

Bridging the Gap from the Local to the Landscape in Northern Honduras

A HYBRID CONSERVATION AND DEVELOPMENT
COLLECTIVE IMPACT APPROACH

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Landscapes for
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SUMMARY

This paper focuses on an approach to scaling up local-level development and resource management projects to a broader geography, uniting forces across a landscape. We draw from the experience of EcoLogic Development Fund (EcoLogic) and the local partners it supports and with whom it co-designs natural resource management projects in Latin America. Specifically, we describe the Pico Bonito Landscape of Northern Honduras. We extract lessons from work done to date in a variety of communities with diverse actors, from grassroots rural households all the way up to municipal, regional, and national policymakers. We then suggest—and illustrate from experience and current plans in Honduras—how to combine principles of Collective Impact, Integrated Landscape Planning, and Eco-regional Conservation/Protected Areas Network design in a way ensures the involvement of rural communities.

We argue that a strong backbone organization, run locally and with strong landscape literacy competencies, must be left in place for a landscape-level conservation effort to take root. We present frameworks, identify potential tools to aid a landscape planning and management effort, and walk the reader through EcoLogic's process for building a grassroots-led coalition in Northern Honduras. The paper is premised on the belief that a truly effective landscape-level effort must actively involve and improve the well-being of rural communities. It is essential that they have the means and the incentive to serve as long-term conservation leaders across a landscape, with the supportive enabling conditions of institutions, policy, legislation, and access to knowledge and power.

KEYWORDS

Honduras, collective impact, scaling

CATEGORIES

forests, agricultural areas, watersheds

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July 2014. Cover photo: Family stands with a MAMUCA project water tank. Photo by Lee Shane.

THE ROOTS OF ECOLOGIC'S SHIFT TO A LANDSCAPE-LEVEL APPROACH

Mexico and Central America (Mesoamerica) houses extraordinary biodiversity thanks to its location as a bridge between North and South America. The relatively thin isthmus' 85 million forested hectares endure severe deforestation and degradation pressures. From 2005 to 2010, Mexico lost an average of 155,000 hectares of forest per year (net) and Central America lost 250,000 hectares per year (net). During this period, forest degradation in Mexico was roughly 300,000 hectares per year (Climate and Land Use Alliance [CLUA], 2013). The region's ecosystems and people have also been among the hardest hit by climate change and related extreme weather events in the last two decades, particularly hurricanes.

In Honduras alone, over 80,000 hectares of forest are cut down per year, due chiefly to agriculture, wildfires, fuel wood and timber extraction, and low-density cattle grazing. Further, the link between livestock production and deforestation is strongest in Latin America (Calle, 2012). These challenges combine with climate change-related severe weather, such as droughts and hurricanes, to increase the population's vulnerability. Honduras is rated among the most vulnerable to climate change of any nation globally (Kreft, 2014).

Despite these challenges, Mesoamerica also holds great opportunity. It contains the largest share of forests owned or managed by communities of any region in the world, with public policies legitimizing a wide range of community tenure arrangements. Community forest management is especially noteworthy for the variety of low-cost opportunities and bottom up solutions it allows. Though still quite high, deforestation rates have begun to decline in the last twenty years due to more forest-friendly agriculture policy, diverse land protection regimes, and other cross-sector policy experimentation. With efforts toward ever greater policy alignment between forest, agriculture, and other sectors, and targeted investment in building in-country capacity, deforestation and degradation rates can be curbed even further. This would present an opportunity for diverting public and private resources from slowing deforestation to engaging instead in broad scale landscape restoration. Further, the region has a rich history of local and regional networks and exchanges that can provide a particularly strong foundation for landscape-level conservation and development efforts (CLUA, 2013). This is particularly true in the Northern coast region of Honduras, with a Model Forest Network, groups dedicated to conserving several protected areas, and groups from all sectors with a vested interest in ensuring the health of the nearby Mesoamerican Reef.

EcoLogic Development Fund (EcoLogic) recognizes that the rural and indigenous peoples of Mesoamerica have already played an important role in the sustainable management of natural resources and need to be supported to continue. This is why, since 1993, EcoLogic has worked with local partner NGOs and rural associations to serve over 700 communities in Mesoamerica. EcoLogic opened its doors as a re-grantor, under the premise that funding was the most important missing ingredient for many underserved and remote communities in Mesoamerica. Over time, identifying gaps in its approach, EcoLogic evolved to provide more direct technical assistance in areas such as reforestation, fuel-efficient stoves, agroforestry, water source conservation and restoration, and organizational capacity building. EcoLogic's local technical staff are often born and raised in the communities in which it works and are supervised by country-level and regional staff. EcoLogic also expanded from supporting its first partner in Guatemala to projects in Guatemala and four more countries – Belize, Honduras, Mexico, and Panama.

Its focus has been to improve rural people's wellbeing and ensure that they become stewards of their land and water, helping to slow or reverse deforestation trends and restore targeted areas to limit further degradation and tropical forest loss. Collaborating with local partners, EcoLogic has helped rural people establish more sustainable livelihoods and has strengthened community participation in conservation, providing support for the sustainable management of over 2 million hectares of critical forest and marine areas, and the protection of over 1,200 water sources. This is all critical for communities to thrive so that they have the means and the incentive to serve as long-term conservation leaders in their region. With perhaps the greatest stake in sustainable forest and water conservation, EcoLogic believes the rural poor are the key to unlocking the potential for collective natural resource management.

EcoLogic's greatest strength is its capacity to work closely with local communities. The organization taps into the underappreciated knowledge, talents, and determination of rural people to ensure that they have the resources and strategies they need to improve their well-being in a sustainable manner. It is accustomed to operating at local scales, using "learning pilots" as cost-effective approaches to co-create solutions with local organizations and strategic partners working beyond local scales. Much of its work involves restoration, stewardship, and promoting sustainable production to slow or avoid further deforestation in a world of competing claims to the land. EcoLogic's approach involves recruiting capable and committed local partner organizations as project implementers, or building the capacity of organized communities to create durable institutions that best represent them and can negotiate these claims effectively as champions of conservation.



Figure 1. Gabriela Gonzalez, EcoLogic Regional Programs Director, visits a nursery in Honduras that is part of the EcoLogic supported reforestation project. Photo by Dave Kramer/EcoLogic Development Fund.

EcoLogic's fundamental theory of change is that if rural people in Mexico and Central America have the ability, incentives, and support to provide for themselves in sustainable ways, then they can improve their well-being and quality of life while conserving biodiversity at a scale well beyond that of their own village.

Through an organization-wide strategic planning process from 2010 to 2012 that coincided with a period of major leadership transition within the organization, EcoLogic identified gaps and opportunities related to the scale of its impact. Though local-scale efforts are extremely valuable in their own right, they are no longer sufficient on their own to effect the kind of long-term, lasting change EcoLogic envisions – and certainly not at a rate that meets the pace of the threats and opportunities on the horizon. With this understanding, EcoLogic committed to working at the landscape-level and restructuring its work. It aims to (a) convene and strengthen local NGOs and networks of stakeholders committed to the conservation and productivity of land and water; (b) form alliances and partnerships focused on policy change and advocacy to deal proactively with threats and ensure adherence to and enforcement of rules and regulations critical to sharing the commons (Cox, et al. 2010).

EcoLogic's resulting five-year strategic plan (2013-17) has the ambitious goal of elevating its work to the landscape level and recognizes the central importance of the importance of partnerships and alliances to scale the organization's impact without increasing its size at the same rate (Bradach, 2010). The concept and practice of Collective Impact provides an essential framework for EcoLogic's new model (Kania and Kramer, 2010). EcoLogic is refining its approach to project design, utilizing the Open Standards for the Practice of Conservation for multi-year place-based, team-driven conservation planning and evaluation that naturally lends itself to landscape-level efforts (Margoluis, et al. 2013). This degree of change and restructuring presents significant management challenges but gives EcoLogic an opportunity to leapfrog forward and redefine itself, working to bridge the gap between differing approaches to (and philosophical underpinnings of) landscape-level conservation. EcoLogic seeks to forge a unique way forward, contributing to the field at large, demonstrating success, and engaging in practical action on the ground, the single most important feature of EcoLogic's work.

Given its many years of on-the-ground work in Honduras, EcoLogic's staff and Board has chosen Northern Honduras as its first official landscape effort. EcoLogic is embarking on an intentional and systematic process to scale its work to the landscape level under a Collective Impact framework in the Pico Bonito Landscape of Northern Honduras. EcoLogic expects to draw from its experience mediating conflict and bringing together Honduran groups, including cattle ranchers, rural communities, and municipal authorities. These groups all share a keen interest in the water and other ecosystem services they depend on. This has created a window of opportunity for a fresh, multi-stakeholder collaboration to conserve diverse tropical ecosystems across two important watersheds – those of the Aguan and Cangrejal Rivers. We describe the landscape in further detail in the following section.

EcoLogic's initial years of work in Northern Honduras have produced many significant wins, but for the most part, they have been independent efforts with limited linkage between project sites and communities - and significant energy, time, and financial investment required to mobilize separate resources – making it difficult to scale up or manage at broader scale. EcoLogic is now crafting an approach together with local partner organizations that (a) enables rural communities and grassroots NGOs to earn and maintain a central place of empowered leadership as long-term stewards of the Pico Bonito landscape, and (b) to make use of the principles of Collective Impact to raise the level of commitment, accountability, and shared measurement of landscape-level efforts beyond loosely defined multi-stakeholder dialogues and networks.

Not only is this an opportunity to demonstrate the power of Collective Impact as applied to a specific landscape-level effort, it is also a chance to bridge two distinct schools of thought. On one hand, proponents of landscape sustainability seek ultimately to meet human needs, to ensure productivity of the land with minimal disturbance to the environment and the ecosystem services it provides (water, soil, etc.). On the other hand, landscape conservationists seek, at the end of the day, to protect wildlife and biodiversity. They emphasize species' range connectivity over vast areas and between islands of protected areas. While the ultimate goals and motivations differ for these two philosophies, an approach to landscape-level conservation and development can bring them together. That is, local leadership and a shared vision of a thriving, well connected landscape – both between forest patches and institutions – can serve as a compass to guide landscape-level conservation and sustainable development in pragmatic ways that meet the interests and needs of multiple stakeholders, both human and non-human.

THE FERTILE SOIL OF THE PICO BONITO NORTHERN HONDURAS LANDSCAPE

The Pico Bonito region of Northern Honduras includes a matrix of protected areas interwoven with rich agricultural fields for large-scale agriculture, marginally productive hillsides used for subsistence agriculture and grazing, and over 20 rivers. The landscape is divided geographically along the spine of the Nombre de Dios Mountain Range and anchored by the 8,000-foot Pico Bonito mountain, overlaying the Aguan River and Cangrejal River watersheds which drain steep hillsides through fertile valleys into the Gulf of Honduras. The Aguan-Cangrejal watershed complex

supplies water to surrounding communities and the nearby cities of La Ceiba and Olanchito. The landscape's various microclimates feature flora ranging from humid rainforest to desert-like rain shadows and thornscrub, supporting an extraordinarily high degree of endemism and biodiversity (USAID ProParque, 2012).

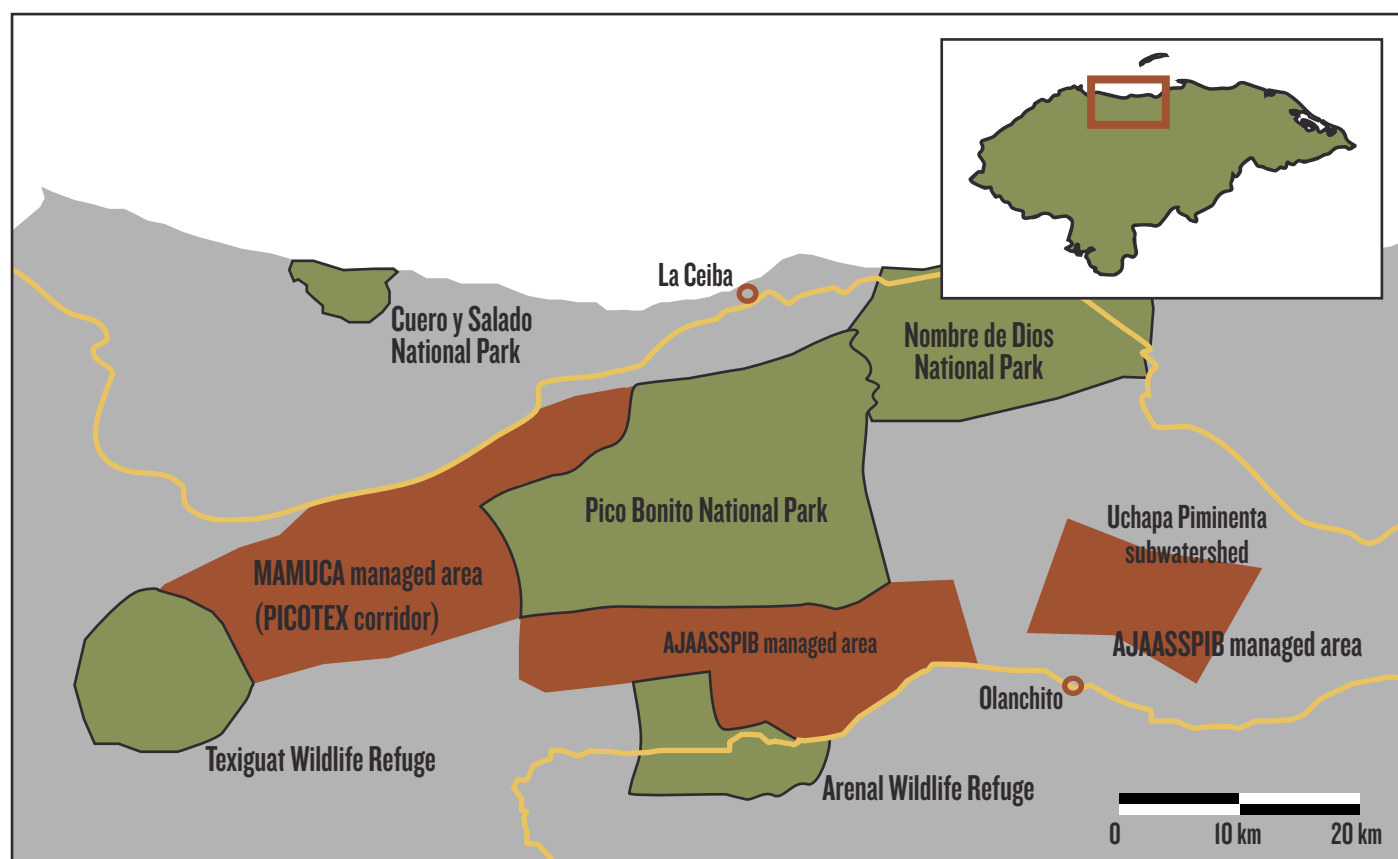


Figure 2. Map of the Pico Bonito Landscape.

The landscape area as currently delimited by EcoLogic is 500,000+ hectares and extends from Pico Bonito National Park (PBNP) into the departments of Atlántida and Yoro. PBNP is the second largest national park in Honduras. Spanning 107,000 ha (56,000 ha nucleus), it is Honduras' second largest national park and third largest protected area. Its tropical broadleaf pine forests include mahogany, cedar, and passion-flower, and teem with hundreds of rare medicinal and ornamental plants, and endangered animals, such as anteaters, wild boars, monkeys, and jaguars. It is home to over 350 species of birds species (including an estimated 200 species of neotropical migratory birds), which are a key draw for tourism (Nickens, 2009).

The Pico Bonito Landscape radiates northwest to the coastal Cuero y Salado Wildlife Refuge (predominantly mangrove ecosystem), west to Texiguat Wildlife Refuge (cloudforest with six different ecosystems), east to the municipal forest of Olanchito in the Uchapa-Pimienta sub-watershed (pine-oak forest supplying water to the drought-prone city of Olanchito), and southeast to the Emerald Hummingbird Sanctuary (very dry thorn scrub housing the endemic Emerald Hummingbird) and the Aguan River Valley (House, 2007). EcoLogic has worked here since 1998 and now collaborates with diverse partner institutions that together conserve a sum of 75,000 hectares of forest. A wide range of stakeholders exercise local leadership, from local village water committees to student groups to municipal government representatives.

The region faces the rapid destruction of its natural resources, especially of its forests that are vital for water, wildlife, and overall well-being of its inhabitants. The deterioration is accelerated by adverse weather events related to climate change. The persistent poverty and lack of sustainable natural resource management strategies compound these problems and have led, in many cases, to the degradation of rivers, caused primarily by unsustainable agricultural practices, the intensification of pastoral land use, and the over-harvesting of fuel wood and high-value timber such as mahogany and cedar have caused extensive water contamination and depletion.

Based on EcoLogic's own analysis, three of the largest threats to the landscape are: (1) conversion of standing forest to grazing pastures, farmland (chiefly bananas, plantains, pineapple, watermelon, cacao, and citrus), and plantations (especially African Palm); (2) inadequate and unsustainable management of existing pasture/agricultural fields; and (3) poor management and enforcement of forest resource use, including over-harvesting of trees for fuel wood and illegal timber operations.

PIONEER SEEDS: SEEING WHAT WOULD TAKE ROOT IN THE LANDSCAPE

Even though EcoLogic did not begin with an intentional focus on landscape-level change, the aim in describing its history in the area since 1998 is to provide sufficient context about its work leading to a decision to shift its focus to a greater scale. Though 16 years of efforts positioned EcoLogic well for this new level of work, it is likely this readiness could have been achieved more efficiently and effectively with more landscape-scale foresight. It is also worth noting that, together with local people, EcoLogic has weathered many setbacks in this landscape and become a more resilient team in the process – including dealing with major leadership transitions, natural disasters, a global economic meltdown, and Honduras' 2009 coup.

Identifying local partners is no simple task, but EcoLogic has used a network of people on the ground and its own local staff to get a good sense of partner organizations' genuine commitment and ability to work with and be trusted by rural communities. As elsewhere, once EcoLogic establishes local partnerships, staff works on an annual planning basis with them. They work together to engage in participatory consultation and co-design projects that respond to the needs and priorities of local people.



Figure 3. The stunning natural beauty of the Pico Bonito region. Photo by EcoLogic Development Fund.

EcoLogic began working around PBNP with the Foundation for Pico Bonito National Park (FUPNAPIB) in 1998 after Hurricane Mitch devastated the region. The storm destroyed the homes, livelihoods, and infrastructure of the region. FUPNAPIB faced the daunting task of protecting PBNP with few government resources and a limited budget. During this first phase, and with FUPNAPIB in the lead, work included developing and executing community-based microwatershed management plans. A microwatershed approach is a direct response to the perceived ineffectiveness of beginning with a macro approach to territorial development and conservation (at the sub-watershed approach, whole watershed, and beyond), and its focus goes beyond water

alone – prioritizing social organization and holistic community development, starting at a unit of analysis and action that makes the most sense to local people in their daily experience (Rosal/IUCN, 2011).

EcoLogic also worked closely with FUPNAPIB and local water committees to build their operational, administrative, and technical capacity. This included establishing local financing mechanisms for watershed protection and restoration activities; installing fuel-efficient stoves to decrease pressure on forests; guiding farmers to adopt sustainable agriculture techniques (agroforestry, with the guidance of Dr. Mike Hands); and restoring degraded forest patches around freshwater sources via reforestation and natural regeneration. EcoLogic also collaborated with FUPNAPIB in launching a for-profit company called Pico Bonito Forests, to seek income from carbon credits tied to afforestation and reforestation, helping employ hundreds of people seasonally in villages to the west and northwest of PBNP.

Communities worked to create topographic models to capture a snapshot of the forest / microwatershed status and allow space for the community to discuss and assess problems in the ecosystem. EcoLogic then guided each community in creating a second topographic model to craft an ideal future and come to consensus, resolving conflicts and confusion that had been brewing for years, mostly within communities, this strengthening and building bonding (intra-community) social capital (Woolcock, 2002). This laid a foundation for communities to participate in projects that extend beyond the boundaries of their communities and microwatersheds.

However, EcoLogic has also sought ways to bridge and link communities and the organizations with whom it works. When FUPNAPIB and EcoLogic parted ways in 2006, EcoLogic helped launch a local association of water committees known as the Association of Water Boards of the Southern Sector of Pico Bonito National Park (AJAASSPIB) to design a comprehensive management approach that addresses ecosystem health and the needs of local people within and between villages, starting with four and now involving 28 villages. This required moving beyond a focus on bonding social capital and emphasizing to a greater extent bridging and linking functions (Woolcock, 2002).

To the north/northwest of PBNP, EcoLogic partnered from 2001 to 2005 with the Foundation for the Protection of Punta Sal, Lancetilla, and Texiguat (PROLANSATE). PROLANSATE manages the Cuero y Salado Wildlife Refuge along the Caribbean coast. Since 2007, EcoLogic has partnered with the Alliance of Municipalities of Atlántida State (MAMUCA), to manage and work toward official recognition of the 35,000-ha forested corridor between PBNP and the Texiguat Wildlife Refuge (PIBOTEX corridor), where many of the rural MAMUCA / Pico Bonito Forests communities reside.

MAMUCA, as a mancomunidad (alliance of municipalities) represents a class of partner that is both strategic at the landscape level and practical for locally rooted activity. They can be effective partners with mandates to manage large areas of land sustainably where national governments cannot or do not wish to, especially in more sparsely populated, politically marginalized rural areas. Mancomunidades have become increasingly common as a governance structure throughout Latin America since the trend towards decentralization in the 1980's and 1990's (Molina, 2007).

EcoLogic's work with MAMUCA has included agroforestry with *Inga edulis* (based also on the pioneering work done by Dr. Mike Hands with the Inga Foundation and CURLA, the National Autonomous University of Honduras' Atlantic Coast Regional Campus in La Ceiba), the construction of fuel-efficient wood stoves, the construction of sumps (greywater and sewage-water drainage pits), and learning exchanges between local water and natural resource boards and other communities. This partnership with a passionate researcher produced a win-win synergistic relationship; the Inga Foundation has done an outstanding job of working with local farmers and providing training on the CURLA campus, and EcoLogic and its partners have helped farmers establish *Inga edulis* on their own small plots, using diverse land parcels as natural experimentation sites.

More locally, thanks to its success helping communities secure their own water sources and unite to secure local financing to sustain the commons, the Municipality of Olanchito reached out to AJAASSPIB and its technical team to accomplish a similar feat on a larger scale. Officials from the municipality recently

approached AJAASSPIB for help with forging agreements and establishing environmental funds for conservation of the 6,500-ha Uchapa-Pimienta subwatershed, which supplies water to its 40,000 residents, through the Agreement on Joint Environmental Management of the Municipality of Olanchito (MACO). The Municipality of Olanchito has officially pledged to budget \$53,000 (1 million Lempiras) per year to an initial five-year effort. MACO is designed with a Coordination Unit (Executive Director of AJAASSPIB; Coordinators of Olanchito's Municipal Environmental Unit - UMA, and its Local Supervision and Control Unity; and EcoLogic's technical staff. The mayor's office grew interested in this partnership based on the water council association's reputation in the region for honesty, technical rigor, and capacity to resolve conflict and form links between disparate interests. Of particular note are (a) the fact that the MACO agreement has successfully weathered a change in municipal administration, and (b) the fact that AJAASSPIB's president is also head of the regional cattle association. Many in this region understand the impact of water conservation and its power to link people across socioeconomic boundaries.



Figure 4. An Inga edulis nursery. Photo by EcoLogic Development Fund.

Given community experience with payments for ecosystem services (PES) in and around PBNP, EcoLogic also conducted a PES Workshop and field school here in 2010, together with Forest Trends, the Rainforest Alliance, and the Environmental Leadership and Training Institute (ELTI). More than 60 community leaders from 32 non-governmental organizations and 9 countries gathered to share their knowledge and discuss their experiences with PES projects in Central America and Mexico. The workshop provided practical, hands-on training in the development and execution of PES projects and helped us further develop a vision of landscape-level conservation in this region.

Finally, most recently, MAMUCA won a competition that EcoLogic ran in 2013 among its partner organizations to encourage the submission of innovative solutions to the natural resource conservation and improved local livelihoods. MAMUCA is using its cash award to develop a business plan for and expand a community store where people can bring recyclable materials, such as aluminum cans and plastic bags, to obtain food and other household items. The store functions by accepting recyclable items which have been assigned a price per weight; this amount is then credited to purchases from the store. The store serves to educate local communities about the virtue of recycling materials as well as helping to generate employment opportunities. Thanks to the award incentive provided by EcoLogic, MAMUCA is now implementing a

sustainable and scalable solution. Though EcoLogic is not a pure grantmaker, this strategic use of funds served to incentivize the kind of innovative thinking that is critical for problem solving with a more complex array of partners negotiating work and staking claims at the landscape scale.

EMERGENCE OF A CANOPY: A COLLECTIVE IMPACT APPROACH TAKES SHAPE TO MANAGE THE PICO BONITO LANDSCAPE

With such a variety of stakeholders and interests within the Pico Bonito landscape's vast area, EcoLogic is preparing to shift its approach to providing less tailored support of individual partners and placing greater emphasis on the facilitation of a coordinated approach to larger scale planning. With one foot firmly planted in communities, and with processes for constant participatory consultation of rural people, EcoLogic believes it has earned the legitimacy and bears responsibility to bring together diverse perspectives from government, civil society, and business while ensuring that rural communities are afforded respect and a true leadership role. As a hybrid conservation and development organization, EcoLogic is also dedicated to bridging the gap between stakeholders most interested in protected areas for wildlife and tourism and those most interested in land management to maximize human benefit.

This shift in EcoLogic's role may be instructive for other organizations engaging in similar hybrid conservation and development efforts at the landscape scale. It requires striking a careful balance between:

1. **Maintaining a holistic mindset toward ecosystem services and their utility for human communities.** This relies on finding ways to tie ecosystem health and human well-being together and encouraging management of the entire landscape toward shared goals of improved livelihoods, sustained or restored ecosystem services, and sustainable agriculture. Many conservation goals can be achieved at the community and landscape scale, while simultaneously improving agricultural production and livelihoods. EcoLogic attempts to find synergies between conservation and economic goals in multi-functional, human-dominated or semi-natural portions of the landscape (Milder, et al. 2012). Many of these synergies are found by conserving ecosystem services, increasing production on cultivated land, employing best management practices to reduce threats to natural resources, and restoring degraded land.
2. **Focusing on a network of protected areas as anchors for a spatially explicit design to conservation across the landscape,** including strict non-use reserves and wildlife sanctuaries. This elevates the role of eco-regional conservation planning and capitalizes on the benefits of new and existing protected areas and wildlife corridors. There is a pre-existing array of protected areas in the Pico Bonito area that may be strengthened to achieve direct biodiversity conservation goals, with a focus on conservation and better management of a protected areas network as well as surrounding buffer zones and agricultural land. This network of protected areas should aim to achieve the fullest conservation of biodiversity possible including a variety of dimensions of biodiversity such as representation, redundancy, resilience, and persistence (Groves, et al. 2002).

To achieve this balance, an organization should focus on strengthening **five core competencies for landscape level planning, design, and practice:** landscape literacy, landscape deliberation and negotiation, landscape design, collaborative implementation, and landscape assessment and tracking (Hart, et al. 2010). In addition, these five competencies may have a better chance of "sticking" if delivered within a Collective Impact framework. For this reason, we have mapped the landscape competencies as closely as possible to align with the more generic five conditions of Collective Impact (Kania and Kramer, 2011) as follows:

1. **Landscape literacy** provides a foundation for the first condition of collective impact, setting a common agenda at the landscape level.

2. **Landscape deliberation and negotiation** enables the further crafting of a common agenda to share a vision for change and a common understanding of the problem as well as a commitment to a joint approach to solving it through agreed upon actions. It also opens space for the second condition for collective impact, continuous communication, which is necessary for building trust, assuring mutual objectives, and appreciating common motivation.
3. **Landscape design** assures the third condition for collective impact - mutually reinforcing activities, where activities are differentiated yet coordinated through a mutually reinforcing plan of action.
4. **Landscape assessment and tracking** relates to the fourth condition of collective impact, shared M&E, in which collecting data and measuring results consistently across all participants ensures that efforts remain aligned and participants hold each other accountable
5. **Collaborative landscape implementation** helps that activities are mutually reinforcing and, if managed well, allows for adaptive management of those activities to refine the landscape agenda. The Collective Impact framework involves an important fifth condition, the backbone support institution, in which a separate organization with staff and a specific set of skills serves as the backbone for the entire initiative and coordinates participating organizations and agencies. A true Collective Impact approach to shared governance differs importantly from other forms of multi-stakeholder collaboration in its bias toward action and results rather than pure learning, dialogue, and meetings.

To provide a kind of scaffolding for the approach to installing a backbone support organization, EcoLogic intends to take on the role for a limited period in Northern Honduras prior to helping launch a new backbone support organization formed by a diverse coalition of Honduran community members. We recommend that other organizations interested in truly sustainable landscape initiatives pay particularly close attention to this too often missing ingredient.

In the Pico Bonito Landscape, EcoLogic's work as a backbone support organization is taking shape by building on and scaling up past efforts, including the following:

Together with its local partner AJAASSPIB, EcoLogic is working to help the City of Olanchito make the conservation of the Uchapa-Pimienta subwatershed, and its designation as a protected municipal forest, a reality. Working with staff from USAID's ProParque program, which also has its own "productive landscapes" program for various landscapes across all of Honduras, EcoLogic and AJAASSPIB have conducted willingness to pay surveys with a corps of newly trained university students to determine a feasible range for additional water bill payments to capitalize a fund for conservation.

EcoLogic is also interested, along with AJAASSPIB, in further exploring collaboration with conservation initiatives related to the Emerald Hummingbird. The Emerald Hummingbird Reserve includes land adjacent to several AJAASSPIB member communities. The reserve has significant support from the Nature Conservancy, Bird Life International, the Honduran national government, and others. Together with AJAASSPIB, EcoLogic's Honduras country director has identified several communities with interest in and great potential for earning funds from ecotourism activities near the Emerald Reserve – including the villages of El Pino, Orotina, Burgos, La Union, Boca Cerrada, and several others. He is also exploring ways to deal with African Palm and its negative effects on native forest, and he is considering creative ways to reach across the landscape, including local social marketing campaigns and careful alliance building with cattle ranchers and other stakeholder groups.

MAMUCA's work has focused on the PIBOTEX corridor as a place to establish connectivity between PBNP and Texiguat Wildlife Refuge. MAMUCA has also been instrumental in the creation and management of the Atlántida Model Forest network, which is part of Iberoamerican Model Forest Network, in turn part of the International Model Forest Network. The Atlántida Model Forest has significant political support at the national level and provides a clear platform for building a collective impact initiative with clout.

EcoLogic seeks to play the role of identifying synergies and finding common ground for one overarching landscape-level approach to conservation and sustainable development. In order to accomplish this, however, it is important to build and leverage knowledge of previous efforts in the region and feed this into an integrated planning and design framework. This requires a knowledge management role, collecting and synthesizing previous efforts and learning garnered from conservation and development efforts across the landscape. Through desk research and interviews of local inhabitants and officials alike, EcoLogic has so far identified possible key collaborators and information sources to be groups such as:

- The Atlántida Model Forest
- Honduras Conservation (HOCC). HOCC has deep ties to EcoLogic, FUPNAPIB, and efforts to study and protect the Emerald Hummingbird. HOCC exists to “(a) document, analyze, and publicize biodiversity and unique ecosystems; (b) support, interlink, and train Mesoamerican biologists, conservationists, environmental groups, and entrepreneurs; and (c) help protect biodiversity and ecosystems via community-based approaches” (HOCC website, 2014).
- USAID’s ProParque (2012-present) and Proyecto MiraHonduras (2005-2010) programs. MiraHonduras supported organic agriculture at Paseo Cangrejal in PBNP, handicraft training in Cuero y Salado refuge, and a variety of species surveys and watershed management assessments in the PBNP region. ProParque focuses on several protected areas across Honduras, including PBNP, working on biodiversity and natural resource management (NRM), rural enterprise growth, and climate change/natural disaster risk reduction (DRR) and aiming to reform and restructure Honduras’ National Protected Areas System (SINAPH) as a source of sustainable and equitable economic growth opportunities for communities.
- The Inga Foundation
- Honduras’ Institute for Forestry Conservation, Protected Areas and Wildlife (ICF)
- The Honduras Regional Center for Environmental Education
- The Emerald Hummingbird Reserve Ranchers and Farmers Association
- The National Autonomous University of Honduras
- Zamorano University (the Pan-American Agricultural University)
- PARTNERS Network. People and Reforestation in the Tropics: a Network for Education, Research, and Synthesis is a project led by University of Connecticut Professor and EcoLogic Board member Robin Chazdon.

Simultaneous to engaging in broad landscape-level work, EcoLogic continues to work closely with local communities and carry out activities that respond to their needs. It aims to design incentives and encourage involvement in restoration and conservation activities, by making obvious the link between restoration activities and the human struggle for survival and betterment (Calle, 2012). This also involves identifying local community needs, pinpointing what barriers and threats have impeded meeting local development needs and participation in decision making processes, and generating action plans to counter those threats, including required local, national and international policy advocacy.

SUCCESSION AND EQUILIBRIUM: A SOLID BACKBONE SUPPORT ORGANIZATION AS A SELF-REGULATING SYSTEM

Overall, shifting to the landscape level will rely on strategic alliance building, greater systematization, a focus on shared outcomes with carefully crafted joint plans to achieve them, and efficient use of scarce resources to prioritize a sequence of projects with a higher degree of certainty regarding their feasibility and likelihood for broad agreement.

All of this will be brought together conceptually and will be managed using the Open Standards for Conservation as an adaptive management and planning tool, with a focus on conservation targets and the human well-being they can help ensure. This includes committing to tools developed for environmental projects to

engage and guide community partners and project teams in participatory project design and evaluation. EcoLogic aims to elevate the role of science and data in management of the landscape as a whole and to focus on threat-abatement strategies, monitoring, and adaptive management at multiple scales.

To build landscape literacy and design a landscape-level model that allows for management of productive lands and a protected areas network, EcoLogic is now beginning to work in a more team-based, participatory manner with project teams composed of staff, partners, and a variety of advisors. EcoLogic uses Miradi, based on the Open Standards for the Conservation of Nature, as a tool to create that framework. Miradi is a user-friendly program that allows nature conservation practitioners to design, manage, monitor, and learn from their projects to more effectively meet their conservation goals. The program guides users through a series of step-by-step interview wizards, based on the Open Standards for the Practice of Conservation. As practitioners go through these steps, Miradi helps them to define their project scope and design conceptual models and spatial maps of their project site. The software helps teams to prioritize threats, develop objectives and actions, and select monitoring indicators to assess the effectiveness of their strategies. Miradi also supports the development of work plans, budgets, and other tools to help practitioners implement and manage their project.

Project teams composed of Honduran staff and partners and a variety of other EcoLogic staff and scientific advisors are currently preparing to develop a conceptual model for the landscape as well as results chains for each sub-project. The process of creating this model helps instill landscape literacy. The conceptual model illustrates the complex relationships that link conservation, livelihood, and agricultural production targets to threats, opportunities, stakeholders, and key intervention points, as well as indicators for use in monitoring and evaluation, or M&E. A results chain, similar to a logic model, illustrates a project's assumptions and the logical sequence linking project strategies to project targets. This is important for devising and implementing intervention strategies (Margoluis, 2013). It will be especially important for use in a shared M&E system, for collecting and analyzing data on project outputs and outcomes. EcoLogic's role is to integrate the conceptual model and results chains for all projects across the landscape to show diverse relationships across Northern Honduras and optimize coordination between actors.

Just as EcoLogic's work has evolved organically in Northern Honduras, this planning process will not be linear, but instead is expected to be an iterative and adaptive process.

The Northern Honduras Landscape project team will choose conservation targets based on a shared vision planning process and threat ranking exercise. Targets will include species (see appendix), ecosystems (there are at least 15 distinct ecosystems across this landscape), and connectivity (in places such as the PIBOTEX corridor between PBNP and Texiguat). The team will help ensure that participatory methods are integrated into planning. Participatory methods will be most readily applied wherever local communities have a greater personal stake in projects and will include the selection of targets, identification of threats, mapping of the landscape, and data collection.

One participatory method that holds great promise is the Analytical Hierarchy Process (AHP), a method that is highly complementary to Miradi. This is a planning tool that encourages stakeholder input with regard to conservation and community priorities. It allows the comparison and ranking of criteria that are not readily comparable. This allows each criterion to be weighted according to its AHP score during the final analysis. AHP also allows local communities to have a voice in expressing what values are most important to them. This method can also help to analyze trade-offs between conservation and agricultural or livelihood goals, and in selecting optimal strategies (Schmoldt, 2001). It has been used for conflict management and for "systems intelligent participation" that is more appreciative, less about managing and mitigating negatives and more about seeking positive synergy (Siitonen, 2004).

Since local communities are more in tune with local resources and their respective threats, participatory methods such as surveys, meetings, and participatory data collection and mapping will greatly aid identification and prioritization of direct threats. Spatial data on each threat will be useful in prioritization, and in developing strategies to address those threats. Information about threats to conservation targets at the

community-scale will be important inputs for identifying priority conservation areas as part of the landscape-scale conservation and management plan.

As a complement to community participation, the project team will also ensure that conservation targets and prioritization of threats are informed by scientific expertise. The prioritization of threats into critical threats will inform the development of cost-effective strategies to reduce threats and best achieve goals. Threats can be prioritized in several ways, and tools exist to aid this process, but criteria include spatial extent, severity on targets, irreversibility, and urgency (Conservation Measures Partnership, 2013), consideration of abiotic targets (e.g. elevation, soil, geology, and hydrology, that create the underlying ecological processes that give rise to biological diversity) and rare, threatened, endangered, and culturally important species.

As noted previously, mapping and spatial analysis are planning tools that can aid decision-making bodies at various stages of the process. These tools are important in identifying natural resources, land cover, land use, land cover change, and the spatial arrangement of landscape features. This information will inform spatially explicit planning and management to achieve conservation, production, and livelihood goals. The spatial arrangement of landscape features will be considered as part of different goals, such as a landscape connectivity goal and a water conservation and flow goal. This will also influence ecosystem functioning and the prioritization of threats to the landscape.

EcoLogic and local partners will pay special attention in this phase to the drawing of previously informal or unrecognized boundaries at a broader landscape level. Stakeholder engagement through participatory mapping may lessen this problem by allowing community members to resolve these issues, avoiding potential conflicts. This process will be complemented with mapping from technical experts using technology such as remote sensing and GIS to digitize community-drawn maps. Participatory mapping can also raise awareness of important natural resources, and threats to those resources as has already been done at the microwatershed scale in villages within the Pico Bonito region with great success. This in turn can increase buy-in for projects that will address those threats.

Other low-cost, accessible tools that are useful for mapping and spatially explicit planning include the Community-based Risk Screening Tool – Adaptation and Livelihoods (CRISTAL, focusing on adaptation to climate change) and Global Forest Watch (GFW, an online forest monitoring and alert system designed by WRI and Google, to gather forest baselines and monitor deforestation). In addition, the IUCN's ROAM, or Restoration Opportunities Assessment Methodology, can help analyze forest landscape restoration opportunities. Finally, drones, or UAV's, can be used for landscape-level reconnaissance and mapping.

A shared M&E system will be vital to track changes across the landscape and assess the outcomes of any interventions. EcoLogic, acting as the backbone organization, will need to standardize this system for use in individual communities, in order to compare results across the region (Kania and Kramer, 2011). This system will build consensus around how success is defined, and, where appropriate, share indicators and data collection protocols. Local communities will drive this process, with guidance from technical experts. Local community members will have a critical role in the development of indicators, particularly those related to livelihood. Other indicators, such as biodiversity indicators, may need to be developed by technical experts. Through participatory M&E community members can be involved in the monitoring process, especially by helping with data collection. This process works best when there is a clear incentive for local people, such as when monitoring efforts result in an improvement in livelihood, or if local people are paid to conduct monitoring. Indicators should be simple and easy to observe, and should be related to information that community members are familiar, such as human-wildlife interactions (Milder, et al. 2012).

M&E for the landscape-level plan will include portions that are highly technical and require large amounts data and analysis. This process will require data for many indicators, such as land-cover change, population dynamics of target species, and the use of biological corridors by target species. Due to the type of data needed and the expertise required, technical experts will likely conduct this much of this process, with less emphasis on participatory methods. However, community members with knowledge of particular areas will

be valuable in collecting data and setting up monitoring equipment, such as camera traps used to capture images of target species. GFW will also be a key way to include local opinion, allowing us to integrate GFW's forest cover data into threat assessment, conceptual modeling, and project evaluation in a way that gives ample room for local communities to access and validate data.

All activities throughout the region should be coordinated to be mutually reinforcing, in order to leverage positive results, creating synergies and mitigating trade-offs (Kania and Kramer, 2011). It will be the role of the backbone organization to encourage communities to plan and carry out activities that will have benefits beyond individual community-scale landscapes. EcoLogic will work to establish a strong "backbone support" institution that works effectively with relevant stakeholders at all scales. It will define and work towards a shared vision of conservation, production, and livelihood goals in a multi-functional landscape.

According to the principles of successful collective impact, the backbone organization will be responsible for overall coordination, logistics, and administration surrounding the projects throughout the region (Kania and Kramer, 2011). EcoLogic, will initially take on some of these roles, while building capacity within the regional organization, as part of its exit strategy. These regional partners need to be nimble, acting as a conduit between the community, regional, national, and international levels. The organizations will need to engage stakeholders at all relevant scales and in all sectors, including government. Regional organizations would fulfill several critical roles, which would depend on the scale at which they are working:

All Scales

1. Presenting a shared vision for the region.
2. Communicating with local, regional, national, and international stakeholders.
3. Lending credibility and increasing support for the process.
4. Coordinating data collection, monitoring, and evaluation.

Community Scale

1. Providing technical expertise to local communities throughout the process.
2. Strengthening local institutions that represent local stakeholders.
3. Building the capacity of local communities and institutions to engage with stakeholders operating in the same landscape and at the policy level including regional and national government agencies, international NGOs, funders, and the private sector.

Landscape Scale

1. Coordinating regional-scale conservation and land-use planning.
2. Representing the interests of individual communities, facilitating negotiations between communities, mediating conflict between stakeholders.
3. Coordinating management of land and resources shared by multiple communities.
4. Facilitating access to existing environmental markets, such as payments for ecosystem services, of both regional and global scale.
5. Assisting in the creation of endogenous environmental markets, especially related to water users and suppliers.
6. Strengthening the voices of communities against powerful external interests that could impede conservation and societal goals.

Interactions among stakeholders can occur at multiple scales, including the plot, the farm, the community, and the entire region (Bernard, et. al 2013). By using a landscape approach, the backbone support organization can mediate conflict and adjust targeted strategies, strengthening a shared M&E system to most effectively accomplish landscape-level goals. As regional and local institutions start to coalesce it is

important to ensure that they represent all segments of the population, particularly those segments that are already marginalized.

The role of this new support organization will be to integrate the conceptual model and results chains for all projects across the landscape to show diverse relationships across the Northern Honduras region and optimize coordination between actors. More importantly, it will serve to create a coalition that focuses on shared measurement and results, helps communicate them to a wide audience, and helps attract support to the Northern Honduras region, ensuring the sustainability of efforts to conserve and sustainably manage the landscape with local leadership at the helm for years to come.

All of this is expected to provide fertile ground for the launching of a separate backbone support organization which is a clear way for local leadership to be established and sustainability of the landscape effort be better assured, allowing EcoLogic to establish landscape-level conservation and development efforts elsewhere in Mesoamerica.

HARVESTING LESSONS: LANDSCAPE-LEVEL LEARNING FROM PICO BONITO

Based on EcoLogic's experience to-date and future plans, we offer the following advice regarding careful sequencing and scaffolding of activities:

1. The initial phase of a landscape effort should involve trust building and responsiveness to local partners with a focus on flexible relationships and tailored activities that meet their needs and interests. This is especially true if one cares, as EcoLogic does, about local empowerment and the need for local people to take a central leadership role in landscape-level efforts.
2. It is vital to build trusting, pragmatic relationships based on tangible benefits (e.g. fuel-efficient stoves, clean water, income from ecotourists, better soil, etc.) for all stakeholders, down to the village and household level whenever possible.
3. The use of participatory spatial modelling is critical during early stages of a landscape effort, and it is best done within a community's comfort zone. EcoLogic focuses on the microwatershed level at this stage. This allows space for the community to discuss and assess problems in the ecosystem they know best and it also helps them model an ideal future. Perhaps most importantly, mapping and visioning exercises at the local level are critical for preparing communities to clarify their own interests prior to involving them in broader landscape level negotiation and larger scale mapping and visioning exercises.
4. To begin to broaden horizons and stretch local actors as well as policymakers, learning exchanges and field schools are essential. EcoLogic prefers field-based settings to institutional meetings in urban areas, believing in the power of experiential training and of "walking a mile in another (wo)man's shoes." This requires intentional, skilled facilitation of learning exchange opportunities between communities, funders, and peer institutions that normally do not have a reason to collaborate. This kind of bridging and linking lays a foundation for the success of larger-scale joint efforts at the landscape level.
5. Integrating with local government and governance structures, involving them in the conversations and activities is critical. With decentralization of authority, especially over natural resources, becoming the norm, the model of the mancomunidad, or municipal alliance, provides a useful example for people across the world to replicate in partnership with government agencies.
6. Partnerships between researchers, NGO's, and communities are critical, allowing for win-win scenarios and cutting edge techniques and feedback for landscape stakeholders, and grounding researchers in practical action.

7. A backbone support organization, or some kind of facilitative body, must not only coordinate activities but must also serve the role of instigator, pushing a variety of stakeholders and partners to reach across traditional siloes and boundaries. This is the work of community organizers and social change agents, and the kind of cross-sector collaboration required for landscape-level work relies on bridging and linking. Pushing can and should be complemented by finding opportunities to elevate the role of and bolster the reputation of organizations on a larger stage (national, regional, international forums, awards, conferences, etc). Psychologically, this builds trust and confidence and can provide an immense boost to the credibility and commitment required for landscape-level activities – and the “brand” reputation of the all landscape actors collectively.
8. The Collective Impact literature and expanding community of practice offers a useful frame for landscape efforts that can stick, with a shared measurement system, mutually reinforcing activities, and ongoing communication, and are staffed by an independent backbone organization that convenes and pushes for action and results. Collective Impact provides a clear alternative and a step up from funder collaboratives, public-private partnerships, multi-stakeholder initiatives, or social sector networks, but it cannot be achieved without full involvement of government, business, and civil society.
9. A landscape effort requires a backbone support organization to make a long-term commitment and follow through in solidarity with marginalized stakeholders, on their terms. Such an effort should be one of pragmatism, failing, learning, adapting, regrouping, and identifying bright spots as beacons of hope in the effort to ensure landscape-level sustainability.
10. The sequencing of activities in a landscape effort are critical, especially because landscape efforts must be constructed as multi-year, coordinated campaigns for optimal land use planning and management of the commons. They should be based on sound science, optimization of tradeoffs and synergies, and natural and institutional resilience over time.

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