sustainability, local participation, and gender equity are through community-driven, asset-based processes fomented with social guarantees, driven by the voices of women and other vulnerable peoples, and designed, first and foremost, to promote the long-term environmental, social, and economic health of impacted communities.

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