

Valuing Nature and Social Return on Investment in the Sierra Gorda Biosphere Reserve



Sierra Gorda Biosphere Reserve

Queretaro State, Mexico

**Valuing Nature and Social Return
on Investment in the
Sierra Gorda Biosphere Reserve**

**Biodiversity Conservation in the
Sierra Gorda Biosphere Reserve**

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I. Introduction

Located in the northeast of the state of Querétaro, the **Sierra Gorda Biosphere Reserve (SGBR)** is the most ecosystem-diverse natural protected area in Mexico with 15 different types and subtypes of vegetation in its 383,567 hectares. Part of the **UNESCO WORLD NETWORK OF BIOSPHERE RESERVES**, it ranks second in the country in terms of overall biodiversity.

With solid achievements, experience and lessons learned during 25 years of energetic and innovative action, **GRUPO ECOLÓGICO SIERRA GORDA, I.A.P. (GRUPO ECOLÓGICO)** is now a model for the participatory conservation of natural resources in a reserve with 638 communities and 100,00 inhabitants, with more than 32,000 Sierrans participating annually in activities of restoration, conservation, community education, productive diversification and sanitation. In other words, since 1987, **GRUPO ECOLÓGICO** has developed initiatives to promote sustainable development through the united efforts of citizens and institutions.

Thanks to the efforts of **GRUPO ECOLÓGICO**, the **SGBR** was decreed by the Mexican federal government in 1997. It is the first example of the establishment of a Mexican natural protected area as a direct result of the efforts of the local civil society. Since then, the activities of conservation and sustainable development have grown to such an extent that they are now carried out by the **ALLIANCE FOR THE CONSERVATION OF THE SIERRA GORDA (THE ALLIANCE)**, including **GRUPO ECOLÓGICO**, **BOSQUE SUSTENTABLE, A.C.**, **SGBR**, **JOYA DEL HIELO, A.C.**, **SIERRA GORDA PRODUCTS AND SERVICES, S.A. DE C.V.** and **VIVA SIERRA GORDA (USA)**. Each organization plays a key role in the united effort to conserve the natural resources of the area and promote sustainable development. **THE ALLIANCE** also works in close coordination with the federal government through the **NATIONAL COMMISSION OF NATURAL PROTECTED AREAS** and its management team in the reserve.

THE ALLIANCE's programs of environmental education, community sanitation, conservation, restoration, alternative productive activities, fundraising, communications, public relations and scientific investigation are implemented utilizing a co-management model for the protection of the natural protected area, with responsibilities shared between the local civil society organizations and the government. It is a model that has been recognized nationally and internationally, garnering numerous awards and the collaboration of many national and international, private and public organizations and businesses.



The natural resources of the Sierra Gorda, along with the programs of **THE ALLIANCE**, are providing important benefits for **SGBR** residents, Mexico and the world, including:

- Mitigation of climate change, storing carbon in the living tissues of forests instead of liberating it as **CO₂** into the atmosphere;
- Maintenance of water quality and quantity that benefit the entire region;
- Conservation of emblematic species of Mexican flora and fauna and an extraordinary biodiversity of incalculable value to humanity;
- Conservation of the productivity of soils for the benefit of this and future generations;
- Natural beauty and a foundation for local culture and values;
- Recycling and management of local solid waste;
- Promotion of good nutrition and healthy eating;
- Education and training for the inhabitants of the **SGBR**;
- Education and training for national and international groups who come to learn from the Sierra Gorda; and
- Creation of a regional economy of conservation via
 - Payments for ecosystem services,
 - Carbon offsets from validated projects for the voluntary carbon market,
 - Development of a state mechanism to bring the goals of Kyoto to the local level with viable protocols for areas of poverty,
 - Rural tourism model for natural protected areas and network of community-owned-and-operated tourism products and services that comprise the *Sierra Gorda tourism destination*,
 - Network of community-owned-and-operated small businesses, involving embroidery, ceramics, healthy foods, dairy products, oregano and honey supported by *Sierra Gorda Products and Services*,
 - Commercial use of reforestations,
 - Holistic livestock management, Keyline design and soil regeneration,
 - Public policies that give economic value to the services provided by nature, and;
 - Commercialization of the *Basket of Ecosystem Products and Services from the Sierra Gorda Biosphere Reserve*.

THE ALLIANCE uses a variety of tools to describe, quantify and communicate the value of the natural resources of the **SGBR** and the benefits of the programs for their conservation. These tools include the quantification and valuation of ecosystem services and the analysis of social return on investment (**SROI**). This document presents a summary of some of the results. More detail about **SROI** analysis and the Sierra Gorda experience with **SROI** is presented in two reference documents to this report, (available upon request).



II. Valuing of the Natural Resources of the Sierra Gorda Biosphere Reserve (SGBR)

The natural resources of the Sierra Gorda are important for their provision of ecosystem services as well as a means of sustenance for its residents. In this section, we estimate the value of selected ecosystem services.

In *Table 1*, the value of carbon, hydrological and biodiversity services provided by the **SGBR** is estimated at more than \$4.5 billion **USD**. The carbon estimates are based upon three projects for the voluntary carbon market already in operation by **THE ALLIANCE** plus an assumed value of \$15 per tCO₂e (equivalent to the current donation amount for *Solidarity Carbon*) for the carbon stored in existing forests of the **SGBR**.

Estimations for hydrological and biodiversity services are based upon a typical annual payment (500 pesos) for environmental services of the MEXICAN NATIONAL FORESTRY COMMISSION (**CONAFOR**) calculated over a 100-year time period.

Table 1. Value of ecosystem services in the Sierra Gorda Biosphere Reserve (SGBR).

Ecosystem Service	Value in USD	Source or methodology for calculation
Carbon capture <i>Premium Carbon project</i>	2,717,006.00	Projection of donations for carbon offsets produced by this reforestation project. The design of this project has been validated under the CLIMATE, COMMUNITY AND BIODIVERSITY STANDARDS (CCB) and the VERIFIED CARBON STANDARD.
Carbon capture <i>Solidarity Carbon project</i>	3,480,000.00	Projection of donations for carbon offsets produced by this reforestation project.
Carbon storage and capture <i>Biodiversity Carbon project</i>	26,842,174.00	Projection for donations for ecosystem services provided by this project for the restoration of natural forests by elimination of cattle grazing in forests, assuming full implementation for 10 years. ¹
Carbon storage <i>Value of total carbon storage in vegetation of SGBR</i>	1,801,347,510.00	Calculation of tCO ₂ e in vegetation of Reserve at value of \$15 USD per ton.
Hydrological services	1,340,091,300.00	Hectares of forest vegetation valued at 500 Mexican pesos per hectare per year, a typical annual payment under program of CONAFOR , for a duration of 100 years.
Biodiversity services	1,340,091,300.00	Hectares of forest vegetation valued at 500 Mexican pesos per hectare per year, a typical payment under program of CONAFOR , for a duration of 100 years.
TOTAL	4,514,569,298.00	



1. This project is currently being implemented in oak forests but is planned to be extended to other forest types.



The results show a return on investment of \$17.33 USD for each \$1 USD invested

2. Considering direct government expenditures as part of the project investment would permit a broader and deeper analysis of the social return on investment of the Sierra Gorda project, including the role of its government partners.

3. Assumes exchange rate of 12 pesos MXN = 1 USD.

4. THE ALLIANCE conducts ongoing advocacy before local, state and national governments and their agencies in support of funding and to ensure that the programs are implemented consistent with conservation criteria.

III. Social Return on Investment in the Sierra Gorda Biosphere Reserve

In this section, we present a summary of an analysis of the social return on investment (SROI) of the programs of THE ALLIANCE. This information is based upon an external SROI analysis conducted by SVT GROUP in 2007 with revisions and updates by THE ALLIANCE.

A. Calculation of Social Return on Investment with Selected Monetized Returns

In this section, we present a calculation of the annual social return on investment of THE ALLIANCE utilizing selected monetized returns of the overall project operated by THE ALLIANCE. The return on investment is separated into two large categories — I) Income generated by the *Sierra Gorda project* for the local economy and; II) Annual value of ecosystem services provided by the SGBR — which are further broken down into subcategories.

Following SROI methodology, this calculation identifies the percentage of returns that are attributable to the work of THE ALLIANCE. As this is an analysis of the return on investment of THE ALLIANCE, direct government expenditures, except for the core budget of the SGBR, are not considered as investments for the purposes of these calculations.² This is done in order to measure the success of THE ALLIANCE in advocating for and obtaining government expenditures for sustainability in the SGBR. The results show a return of \$17.33 USD for each \$1 USD invested.

Table 2. Annual Social Return on Investment of SIERRA GORDA ALLIANCE for Conservation.

Return on Investment	Amount
I. Income obtained or generated by the SIERRA GORDA ALLIANCE for the local economy (USD³)	
Temporary employment programs (2010)	
Municipal	26,235.00
State	89,702.00
SGBR	89,667.00
% attributable to ALLIANCE ⁴	100%
Subtotal	205,603.00
Other community income (2010)	
Community productive projects	53,012.00
Community tourism projects	27,593.00
Payments for environmental services, biodiversity	22,520.00
Payments for environmental services, hydrological	10,325.00
% attributable to ALLIANCE	100%
Subtotal	113,450.00
(continued on next page)	

Reserve tourism (2010)	
Lodging	1,075,000.00
Food	450,000.00
% attributable to ALLIANCE ⁵	70%
Subtotal	1,067,500.00
Income of SIERRA GORDA ALLIANCE employees and workers (2010)	
GRUPO ECOLÓGICO SIERRA GORDA	304,426.00
BOSQUE SUSTENTABLE	192,561.00
Salaries and fees, SGBR	154,262.00
% attributable to ALLIANCE	100%
Subtotal	651,249.00
Total	2,037,803.00
The economic ripple effects of income coming into the area, using a multiplier of 1.8 ⁶	3,668,045.00
TOTAL	5,705,847.00



II. Annual value of ecosystem services	
Carbon storage	
Carbon stored in the vegetation of the SGBR (tCO ₂ e)	120,089,834.00
Value per tCO ₂ e	15
% attributable to ALLIANCE for one year ⁷	0.63%
Subtotal	11,346,964.00
Hydrological services	
Surface area of forests	308,221.00
Value per hectare per year	41.67
% attributable to ALLIANCE for one year	0.63%
Subtotal	80,897.00
Biodiversity services	
Surface area of forests	308,221.00
Value per hectare per year	41.67
% attributable to ALLIANCE for one year	0.63%
Subtotal	80,897.00
Avoided erosion ⁸	958,666,133.00
% attributable to ALLIANCE for one year	0.63%
Subtotal	6,038,784.00
Total	17,547,543.00
GRAND TOTAL	23,253,390.00
Investment (combined budgets of organizations of SIERRA GORDA ALLIANCE)	1,341,641.00
SOCIAL RETURN ON INVESTMENT (dollars of return for each dollar invested)	17.33

5. Estimated by **ALLIANCE FOR CONSERVATION OF THE SIERRA GORDA**.

6. Whitestone, Jim. 2007. *Survey of Multiplier Effects for Use in SROI Analysis of GESG Community Education and Ecotourism Programs*. February 2007.

7. Based upon difference in annual recovery rate of forests in separate studies analyzing the periods of 1973-2004 and 2001- 2007.

8. Estimated by GABRIEL DOMÍNGUEZ CABRERA, Director, **BOSQUE SUSTENTABLE, A.C.**, 2009.

B. Other indicators of social return on investment

The following **SIERRA GORDA SROI** analysis is broken into three core areas:

- **Earth**
 - Returns that demonstrate protection of the environment.
- **Wealth**
 - Returns that demonstrate support for the livelihood and economic existence of Sierra Gorda residents, as well as the financial sustainability of the *Sierra Gorda project*.
- **Spirit**
 - Returns that demonstrate change in peoples' mindsets, their understanding of their relationship with nature, etc.

For each of the three core areas (**Earth/Wealth/Spirit**), desired states are identified and results presented. The results have been determined through historic records, surveys and ongoing monitoring. Here are summaries of some of the key findings.

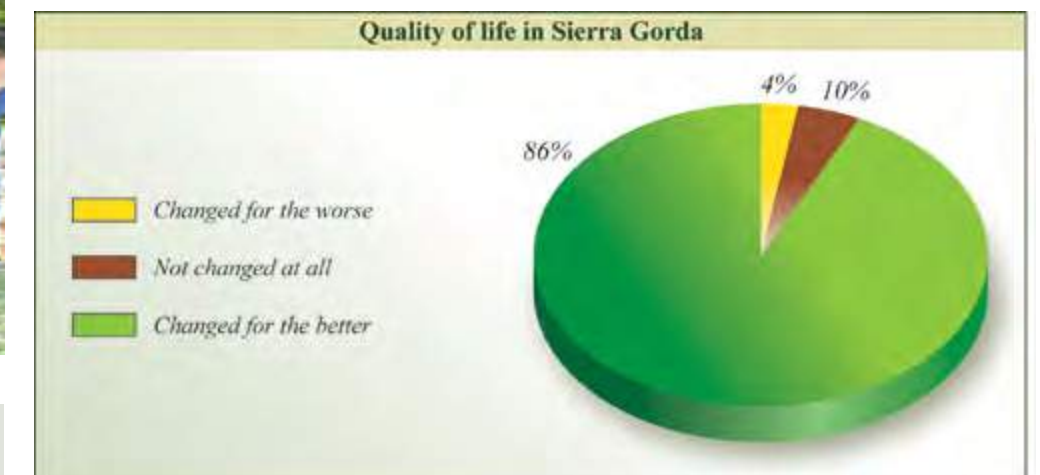


Overall

The vast majority of survey respondents believe the existence of the **SIERRA GORDA BIOSPHERE RESERVE** has improved their lives.⁹



9. Base on survey carried out from 2006-2007.



EARTH

Desired state:

- Sierra Gorda’s environmental training reaches the local population and promotes replication in other areas of Mexico.

Results:

- More than 44,000 people in the Sierra Gorda, 49% of the population, receive environmental instruction each year.
- 2,537 people from other natural protected areas and other parts of Mexico trained by the **SIERRA GORDA EARTH CENTER** since 2007.
- A living laboratory for sustainability, the **SIERRA GORDA EARTH CENTER** imparts 40 workshops with top national and international experts.
- On-line education promotes replication throughout the country. The **UNESCO-Sierra Gorda** on-line diploma course of “Learning and Teaching for a Sustainable Future” is part of the *National Catalog of Teacher Training of the Ministry of Public Education* with continuing education credits for practicing teachers.
- **Eco-Clubs**, groups of young people with great energy and capacity, are replicating successful strategies in their schools and communities.

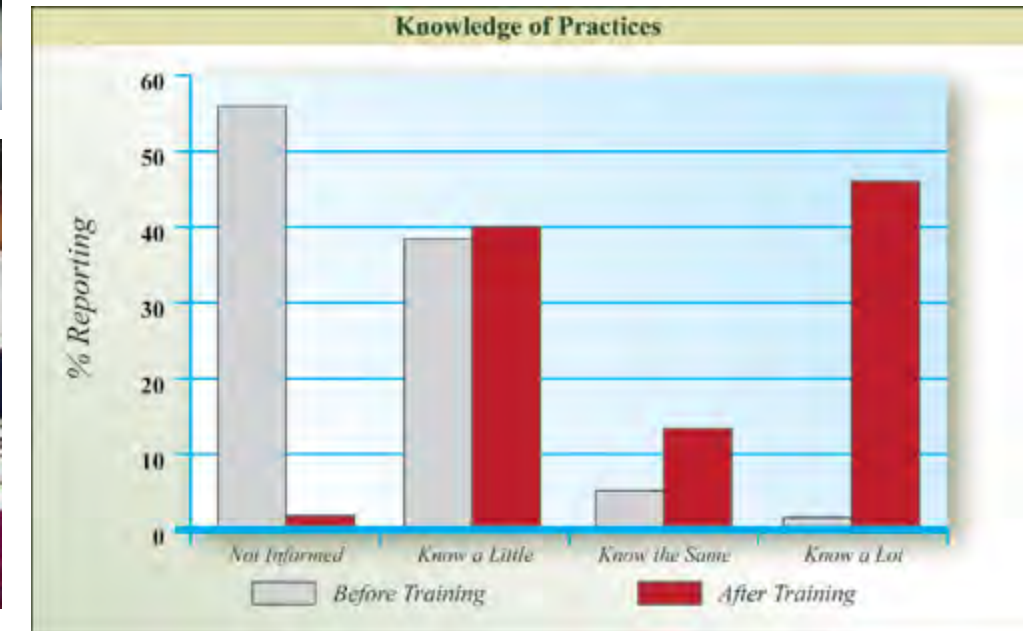


Desired state:

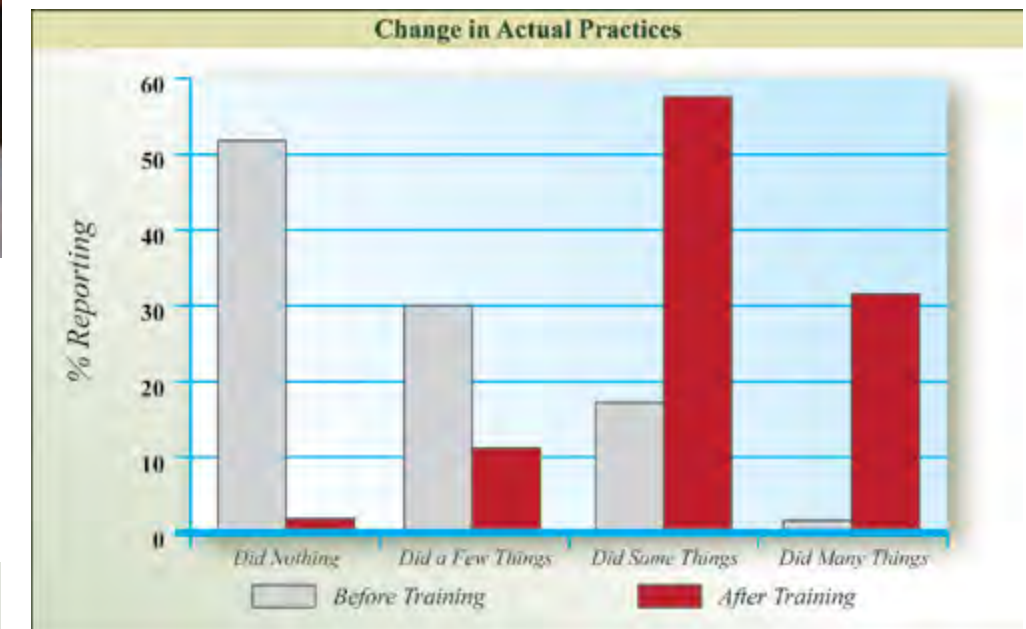
- Sierra Gorda’s environmental training affects people’s behavior positively and instills them with a sense of benefit from environmental protection.

Results:¹⁰

- Change in knowledge of environmental problems and sustainability practices before and after their training experience — those saying “I am well informed or very well informed” changed from 13% to 64%.
- People saying ‘I am/was not informed’ dropped from 52% to 15%.



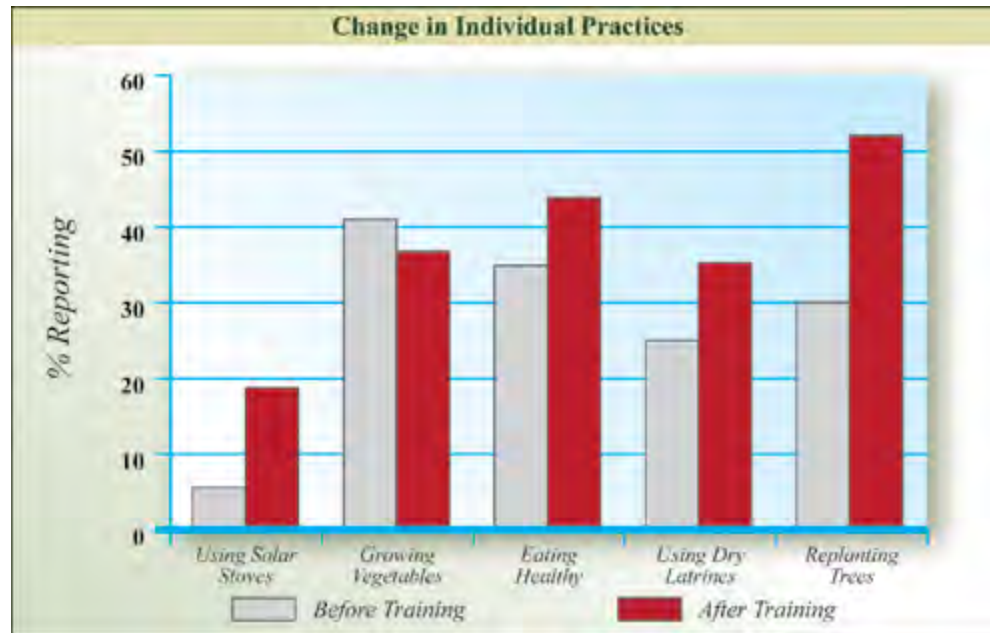
- The change in daily practices to protect the environment before and after completing programs changed from 18% of those reporting “I do some things” or “many things” to 88%.



¹⁰. Base on survey carried out from 2006-2007.

- Changes in the percent of people who report having changed in their behavior/ doing desired actions:

- Using dry latrines 2% => 36%
- Using solar stoves 5% => 18%
- Growing vegetable gardens 41% => 36%
- Eating healthy 34% => 44%
- Planting trees 30% => 53%



- Days per month that people are dedicating to desired environmental actions post-training:

- Up to one workday per month: 48%
- Two to three workdays per month: 36%
- Four to six workdays per month: 14%
- Seven or more workdays per month: 2%

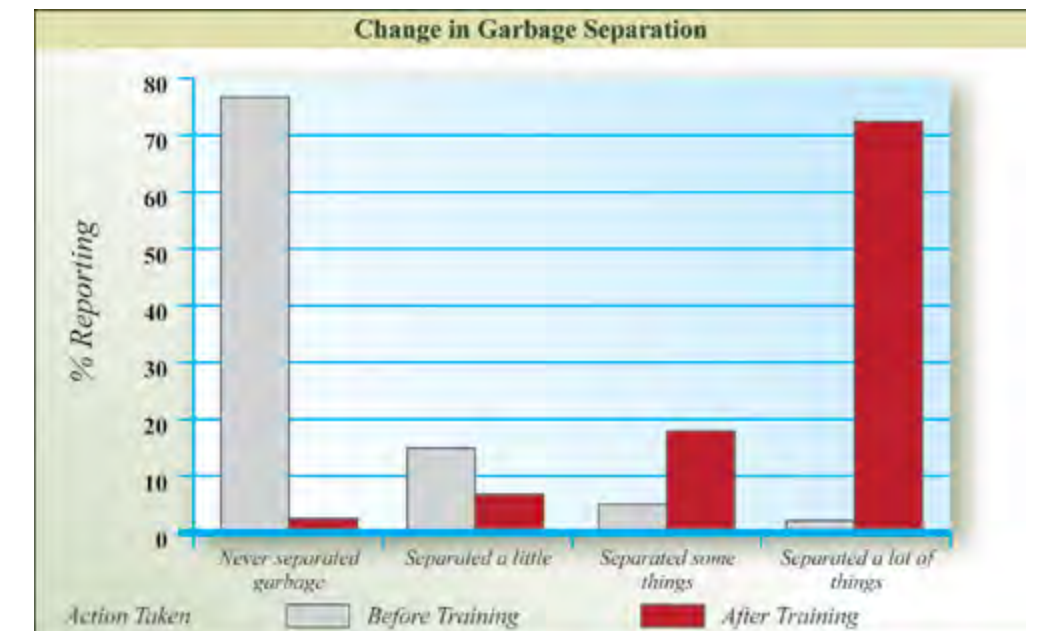


Desired state:

- All garbage is collected and illegal dumping is prevented.

Results:

- 1,387 tons of materials were collected and recycled from 2008-2010.
- 125 community recycling centers are maintained by a network of volunteer women.
- Three regional collection centers process the materials prior to their transfer to the City of Queretaro.





- Four municipal ordinances approved for good management of solid waste.
- The % of people who separate garbage (*some things or many things*) increased from approximately 9% before training to more than 91% after training. ¹¹

Desired state:

- Deforested areas are reforested.

Results:

- 145.7 hectares reforested from 1997-2009 as part of project of **Sierra Gorda Premium Carbon**, the first project in Mexico to be validated under the **VERIFIED CARBON STANDARD AND CLIMATE, COMMUNITY AND BIODIVERSITY STANDARDS (CCB)**.
- 457.9 hectares reforested from 1987-2010 as part of **Sierra Gorda Solidarity Carbon project**.¹²
- Net increase of 13,000 hectares of vegetation from 1973-2004.
- More than 8,800-hectare increase in vegetation within a radius of 5 kilometers of the core protected areas from 2001-2007.

Desired state:

- Forests degraded by cattle grazing are restored.

Results:

- 9,910 hectares of degraded forests projected to be restored by **Sierra Gorda Biodiversity Carbon project**.

Desired state:

- Sierra Gorda contributes to mitigation of climate change through capture and storage of carbon dioxide.

Results:

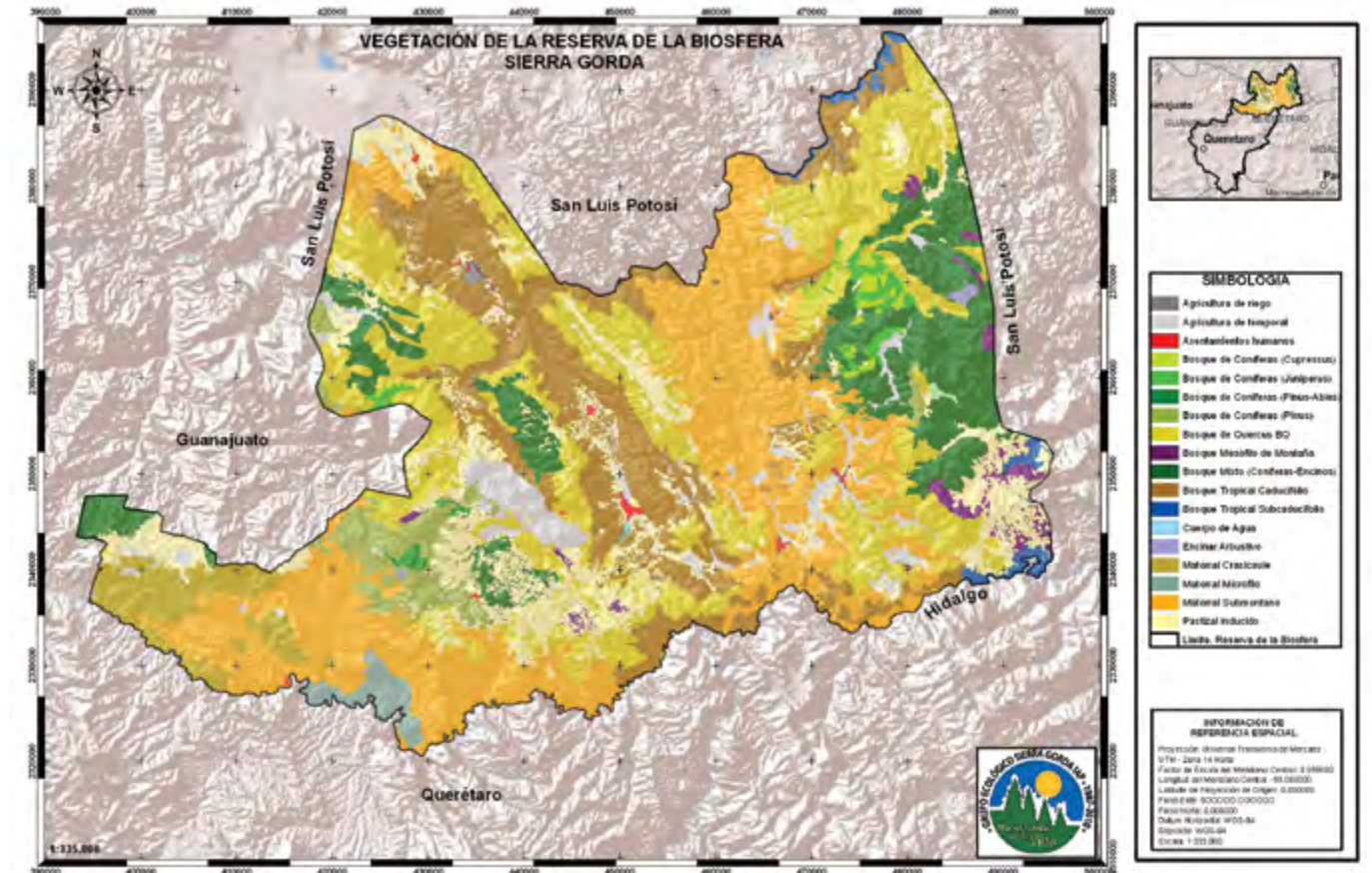
- Successful promotion of carbon products in voluntary markets, directed to individuals and organizations.
- 11,545 tons of **CO₂e** captured through 2010 by **Sierra Gorda Premium Carbon project** with 100,134 tons of **CO₂e** projected through 2042.
- 290,000 tons of **CO₂e** projected to be captured by **Sierra Gorda Solidarity Carbon project** from 1987 through 2042.

¹¹. Base on survey carried out from 2006-2007.

¹². Inventory of additional reforestations established from 1987-1996 is in progress.

- 138,750 tons of **CO₂e** projected to be captured by **Sierra Gorda Biodiversity Carbon project**.
- More than 120 million tons of **CO₂e** currently stored in vegetation of **SGBR**. (See map of vegetation types and **CO₂e** storage by vegetation type below).

Map of vegetation types in the Sierra Gorda Biosphere Reserve



Carbon storage by vegetation type in the Sierra Gorda Biosphere Reserve

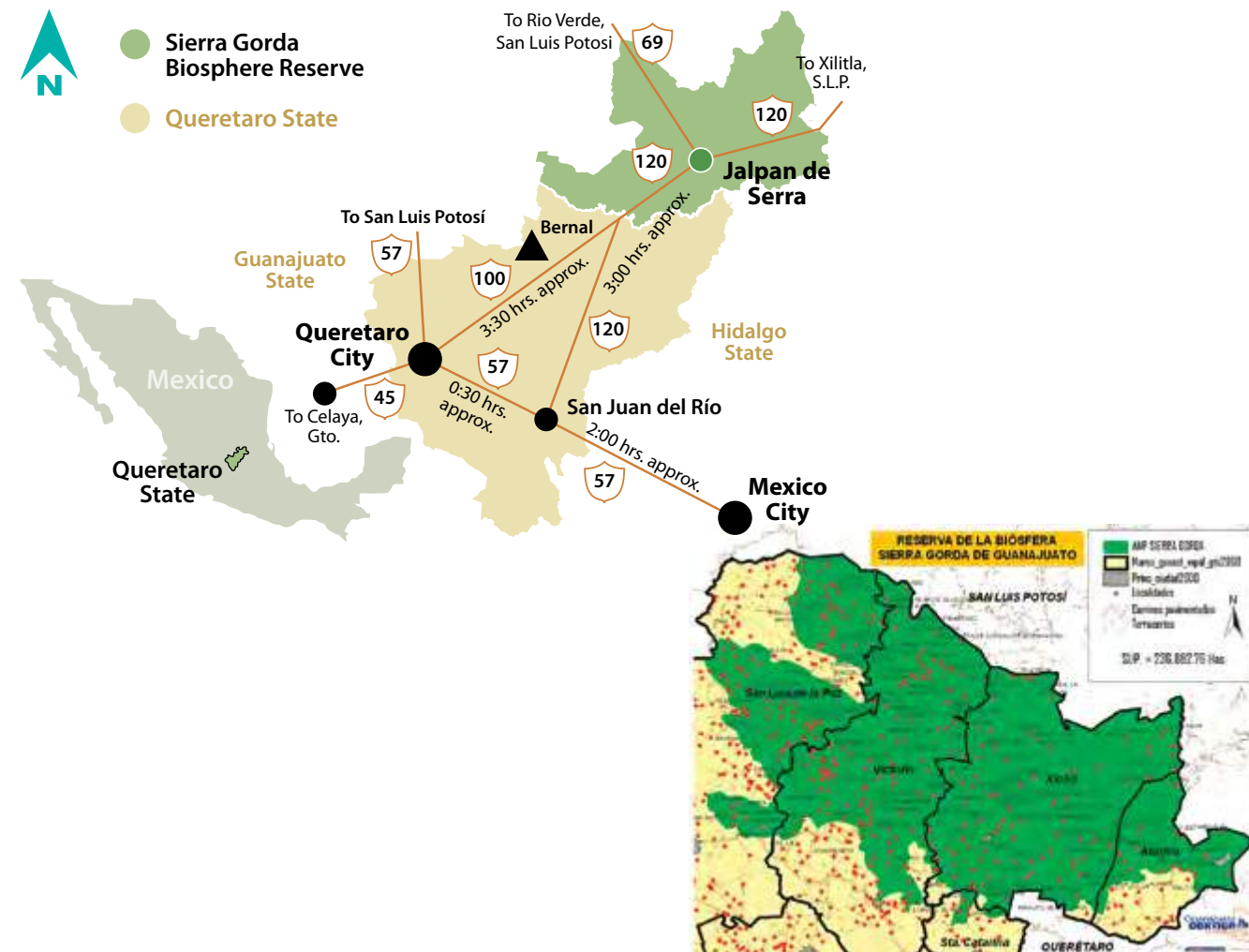
Vegetation type	Surface area hectares	Carbon storage tCO ₂ e
Irrigated agriculture	505	7,389
Seasonal agriculture	19,105	279,697
Conifer forests (Cupressus)	285	260,491
Conifer forests (Juniperus)	5,751	5,262,220
Conifer forests (Pinus)	13,710	12,544,568
Conifer forests (Pinus-Abies)	971	888,694
Forests of Quercus	89,559	36,056,530
Cloud forests	4,922	1,088,174
Mixed forests (conifers-oaks)	43,256	50,503,344
Deciduous tropical forests	57,569	8,112,069
Sub-deciduous tropical forests	3,143	621,109
Scrub oak forests	439	176,842
Sub-montane shrubs	88,616	3,720,119
Induced pasture	37,891	568,588
TOTAL	365,722	120,089,834

Desired state:

- Critical habitat is protected.

Results:

- **SIERRA GORDA BIOSPHERE RESERVE** decreed in 1997, placing 383,567 hectares under conservation management.
- **SIERRA GORDA OF GUANAJUATO BIOSPHERE RESERVE** decreed in 2007, placing another 236,882 hectares under conservation management.
- 68,000 hectares with high biodiversity values with protection mechanisms.
- 4,011 hectares purchased and protected as private natural reserves.
- 48,900 hectares of forests with payments for ecosystem services.
- **Biodiversity Carbon Project** designed for areas of critical habitat, bringing field opportunities for the mitigation of climate change and poverty to new market niches for the benefit of local communities.
- **State Compensation Mechanism** developed for areas of critical habitat, bringing the goals of Kyoto to the local level with viable protocols for areas of poverty.



Desired state:

- Soil and water resources are conserved and regenerated.

Results:

- 73 water springs protected, benefitting 54,000 people in 172 communities.
- 80,439 linear meters of trenches with live barriers constructed for the retention of soil and infiltration of water.
- 166,635 linear meters of live barriers established for the retention of soil and infiltration of water.
- 48,900 hectares of forests with payments for hydrological services.
- 58 water storage tanks constructed.
- Notable reduction of forest fires.
- 850 hectares with implementation of best practices such as permaculture, *Keyline Design*, bio-fertilizers, microorganisms, and holistic livestock management.
- Alliance established with **THE SAVORY INSTITUTE** for training and certification as a center for knowledge replication.



WEALTH

Desired state:

- People obtain jobs and the skills necessary to ensure economic stability.

Results:

- 260 people¹³ trained and employed periodically¹⁴ as part of **Premium Carbon project**.
- 916 people trained and employed periodically¹⁵ as part of initial **Solidarity Carbon project**.
- New project of **Biodiversity Carbon** in development to provide seasonal employment.
- 23,409¹⁶ days of temporary employment created via *Temporary Employment Program* financed by **NATIONAL COMMISSION OF NATURAL PROTECTED AREAS** and operated by **BOSQUE SUSTENTABLE**.
- Thousands of additional days of temporary employment created via other sustainable public investment programs.



Premium Carbon



Solidarity Carbon



Biodiversity Carbon

Desired state:

- Income levels alleviate any need for Sierra Gorda residents to harm the environment for profit.

Results:

- More than \$2.7 million in new annual income for Sierra Gorda residents from activities generated by **ALLIANCE**.

Desired state:

- Businesses prosper and the community benefits.

Results:

- 26 new businesses and 125 new products developed from 2001-2010.
- Winner of the **2009 Geotourism Challenge** sponsored by **ASHOKA CHANGEMAKERS**, **NATIONAL GEOGRAPHIC** and the **INTER-AMERICAN DEVELOPMENT BANK**.
- Model of *Rural Tourism for Natural Protected Areas* being developed with the support of the **INTER-AMERICAN DEVELOPMENT BANK**, including an effort to value the scenic beauty of the **SGBR**.

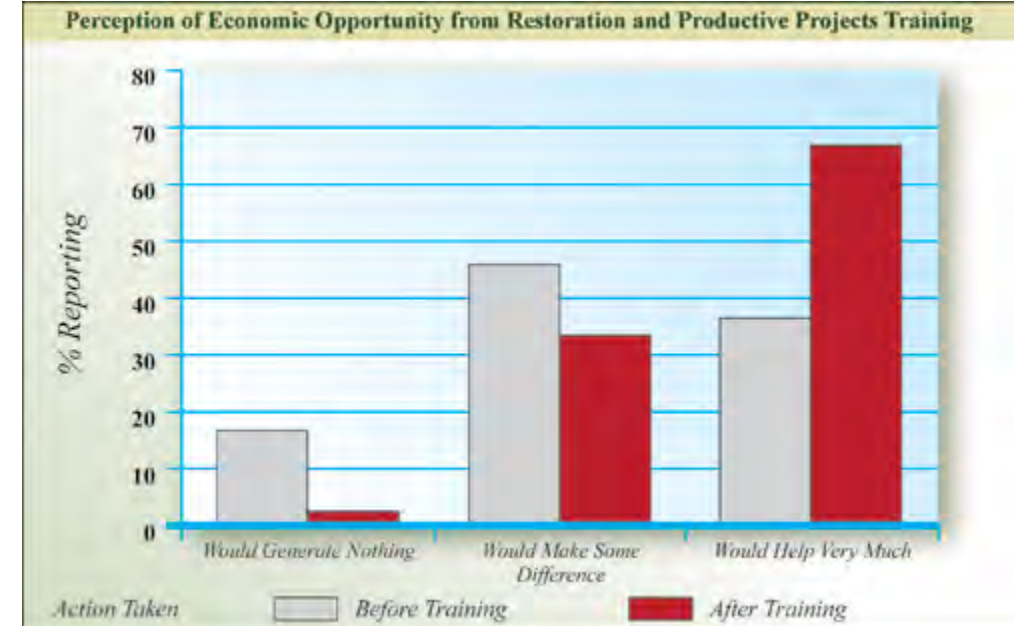
Desired state:

- Residents understand the connection between environmental protection and economic opportunity.

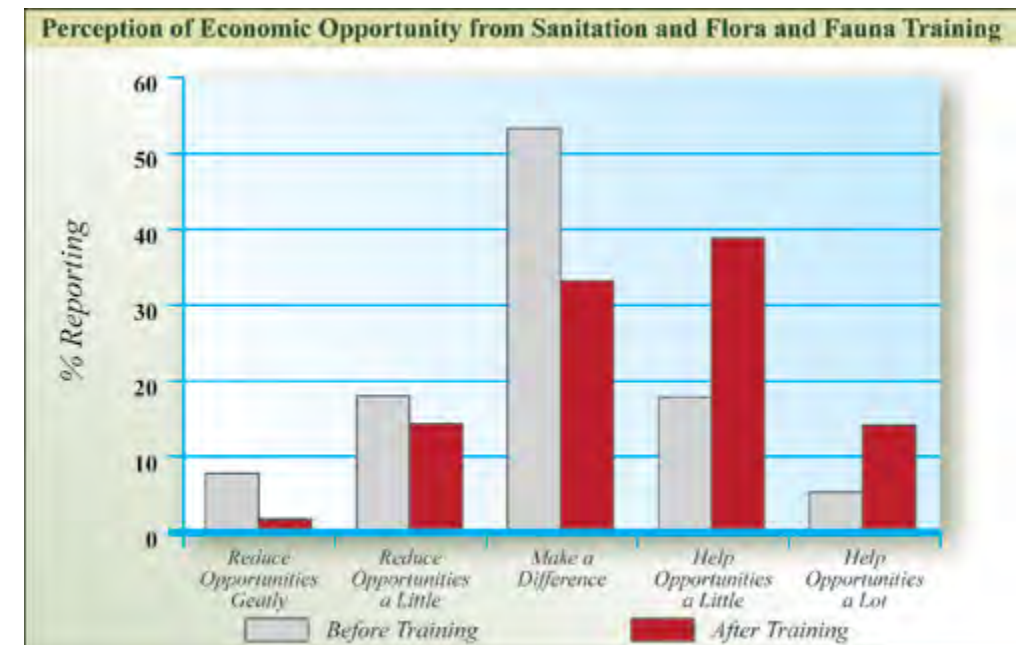
Results: 17

- The restoration and productive project participants reporting they felt training would help their economic opportunities went from 83% saying "it would make a difference" or "help very much" to 99%.

GRUPO ECOLÓGICO SIERRA GORDA IAP's model for *Rural Tourism in Natural Protected Areas* won support from the **INTER-AMERICAN DEVELOPMENT BANK** in the **2009 Geotourism Challenge** sponsored by **ASHOKA'S CHANGEMAKERS**, **NATIONAL GEOGRAPHIC SOCIETY**, and **INTER-AMERICAN DEVELOPMENT BANK**.



- The sanitation and flora and fauna participants reporting the training would increase their economic opportunities went from 22% saying "it would make a difference" or "help very much" to 53%.



13. 528 projected by the year 2013.

14. Employment determined by reforestation planting and management plans.

15. Ibid.

16. Combined total for 2009 and 2010.

17. Base on survey carried out from 2006-2007.

18. This is a measure of **THE ALLIANCE'S** success in achieving the decree of the natural protected area, which resulted in increased government funding levels, as well as **THE ALLIANCE'S** ongoing advocacy before local, state and national governments and their agencies in support of higher funding and ensuring that such funding is spent consistent with conservation criteria.

Desired state:

- There is substantial public investment for sustainability.¹⁸

Results:

- More than \$3.2 million **USD** in public investment for sustainability in 2010.

Public Investment for Sustainability in the SIERRA GORDA BIOSPHERE RESERVE, 2010.

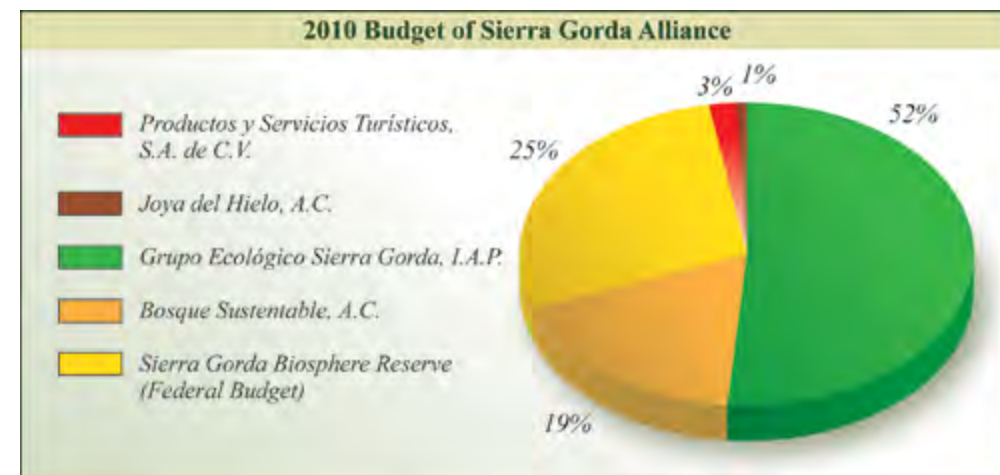
Investment Utilizing categories of Mexico's National Development Plan	Amount USD
Acquisition and construction of domestic firewood-saving stoves	97,590.71
Combating forest diseases and pests	307,165.91
Conservation and rational use of water	530,331.25
Creation of infrastructure for the management of solid waste	3,043.48
Environmentally responsible tourism	40,347.83
Drainage and wastewater infrastructure	179,723.01
Installation of sanitary facilities	141,092.98
Payment for environmental services	443,067.39
Prevention and combating of forest fires	12,166.96
Ecological land-use planning	116,188.00
Reforestation and creation of tree nurseries	305,088.09
Regeneration of aquifers	41,700.00
Soil regeneration	99,339.13
Others	919,233.20
TOTAL	3,236,077.94

Desired state:

- Sierra Gorda funding comes from a variety of sources.

Results:

- 75% of **THE ALLIANCE's** budget is operated by organizations created by the local civil society.



- 71% of the budget is from non-government sources
- 10% of the budget is from self-financing program income.
- 20% of the budget from businesses and other organizations. Current business donors include BOMBARDIER AEROSPACE, CUMMINS, VOLARIS, HSBC and DEUTSCHE BANK.
- No more than 29% of funding comes from any one donor type.

2010 SIERRA GORDA ALLIANCE Budget by Donor Type.

Type of Donor	%
Individuals, national	1%
Individuals, foreign	0.1%
Foundations, national	23%
Foundations, foreign	11%
Businesses and other organizations, national	14%
Businesses and other organizations, foreign	6%
Government agencies, national	29%
Program income (self-financing)	10%
Financial income and others	6%
TOTAL	100%



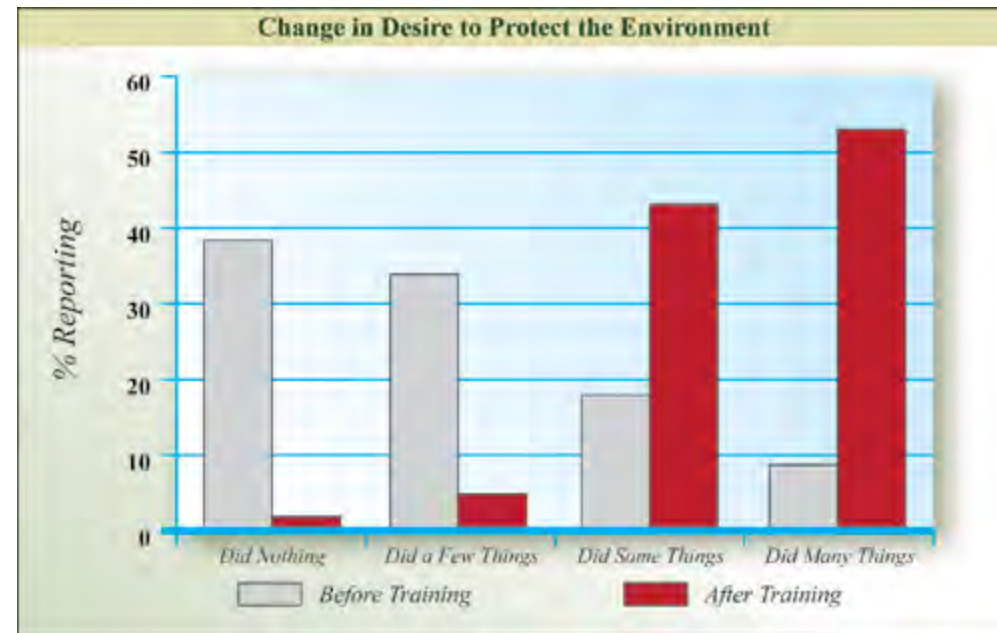
SPiRiT

Desired state:

- People feel a personal connection to nature.

Results:

- The change in desire to maintain or protect the environment before and after their training experience moved from 27% reporting "mild interest" or "great interest" to 96%.¹⁹



19. Base on survey carried out from 2006-2007.



- 22 groups of youths with 840 have organized themselves as **Eco-Clubs** and received leadership training. Under the guidance of a teacher-facilitator, the clubs have proven to be an effective tool for replication of successful strategies.

- Replication of **Eco-Clubs** in seven states throughout Mexico.

Desired state:

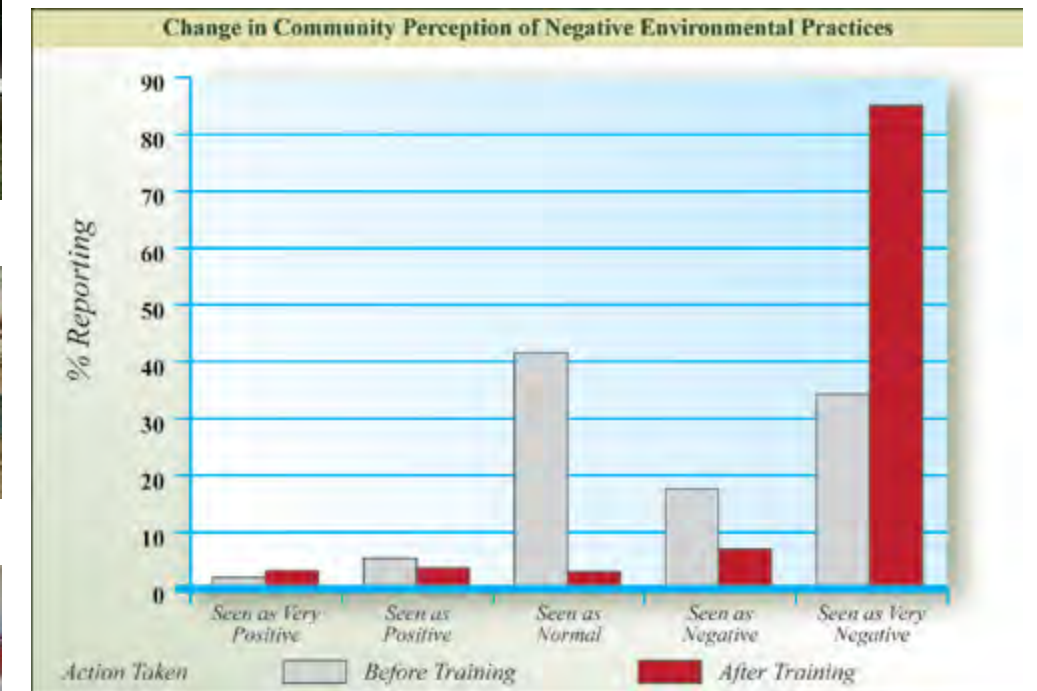
- Community perception emphasizes positive environmental actions.

Results:

- The change in community perception of unsustainable practices before and after their training experience went from 52% of residents who view them as "somewhat bad" or "very bad" to 92%.²⁰

Desired state:

- People, especially women and youths, feel empowered to make a difference.



20. Ibid.



Results:

- Women and youth who feel “very capable” of participating in or leading group activities changed from 9% before their training to 41% after training.²¹
- The network of women operating the community recycling centers has operated for more than 20 years.
- **WOMEN EMBROIDERING NATURE**, a group of 32 organized women, has received its first export order for the department store *El Corte Inglés* in Spain, evidence of the quality of the organization’s work.
- The participation of women is egalitarian, effective, tenacious and, now, a demonstration of local social entrepreneurship.



21. Ibid.



Alliance for the Conservation of Sierra Gorda Biosphere Reserve

THE ALLIANCE is made up a group of local civil society organizations committed to the implementation of activities that conserve and restore valuable local ecosystems through the participation of the communities, generating opportunities for their social and economic improvement and constructing and strengthening an economy of conservation. The members of **THE ALLIANCE** are the following:

SIERRA GORDA ECOLOGICAL GROUP, I.A.P. (GESGIAP) is the founding organization that educates for a sustainable future, organizes community action and cross-sector cooperation, promotes the management of recyclables, and raises awareness and funding for the activities of local partners and on-going activities within and outside the region. The Sierra Gorda Earth Center provides on-line and on-site training in sustainable development to students and professionals throughout the country with increasing success to replicate the proven education, conservation and development strategies.

SUSTAINABLE FORESTRY, A.C., (BSAC) develops activities with private landowners and ejidos to manage forests, reforestations and natural regenerations, build watertanks at critical springs, and restore watersheds and greater ecosystems sustainably. As a leader in ecosystem services payment programs, **BSAC** offers technical training and support to guarantee quality ecosystem products and services such as (forest and soils) carbon, water, biodiversity and land management.

JOYA DEL HIELO, A.C., is the custodian of unique wildlife sanctuaries that form private natural reserves along the priority biodiversity corridor in the **SIERRA GORDA BIOSPHERE RESERVE**.

SIERRA GORDA’S TOURIST PRODUCTS AND SERVICES, S.A. DE C.V., is a company that provides training, assistance, management skills and **commercialisation** to community micro-enterprises as well as building bridges between the producers and the market.

VIVA SIERRA GORDA is an organization based in San Francisco, California and a project of the **EARTH ISLAND INSTITUTE** that assists with fundraising and promotion of the area.

The *Sierra Gorda Alliance’s organisations’ programs* have been recognized on a global scale, with prizes and acknowledgements such as: the NATIONAL PRIZE FOR THE ENVIRONMENT, ASHOKA INNOVATORS FOR THE PUBLIC FELLOWSHIP; the WORLD ECONOMIC FORUM’S SCHWAB FOUNDATION FOR SOCIAL ENTREPRENEURSHIP; the ROLEX PRIZE FOR ENTERPRISE; the WORLD BANK’S DEVELOPMENT MARKETPLACE; ENERGY GLOBE PRIZE in the categories of biodiversity conservation and youth; TOURISM FOR TOMORROW PRIZE of the **WTTC**; the **BBVA** FOUNDATION CONSERVATION AWARD; and from PARTNERS IN FLIGHT and the SOCIETY FOR CONSERVATION BIOLOGY.

Private sector partners: GONZALO RIO ARRONTE FOUNDATION, NACIONAL MONTE DE PIEDAD, **IUCN**, the NETHERLANDS COMMITTEE of the **IUCN**, WORLD LAND TRUST **UK**, CUMMINS PHILANTHROPIC ASSOCIATION, THE KATOOMBA GROUP, UNITED NATIONS FOUNDATION, GLOBAL GREENGRANTS FUND, BOMBARDIER AEROSPACE, DEUTSCHE BANK FOUNDATION, VIVA SIERRA GORDA of EARTH ISLAND INSTITUTE, SALESFORCE FOUNDATION, FUNDACIÓN BIODIVERSIDAD, THE SAVORY INSTITUTE, VOLARIS AIRLINE and **HSBC**.

Public sector partners: Seven committees in the TECHNICAL ADVISORY COUNCIL OF THE RESERVE, QUERETARO STATE GOVERNMENT, **CEA**, **SEDEA**, **SEDESU**, **SECTUR**, **SEMARNAT**, **CONANP**, **CONAFOR**, **INDESOL**, **SEP**, **FIRA**, and internationally the **U.S. FISH AND WILDLIFE SERVICE**.

IV. Conclusions

GRUPO ECOLÓGICO SIERRA GORDA has been involved for more than 25 years in a persistent effort with neither deviations nor delays to build a bridge to a new paradigm of conservation and sustainable development. It has implemented energetic local actions for mitigating global warming and created a living laboratory of the most innovative tools and strategies for achieving conservation of natural resources and development and participation of local communities. The Sierra Gorda is now implementing a strategy for replication of the successful strategies of the project in other areas that will shorten the learning curve and reduce costs of transference and implementation. Through the operation of the **SIERRA GORDA EARTH CENTER**, **GESG** is providing workshops, courses, and online education in which community members, staff of protected areas and **NGOs**, teachers, environmental educators and others can enhance their capacities and become integrated as strong teams.

The *Sierra Gorda strategy* demonstrates the value of co-management of a natural area, with responsibility shared by the local initiative and the federal government. There is a deep feeling within the bioregion of active citizenship operating every day at all levels. The Sierra Gorda is now a global reference for a strategy of conservation and sustainable development through the forging of a conservation economy. Although **GESG's** achievements have not yet been fully monetized, they are still real and tangible. The efforts of **GESG** have opened up new funding sources, reoriented public policies and provided a better understanding of the value of social entrepreneurship as the most energetic solution for saving the world from its abysses and crises, a solution that reflects the emergence of a new social force.

After eight years of executing the **GEF/UNDP/CONANP project from 2001-2009** with the tremendous demands of monitoring and reporting to three different entities, **GESG** ended a great period of capitalization of the **SGBR** and its communities. The region became more commercial, with productive processes in motion, and with an economic valuing of nature, a pioneering initiative involving new products based on the area's ecosystems. **GESG** began the operation of a virtual campus, initiated conservation enterprises that help fund the operating expenditures of community programs, and brought carbon programs to the point of being validated.

Today, without this funding and yet maintaining the tremendous demands of the project operation, **GESG** and its partner organizations have integrated themselves as the **ALLIANCE FOR THE CONSERVATION OF THE SIERRA GORDA**. In the years to come, **GESG** will work with the organizations born during the **GEF project**, namely, **BOSQUE SUSTENTABLE A.C.**; **JOYA DEL HIELO A.C.**; **SIERRA GORDA TOURISM PRODUCTS AND SERVICES S.A.**; and **VIVA SIERRA GORDA**, a project of **EARTH ISLAND INSTITUTE**, located in San Francisco, California.



GESG believes its valuation of natural resources and **SROI analysis** are powerful tools that will strengthen its communication and fund-raising efforts and is ready to share its experience with others. This has been a pioneering initiative, and **GESG's** knowledge can now help others to more easily adapt these tools to their needs. However, in spite of our efforts at monetizing returns, we continue with the same feeling of frustration at only partly achieving the valuation of the efforts that the organized civil society is capable of achieving. The most important aspects of social entrepreneurship — persistence, creativity, generosity, the capacity to integrate multiple actors, passion for a cause — these are what are most valuable about our work. How do you measure conscientiousness and local control and ownership? The participation of organized society in the rescue of its environment? Leadership and the social fabric achieved through 25 years of work? Finding a way to communicate these values in dollars and cents is the challenge, but perhaps the final conclusion is that all that glitters is not gold.

GESG believes in the professionalization of the social sector, including donors as well as the operators of social projects. With this in mind, **GESG** is helping to generate more reliable processes with hard numbers that speak to new markets about a philanthropy in which

donors are able to rank the impact of their donations. Through the **SIERRA GORDA EARTH CENTER**, **GESG** will continue to share its experiences in developing this new vision, alerting social enterprises to the importance of becoming part of this disciplined approach to monitoring in order to more fully value their impacts and achieve their missions.



Reference documents

Available upon request.

Annex A: *Case Study on the Development of the Sierra Gorda SROI Analysis (2006-2009).*

Annex B: *Sierra Gorda Social Return on Investment Analysis Report*, prepared by **SOCIAL VENTURE TECHNOLOGY GROUP** (June 21, 2007).



Photograph: Roberto Pedraza Ruiz



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