



BIO-ITZÁ ASSOCIATION

Guatemala



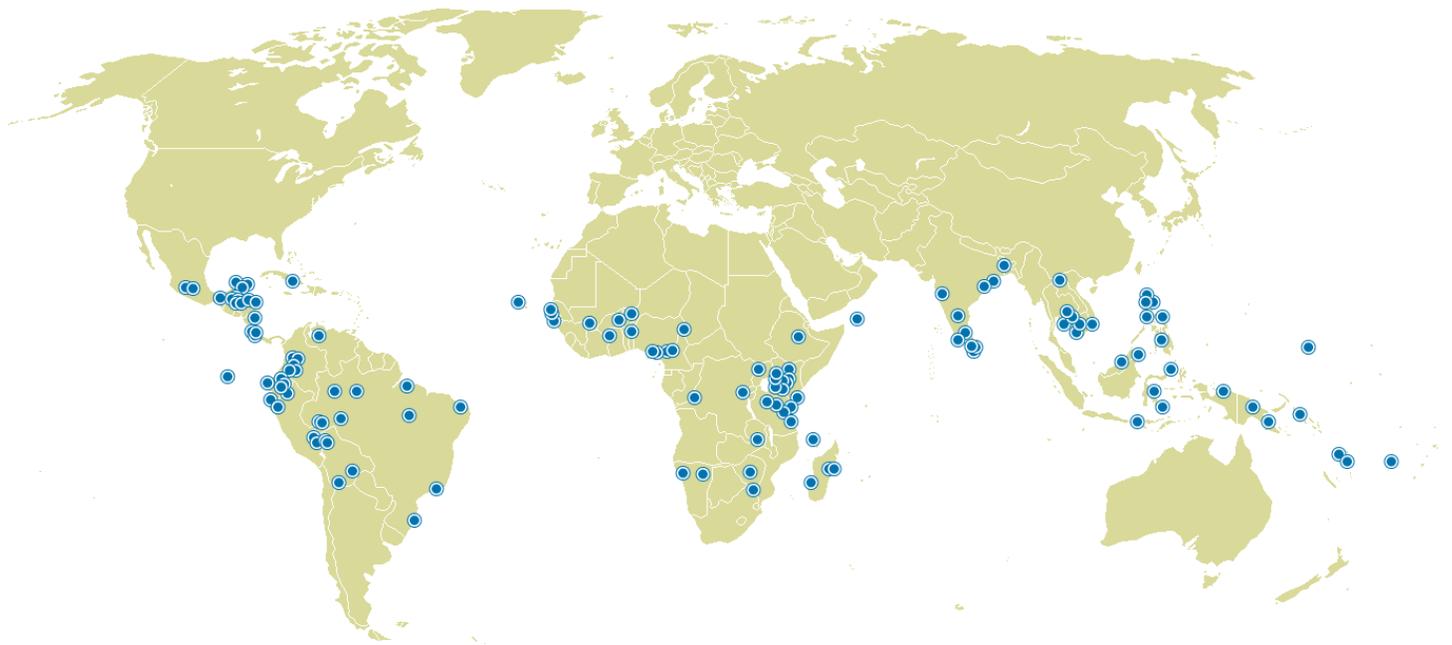
Equator Initiative Case Studies

Local sustainable development solutions for people, nature, and resilient communities

UNDP EQUATOR INITIATIVE CASE STUDY SERIES

Local and indigenous communities across the world are advancing innovative sustainable development solutions that work for people and for nature. Few publications or case studies tell the full story of how such initiatives evolve, the breadth of their impacts, or how they change over time. Fewer still have undertaken to tell these stories with community practitioners themselves guiding the narrative.

To mark its 10-year anniversary, the Equator Initiative aims to fill this gap. The following case study is one in a growing series that details the work of Equator Prize winners – vetted and peer-reviewed best practices in community-based environmental conservation and sustainable livelihoods. These cases are intended to inspire the policy dialogue needed to take local success to scale, to improve the global knowledge base on local environment and development solutions, and to serve as models for replication. Case studies are best viewed and understood with reference to *'The Power of Local Action: Lessons from 10 Years of the Equator Prize'*, a compendium of lessons learned and policy guidance that draws from the case material.



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PROJECT SUMMARY

The Bio-Itzá Association is an indigenous organization of the Mayan Itzá people, located in the Municipality of San José in northern Guatemala, which works to involve local communities and incorporate Mayan cultural traditions in the conservation of regional biodiversity. Legally incorporated in 1991, the association's first major achievement came in 1998, when it was granted usufruct ownership of a 36-square kilometer area of forest, the Indigenous Community Bio-Itzá Reserve – the first indigenous community reserve to be established in Guatemala.

The association brings together 60 member families and focuses on three project areas: biodiversity conservation, through the sustainable management of the Bio-Itzá Reserve; development of sustainable micro-enterprises; and educational programmes addressing environmental and social issues that utilize indigenous Mayan knowledge.

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KEY FACTS

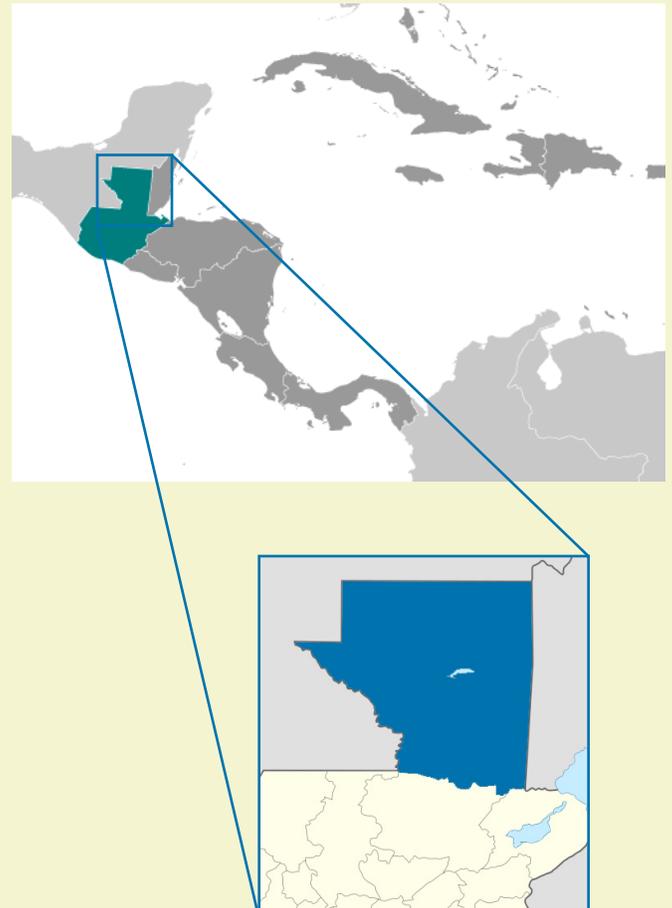
EQUATOR PRIZE WINNER: 2006

FOUNDED: 1991

LOCATION: San José, Petén Department

BENEFICIARIES: 60 families

BIODIVERSITY: 36 km² Bio-Itzá Reserve



Background and Context



The Bio-Itzá Association (Asociación Bio-Itzá) is an indigenous organization of the Maya-Itzá people, located in the Municipality of San José and the Department of Petén in northern Guatemala. The association involves local communities in the conservation of the region's biodiversity, drawing from and incorporating Mayan cultural traditions. The organization was created by a group of Itzá residents in San José, Petén whose primary motivation for mobilizing was preservation of their traditional culture and conservation of the natural resources and biodiversity found in the jungles of Petén. Asociación para la Conservación de la Reserva Indígena Biosfera Itzá was legally incorporated in 1991.

One of the association's first undertakings was petitioning local government authorities to extend a forest concession for community conservation and livelihood activities. In 1998, the association succeeded and was legally granted usufruct ownership of a 36-square kilometer area of forest, the Indigenous Community Bio-Itzá Reserve (RCIBI) – the first indigenous community reserve to be established in Guatemala. The association was formally recognized as manager of the reserve by Guatemala's National Council of Protected Areas (Consejo Nacional de Areas Protegidas - CONAP) in 2002. The association currently serves 60 member families in San José and in the communities adjacent to the reserve.

The Indigenous Community Bio-Itzá Reserve (RCIBI) is located between the northern and eastern boundaries of San José, Petén. This concession represents the last stronghold of natural forest in the municipality and is of critical importance to the ecological connectedness of northern Petén, including the adjacent concession units of the Tikal National Park and El Zotz-San Miguel La Palotada Biotope, located within the Maya Biosphere Reserve. A number of communities live on the borders of the reserve, largely migrants from other regions in Guatemala. Unsustainable farming methods and poaching by these adjacent communities have threatened the reserve's fragile ecosystems. With a vision of countering these trends and incursions, the association aims to ensure sustainable natural resource management and biodiversity conservation in and around the reserve. To this end, the association has created and implements a management plan for the reserve, which includes a public use plan that regulates local resource access and use.

Conserving environmental and cultural heritage

The first of its kind in the country, the reserve is currently the only protected area managed by an indigenous community or group in the department of Petén. Biodiversity assessments in the reserve register 260 species of fauna – over 10% of which are in danger of extinction according to the Convention on International Trade in Endangered Species (CITES) – 90 species of trees, and more than 140

“We would like to share our story and experience with other indigenous groups, as it is communities on the ground that can make positive change happen – not just governments, not just policymakers.”

Reginaldo Chayax, Asociación Bio-Itzá

species of plants (many with ethno-botanical applications). Through its conservation and livelihoods activities the association has worked to recover, reintroduce and disseminate traditional knowledge of the Maya-Itzá people. One outlet for this knowledge restoration exercise has been medicinal plant propagation. Focusing on locally-available plant species, the association has constructed a laboratory to process medicinal plants into commercially viable cosmetic and health products. Other alternative income-generating activities focus on reducing human pressure on the reserve and emphasize sustainability principles. One such activity has been the development and operation of an Eco-Cultural Spanish Language School, which receives an average of 200 visitors annually. Through the school, jobs and income have been created for the local population, and revenues generated are reinvested into conservation projects.

The reserve also contains culturally-significant archeological sites, the most important of which is known as El Guineo. Though the site has been damaged by looters, most of the structures are stable or capable of restoration. The site is used by the association for histori-

cal education, cultural exchange, archeological research and restoration, and tourism. The reserve also contains an ancient Mayan orchard, which preserves not only the historical farming practices of the Maya-Itzá people, but many traditional edible and medicinal plant species. Through management of the orchard, the association has sought to maintain a historical reference to the customs of their Maya-Itzá ancestors. The site also serves as the basis for the association's environmental education programme and as a tourist attraction.

Through its integrated conservation, education and sustainable development activities, the reserve endeavors to be a model for indigenous and community-based natural resource management. The reserve employs 28 people, including a reserve coordinator, six resource guards, twenty seasonal workers, and a technical adviser. Additionally, community members are employed directly by the association, the Spanish School, and the medicinal plant processing center.



Key Activities and Innovations



Asociación para la Conservación de la Reserva Indígena Biosfera Itzá oversees activities in four main areas: the management and protection of the Bio-Itzá Reserve, the processing and sale of medicinal plants, management of a Spanish language school; and delivery of a “social affairs and training” program that offers vocational skills training.

Conservation and livelihoods in the Bio-Itzá Reserve

Within the Bio-Itzá Reserve itself, activities include the management of ecotourism, regulation of access and use, biological monitoring, and the maintenance of perimeter trails. All activities include the full and direct participation of community members of reserve-adjacent communities. A public use plan – developed in consultation with the community – delimits different use zones and is designed to maximize ecotourism potential while minimizing the environmental impacts of human incursions into fragile ecosystems. The association conducts regular and detailed ecological assessments to ensure effective monitoring and informed regulatory principles.

Maintenance of the Bio-Itzá Reserve has important implications for the larger Maya Biosphere Reserve, as it provides connectivity between other conservation areas such as the Tikal National Park, El Zotz Biotope, and Lake Petén Itzá. Central to effective management of the reserve have been outreach and awareness-raising efforts, notably a ‘community care’ program which raises awareness amongst the local population of conservation issues and incentives.

The program also conveys to national and international stakeholders the benefits of a community-based conservation approach. Outreach efforts to both scale levels are informed by biological monitoring and resource documentation. One such example is a program developed with the Municipal Forest Fire Commission to prevent and control forest fires in the region. The association works through community surveillance and monitoring to collect data on incidents of forest fires, frequency, location, species affected, and the source of

specific threats. Beyond tracking forest fires, biological monitoring is a vehicle for combining scientific and traditional knowledge systems, both in data collection and cataloguing the uses of medicinal plants.

Medicinal plant cultivation

Indeed, medicinal plants form an important dimension of association activities. Local uses of medicinal plants – and the traditional knowledge systems employed in service of their conservation – were being lost and undermined by the introduction of modern medicine. A medicinal plants program launched in 1993 aims to restore and reintroduce traditional knowledge and popularizes the use of medicinal plants. The association operates a laboratory (and processing center) which use locally-available and sustainably harvested medicinal plant derivatives in shampoos, creams, soaps, balms, tea and syrups. As a complimentary activity, the association manages a botanical garden and a medicinal plant library. A volunteer program around medicinal plants conservation is offered to local students and tourists.



Language school and social affairs training program

To generate revenues to fund conservation activities, the association operates a Spanish language school. Inaugurated in 1998, the school has been recognized (and accredited) by Guatemalan ministries of education and national tourism. The school offers visitors intensive language courses in Spanish (twenty hours per week), extra-curricular activities and accommodations. (To promote local culture and ownership by community members, a homestay program is also offered). The school has been an essential source of income and job creation.

The most recent activity area launched by the association is a 'social affairs and training' program. Started in 2003, the program serves a fundamental role in advancing the association's objectives. Members of reserve-adjacent communities are empowered through vocational training, which in turn opens doors for income generation and supplementation. Trainings and workshops are offered in areas such as baking, sewing, ecotourism (guiding), agro-forestry and environmental education. The program also provides technical assistance for small-scale business and enterprise development. Scholarships are offered to local children and youth to cover school fees and higher education. By increasing the livelihood options available to local communities, the program has been significant in ensuring long-term organizational and social sustainability.



“The world needs to know that there are still many communities of people dedicated to acting as guardians of nature. We count ourselves among them – guardians of the world’s natural heritage.”

Reginaldo Chayax, Asociación Bio-Itzá

Impacts



BIODIVERSITY IMPACTS

The Bio-Itzá Reserve fulfills several key functions in protecting the forests of northern Guatemala. Among the other elements which make it unique, the reserve is the last vestige of natural forest in the buffer zone of the Maya Biosphere Reserve. As such, it serves as an indispensable function of housing endemic biodiversity and species native exclusively to Petén. The reserve also links a biological corridor which extends from the northern boundary of the buffer zone to El Zotz Biotope, and continues to the Mirador-Río Azul National Park, providing connectivity with the Kalacmul Reserve in Mexico. Additionally, the reserve serves as a natural barrier to human encroachments into El Zotz Biotope and Tikal National Park. Through inclusive zoning and regulation – including the implementation of control and surveillance plans – the association has strengthened conservation efforts in the two core areas of the Maya Biosphere Reserve. The reserve is officially recognized in the Sistema Guatemalteco de Áreas Protegidas (SIGAP), the Guatemalan System of Protected Areas.

Bio-Itzá ecosystems and endemic species

The predominant ecosystems in the reserve are evergreen broadleaf forest and palm forest, the latter being dominated by palma de corozo, or prickly palm. The area of the palm forest covers nearly three square kilometers, is relatively flat, and is prone to regular flooding. This ecosystem has been classified as a priority for conservation as it provides habitat for more than 44 mammal species, including the Lowland Paca (*Cuniculus paca*), Baird's Tapir (*Tapirus bairdii*) and the puma. The broadleaf forest covers a larger area of nearly 30 square kilometers and is characterized by a forest canopy of between 25 and 30 meters high. The forest is known for its high floristic density, with 90 tree species grouped into 37 families. Undergrowth biodiversity includes 144 species, of which 139 have ethno-botanical uses. Notable medicinal plant species include Sapodilla (*Manilkara sp.*), the Maya nut tree (*Brosimum alicastrum*), Chechen tree (*Meto-*

pium brownei), Bullet tree (*Bucida buceras*), Mahogany (*Swietenia macrophylla*), Cedar (*Cedrela odorata*) and Allspice (*Pimenta dioica*). The latter also have cultural and traditional significance to resident local communities, and are customarily used for construction, handicrafts, and ornamental decoration. Conservation of local biodiversity and survival of the traditional Maya-Itza culture are considered indivisible.

According to biological assessments conducted by the association, the reserve contains 73 species of birds, 53 species of reptiles and amphibians, and 44 species of mammals. Of these, 28 species are listed by the Convention on International Trade in Endangered Species (CITES) as threatened or endangered. Their survival is directly dependent on the conservation of the standing forests in the reserve. The reserve also contains an important watershed for the region with multiple fresh water sources. The Cantetul River runs intermittently through the area, allowing for the proliferation of amphibian species and the development of a unique micro-ecosystem. This ecosystem has drawn scientific interest for biological monitoring studies.

The association has also conducted an impact assessment to gauge anthropogenic pressure on the reserve and its natural resources. Various threats from adjacent communities were mapped and placed on a scale ranging from 'low' to 'extreme'. Those threats falling in the category of most destructive included the looting and destruction of archeological sites, the introduction of invasive alien species, the degradation of watersheds, the loss of wildlife habitats, imposed changes to wildlife behavior, deforestation, proliferation of forest pests and diseases, and the loss of forest cover. Based on identified priority interventions, the association has undertaken a number of response measures to control and regulate human incursions into the reserve. Among other things, the association controls and monitors species health, ensures proper signage for different zones, runs a conservation education and awareness program (with a high level of ownership by community members), and cleans and maintains trails marked for ecotourism. Tourism activities are limited to

these trails, ensuring that human incursions have a low impact on the ecological health of the reserve. The areas of forest previously degraded by farming or forest fires, meanwhile, have shown significant recovery since the beginning of the project.

SOCIOECONOMIC IMPACTS

The conservation of the Bio-Itzá Reserve has had substantial benefits for the population of San José and other neighboring communities. One of the most significant benefits has been the recovery and preservation of indigenous Itzá culture. The cultural history of San José, Petén is linked to the pre-Hispanic vestiges of Mayan culture. The indigenous communities of the region have faced the steady encroachment of modernization and, along with it, the erosion of cultural identity and links to traditional knowledge and ancestry. The Bio-Itzá Reserve has provided a cornerstone of rescuing Itza culture, as it provides tangible evidence of the people's cultural and natural heritage, allowing them to rediscover their roots through archaeological sites which date back to the pre-classic and classic Maya periods.

Beyond the enormous cultural importance of the reserve, the association's work has also had significant economic impacts for local communities. The unique ecosystems and biodiversity of the reserve have enabled the association to develop ecotourism activities. Ecotourism provides a platform of cultural and environmental pride, as well employment opportunities and income for local people. Community members have been trained and hired as eco-guides and all sourcing is done through local service providers. So too, the Spanish language school has been a valuable source of revenue for the reserve and incomes for the local population. Similarly, the medicinal plants processing center has taken locally available resources, created commercially viable products, and opened up new markets. Lastly, the association's 'social affairs and training' program offers local community members vocational training and options for income generation that were previously non-existent. A diversified base of livelihood options has translated to greater economic security for local economies.

POLICY IMPACTS

The association stands out in Guatemala as an exceptional case of indigenous management of natural resources and protected area stewardship. The indigenous community reserve was the first of its kind in the country, setting an important precedent for national tenure reform and devolution.

An 'indigenous community reserve' model

The association was officially granted management authority of the reserve by the National Council of Protected Areas (CONAP). In 2005, with the support of Fundación ProPetén, the Global Environment Facility, and the European Commission in Guatemala, the association was used as a model for an advocacy effort to create a new protected area category in Guatemala, that of the 'indigenous community reserve'. The objective of the campaign was, "promoting the legalization of land under community management in forest reserves

through the promotion of an 'Indigenous Community Reserve' category that would recognize this type of management... within the national legal system in the provisions of Law 4-89 of the Congress of the Republic." The project involved extensive knowledge sharing and network development between a variety of local and regional actors, including 14 indigenous organizations involved in the management of communal forested areas, 13 non-governmental organizations working on related issues, 11 government institutions, two academic entities, and two regional networks. The association coordinated with CONAP to raise local awareness about the proposed category, conducted studies to quantify the socio-economic benefits of two model sites, and facilitated site visits between communities to share information, experiences and knowledge. The goal of achieving formal legal recognition for the 'indigenous community reserve' category is still unmet, and advocacy efforts by the association and its partners continue.

The association has been equally active in advocating for inclusion of indigenous community reserve areas in the Programme for Forestry Incentives (PINFOR), created under the Forest Law of 1996 to promote reforestation, afforestation and sustainable forest management. The law established that 80% of annual PINFOR funding be allocated to plantations, while the remaining funds be used for the management of natural forests. In order to qualify for the latter, forest management plans must be approved by the Guatemalan National Institute of Forests (INAB). If indigenous community reserve areas were properly recognized in law, PINFOR would offer a window of opportunity for the association to get government funding for reforestation and forest management activities and to further integrate their work into national policy work.



Sustainability and Replication



SUSTAINABILITY

The association has legitimized indigenous community reserves as a viable land and resource management model. Within this model, the conservation of medicinal plants underpin the cultural and ecological sustainability of the association. The reserve is a living gene bank of culturally-important and biodiverse plants. The uses and applications of these plants as they apply to improving local livelihoods provide a tangible link to traditional knowledge, ancestral history and an ethno-botanical heritage. The reserve and its biodiversity are a functional repository of accumulated knowledge and community identity. This provides a strong basis for social cohesion and collective action. In the same vein, the association is institutionally sustainable thanks to a commitment to participatory management and local inclusion in decision-making.

Above and beyond the revenues generated from medicinal plants and the Spanish language school, Asociación para la Conservación de la Reserva Indígena Biosfera Itzá is working to promote a range of environmentally sustainable and responsible community-based enterprises that will contribute to its long-term financial sustainability. Partners to the association have recommended linkages with state programs – and particularly the Ministry of Economy – in cultivating business development capacity, both within the association and with community enterprises.

PARTNERS

Fundación ProPetén provided technical assistance and partnered with the association between 2002 and 2008. Its staff provided expert guidance and resources to help manage the project. The project received USD 750,000 in funding from a variety of key donors: Fondo Nacional para la Conservación de la Naturaleza (FONACON – Guatemala), Ford Foundation, Global Environment Facility (GEF), Soros Foundation, and Whitley Fund for Nature.

The association has developed several partnerships with government ministries and agencies in Guatemala. Among the most relevant of these include: the National Council for Protected Areas (Consejo Nacional de Áreas Protegidas - CONAP), the Municipality of San José, the Petén National Institute of Forests (INAB), and the National System for Prevention and Control of Wildfires (Sistema Nacional de Prevención y Control de Incendios Forestales - SIPECIF). The association also participates in inter-institutional coordination activities at the municipal level as part of a roundtable of protected area co-administrators, and represents the Maya-Itzá people on the Departmental Council for Urban and Rural Development.

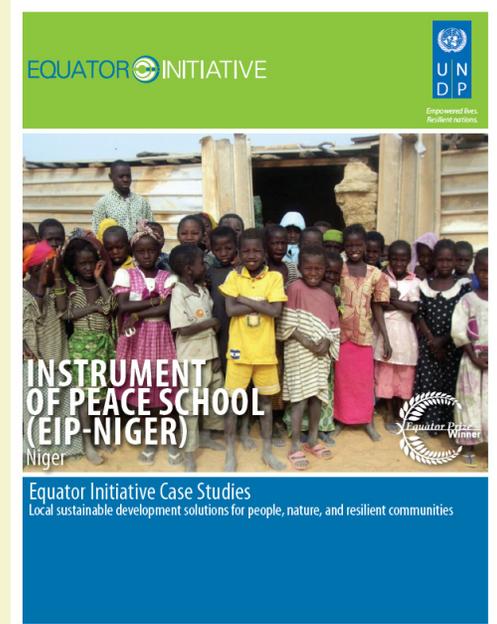
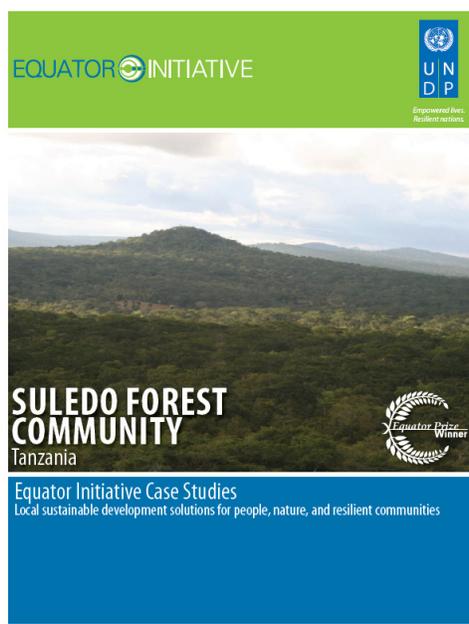
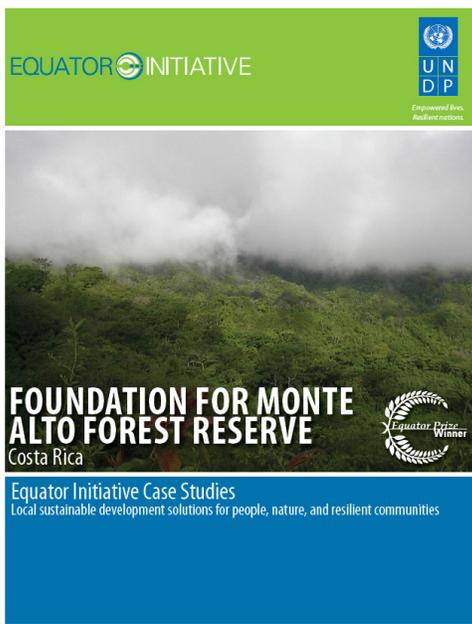
Other important partners have included research institutes – the University of San Carlos of Guatemala and University of the Valley of Guatemala – and international NGOs such as Conservation International.



FURTHER REFERENCE

- Bio-Itzá website <http://www.bioitza.com/>
- Bio-Itzá Photo Story (Vimeo) <http://vimeo.com/24283705>
- PowerPoint presentation on Bio-Itzá http://siteresources.worldbank.org/INTLACREGTOPSUSTOU/Resources/BBLGuatemalaBio_Itza_Ecotourism.pdf

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