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**USAID REGIONAL PROGRAM FOR THE MANAGEMENT
OF AQUATIC RESOURCES AND ECONOMIC ALTERNATIVES**



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USAID PROGRAM FOR THE MANAGEMENT OF AQUATIC RESOURCES AND ECONOMIC ALTERNATIVES

**DELIVERABLE NO. 4(C):
SEA TURTLE TOURISM CONSERVATION MODELS**

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DELIVERABLE NO. 4(C): SEA TURTLE TOURISM CONSERVATION MODELS

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EXECUTIVE SUMMARY

Sustainable tourism has the potential to not only mitigate the potentially harmful impacts of visitation to natural areas, but can also act as a powerful tool to support conservation of the ecosystems upon which it depends. Tourism is among the largest and fastest growing industries in the world, and is a labor-intensive activity that employs natural and cultural resources as working capital and promotes youth and gender equality. These conditions create the opportunity for sustainable tourism to provide economic alternatives in regions where few other non-extractive options exist. This is particularly relevant to populations living in or around parks and protected areas in developing countries.

Yet throughout these developing countries, the relationship between communities and the protected areas in which they live is often one characterized by conflict and diverging interests. Community members are too often dependent upon the extraction of natural resources for their economic livelihoods, while protected area managers seek to curb or eliminate extractive livelihoods in order to preserve natural resources.

Sustainable tourism, if developed properly, can align these interests by creating economic opportunities for local residents that are dependent upon the *preservation* of natural resources rather than their *extraction*.

In an effort to promote this realignment of interests, the following document outlines six **Tourism Conservation Models**, as well as 16 unique strategies that correspond to them. All of these models and strategies attempt to directly link sustainable tourism, biodiversity conservation, and communities. These models include:

1. Improve Tourism Operations & Guidelines
2. Increase Environmental Awareness and Conservation Constituencies
3. Increase Income Diversification
4. Increase Monitoring & Research
5. Increase Tourism-Generated Conservation Financing
6. Increase Conservation Partnerships

The models and strategies describe different methods for harnessing the two primary resources created by successful sustainable tourism enterprises that can in turn be used to support conservation activities. These resources are **time** – the volunteer or paid labor of employees, community members, and visitors...and **money** – the financial resources created by the enterprise and its clients that can be used to leverage greater conservation outcomes.

Case studies from conservation and tourism partners throughout Central America and the Caribbean are included at the end of the document. The case studies chronicle the practical implementation of these models and strategies and provide additional insight into the process, results, and lessons learned.

Given that the supporting program, USAID-MAREA, is designed to address human-based threats to coastal and marine ecosystems throughout Central America...the theory and practical application of these models and strategies as described in this document reflects MAREA's geographic and thematic focus. Yet it is worth noting that none of the **Tourism Conservation Models & Strategies** presented in this document are unique or somehow exclusive to coastal and marine ecosystems and/or conservation threats. The principles and assumptions upon which they are based apply equally to *terrestrial* ecosystems, conservation threats, and tourism products as well.

MAREA and Solimar's goal is to share these **Tourism Conservation Models & Strategies** with NGOs, CBOs, protected area managers, and private sector partners to encourage and assist their efforts to better support biodiversity conservation through sustainable tourism.

All photo credits Solimar International unless otherwise noted

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The initial work to identify the overall **Tourism Conservation Models** outlined in this document was supported by Rare, a US-based international conservation organization, and its Ecotourism Enterprises program. The authors wish to thank Rare's leadership for their investment and commitment to conservation that led to these initial results.

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ACRONYMS

AAMVECONA	Asociación de Amigos y Vecinos de la Costa y la Naturaleza
AGRRA	Atlantic Gulf Rapid Reef Assessment
ANAM	Autoridad Nacional de Ambiente
APRORENANB	Asociación de Protección de Recursos Naturales Ngöbe-Buglé
ATP	Autoridad de Turismo Panama
BITMAR	Banco de Información sobre Tortugas Marina
BSTA	Bocas Sustainable Tourism Alliance
CAMPAM	Caribbean Marine Protected Area Managers
CAP	Conservation Action Planning
CARICOMP	Caribbean Coastal Marine Productivity
CBO	Community Based Organization
CCC	Caribbean Conservation Corporation
CMBC-GC	Center for Marine Biodiversity Conservation-Gulf of California
CONANP	Comisión Nacional de Areas Naturales Protegidas
CORAL	Coral Reef Alliance
GDP	Gross Domestic Product
GET	Grupo Ecotortuguero
GTC	Grupo Tortuguero de las Californias
HCRF	Honduras Coral Reef Foundation
ITEC	Instituto Tropical de Ecología y Conservación
ISV	International Student Volunteer
MAREA	Management of Aquatic Resources and Economic Alternatives Program
MINAET	Ministerio de Ambiente, Energía y Telecomunicaciones
MNMCC	Monumento Natural Marino Cayos Cochinos
MoU	Memorandum of Understanding
MPA	Marine Protected Area
MSC	Marine Stewardship Council
NGO	Non-Governmental Organization
OFRANEH	Organización Fraternal Negra Hondureña Pueblo Garifuna
OSI	Ocean Spirits, Inc.
PA	Protected Area
PETS	Programa de Empleo Temporal
PMP	Performance Monitoring Plan
PROARCA	Programa Ambiental Regional para Centro America
PROCOCDES	El Programa de Conservación para el Desarrollo Sostenible
SAVE	Student, Academic, Volunteer, and Educational Tourism
SIEC	Sociedad de Inversiones Ecológicas
STC	Sea Turtle Conservancy
STRI	Smithsonian Tropical Research Institute
SWOT	Strength, Weakness, Opportunity, Threat
TNC	The Nature Conservancy
UNAM	Universidad Nacional Antónima de México
USAID	United States Agency for International Development
USGS	United States Geological Service
WCS	Wildlife Conservation Society
WIDECAST	Wider Caribbean Sea Turtle Network
WWF	World Wildlife Foundation
VBM	Vigilantes de Bahía Magdalena

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Introduction

Marine ecosystems worldwide are experiencing unrelenting pressure from coastal development, urban expansion, pollution, and unsustainable fishing practices...not to mention the increasingly negative effects of climate change. The degradation of these ecosystems has caused the decline of numerous marine species, including the six species of sea turtles found in Central American waters now classified as endangered. The decline of sea turtle populations is emblematic of the damage that humans have inflicted on sensitive marine ecosystems, as sea turtles have existed for over 100 million years but only now face the real possibility of extinction due primarily to anthropogenic causes such as the poaching seen in figure 1.



Photo: WIDECAST Costa Rica

Figure 1: Sea turtle populations in decline

USAID’s “Management of Aquatic Resources and Economic Alternatives” (MAREA) Program is designed to address human-based threats to coastal and marine ecosystems throughout Central America. The USAID-MAREA Program holds two primary objectives. The first of which is to promote effective monitoring and enforcement of coastal and marine resource policies and legislation with an emphasis on compliance. The second objective is to foster rights-based and market-based mechanisms and management incentives for the conservation and sustainable use of coastal and marine resources and ecosystems, with an emphasis on ecosystem-based approaches to management.

The MAREA Program is targeting both economically important fisheries such as lobster, queen conch, mangrove cockles and grouper and endangered marine species such as turtles and shark, which represent viable opportunities for piloting the use of rights-based mechanisms and best management practices.

Sustainable Tourism as a Tool for Conservation

Sustainable tourism has the potential to not only mitigate the potentially harmful impacts of visitation to a natural area, but it can also act as a powerful tool to support conservation of the ecosystems upon which it depends. To achieve such results, MAREA Program partner **Solimar International** employs a market-based approach that links the jobs and revenue generated by sustainable tourism to direct support of conservation activities that mitigate threats to sea turtles and their habitats.

At its best, sustainable tourism presents an opportunity to better align the economic activities and needs of rural populations, particularly those living in or around protected areas, with biodiversity conservation objectives. Throughout developing countries, the relationship between communities and protected areas is one characterized by conflict and diverging interests. To put it in broad strokes...communities often view protected areas and their managers as those who create and enforce rules that inhibit their ability to provide for their families. And protected areas often view communities as an extractive and destructive force that requires constant monitoring and policing.

The reality is that communities, and their history of dependence upon the extraction of natural resources to make a living, are often at the center of direct and indirect conservation threats. As Brett Jenks, President and CEO of Rare Conservation, a global leader in conservation awareness building puts it “conservation is not an ecological challenge. It is an economic, social, and political challenge”. But it is for this very reason that Rare, Solimar, and other conservation and development organizations around the world focus on solutions that engage and address the needs of local communities, rather than ignore them.

Specifically, sustainable tourism presents an opportunity to develop economic alternatives dependent upon the *preservation* of natural resources...rather than their *extraction*. This difference is illustrated in figure 2. Further more, sustainable tourism creates an opportunity for communities and protected areas to align their interests, begin a collaborative and productive dialogue, and bridge the disconnect that has traditionally existed between them.



Figure 2: Sustainable tourism vs. resource extraction

It is extremely important to note that **sustainable tourism is not an economic panacea**. Strong economies are diversified economies, and sustainable tourism development is simply an opportunity to *lessen* the pressure on resource extractive activities rather than *replace* them entirely. Sustainable tourism, particularly with rural communities, often begins small with a limited number of new jobs. Tourism employment also tends to be part-time and seasonal at first (although most jobs in rural regions of developing countries are both part time and seasonal). But over time, and through the expansion of tourism products and services (such as tours, lodging, dining, and transportation) tourism can become a viable and sustainable economic option for a growing number of local community members, and can also directly contribute to conservation activities.

Linking Sustainable Tourism, Communities and Conservation

Many community-based businesses, cooperatives, or associations that are established as a part of international development projects often take on the structure and mission of a “social enterprise”. A social enterprise is a venture that advances its social mission through entrepreneurial, earned income strategies. For a social enterprise, profit is not the *point* of the business but the *means* by which the enterprise supports a social need. To further explore the concept of social enterprise, let’s break down its widely accepted definition:

*A social enterprise is a business or organization whose purpose is to change the world for a common good.*¹

When we apply this definition of social enterprise to *sustainable tourism*, we begin to see some of the unique opportunities that this model presents as a development tool as seen below in figure 3:

A Social Enterprise is...



Figure 3: The social enterprise model applied to sustainable tourism

¹ Lynch, Kevin and Walls, Jr., Julius (2009). *Mission, Inc.: The Practitioner’s Guide to Social Enterprise*. Berrett-Koehler Publishers, Inc.

A social enterprise is, first and foremost, a business. The social mission can only be achieved through financial viability and growth of the enterprise itself. Therefore, the social enterprise must achieve the same success required of any small business, including:

- Healthy revenues & profit margins
- Sufficient working capital
- Effective marketing
- Product innovation
- Superior customer service
- Streamlined operations
- Strong leadership
- Comprehensive business skills

Social enterprise is not an uncommon or radical concept - if you Google the term “social enterprise” you will find nearly 50 million direct references. Harvard Business School has its own Social Enterprise Program. And USAID currently supports social enterprise development programs in Bulgaria, Moldova, Lebanon, Egypt, and Morocco, and Ukraine, to name a few.

The “Triple Bottom Line” Approach

Many social enterprises measure their success not only by their financial “bottom line” or profitability, but also by their ecological and social returns. This approach, called the “triple bottom line”, assesses an enterprise’s degree of sustainability as seen in figure 4.

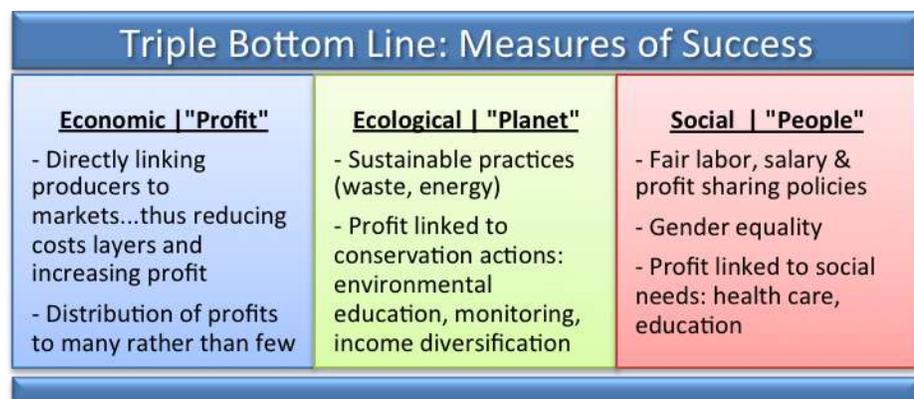


Figure 4: The “triple bottom line” approach

Within many development projects the opportunity often exists for the social enterprise and triple bottom line approach to support the economic, ecological, and social objectives of the project. For example, many of USAID’s projects that target economic growth or biodiversity conservation include some of the following objectives as a part of “Performance Monitoring Plan” (PMP)” seen in figure 5 below, just to name a few:

Common USAID Project Performance Objectives
• Number of jobs created
• Increased investment in target areas
• Number of small & medium enterprises supported
• Increase in sales of environmentally sustainable products or services
• Number of persons trained
• Increase in environmentally sustainable practices & processes adopted by the tourism sector
• Increase in of alliances, cooperative agreements, concessions, and co-management agreements between protected areas, communities, and the private sector

Figure 5: USAID project performance indicators

In order to achieve these direct linkages between community-based tourism and conservation, Solimar introduces direct financial incentives as a way to encourage local community to adopt sustainable tourism principles and practices.

Three examples of this approach include:

- **Memorandums of Understanding (MoUs):** During the project development stage, specific agreements are outlined within MoUs that clarify stakeholder commitments. For example, the project partner may commit to a certain level of financial or technical assistance to support the establishment of a community tourism enterprise. In exchange, the community partner agrees to contribute a certain amount of time or percentage of money to support project conservation objectives.
- **Marketing Incentives:** Many small and medium enterprises lack the resources and capabilities to effectively link their products and services to global, regional, or even local markets. Whether it is a lack of capital, training, technology, or knowledge...reaching target markets is a common challenge that many tourism enterprises face. Yet, this need also presents an opportunity to offer marketing support to enterprises (and the sales it generates) in exchange for their adoption of sustainability criteria or some other form of direct conservation support.
- **Profit Sharing Mechanisms:** Within this approach, community members may earn a higher percentage of year-end tourism profits in exchange for time and labor contributed to support conservation activities throughout the year.

Solimar International’s approach begins by empowering local entrepreneurs to develop or improve sustainable tourism enterprises through technical support and highly customized tools, such as the “tourism toolkit” described later in this chapter. Once successful, these local enterprises generate two primary resources, *time* and *money*, that can be harnessed to support local biodiversity conservation activities.

The following graph highlights how tourism’s ability to produce these two key resources of time and money can be generated not only from *local beneficiaries*, but also by the *visitors* that are patronizing sustainable tourism businesses and destinations. Many of these specific examples will be further explored within later chapters.



Figure 6: Channels through which tourism-generated time and money can directly support conservation

The Economic Potential of Sustainable Tourism

Solimar International's focus on sustainable tourism as an engine to drive conservation stems from the industry's size and dynamic growth, as well as its potential in developing countries. Tourism is one of the world's largest industries accounting for approximately 11% of global GDP. As a sub-sector, sustainable tourism has experienced an astounding 20% annual growth rate since the 1990's, three times that of the tourism industry overall.

These global trends are even more pronounced in developing countries where tourism growth is double that of the worldwide average. Developing countries represent 40% of all international tourism arrivals and 30% of global tourism receipts.² Tourism employs natural and cultural resources as working capital in areas where few other non-extractive economic options exist. Tourism represents a labor-intensive activity that allows youth and gender participation and equity. And finally tourism, particularly in rural areas, is an excellent strategy to economically "link" locally produced ancillary products and services such as food production, arts and crafts production, and transportation services.



² UN Report (2010). *The Contribution of Tourism to Trade and Development*. United Nations Conference on Trade and Development. Second session. Geneva May 3-7 2010.

Tourism Conservation Models

Over the past five years, Rare and Solimar International have analyzed their own sustainable tourism projects, as well as partner projects, to identify direct linkages between sustainable tourism, biodiversity conservation, and community development. The result has been the development of six **Tourism Conservation Models**. A chapter has been dedicated to each of these six **Tourism Conservation Models** within this document outlining the conservation threats they are designed to address, the theory behind them, as well as the individual strategies that fall within each of the models.

These six **Tourism Conservation Models** are described in figure 7 below:

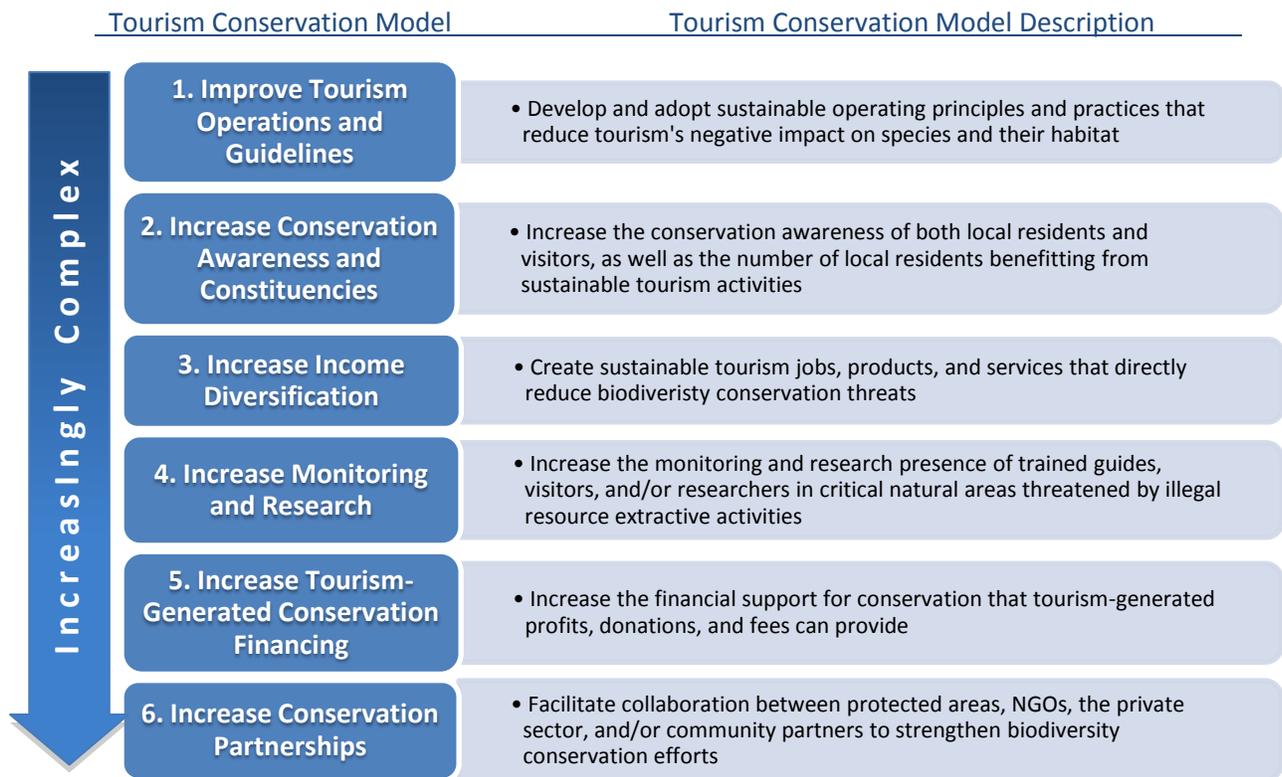


Figure 7: Tourism Conservation Models

The six **Tourism Conservation Models** are presented here in order of increasing complexity in terms of commitment of resources (money, time, infrastructure), required collaboration amongst stakeholders, and overall coordination and implementation.

It is important to note that none of the **Tourism Conservation Models** described here, nor the **Tourism Conservation Strategies** on the following page, are unique or somehow exclusive to coastal and marine ecosystems and/or conservation threats. The principles and assumptions upon which they are based apply equally to *terrestrial* ecosystems, conservation threats, and tourism products and services as well.

Tourism Conservation Strategies

Within each of the six overarching **Tourism Conservation Models**, individual **Tourism Conservation Strategies** exist. The strategies represent different conservation activities that utilize unique approaches to implementing the overarching **Tourism Conservation Model**. These strategies are listed in figure 8 below:

Tourism Conservation Model	Tourism Conservation Strategy
1. Improve Tourism Operations and Guidelines	<ul style="list-style-type: none"> • 1.1 - Promote sustainable tourism guidelines with visitors • 1.2 - Promote sustainable tourism guidelines with the travel industry • 1.3 - Promote sustainable tourism guidelines within protected areas
2. Increase Conservation Awareness and Constituencies	<ul style="list-style-type: none"> • 2.1 - Increase awareness and conservation support of visitors • 2.2 - Increase awareness and conservation support of local residents • 2.3 - Link benefits of sustainable tourism to the community as a whole
3. Increase Income Diversification	<ul style="list-style-type: none"> • 3.1 - Target resource extractors with sustainable tourism employment • 3.2 - Develop sustainable tourism products that directly mitigate conservation threats
4. Increase Monitoring and Research	<ul style="list-style-type: none"> • 4.1 - Increase the role of local residents in monitoring & research • 4.2 - Increase the role of visitors in monitoring & research
5. Increase Tourism-Generated Conservation Financing	<ul style="list-style-type: none"> • 5.1 - Utilize sustainable tourism profits to support conservation activities • 5.2 - Develop travel philanthropy programs • 5.3 - Develop conservation-themed brands and merchandise • 5.4 - Promote mandatory or voluntary protected area entrance/user fees
6. Increase Conservation Partnerships	<ul style="list-style-type: none"> • 6.1 - Develop partnerships between protected areas, NGOs, and universities • 6.2 - Develop partnerships between protected areas and communities

Figure 8: Tourism Conservation Strategies

Sea Turtle Tourism Conservation Case Studies

In order to best support MAREA's conservation objectives, Solimar International partnered with international and local sea turtle conservation organizations to focus on identifying existing or potential *sea turtle* tourism conservation activities that fall within the umbrella structure of the **Tourism Conservation Strategies** outlined above.

This document is the result of this collaboration. With a focus on practical application, each of the six overarching models are introduced with a short narrative and followed by descriptions of the individual **Tourism Conservation Strategies** that fall within each of the six models. In the annex of this document, a series of case studies are presented that highlight the organizations and individuals who have implemented these strategies, outlines the process they went through, and also shares some of the practical lessons learned in the process. The majority of these examples and case studies come from Central America, although a handful of projects outside of the region are cited as well.

It is worth noting that many tourism destinations and enterprises, even those that operate sea turtle tours as their "anchor" product, also tend to provide other products (such as snorkeling tours) and services (such as food and lodging) as well. For this reason, this document does not exclusively focus on sea turtle tourism products.

In addition, an internal review of the **Tourism Conservation Models & Strategies** was conducted with MAREA technical staff, and an external review was conducted with a number of qualified sea turtle conservation organizations, sustainable tourism representatives, and coastal protected area managers. The specific participants of this internal and external review process are mentioned in the "Acknowledgments" page of this document.

Conservation Threat Assessment

Any good conservation strategy is built upon the strong foundation of a comprehensive conservation threat assessment. Throughout the process of developing the **Tourism Conservation Models** described within this document, Solimar and partner organizations often used a conservation threat assessment approach that is utilized by local and international conservation organizations throughout the world.



Figure 9: Sea turtle monitoring activities in Mexico

Within this approach, a target condition is defined (species or habitat) and causal chain concept models are developed that identify direct and indirect threats to that target condition. This conservation threat data is collected and prioritized through workshops and in-depth interviews with a variety of local stakeholders including scientists, NGOs, protected area managers, community leaders, and private sector representatives.

Threat Assessment Model

The threat assessment model is built around the cause and effect relationships between indirect threats to biodiversity (such as lack of economic alternatives or lack of conservation awareness), direct threats to biodiversity (such as illegal logging or wildlife harassment), and a site-specific target species or habitat.

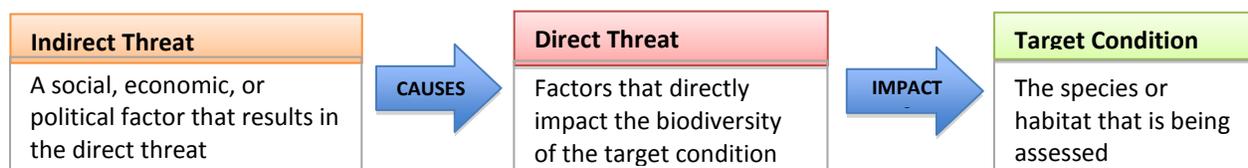


Figure 10: Sample threat assessment "causal" chain

For example, the demand of sea turtle eggs for human consumption is a ubiquitous conservation threat that occurs throughout Central America. The threat assessment model for sea turtle egg consumption might look something like this:

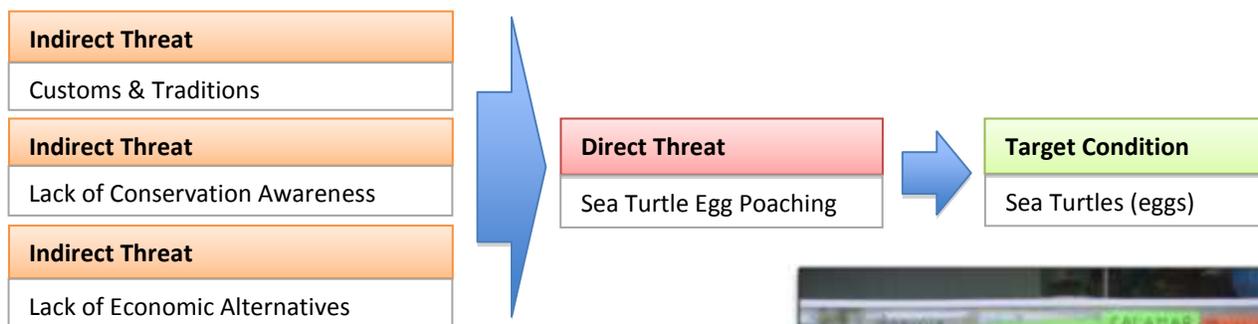


Figure 11: Sample threat assessment causal chain for turtle egg poaching

In this example there are three indirect threats - customs & traditions, lack of conservation awareness, and lack of economic alternatives - that result in the direct threat of sea turtle egg poaching. This direct threat obviously impacts the site-specific target of sea turtle eggs.



Photo: WIDECAST Costa Rica

Figure 12: Sea turtle eggs for sale

Sustainable Tourism Toolkit

As stated earlier, the **Tourism Conservation Models** described in this document are designed to harness two powerful resources that result from successful sustainable tourism projects: *time* and *money* from both local beneficiaries visitors alike. But developing successful tourism products and community enterprises that produce these resources is a critical first step before any additional conservation or social benefits can be realized.

In an effort to fill this paramount need, Solimar International has also developed a “Sustainable Tourism Toolkit” to be distributed alongside the **Tourism Conservation Models** to provide local organizations practical guides and tools to develop successful community tourism products and enterprises.

Figure 13 summaries the four major components of the Sustainable Tourism Toolkit, as well as briefly describes their contents.

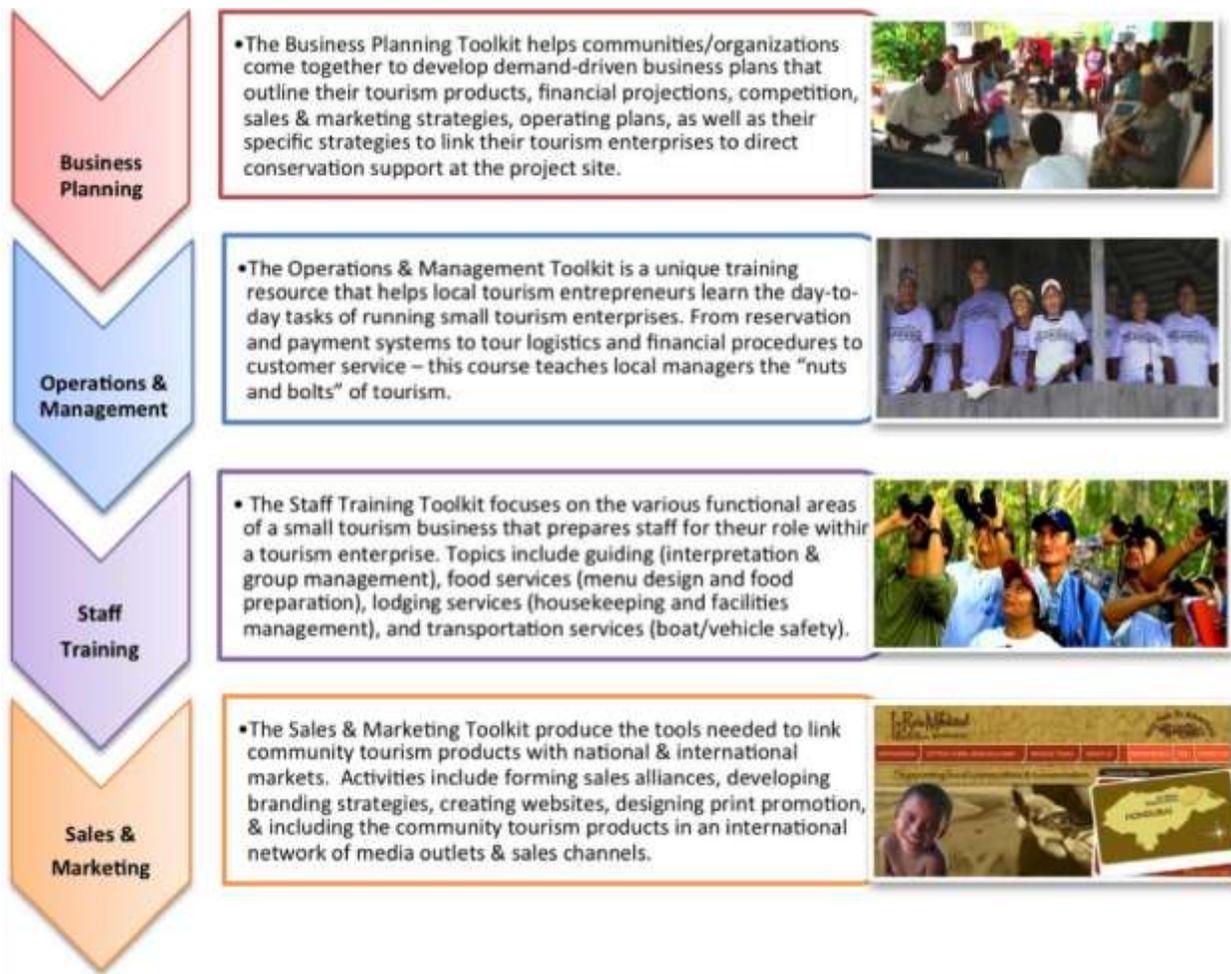


Photo: Rare

Figure 13: Tourism Toolkit Contents

TOURISM CONSERVATION MODEL & STRATEGIES

1. Improve Tourism Operations & Guidelines

Develop and adopt sustainable operating principles and practices that reduce tourism's negative impact on species and their habitat

Conservation Threats Addressed

Indirect Threats
<ul style="list-style-type: none">• Lack of conservation awareness• Lack of sustainable criteria and guidelines

Direct Threats
<ul style="list-style-type: none">• Visitor/tourism impacts: wildlife harassment, habitat destruction, solid waste

Model Summary

The **Improve Tourism Operations & Guidelines** model focuses on reducing the negative impacts of tourism on species and habitat.

The relevance of mitigating the impact of nature-based tourism is justified in part by the sheer volume of visitation that occurs in natural areas, particularly in developing countries. Consider the following:

The phenomenon of “loving nature to death” is a reality nearly every tourism destination in the world faces in one form or another. The threat of tourism to habitat and species are perhaps nowhere more apparent than with sea turtle tourism. Coastal resorts with non-compliant lighting, harassment of nesting sea turtles, the effects of solid waste, and the illegal trade of products made from sea turtle such as jewelry are just a few examples of how tourism and sea turtle conservation can conflict.



Figure 14: Tourism requires sustainability guidelines to minimize impacts to fragile marine ecosystems

Market Forces at Work:

Sustainable Whale Watching in Laguna San Ignacio, MEXICO

Every winter, California gray whales migrate 5000 miles from Alaska to the warm waters of Laguna San Ignacio on the Pacific coast of Baja California Sur, Mexico. Twenty years ago, local Mexican fisherman began offering whale-watching tours to visitors who came to see the “friendly” gray whales of Laguna San Ignacio. Unlike other whale watching lagoons along the coast, the boat guides of Laguna San Ignacio actually *asked* the Mexican government to come in and establish strict regulation to manage whale-watching tourism in San Ignacio in a sustainable way.

Over the years “friendly” gray whales and their calves began to approach the boats seeking out human contact because the local boat guides didn’t harass the whales. Today, the Laguna San Ignacio boat guides charge \$85 per person for their tour, while in nearby Magdalena Bay where no regulations exists and 20 boats are known to crowd a single whale, they are only able to charge \$30 for the same tour.



Source: Chris Pesenti, RED/Grupo Tortuguero

Figure 15: Sustainable Whale Watching in Laguna San Ignacio, MEXICO

Yet for a variety of reasons, including the improved integration and communication of “Global Sustainable Tourism Criteria,”³ tourists and tourism service providers alike are becoming increasingly aware of the importance of mitigating their impact. Within the **Improve Tourism Operations & Guidelines** model, we will explore some of the tools and methods used to engage and educate the tourism industry and visitors in sustainable tourism principles.

Tourism Conservation Strategies

Strategy 1.1 – Promote Sustainable Tourism Guidelines With Visitors

Promoting sustainable tourism guidelines with visitors, such as “codes of conduct”, empowers those individuals with the information they need to make sustainable choices while visiting natural areas. Visitor codes of conduct are built on a strong understanding of tourism-based conservation threats and scientific input on the parameters and regulations that must be established to mitigate those threats. Codes of conduct should also include or consider any rules or regulations already established by a protected area or authority.

Effectively communicating these regulations is just as important as developing good regulations in the first place. Even incomplete codes of conduct will be more effective if they are socialized well with the target audience. Part of this communication should ensure that tour operators, hotels, and other service providers that move tourism to sea turtle nesting beaches are included to ensure that the messages reach all of the intended audience sufficiently. Materials and signage should be produced in multiple languages, for Central America it will be essential to produce signage in at least English and Spanish.

Visitor codes of conduct for nesting sea turtle tours typically address some or all of the following factors:

- The importance of a local guide’s presence
- Group size
- Appropriate clothing
- Use of flash photography
- Visitor behavior (talking, position on the beach, proximity to turtles)
- Beach degradation due to vehicles, horses, and fires
- Waste management

Delivery of this strategy is achieved through a variety of mediums, including:

- **Guided Interpretation:** **Local guides** are the most effective strategy to help communicate and monitor visitor codes of conduct. Guides are able to help develop an appreciation of visitors in natural areas through environmental interpretation, monitor behavior and impacts, and enforce rules and regulations when necessary.



Figure 16: MAREA sea turtle nesting beach signage

Photo: USAID-MAREA

³ Global Sustainable Tourism Council. *GSTA Criteria*. (<http://new.gstcouncil.org/resource-center/gstc-criteria>)

- **Interpretive Signage:** Realizing that many beaches are isolated and unmanned the majority of the time, **beach signage** can be an effective way to communicate visitor codes of conducts to unaccompanied tourists. Signage should be in all of the languages of visitors to the region. Making the signage visually appealing and including interesting interpretive facts helps to ensure that visitors read and understand the rules that apply to them.
- **Signed Statements of Understanding:** With guided tours, one strategy is to present visitors with a **document that clearly states the code of conduct**, and then have visitor review and sign the statement acknowledging their understanding of the code.
- **Promotional Materials:** Incorporating visitor codes of conduct into a sea turtle tourism enterprises **promotional materials** (such as websites and brochures) helps to not only prepare visitors for a sustainable experience, but also conveys to eco-savvy clients the added value of an enterprise’s sustainable practices (which is often a motivating factor for their eventual tour purchase).

Strategy 1.2 - Promote Sustainable Tourism Guidelines with the Travel Industry

Promoting sustainable tourism guidelines with the travel industry empowers service providers (such as tour operators and hotels) to make sustainable decisions in how they operate their businesses. At the global level, an initiative is well underway to combine and integrate the best of the world’s many sustainable tourism criteria programs into a single program called the “Global Sustainable Tourism Criteria” (www.sustainabletourismcriteria.org). The criteria are part of the response of the tourism community to the global challenges of the United Nations’ Millennium Development Goals. Poverty alleviation and environmental sustainability – including climate change – are the main crosscutting issues that are addressed through the criteria.

In coastal regions throughout Central America, a number of conservation organizations, such as the Coral Reef Alliance (CORAL) in Roatan, Honduras, are working with the travel industry to improve marine and coastal tourism operations. CORAL’s “Environmental Performance Checklist” assesses marine recreation providers on a myriad of sustainability standards, and then provides training and support to help those marine recreation providers improve their operations. CORAL’s sustainability standards include:

1. **Adherence to existing laws and regulations:** With respect to laws regarding protected species and fishing.
2. **Staff training:** Best practices in snorkeling, diving, kayaking, and boat tours.
3. **Boating practices:** Mitigating motorized vessel impacts to reefs, including the use of mooring buoys.
4. **Wildlife viewing:** Communicating best practices to visitors to not harass wildlife.
5. **Waste management:** Boat engine motor oil, untreated sewage, solid waste, and toxic boat paints.
6. **Improved equipment & technology:** Use of four-stroke engines, biodiesel fuel.



Figure 17: Local dive shop supporting marine park protection in Roatan, HONDURAS

WIDECAST Publications Guidelines for Nesting Beach Hotel Development

WIDECAST is a network comprised of biologists, managers, community leaders and educators in more than 40 nations and territories. For more than 25 years, the organization has worked to support the recovery and sustainable management of depleted sea turtle populations.

WIDECAST is also a leader in the production of sea turtle tourism publications and manuals, including guidelines for nesting beach hotels that deal with issues such as beach lighting, staff training, and overall property management to mitigate the threat of tourism to nesting sea turtles.

More information can be found at:
www.widecast.org/Resources/Pubs.html



Figure 18: WIDECAST construction guidelines

7. Responsible seafood: Not serving rare, threatened, or endangered species, and respecting seasonal bans.
8. Responsible souvenirs: Not harvesting marine species such as shells, coral, exotic fish, and urchins.

More information on CORAL and their “Environmental Performance Checklist” can be found at www.coral.org.

Challenges

Although certification processes are potentially important parts of these guidelines, as a way to ensure compliance, it is important to note the limitations of these programs as well. Certification programs can be costly and time-consuming for businesses, reducing participation rates. Specifically auditing and verification processes often charge significant fees and expenses, and even those programs that do not charge fees still imply a time commitment from businesses that many are not able to invest in. The challenge is that certifications without teeth or without verification run the risk of being co-opted as a kind of “green-washing” marketing strategy than for real sustainability guidelines thus reducing the effectiveness of the brand.

The other challenge presented by these certification processes is that one-size-fits-all approaches do not work. The tourism industry as a whole should be targeted, including tour operators, hotels, restaurants, and other service providers. Restaurants will have to be judged on different criteria as hotels or water taxi services. The creation, dissemination, and verification of these different classes of operations also drives up costs. Certification initiatives should take into account the time and cost requirements to lighten the load on small businesses, and create a program that takes into account different contexts of different kinds of businesses without sacrificing effectiveness. One possible solution is to create user-driven feedback that provides a kind of verification at a wider scale and low cost. These systems are already being employed by websites such as tripadvisor.com or yelp.com to rate customer service; these same ideas can be applied to provide feedback on sustainability within a certain framework and given some level of editing.

Finally, it is important to establish regulations and codes of conduct before a destination becomes too popular. Establishing a certain mode of operations is more realistic with a smaller number of stakeholders and fewer big interests. As destinations become more popular and bad habits become accepted as normal behaviors the task converts from an establishment of a best practice regime to the fomentation of a cultural change. The latter of those is very difficult to achieve except through dedicated long-term interventions by a consortium of motivated individuals and organizations.

In the end, sustainable tourism criteria, standards, and guidelines that are **relevant, achievable, and marketable** for private sector partners are the ones that are most likely to be embraced by the travel industry.

Strategy 1.3 - Promote Sustainable Tourism Guidelines within Protected Areas

Though awareness campaigns and the process of informing visitors and tourism operators have an important role, the unfortunate reality is that there are some who simply won’t act sustainably without actual regulations in place.

The development public use or management plans for marine protected areas helps in establishing the guidelines and regulations for tourism taking place in these critical natural areas. The complex process of developing such management plans is well beyond the scope of this document. With that said, an overview and importance aspects of developing a management plan include:

- The process should be participatory and inclusive, taking into account the varying points of view of different groups that will be affected by the resulting rules. These stakeholders include protected area managers, conservation NGOs, local businesses, and local communities.
- The regulations and guidelines should address the following issues related to marine protected area management:
 - Descriptions of the area: This should include both the social and the natural history of the protected area
 - Background and history of conservation

- Vision, mission, and objectives
- Roles and responsibilities of active partners
- Legal framework and applicable laws
- Zoning: Including maps of different zones and descriptions of activities permitted in each zone
- Management issues: Research, tourism, fishing, etc.
- Implementation strategy
- Monitoring and evaluation plan
- Budget

Promoting Protected Areas and their Guidelines

With protected area sustainable tourism guidelines or regulations in place...the next step is to share those guidelines with the widest audience possible. It is important to present protected area tourism guidelines in ways that are both easily understood and easily accessible.

Some protected areas make orientation sessions mandatory, particularly if visitors are going to be participating in activities that can cause damage to vital and fragile natural resources such as coral reefs. This can assure park management that those using the site for recreational purposes are having as little an impact as possible on the environment thus making their use more sustainable and possibly even allowing for a higher carrying capacity.

Protected area informational scripts and videos can be developed and distributed to hotels, tour and dive operators and naturalist guides. Making these both informative and entertaining will help convey information and keep people interested and attentive. Any time you have a captive audience, such as in a hotel lobby, water taxi or dive boat...there is a prime opportunity to share this important information. Integrating historical and ecological information to frame the rules of the protected area may help to capture the viewer's attention as well.

Multi-media and social networking can also help to promote sustainable tourism guidelines within protected areas. Such mediums help to not only showcase the rules, but also create a forum to capture visitor feedback and further promote the area as well as conservation activities that the park is undertaking. Many visitors approach their travels with a great deal of anticipation and will explore social media outlets looking for information on what to expect when they finally arrive at their destination. This is a fantastic opportunity to brief visitors on local codes of conduct and regulations in the protected areas they'll be visiting.

Media outlets such as Facebook, Twitter and YouTube are amongst the most popular forums for sharing ideas and creating social networks. These sites are user friendly and items can be cross-posted through links to an organization's main website. Common use of these sites include:

- **Facebook:** Create a fan page, post videos and park signage, share conservation initiatives and recruit volunteer support, gather feedback and experiences from visitors.
- **Twitter:** Post updates with links to videos and other media, communicate conservation events and activities, and recruit volunteer support.
- **YouTube:** Create videos on park rules and their importance. Imbed links to park websites and other social media outlets.



**Cancun Marine Park
Orientation Video, 2009**
www.youtube.com/watch?v=e7dikeSqOU



**Buddy Dive Bonaire,
Orientation Video, 2009**
www.youtube.com/watch?v=BfUbVtsKNuI

Figure 19: Sample protected area orientation videos

Examples of marine parks and protected harnessing the power of online media and social networking sites:

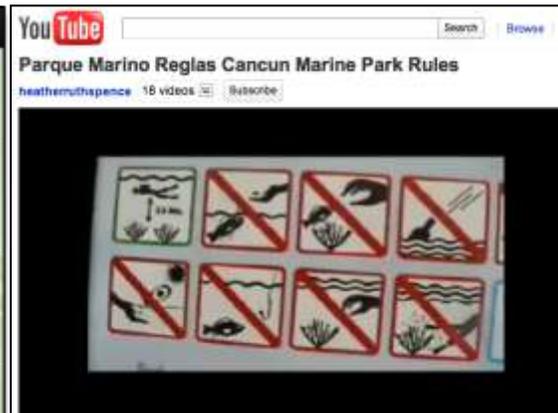
Hol Chan Marine Reserve’s website is eye-catching and engaging, and offers a wealth of information to help visitors plan their visitor to the marine reserve and mitigate their impact while there. www.holchanbelize.org



Marine Park has a Facebook page that links to their own website. The page features visitor photos, announcements of upcoming events, and an online community of 3,805 “friends”.

<https://www.facebook.com/pages/Roatan-Marine-Park/100064028855>

Bonaire Tourism has a very active twitter feed. This type of outlet is a great place to tweet about park rules, special events, as well as linking up to other media and websites.



Video on MPA rules in Cancun and codes of conduct while snorkeling and diving:

<http://www.youtube.com/watch?v=e7dikiaSqOU>

Figure 20: Examples of marine parks and protected areas’ use of online media and social networking sites

**Tourism Conservation Model SWOT Analysis:
Improve Tourism Operations & Guidelines**

Strengths	Weaknesses
<ul style="list-style-type: none"> • Strategies are relatively easy to implement • Sea turtle watching guidelines are well-documented • Signage is always present, while guides and guards sometimes are not • Visitors are usually willing to adopt sustainable behavior if provided direction on how to do so • Signage can be designed in a way that engages, educates, and even entertains visitors...not just outlines the rules 	<ul style="list-style-type: none"> • Tourism is often a less critical threat to species and habitat in relation to other threats such as poaching or development • Educating tourists and tourism service providers may not be enough, monitoring & enforcement may be necessary as well
Opportunities	Threats
<ul style="list-style-type: none"> • If communities act proactively and early to establish visitation/tourism guidelines, they are more likely to receive the support of government agencies in their tourism activities over the long term • Better to approach hotels/private business in a <i>productive</i> manner (helping them to develop sea turtle products they benefit from, rather than telling them to not do certain things) • The strategy can impact a large number of tourists and service providers with little cost/effort • Engaging tourism service providers is an opportunity to “scale up” the conservation strategy and reach a higher volume of visitors 	<ul style="list-style-type: none"> • The demands of tourists on tourism service providers to deliver an “up close” sea turtle experience can potentially overshadow sustainable operating principles • Signage is easily vandalized or stolen

TOURISM CONSERVATION MODEL & STRATEGIES

2. Increase Conservation Awareness and Constituencies

Increase the conservation awareness of both local residents and visitors, as well the number of local residents benefitting from sustainable tourism activities

Conservation Threats Addressed

Indirect Threats
<ul style="list-style-type: none"> • Lack of conservation awareness • Lack of local participation in conservation • Customs and traditions

Direct Threats
<ul style="list-style-type: none"> • Visitor/tourism impacts • Resource extraction

Summary

The **Increase Environmental Awareness and Conservation Constituencies** model attempts to go beyond simply educating visitors and tourism service providers about their impacts. This model attempts to increase the awareness of both visitors and local residents about the role they can play as active supporters of conservation efforts.

With this model the focus begins to shift towards the role that *local residents* can play in conservation in addition to visitors...why?



Photo: Rare

Figure 21: Community tourism group in the coastal Rio Plátano Biosphere Reserve, La Moskitia, HONDURASRoatan

Primarily, it is because local residents are often the source of a conservation threat, and therefore are also the key to mitigating that threat. This is true for both visitors and local residents alike...but conservation threats exerted by local residents tend to be more severe (e.g. sea turtle poaching has a deeper impact than wildlife harassment) and more widespread (e.g. solid waste produced by many coastal communities may exceed that produced by a few tourism businesses or destinations). This is not always the case of course...but tends to hold true.

With local residents, the indirect causes for those conservation threats are often rooted in one of three factors: **lack of awareness, lack of economic alternatives, and long-standing cultural traditions and customs.** This model primarily attempts to address the first two factors, recognizing that altering customs and cultural traditions is a highly sensitive, complex, and deep-rooted issue.

Tourism Conservation Strategies

Strategy 2.1 - Increase Awareness and Conservation Support of Visitors

Local naturalist guides can incorporate key messages and content into their tours that can achieve a number of awareness building and conservation support objectives with visitors. First, guides must **increase visitor appreciation** about the

Role of local guides in increasing visitor conservation awareness and support



Figure 22: Role of local guides

biological value of a protected area’s habitat and species by sharing natural history information with those visitors. Second, guides should increase visitor awareness about the **threats to conservation** in that protected area. Third, guides should inform visitors about **local conservation efforts** to mitigate those conservation threats. Finally, guides have the best opportunity to encourage visitors to **contribute to those conservation efforts** through a financial donation or some other contribution.

“Friend-a-Species” and “Adoption” Programs as a Tool to Increase Visitor Awareness and Conservation Support

Conservation strategies that help visitors develop a personal and/or emotional connection to a certain species or place can increase continued involvement with conservation and research as well as traveler philanthropy. Websites can be used to list information on “adopted” animals, update sponsors on continued research and provide opportunities for continued support through donation portals. Getting visitors involved personally and emotionally can lead to increased financial support for conservation efforts, and even encourage return visits to the area.

Sea Turtle Conservation Bonaire is an NGO that conducts conservation monitoring, surveys, protection and rehabilitation programs, as well as conservation education and advocacy⁴. As part of their line of merchandise, Sea Turtle Conservation Bonaire sells “Sea Turtle Research Hats”, a branded baseball caps with the NGO’s name and logo that each have a unique metal tag sewn on with an alpha-numerical code that corresponds to a turtle that has been tagged by their researchers.

The NGO’s website (www.bonairerturtles.org) has a page where people can look up their code and learn more about their specific turtle such as date of initial tagging, species, weight, length, photo and whether the turtle has been recaptured since its initial tagging. While on the website you can look up other conservation information and donate to support the NGO’s conservation initiatives.

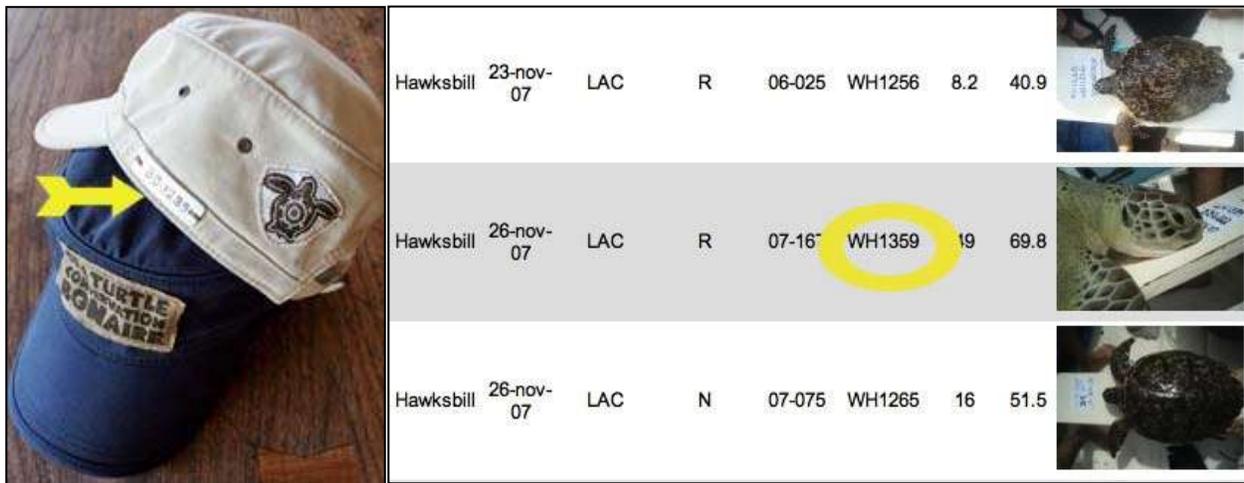


Figure 23: Sea Turtle Conservation Bonaire’s “Sea Turtle Research Hats”

⁴ Sea Turtle Conservation Bonaire, *About Us*, 2011 <<<http://www.bonairerturtles.org/about-us/strategy/>>>

Although a terrestrial example, the Uganda Wildlife Authority has a “Friend-a-Gorilla” campaign that has acquired much acclaim⁵ and serves as a replicable model for both land and marine-based species and conservation programs.

Through the website and supported through other social media outlets, people are invited to “friend” a gorilla and get to know them better. Users can choose individuals to friend, and decide their support levels, starting as low as US\$1. This allows “friends” to receive updates, photos and videos on that individual gorilla, encouraging a personal kinship and continued support. People are even encouraged to go visit their gorilla. Celebrities were invited to participate in a tour of the conservation area and learn about the gorillas, from which a promotional film was made to market the sponsorship program.

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Figure 24: Uganda Wildlife Authority’s “Friend a Gorilla” campaign

Both of these strategies/products seeks to establish a personal connection between the visitor and aspects of the local environment. In doing so these products help develop a lasting bond which can further encourage traveler philanthropy, volunteering and other types of support for local conservation efforts. Products that encourage nurturing relationships with the environment not only provide revenue when purchased, but also present the opportunity to establish a lasting relationship.

Strategy 2.2 - Increase Awareness and Conservation Support of Local Residents

Increasing the environmental awareness of visitors is an important step to mitigating tourism impacts and encouraging travel philanthropy, but increasing the environmental awareness of *local residents* and encouraging them to become active conservation supports is critical to the sustainability of most protected areas.

One way to achieve this is to encourage the same local naturalist guides that work with visitors to **teach environmental education classes** with local school groups to begin developing an appreciation of conservation within youth groups. Many organizations that specialize in conservation awareness building focus on youth populations because of their belief that youth are more receptive to conservation messaging and educational programs.

⁵ Uganda Wildlife Authority. *Friend-A-Gorilla* (2011) << <http://www.friendagorilla.org/>>>

⁶ Uganda Wildlife Authority. *Friend-A-Gorilla : Individual Sponsorships* (2011) << <http://www.friendagorilla.org/GorillaIndividual.aspx>>>

⁷ Uganda Wildlife Authority. *Facebook, Friend-A-Gorilla*. (2011) <<<https://www.facebook.com/friendagorilla>>>

Sea Turtle visitor centers or displays/panels that feature interpretive information in English as well as local languages are another commonly employed strategy to increase local resident’s conservation awareness and support.

Sea turtle festivals are a good way to bring together visitors and local residents alike to celebrate the protection of the species. Activities can include environmental theater and awareness building presentations, face-painting, sand sculpture competitions, hatching releases, amusement rides, music, and dancing...and much more! Messages, games, and competitions are often designed specifically for targeted groups that include children and fisherman.

Sea turtles are a highly charismatic species that can act as a “hook” to get not only visitors interested in their protection, but local residents as well. It may take a generation to *create true stewardship* – for it to become a value that an entire community embraces - but few species can capture the interest and of local residents, young and old, as well as the sea turtle.

Annex Case Study: Grupo Ecotortugueros, RED Sustainable Tourism Project - Magdalena Bay, Baja California Sur, Mexico

Strategy 2.3 – Link Benefits of Sustainable Tourism to the Community as a Whole

One of the most effective ways to use tourism as a tool to build conservation “constituencies” (or groups of people who actively support conservation) is to financially link as many local residents to the economic benefits of sustainable tourism. *Direct* beneficiaries of sustainable tourism might include the staff of community tourism enterprises (such as guides, managers, cooks, housekeepers, etc.). *Indirect* beneficiaries of sustainable tourism might include the family members of those direct beneficiaries, as well as local residents who provide ancillary products that a tourism enterprise purchases (such as food, gas, construction, etc.).

But as stated in the introduction to this document, community-based sustainable tourism enterprises often start out small and may offer a limited number of jobs that tend to be part-time and seasonal, particularly in the initial stages of the business. As a community tourism enterprise increases the products and services it provides (such as tours, dining, lodging, and transportation) and its volume of sales increases...the opportunity to benefit more direct and indirect beneficiaries grows as well.



Photo: Flora Fauna y Cultura de Mexico



Photo: Drake Bay Sea Turtle Festival

Figure 25: Images from sea turtle festivals in Latin America

Realizing that sustainable tourism job creation can be limited...the **Link Benefits of Sustainable Tourism to the Community as a Whole** strategy focuses additional ways in which sustainable tourism can impact multiple beneficiaries in ways *other* than employment.

For example, a community tourism enterprise might elect to dedicate a percentage of its year-end profits to buy or build something that everyone in the community can appreciate and enjoy. A new soccer field, improved water or sanitation systems, supporting a school scholarship program, or a new health clinic are just a few examples.

All of these construction projects also benefit from the dedication of time and labor from *visitors* interested in a “Voluntourism” experience, as well as the time and labor of *enterprise staff members* who might be rewarded with a higher percentage of year-end profits based on the amount of time they dedicate to a community project like the ones described above.

It is important to note that simply using community tourism revenues to pay for these items does not necessarily mean that communities as a whole will recognize the value of sustainable tourism (or its dependence on the community’s support of conservation efforts to ensure that natural and cultural resources are protected and maintained). Rather, it is up to projects and the enterprises themselves to “connect the dots”...ensuring that communities understand the interdependency between resource preservation, successful sustainable tourism, and the importance of local “conservation constituency” support.

Annex Case Study: Vizcaino Biosphere Reserve, Mexico

Tourism Conservation Model SWOT Analysis Increase Conservation Awareness and Constituencies

Strengths	Weaknesses
<ul style="list-style-type: none"> • A few strong local conservation leaders can have a significant impact • This strategy primarily targets youth, which may be the most effective place to begin awareness building and behavior change • This strategy, if done effectively, can result in immediate impacts • Well-designed visitor centers and interpretive plans/materials can be used to educate both visitors and locals alike 	<ul style="list-style-type: none"> • Requires significant human and financial resources to implement (environmental education materials, people to conduct school visits, etc.)
Opportunities	Threats
<ul style="list-style-type: none"> • Both local and visitors can play active roles as sea turtle conservation “ambassadors” • Presents opportunity for a cross-section (men, women, youth) of enterprise & community members to become directly involved in conservation activities • Opportunity to reward enterprise/community member “in kind” support of conservation activities with year-end profit sharing strategies 	<ul style="list-style-type: none"> • The effects of awareness building campaigns fade over time, and must be reinforced over the long term

TOURISM CONSERVATION MODEL & STRATEGIES

3. Increase Income Diversification

Create sustainable tourism jobs, products, and services that directly reduce biodiversity conservation threats

Conservation Threats Addressed

Indirect Threats
<ul style="list-style-type: none">• Lack of economic alternatives

Direct Threats
<ul style="list-style-type: none">• Extraction of Natural Resources (poaching)

Summary

As stated earlier, lack of economic alternatives is one the most important contributing factors to local involvement in conservation threats, particularly resource extraction. Within sea turtle conservation, resource extraction in the form of poaching of eggs and the slaughter of adults for their meat and shells is ubiquitous threat wherever sea turtles are found. There are also long-standing cultural traditions involving the consumptive use of sea turtles, though historically this was largely done in small communities for subsistence.



Figure 26: Local fisherman and former poachers possess unique skills that make them excellent naturalist guides

Sea turtle poaching is often a livelihood of necessity rather than malice. However, as populations grow and poaching is done not merely for subsistence but for commerce, turtle populations are being decimated worldwide. In certain cases biological or emotional arguments are not enough to dissuade poachers from poaching. In within these cases that *economic arguments* can be most effective.

Many sea turtle tourism projects have shown that poachers are willing and eager to shift to non-extractive jobs such as guides and researchers. Tourism is often better paying, less labor and equipment intensive, and simply more enjoyable.

Local Naturalist Guides: Ambassadors of Conservation

The overlap between tourism and increased conservation awareness and support of both local residents and visitors usually begins with the training of a corps of **local naturalist guides**. Local rural residents typically possess a deep understanding of the natural world because they have often grown up within that world working as fisherman, farmers, or maybe even hunters. Tapping into that knowledge and rechanneling it to be used to interpret the natural world for visitors as naturalist guides is a great strategy to increase visitor conservation awareness and encourage travel philanthropy. Furthermore, expanding the role of those naturalist guides to be local environmental educators is a great strategy to increase local resident conservation awareness and encourage local stewardship.



Photo: RED

Figure 27: Local naturalist guides as ambassadors of conservation

Tourism Conservation Strategies

Strategy 3.1 - Target Resource Extractors with Sustainable Tourism Employment

Ironically, the same local residents who exert pressure on sea turtle populations as poachers possess unique skill sets that make them ideal candidates to work in sea turtle tourism and conservation. Poachers tend to understand sea turtle behavior and know when and where find them. Poachers have personal stories to share of their experiences with the natural world. All of this combined knowledge and experience positions poachers to be excellent candidates to work as naturalist guides and even research assistants. And there is no better human-interest story to an ecotourist than a poacher who has “converted” from killing turtles to make a living to protecting them to make a living.

In order for poachers to adopt new sustainable economic alternatives, it helps tremendously if the salary they can earn from tourism exceeds the amount of money they can earn from poaching (“tipping” the scale from resource extraction to preservation). But it is also worth noting that many resource extractors that make the same (or even less) from tourism still tend to make the shift because the physical demands of working in tourism tend to be less than that of fishing, farming, or other labor intensive activities. This propensity towards shifting economic activity to tourism can be further leveraged by making the case that the long-term benefits of non-extractive uses such as tourism are much greater than the short-term benefits of poaching.

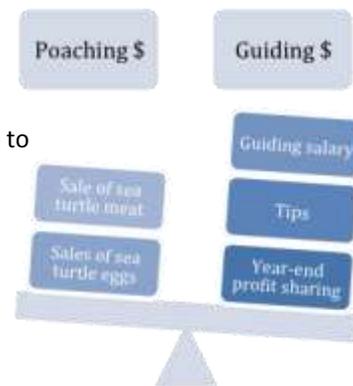


Figure 28: Sustainable attempts to tip the scales of local economic activities from poaching to guiding

Assuming traditional profiles of sea turtle extractors, targeting local residents poaching eggs for subsistence or to augment other sources of household income will resonate powerfully and produce the desired double impact of replacing a conservation threat with an advocate for sea turtle protection, however, this strategy does not work as well with sea turtle poachers that are involved with illicit substances. Conservation NGOs have identified a small demographic of sea turtle poachers that consume drugs and are more likely to be confrontational and even violent. This demographic is thankfully small and seem, from anecdotal evidence, to respect national park boundaries, however it is important to note that this strategy is likely to have little impact on this subsector. These poachers are often patrolling the beach in search of the occasional drug package that wash up along the Central American Caribbean shore, or sometimes specifically hunt for turtles to sell the meat and eggs for enough money to buy more illicit substances. Sea turtle conservation NGOs have reported that they generally find it ill-advised to attempt engaging these kinds of poachers as they are not receptive to conservation messaging and are driven by incentives beyond income to support their families.

In other projects, conservationists depend on “buying” the sea turtle eggs from poachers in order to save them from sale for eventual consumption. This strategy has its complications because it is inherently dependent on outside financial support, mostly from donors, to function. This provides virtually no long-term sustainability for such actions. Tourism income could work to supplement or replace these sources of funding to ensure more long-term viability of such programs.

Annex Case Study: Sea Turtle Research Project, WIDECAS – Gandoca, Costa Rica

Strategy 3.2 - Developing Tourism Products that Directly Mitigate a Conservation Threat

There exists an opportunity to directly target certain conservation threats through the development of specific tourism products and services that address that threat in one form or another. The **Developing Tourism Products that Directly Mitigate a Conservation Threat** strategy is compelling not only because it supports biodiversity conservation, but also creates tourism products, jobs, and revenue. It’s truly a “win-win” situation.

Specific examples of this strategy include:

Plastic Bag Arts & Crafts

In Costa Rica, WIDECAS is supporting a project that takes plastic bags (which are often consumed by sea turtles who mistake them for jellyfish) and turns them into a raw material to create colorful arts & crafts, including handbags (see figure). The production of such arts and crafts removes the conservation threat of solid waste to sea turtles by providing a financial incentive to community artisans who collect plastic bags and then use them to produce an attractive and unique tourism product that generates employment.



Figure 29: WIDECAS's "Weaving for Nature" project encourages local residents to collect plastic bags so they can be turned into crafts for sale



Photo: ARCAS

Figure 30: Local students and international volunteers work side by side in the construction of a "plastic bottle" school in Guatemala.

Plastic Bottle Buildings

In Guatemala, the ARCAS Wildlife Rescue and Conservation Association has identified another way to develop a tourism product that directly mitigates a conservation threat. ARCAS has organized local residents and visiting volunteers to help collect 12 ounce plastic soda bottles littering the beaches of the Monterrico Nature Reserve & Hawaii National Park. Garbage is an intractable problem in the Hawaii area, and affects not only the health of local residents and ecosystems, but is also an eyesore for tourists.

Once collected, the bottles were stuffed with bits of discarded plastic until they were firmly packed, creating 2500 "ecobricks" that were then used to fill in the concrete walls of a new schoolhouse. This activity is unlike the plastic bag project described above in that it doesn't produce a tourism product that visitors can buy, but it does help generate tourism revenue by creating a unique and relevant conservation activity that will attract volunteers and visitors to the site. In addition, such "ecobricks" could also be used to build tourism infrastructure such as lodging, dining areas, and interpretive centers.

More information on plastic bottle buildings can be found at: www.hugiforward.com.

Artificial Reefs

Throughout tropical regions coral reefs are constantly under threat from varying sources, both natural and anthropogenic. Natural causes of reef damage can be drastic and far reaching and come from sources such as hurricanes and tsunamis which can result in huge die-off events, particularly to more fragile corals such as Staghorn varieties. Global warming and its resultant change in seawater temperature can cause coral bleaching, damaging reefs sometime to the point that they cannot recover. Man made threats include damage from sedimentation, eutrophication from agricultural runoff, introduction of invasive species, as well as over use for leisure pursuits such as SCUBA diving where the carrying capacity of the reef environment has been exceeded.

In areas where there has been a loss of coral habitat and subsequent loss of biodiversity, artificial reefs can serve to mitigate the environmental impact and encourage new coral growth. Areas containing fragile reef systems that are taxed by tourist use can benefit from this type of investment. Novice divers and underwater photographers have been shown to be two segments of recreational divers that can cause the most damage to reef ecosystems. Difficulty maintaining neutral buoyancy can result in damaging contact with corals, whereas underwater photographers wishing to “steady” their cameras directly contact the reef with hands, and often get too close, inadvertently causing damage with fins.

Marketing artificial reefs to these two segments can divert those divers from ecologically sensitive areas, thereby relieving the environmental pressure and mitigating further damage, allowing for reefs that are experiencing trouble to bounce back before the damage becomes irreversible.

Examples of such installments include Jason De Caires Taylor’s underwater sculpture installments in Grenada and Cancun⁸ that were constructed specifically to act as rehabilitative substrate for areas wiped out by hurricanes and to mitigate pressure on natural reefs from the tourism industry. Not only is this tactic effective in mitigating these types of stressors, but they also serve as cultural landmarks that can act to convey the message of environmental awareness, such as in the case of the Coral Goddess in Bali⁹.

Although there is debate over what materials are best for use in substrate construction, the added value of these structures to the tourism industry and local economies is overwhelmingly positive¹⁰. Within this strategy lies the potential for many forms of corporate and private sponsorships such as those exemplified by the Jose Cuervo Reef in Miami¹¹ and BioRock Bali’s “Sponsor a Baby Coral” campaign¹² in which the donor’s name can be incorporated into the artificial reef. There is also the opportunity for model diversification and expansion of tourism partnerships (such as those with glass bottom boat excursions, snorkel tours and dive shops).



Photo: Jason De Caires Taylor

Figure 31: Examples of artificial reefs from Grenada, the U.S. and Mexico

Annex Case Study: Weaving for Nature, AAMVECONA/WIDECAS

⁸ Jason De Caires Taylor. *Underwater Sculpture*. (2011) <<<http://www.underwatersculpture.com/>>>

⁹ BioRock Bali, 2011 <<<http://biorockbali.webs.com/coralgoddess.htm>>>

¹⁰ University of Florida, Taylor County Reef Research,. *The Economic Impact of Artificial Reefs*. (2011) <<http://taylor.ifas.ufl.edu/marine_artreef_economicimpact.shtml>>

¹¹ Miami Dade County Government, *Jose Cuervo Reef*. (2011) <<http://www.miamidade.gov/derm/buoy_jose.asp>>

¹² BioRock Bali, 2011 <<<http://biorockbali.webs.com/apps/webstore/products/show/819942>>>

SWOT Analysis of the Model
Increase Income Diversification

Strengths	Weaknesses
<ul style="list-style-type: none"> • Linking livelihoods to natural resources strengthens the desire of local communities to support conservation • If tourism can generate more income than resource extraction, a shift in economic behavior is likely. • Tourism is usually easier/more enjoyable than resource extraction • Many of the same skills and knowledge used for poaching helps with guiding and research • Sea turtle tourism income generation is not limited to tours, but also includes lodging, dining, transportation, arts & crafts, volunteer and home stay programs, and merchandise • Developing tour products that not only create jobs/revenue, but also reduce a direct threat to sea turtles (e.g. plastics bags turned into handbags instead of turtles thinking they are a jellyfish treat) • Social pressure from everyone benefitting from these jobs is a very powerful force in the small community 	<ul style="list-style-type: none"> • This strategy is limited to as many jobs tourism can create. If there are more extractors than tourism jobs this strategy won't work as effectively
Opportunities	Threats
<ul style="list-style-type: none"> • Targeting resource extractors with tourism jobs helps to enhance the effectiveness of this strategy • "Poacher to nature guide" is a very compelling story for visitors 	<ul style="list-style-type: none"> • Sea turtle guides can still be sea turtle poachers in their spare time. The income generated from alternatives has to be sufficient to cause a complete economic shift away from poaching, or the activity has to be lot easier/more enjoyable than poaching to make up any difference

TOURISM CONSERVATION MODEL & STRATEGIES

4. Increase Monitoring and Research

Increasing the monitoring and research presence of trained guides, visitors, and/or researchers in critical natural areas threatened by illegal resource extractive activities

Conservation Threats Addressed

Indirect Threats

- Lack of monitoring and research
- Lack of local participation in conservation

Direct Threats

- Extraction of natural resources (poaching)

Summary

Certain conservation threats, like deforestation, tend to be spread out over large geographic area, and present a challenge for protected area management due the broad scope of the impacted area. Sea turtle conservation on the other hand, at least the protection of hatchlings and nesting beaches, tends to rely on protecting smaller critical natural areas at certain times of the year. This focused need presents an opportunity for tourism to support sea turtle conservation through the **Increase Monitoring and Research** model that encourages the presence of guides, visitors, and researchers in those critical areas at those critical times.



Photo: The Sea Turtle Conservancy

Figure 32: Sea turtle night tour lead by a local naturalist guide

As stated earlier, sea turtle poachers tend to be motivated by necessity rather than by malice. They are not usually violent criminals. Poachers often come from the very same communities as the local residents that support researchers and guide tourists, though each uses the same beach for opposing benefits.

The relatively non-confrontational nature of turtle poachers creates the opportunity to eradicate their behavior through expanded monitoring and research activities. Because poachers largely avoid confrontations when possible, increasing the mere presence of community members and/or visitors through tours, monitoring, and research activities tends to cause poachers to abandon their illegal activities in the moment.

It should be noted that this strategy becomes exponentially less effective if simply monitoring illegal activity (i.e. poaching) on nesting beaches is not enough. When the actual *enforcement* of laws and regulations is required, park or police officials and not visitors or community members should handle the situation in the interest of safety, liability, and maintaining the community fabric.

Locally Driven Monitoring & Research: Grupo Tortuguero, MEXICO

Grupo Tortuguero was initiated in 1998 and is a growing grassroots network of fishermen and conservationists working to restore sea turtles in the eastern Pacific. The project began with sea turtle scientists and conservationists enlisting the help of local community members and fisherman to help collect sea turtle biomonitoring data. Over time, the fisherman began to take on more responsibility...coordinating and presenting the sea turtle data to the sea turtle conservation community. Today, the Grupo Tortuguero has expanded its monitoring activities to also include training and education programs, communications and community outreach, policy and government relations. www.grupotortuguero.org



Figure 33: Grupo Tortuguero, MEXICO

Tourism Conservation Strategies

Strategy 4.1 - Increase the Role of Local Residents in Monitoring and Research

From community beach patrols to naturalist guides to research assistants, many opportunities exist for the involvement of local community members in sea turtle monitoring and research. A number of local and regional NGOs actively train and employ local community members as guides and researchers, and have also helped entire communities establish their own community beach patrol programs.

Tourism profits can be utilized by local sea turtle tourism enterprises to help fund the operational costs of running community beach patrols which might include patroller salaries, equipment for monitoring and collecting data, and training costs.

Annex Case Study: Playa Chiriquí Sea Turtle Research Project, Sea Turtle Conservancy

Strategy 4.2 - Increase the Role of Visitors in Monitoring and Research

An exciting trend in sustainable tourism shows that that savvy ecotourists are increasingly seeking out travel experiences that are not only entertaining but also educational and experiential. This phenomenon is perhaps no better illustrated than through the phenomenon of sea turtle “voluntourism”.

Part of the “SAVE” travel segment (Scientific, Academic, Volunteer, and Educational travel), sea turtle voluntourism projects gives everyday visitors the opportunity to become involved in monitoring and researching sea turtles. Sea turtle voluntourism is another example of the growing trend in the nature-based tourism that blurs the line between conservation and tourism.



Figure 34: Products like sea turtle “voluntourism” help to blur the line between conservation and tourism

The success of voluntourism projects is dependent on the experience that visitors have during their trip. As with travel philanthropy, the long-term viability of this strategy depends on high-quality experiences between visitors and wildlife. Volunteers want to feel like they have been properly trained and provided the opportunity to directly contribute to the protection sea turtles.

Annex Case Study: San San Pond Sak Sea Turtle Monitoring Project, AAMVECONA

SWOT Analysis of the Model

Increase Monitoring & Research

Strengths	Weaknesses
<ul style="list-style-type: none"> Physical presence is an effective deterrent against illegal poaching activity Presents additional employment opportunity for extractors and/or enterprise/community members May support work of local/regional NGOs These activities may help attract grant funding 	<ul style="list-style-type: none"> May require significant training and technical support to implement
Opportunities	Threats
<ul style="list-style-type: none"> Much of the training for local naturalist guides would prepare them for this role Opens up mutually beneficial relationship between protected areas, NGOs, and communities 	<ul style="list-style-type: none"> Potential violence between extractors and enterprise/community members or visitors

TOURISM CONSERVATION MODEL & STRATEGIES

5. Increase Tourism-Generated Conservation Financing

Increase the financial support for conservation that tourism-generated profits, donations, and fees can provide

Conservation Threats Addressed

Indirect Threats	Direct Threats
<ul style="list-style-type: none">• Lack of conservation financing• Lack of monitoring and research• Lack of conservation awareness	<ul style="list-style-type: none">• Extraction of natural resources (poaching)• Tourism/visitor impacts

Summary

If there is one thing that nearly all protected areas, non-governmental organizations (NGOs), and community-based organizations share...it is the need for funding. Big or small, these local partners require a dependable stream of financial support to conduct their activities and realize their missions and objectives.

The **Increase Tourism-Generated Conservation Financing** model attempts to diversify the funding that protected areas, conservation NGOs, or community-based organizations receive to conduct their sea turtle conservation activities...and reduce their dependency on national or international funding agencies.



Figure 35: Gandoca research station, Costa Rica

Tourism Conservation Strategies

Strategy 5.1 - Utilize Sustainable Tourism Profits to Support Conservation Activities

The needs for funding within community-based sea turtle conservation projects are numerous, and may include:

- Monitoring & Research: researcher/patroller salaries, equipment, training
- Infrastructure: interpretive centers, beach signage, egg nurseries, volunteer lodging/dining facilities
- Voluntourism Programs: promotion, training, transportation

A community-based or private tourism enterprise might elect to dedicate a percentage of its year-end profits to support the costs of conservation, particularly if its business depends upon the protection of that place and no other (or very little) public sector funds or non-profit funds exist.

Some might argue that allocating year-end profits (particularly from a community-based tourism enterprise) for conservation is not a feasible strategy if it requires taking money away from community member salaries or profit sharing. On the contrary, the strategy being proposed here is focused on simply moving those profits into a fund that can then be utilized to pay additional salaries to community or staff members that are actively supporting conservation in activities such as beach patrols or environmental education programs.

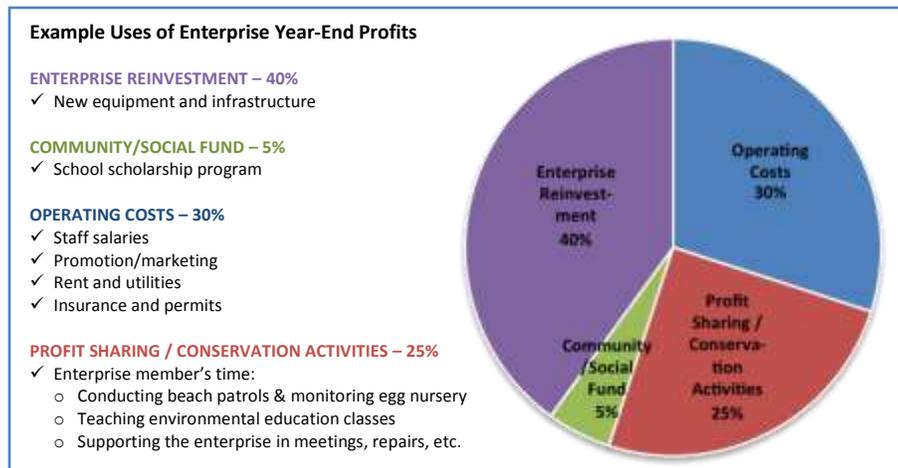


Figure 36: Example uses of tourism enterprise year-end profits

By reallocating a percentage of enterprise profits in this manner, the following is achieved:

1. Tourism profits still go into the pockets of community members, but in an equitable way that encourages and rewards their contributions to conservation
2. The tourism-financed conservation activities help to protect the natural resources and in turn improve the nature-based tourism product

Annex Case Study: "Discover Grenada Turtle Tours", Ocean Spirits/Rare - Grenada W.I.

Strategy 5.2 - Develop Travel Philanthropy Programs

Sustainable tourism is characterized by places and people that attempt to conserve the identity, authenticity, and resources of the destinations. The effective communication and interpretation of these conservation efforts as part of the travel experience can help to foster a desire in visitors to contribute to the efforts to protect that place.

The **Develop Travel Philanthropy Programs** strategy attempts to inspire visitors to financially support social or conservation activities in the places they visit and value, and to also provide those visitors a safe and reliable mechanism to do so.

The strategy works best in destinations where visitors have direct experiences with local communities and ecosystems because of the personal connection that can develop. Conservation threats, as well as efforts to mitigate those threats, should be described as specifically as possible. There should also be a clear custodian of the donations provided which is preferably a trusted community organization or NGO. Donations can be solicited as part of guides' interpretation, or through the sale of brochures, stickers, bracelets, or other merchandise.

Annex Case Study: The Turtle Spotters Program, Sea Turtle Conservancy



Figure 37: Travel philanthropy process

Strategy 5.3 – Develop Conservation-Themed Brands and Merchandise

Branding and merchandising can go a long way towards developing a recognizable symbol to represent the conservation philosophy of protected areas, NGOs, or private businesses. Local, regional and global brands, such as the WWF with its highly recognizable panda logo, distinguishes an organization from competing brands, conveys conservation ideals and can help to increase partnerships that can be vital for increasing conservation funding.



Creating a brand that can easily be recognized and distinguished from competing brands increases trust and brand loyalty. A well-designed logo should be relatively simple and appeal to the full spectrum of customer demographics. Text should be large enough to read at a distance and fine detail should be omitted as it may cause problems when it comes to imprinting. There are many options when it comes to merchandising; t-shirts, caps, water bottles, canvas bags, coffee mugs and more. The addition of a web address keeps the lines of communication open and can encourage further conservation support.

Figure 38: WWF logo

Logos should be used on not only hangtags and merchandise, but should also be on websites, correspondences and publications. Each exposure is a chance to further disseminate your conservation goals and ideas, and to have potential supporters emotionally engage in what distinguishes your organization among others.

Branding should be an important part of any marketing strategy, particularly when it comes to merchandising. Creating a logo and name that is recognizable can encourage support and brand loyalty and well as act to further represent and circulate the message behind the brand, spreading those ideas to a wider audience. As such it is essential to create a logo that will at once convey a message and be simple enough to be recognized at a glance.

These types of branding opportunities can be extended to include many different types of products and services from crafts to tours to real estate. An example of the extent to which branding merchandise can go is the clever branding of the Sea Shepherd's logo on higher end items like surfboards, the sale of which brings in more revenue per purchase and is highly visible. Developing a brand and managing it to its full potential can provide new streams of conservation financing as well as the chance to proliferate the ideology behind the brand to further increase support for conservation efforts.^{13, 14}



Photo: Sea Shepherd Conservation Society

Figure 39: Examples of conservation-themed merchandise

Recently the Sea Turtle Conservancy partnered up with Little Tikes toymaker to celebrate the 33rd anniversary of their Turtle Sandbox¹⁵. A percentage of the proceeds from the sale of co-branded merchandise will be donated to support conservation efforts. In this example the recognizable branding of one product is aiding in the visibility and range of the conservation brand. Social networking sites can be used in conjunction with these campaigns in order to share information about conservation, raise funds through donations and develop brand esteem.

¹³ Sea Shepherd. *7S Sea Shepherd Super Fish Surfboard*. (2011) <<<http://shop.seashepherd.org/store/p/291-7S-Sea-Shepherd-Super-Fish-Surfboard.aspx>>>

¹⁴ Little Tikes Company. *Save the Sea Turtles*. (2011) <<<http://youtu.be/rQ53Zx8uBqM>>>

¹⁵ Sea Turtle Conservancy. *Little Tikes Joins Forces with the Sea Turtle Conservancy to Raise Awareness about Worldwide Threats to Sea Turtles*. (2011) <<http://www.conserveturtles.org/pressreleases.php?page=n_stc_littletikes>>

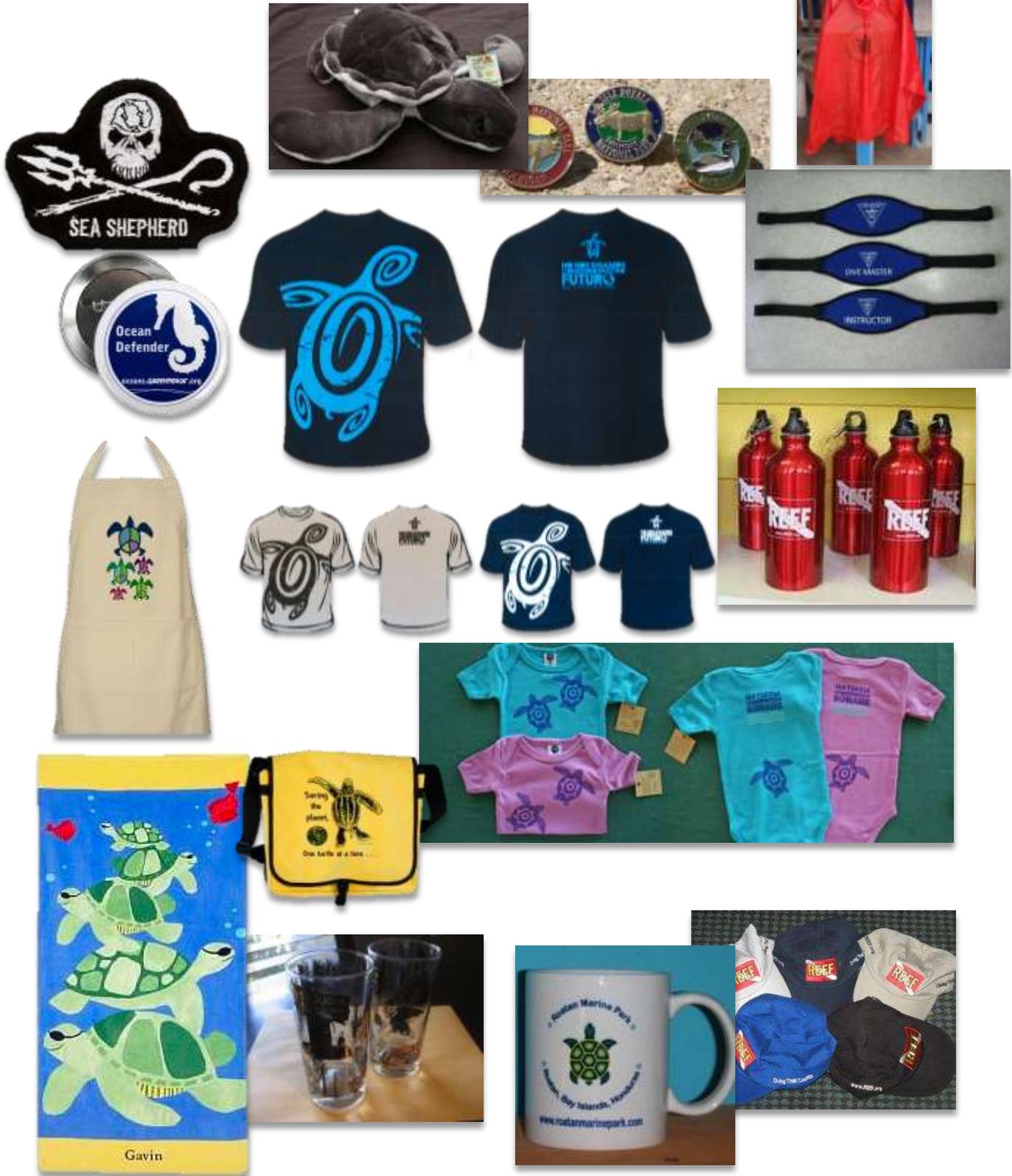
Local initiatives can involve craft co-ops that produce locally made goods, such as the Weaving for Nature project by WIDECAST.¹⁶ In the Weaving for Nature project, bags woven from recycled plastic bags are marked with project specific hangtags that elaborate on project details and website or contact information. These items can be considered to have added value because the branding is not only selling the item, but the community conservation project and its ideology. Social networking sites can be used in conjunction with these campaigns in order to share information about conservation, raise funds through donations and develop brand esteem. Hangtags can do double duty as stickers to further promote the brand and conservation support.



Figure 40: Examples of WIDECAST's conservation-themed brands and "hang tags" for merchandise

¹⁶ WIDECAST. *Socioeconomic Programs – Crochet Bags: Weaving for Nature*. (2011) <<http://www.latinamericaseaturtles.org/socioeconomics_programs_cr.php>>

Examples of Sea Turtle and Conservation-Themed Merchandise



Strategy 5.4 – Promote Mandatory or Voluntary Protected Area Entrance/User Fees

Protected areas are vital in conserving regions rich in natural capital so that they may exist for generations to come. But without the budget to manage these areas properly, they are rarely more than paper parks, conserving in name only but not in practice. In order to fund the management of protected areas, park fees are routinely used to generate income to finance the venture. These fees can be mandatory or voluntary and administered in a multitude of ways. Fees can be per use or per year, or can be based on the activities partaken in the park. Several marine parks institute reef restoration fees to finance coral reef conservation efforts. These fees could just as easily be structured as sea turtle conservation fees.

Fee structures have been used to great success at several marine parks in Central America and the Caribbean; including Roatan Marine Park in Honduras and Hol Chan Marine Reserve in Belize. One of the best documented is the Bonaire Marine Park. As proof of payment users are given a fee tag or bracelet that is to be displayed while in the park. For divers the tag is most often attached to the buoyancy control device. These tags are often viewed as souvenirs and collected by visitors. This model has been so successful it has been replicated as far as the Bunaken National Marine Park in Indonesia, and subsequently at Raja Ampat, West Papua. In order for this type of fee structure to be successfully administered stakeholders and associated businesses such as dive shops and tour operators, must be involved in the planning and implementation of the fee structure.

Few marine parks and protected areas administer park user fees even though the monetary contribution from these fees have been shown to generate enough income to support much of the budget requirements of park management and conservation programs. Although it might be feared that visitors would not want to pay for use, giving them something tangible in return for their fees, whether mandatory or voluntary, would encourage participation and increase satisfaction.

User fee tags and bracelets not only serve to provide proof of payment, which can be displayed while in the park to make payment verification easier, but can also serve as souvenir tokens. This is a tactic used by the Bonaire Marine Park that charges an admission fee of US\$25 for divers and US\$10 for non-divers¹⁷. Return visitors proudly display previous year's fee tags as trophies on their SCUBA equipment. Bracelets can continue to be worn by visitors after their return home, providing free extended PR to the park.^{18, 19, 20}

Giving users something in return for their fees can increase users willingness to pay, as they feel they are receiving something of value in



Figure 41: Examples of marine protected area user fee systems

¹⁷ STINAPA. *Bonaire National Parks Foundation, Admission*. (2011) <<<http://www.bmp.org/admission.html>>>

¹⁸ Scubadiving.com. *Scenes From the 8th Annual Bonaire Dive Festival*. (2011) <<<http://www.scubadiving.com/travel/caribbean-atlantic/scenes-8th-annual-bonaire-dive-festival>>>

¹⁹ Tourism Bonaire. *Nature Tag & Guidelines*. (2011)

<<http://old.tourismbonaire.com/nl/duiken/marine_park/nature_tag_richtlijnen/>>

²⁰ FoodGypsy.com, *Roatan, Honduras – Island Cooking*. (2010) <<<http://www.foodgypsy.ca/wp-content/uploads/2010/10/Roatan-Island-Cruise-Wreck-124a.jpg>>>

return for their contribution. Packaging tags, flyers, maps and other materials in economical and ecologically sound reusable cloth bags, such as those distributed by the Roatan Marine Park under their “Bags for Life” campaign²¹ can propagate conservation goals by discouraging the use of plastic bags. Park rules and regulations can be readily available by providing them in booklets along with bird watching lists, activity booklets and souvenir dive log booklets. When individuals are using the protected area, vital conservation information is close at hand.

SWOT Analysis of the Model

Increase Tourism-Generated Conservation Financing

Strengths	Weaknesses
<ul style="list-style-type: none"> • Tourism-generated revenue can be used for anything • Financial support often needed by local NGOs • When business starts to support conservation and community development, the community as a whole gets behind it (not just the direct beneficiaries) • Enables high-impact engagement of visitors through low-commitment actions • Uncommitted financing is flexible and more easily adapted to changing conditions than donor project funding • Comparatively consistent flow of income can help to pay for reoccurring costs • Donations are not subject to fiscal year cycles of donor agencies and untied to sometimes overly specific activities 	<ul style="list-style-type: none"> • Tourism businesses may have limited profit, esp. early on • Tourism revenue will need to be combined with other conservation financing (e.g. grants) • “Social” funds usually aren’t in place by the first year...there is a potential need for seed money to set up a revolving social fund • Could come to replace genuine interaction and engagement for some visitors • Generally smaller quantities of donations makes financing larger scale projects difficult • Reliant on making a pitch to visitors, and high turnover rate of guides and employees can make travel philanthropy programs subject to occasional disruptions
Opportunities	Threats
<ul style="list-style-type: none"> • \$ used to pay conservation labor can increase local employment and target stakeholders who may not be working in tourism • \$ used to pay for awareness building campaigns can target youth (while the tourism biz targets adults) • Lack of financing is a commonly cited issue facing communities and conservation NGOs 	<ul style="list-style-type: none"> • Tourism is seasonal, and may not provide consistent funding for conservation • If these funds go directly to the community/enterprise (rather than to an NGO) then they need to be trained in how to use them • Perceived trustworthiness of receiving organization is a factor

²¹ Roatan Marine Park. *Bags for Life* (2011) <<<http://www.roatanmarinepark.com/education/bags-for-life/>>>

TOURISM CONSERVATION MODEL & STRATEGIES

6. Increase Conservation Partnerships

Facilitating collaboration between protected areas, NGOs, the private sector, and/or community partners to strengthen biodiversity conservation efforts

Conservation Threats Addressed

Indirect Threats	Direct Threats
<ul style="list-style-type: none">• Lack of local participation in conservation• Lack of monitoring and research• Lack of conservation awareness• Lack of conservation financing	<ul style="list-style-type: none">• Extraction of natural resources (poaching)• Tourism/visitor impacts

Summary

As stated in the beginning of this document, In developing countries around the world, the history between protected areas and the communities that live near or within them has traditionally been one of conflict.

- **Managers of protected areas** often view communities as a nuisance. Communities cut down forests, hunt illegally, fish and farm unsustainably, and are generally seen as a group that needs policing.
- **Communities living in protected areas** often view its managers as those who make and enforce rules that impede the ability of families to survive. This is particularly troublesome with indigenous communities whose ancestral homelands have been converted into government-controlled lands.



Photo: Rare

Figure 42: Community and protected area partners at a tourism planning workshop in the Rio Plátano Biosphere Reserve, La Moskitia, HONDURAS

These conflicts arise when communities rely too heavily on their lands for resource extractive economic activities like the ones listed above. However, when a community adopts sustainable tourism as a part of a diversified economy, some of these conflicts can be transformed into aligned interests.

Tourism Conservation Strategies

Strategy 6.1 - Developing Partnerships Between Protected Areas, NGOs, and Universities

“Scientific” tourism (a part of the “SAVE” tourism market), or the segment of tourism in which university students or other groups actively engage in research activities while visiting a site, is an example how sustainable tourism can result in multiple benefits for protected areas and their conservation efforts.

First, such groups pay for related lodging, food, transportation, and tour services (often directly to protected areas themselves) that generates direct revenue to support the costs of operating that protected area.

Second, the research that scientific tourism groups produce enables protected area managers to better understand their sites that leads to more effective management plans and conservation strategies.

This strategy is best implemented by larger, well-established NGOs with strong research and advocacy arms. The strategy may require structuring academic credit for research, obtaining research permits, providing adequate research laboratory facilities, and the time embodied in structured agreements and alliances. These issues may require the coordinating NGO in site to be relatively well-funded and established in order to avoid risking the loss of control of the project to better-connected academics or overly complicated permitting processes.

The following figure outlines the traditional roles and responsibilities of each stakeholder involved in this kind of collaboration:

Scientific NGOs	Protected Areas	Communities	International Volunteers
<ul style="list-style-type: none"> • Coordinate science & research programs • Proposal development & writing • Legal agreements with governments for research permits • Scientific reputation & credibility • Marketing, sales and tourism technical assistance (when other help doesn't exist) • Scientific reputation & credibility 	<ul style="list-style-type: none"> • Development of a management plan • Enforcement • Link between NGO & communities 	<ul style="list-style-type: none"> • <u>Providers of tourism products & services:</u> food, guides, lodging, transportation • <u>Research roles:</u> biometric measuring, nesting data/ marking, fence construction, nest checks, night patrols, nursery monitoring 	<ul style="list-style-type: none"> • Financial support as paying customers, donations, donated equipment, etc. • Monitoring and research assistance • Word of mouth promotion

Figure 43: Stakeholder roles and responsibilities when managing “SAVE” tourism

Annex Case Study: Scientific Tourism Program, Honduras Coral Reef Fund – Cayos Cochinos, Honduras

Strategy 6.2 - Developing Partnerships Between Protected Areas and Communities

Successful sustainable tourism requires commitments and contributions from both communities as well as protected area managers to succeed. The upshot is that these commitments are often mutually beneficial.

Protected Area Involvement:

At the very least, protected areas seek support from communities in their reduction or elimination of destructive economic activities such as illegal logging or overfishing. By introducing sustainable tourism, a financial incentive is created that encourages communities to go beyond just mitigating their impacts to becoming active supporters of protected area conservation.

Protected areas can in turn provide exclusive opportunities (for example, through concession agreements) that provide communities competitive advantages to operate and benefit from tourism. Protected areas can also help train local naturalist guides to help supporting park-monitoring efforts, and can help protect ancestral land rights through enforcement and political support.

Community Involvement:

For communities to benefit from sustainable tourism, they seek support from protected areas in the form of policies or management plans that encourage and foster community tourism enterprise development. For example, a park rule that requires visitors to be accompanied by a certified local guide. Communities may also benefit from protected areas that support the training of those guides, by their promotion of community enterprises in visitor’s centers and on park websites, or through some other type of financial or technical assistance.

In exchange, community tourism enterprises (and their clients) should directly support protected area management plans and conservation strategies through one of the many community-based conservation activities presented in this document.



Figure 44: The synergy and collaboration that sustainable tourism can produce between protected areas and communities

Annex Case Study: Verde Camacho Protected Area, RED Sustainable Tourism Project

SWOT Analysis of the Model

Increase Conservation Partnerships

Strengths	Weaknesses
<ul style="list-style-type: none"> Concession and co-management agreements have strong potential to create “win-win” partnerships. Communities receive rights to conduct tourism activities, NGOs and protected areas create tangible benefits for locals, and both agree to work towards shared conservation objectives 	<ul style="list-style-type: none"> Concessions and co-management agreements are politically and legally complex, time-consuming, and require forward thinking partners, particularly government representatives Inexperienced communities lack the ability to manage complex conservation activities and PA management plans Government support is almost always needed to manage the resource effectively
Opportunities	Threats
<ul style="list-style-type: none"> Exclusive rights to conduct tourism activities in areas of high biodiversity provide communities a highly competitive business advantage Communities may be the only viable managers of isolated and under-funded protected areas Successful community-based tourism and conservation can provide economic and political justification for increased levels of protection to natural areas 	<ul style="list-style-type: none"> Years of political wrangling that goes nowhere

SEA TURTLE TOURISM CONSERVATION MODELS

CASE STUDIES

Case Study

Strategy 1.1 – Promote Sustainable Tourism “Codes of Conduct” with Visitors

Conservation Awareness Signage, MAREA Program, Bocas del Toro, PANAMA

Summary

Bocas del Toro is an archipelago on the Caribbean Coast of Panama close to its border with Costa Rica. The area’s economy is highly dependent on tourism and the principal tourist attractions in the area are its natural setting and healthy ecosystems including sea turtle nesting beaches on Isla Colon at Bluff Beach, on Isla Zapatillas, and on the beach at San San Pond Sak on the mainland near Changuinola. Tourism, especially sustainable tourism, is a non-extractive industry that generally generates revenue through the enjoyment of the existence of biodiversity rather than through the extraction of natural resources, however, it does pose certain threats to ecosystems. Contaminants enter the waterways, forests may be cleared for development, and sensitive coral ecosystems are sometimes compromised by the very visitors that go to enjoy them. Nowhere is this clearer than in visitation to sea turtle nesting beaches where visitors pay to have experiences with sea turtles at perhaps the second most vulnerable part of their life cycle, behind their harrowing first journey from nest to sea.

To mitigate some of these visitor impacts the MAREA Program has developed a series of awareness campaigns aimed at informing visitors on how to minimize their impact on sensitive ecosystems and wildlife during their visit.

Their purpose is to reach as many of the approximately 100,000 annual visitors to the region as possible and enlist more local residents to actively participate in supporting conservation. Materials have been designed and will be placed in strategic points for maximum visibility, also, enlisting the support of local businesses, government agencies, and local NGOs has been instrumental in ensuring the success of the campaigns. One of these campaigns deals specifically with the visitation of sea turtle nesting beaches. This campaign informs visitors to beaches throughout Bocas del Toro where sea turtles nest on how to ensure their visitation doesn’t negatively



Figure 45: Sea Turtle Visitation Signage on a critical nesting beach

impact the turtles. This campaign focuses on high-impact signage that not only provides visitor codes of conduct to visitors specifically seeking experiences with turtles, but also the daytime beachgoers who may also inadvertently disturb nests or in some other way threaten the turtles.

Stakeholders: Roles & Responsibilities

MAREA Program: Design, production, and placement of campaign materials. Forming relationships and alliances with other organizations and governmental institutions.

Bocas Sustainable Tourism Alliance: Support in development of designs, and guidance on types of campaigns. The BSTA also support the creation of linkages with other organizations and enlisting their support.

Autoridad de Turismo de Panama: The ATP has supported the campaigns by endorsing materials and the local ATP office has been an essential partner in enlisting the support of water taxi associations.

Autoridad Nacional de Ambiente: ANAM has supported the campaigns by endorsing materials and providing necessary permissions to place signage within protected areas.

Municipio de Bocas del Toro: The local municipal government has been very supportive of the campaigns in the endorsement of materials and in providing permission to place signage at municipal reserves.

Water taxi associations: These 'botero' unions have been very supportive of the campaigns, understanding the need for conservation of the natural settings from which they draw their livelihoods. They have agreed to place signage in their boats and to orient tourists/passengers to view best practices materials.

Process

1. Research campaigns and best practices
2. Develop regulation or codes of conduct where necessary
3. Design materials
4. Enlist local support for initiatives
5. Obtain needed permissions and endorsements from government agencies
6. Place signage at strategic locations
7. Resupply materials as needed

Lessons Learned

- It's good to have friends: None of these accomplishments would be possible without strategic partners among government agencies, scientific organizations, and community groups.
- Laws are good, but don't forget the science: It is good to support and promote existing legal frameworks when possible, but if there are other elements that should be added, rely on good science and ensure that campaign materials are really promoting best practices.

Case Study

Strategy 1.3 – Promote Sustainable Tourism Guidelines within Protected Areas

Cayos Cochinos Management Plan, Honduras Coral Reef Fund – Cayos Cochinos,

HONDURAS

Summary

Cayos Cochinos is an archipelago situated about 40 km northeast of La Ceiba in Honduras. The archipelago consists of two larger rocky islands and 13 coral cays in addition to numerous submarine habitats. Created in 1993 with support from the Smithsonian Tropical Research Institute, the Natural Marine Monument Cayos Cochinos (MNMCC by its Spanish acronym) covers about 485 km² and includes all of the islands and a buffer zone of 5 nautical miles around the islands. It is administered by the Honduras Coral Reef Fund, a group formed through a partnership between Operation Wallacea and the NGO AVINA to lobby for the creation of the park. The MNMCC is home to an incredible biodiversity that includes coral, sea grass beds, and mangrove ecosystems and falls inside the Mesoamerican Reef. Living in the MNMCC are 226 reported species of reef fish, 85 reported species of bivalves, 106 species of gastropods, 45 species of decapods, bottlenose dolphins, and green and hawksbill sea turtles. Only hawksbills are known to nest within the archipelago at 19 reported nesting beaches fairly evenly distributed among the islands and cays. This archipelago represents an incredible natural richness for Honduras and as more activities are developed it has become increasingly necessary to have regulations and plans in place to address different eventualities.

There are no exact figures but tourism has existed in one form or another in Cayos Cochinos for somewhere between 8-30 years. In its present form, tourism in Cayos Cochinos runs the gamut from backpackers who arrive in local boats with fishermen, long-term volunteers and students doing research and supporting conservation, to luxury clients seeking sun and sand vacations. The one common thread tying these diverse market segments together is that tourism to the Cayos is very focused on experiential travelers seeking interactions with nature first and secondarily with local communities. In order to strengthen this propensity among visitors and to prevent visitation from negatively impacting the incredible natural richness of the MNMCC, Honduras Coral Reef Fund (HCRF) with support from the Nature Conservancy developed an updated management plan including specific zoning and a subprogram to control and monitor the impacts of tourism on the archipelago. This management plan also includes regulation of reality show tapings that not only present a serious risk for natural ecosystems but also an opportunity for increased exposure to overseas markets and a source of financing for conservation and ecosystem protection. As seen in Bocas del Toro, Panama, the taping of reality shows can be very harmful to sensitive ecosystem, but with the proper partnerships and regulations the HCRF has managed to control the tapings in a way that minimizes impact to local ecosystems while providing around 50% - 70% of their operating budget and a source of free publicity attracting tourists to the area.

Stakeholders: Roles & Responsibilities

Honduras Coral Reef Fund (HCRF): The HCRF is primarily responsible for liaising and coordinating between involved parties and the co-management of the MNMCC and publication of the management plan. The HCRF also controls tapings of reality shows on the islands to minimize environmental impacts, and maintains the research station where visiting scientists and students come each year to study the ecology of Cayos Cochinos.

International Conservation NGOs: NGOs such as WWF and The Nature Conservancy provide technical support to supply needed scientific background to the HCRF, and they also support the creation of the management plan. Organizations such as Fundación AVINA, WCS, MARVIVA and the World Bank have also supported the HCRF and the conservation of the MNMCC

National Government: The MNMCC was created through a presidential decree in 1993. National administrative bodies are actively involved in the enforcement of regulations and in creation of the management plan. These

agencies include the tourism institute, IHT; the environmental ministry, SERNA; a forestry agency, AFE-COHDEFOR; and the fisheries department, DIGEPESCA.

The Honduran Navy: The Honduran Navy was tasked as part of the original presidential decree to patrol the archipelago and enforce regulations. This important collaboration is critical as the naval forces not only ensure a well funded and capable patrolling presence it also essentially eliminates the presence of drug trafficking boats that are ubiquitous in other sparsely inhabited spaces along the Caribbean coast of Central America including the Moskitia Region of Honduras and Nicaragua.

Community Organizations: The community groups in the area of influence are involved in giving feedback for the management plan and in helping to protect the MNMCC by following established regulations. One example of this type of collaboration is the relationship that exists between HCRF and the Organización Fraternal Negra Hondureña Pueblo Garifuna (OFRANEH).

Process

8. Identify important natural spaces in need of protection
9. Form a coalition of civil society groups
10. Lobby the government for protected status
11. Declaration of protected status
12. Research and learn about local ecology
13. Develop a management plan based on solid scientific research
14. Enlist government authorities to enforce regulations laid out in the management plan
15. Update and renew the management plan as activities and scientific understanding evolves

Lessons Learned

- It's good to have friends: None of these accomplishments would be possible without strategic partners among government agencies, scientific organizations, and community groups.
- Embrace science: The management plan and its regulations are only as good as the science that informs their creation. It is important to partner with researchers, the better the understanding of the area's ecosystems, the better its protection can be.
- Too many hands can be bad: One organization, the HCRF is primarily responsible for administering the protected area, including scientific tourism products. This makes it much easier to ensure that rules and regulations are being adhered to. In the case of more developed destinations this luxury may not exist and you will have to cobble together an alliance of different interest groups to have a council or group that can take the role that HCRF plays in MNMCC.

Case Study

Strategy 2.2 – Increase Awareness and Conservation Support of Local Residents

Grupo Ecotortugeros, RED Sustainable Tourism Project - Magdalena Bay, Baja California Sur, MEXICO

Summary

Grupo Ecotortugeros de Puerto San Carlos (GET) is a startup ecotourism cooperative operating in Magdalena Bay, on the Pacific Coast of Baja California Sur, Mexico. The coop was launched as part of the RED Sustainable Tourism Project in an effort to create alternative incomes linked directly to conservation - specifically sea turtle research and conservation. The launch of the cooperative is a collaboration between RED (RED), Vigilantes de Bahía Magdalena (VBM), the Grupo Tortuguero de las Californias (GTC), and members of the local fisher community.

Magdalena Bay represents one of the most important wetland ecosystems on the west coast of North America. Its waters provide protection to calving gray whales, migratory and marine birds, numerous species of marine mammals, and important feeding grounds to endangered black sea turtles. Additionally, Magdalena Bay is one of the most productive fisheries in Mexico.

Unfortunately all of these resources are threatened by overfishing, poaching, by catch, and poorly regulated coastal development. Lax fisheries regulation and enforcement, together with rapid demographic growth resulting from migration from states throughout Mexico, have fomented a tragedy of the commons, with little regard for the natural resources that sustain the communities of the Bay. Sea turtles, principally endangered black turtles, suffer both from by catch in nets and long lines, as well as from active poaching for consumption and sale on the black market. While sea turtle research and conservation projects have taken hold in the zone, and education efforts have been effective in reaching youth, the majority of the adult population has remained a challenging target group. It is this group's daily decisions which may include participation in poaching, or including sea turtle in the family diet, that have the greatest impact on sea turtle populations.

In late 2009, the RED project, together with GTC and VBM, worked with local community members to launch GET, in an effort to generate sustainable employment opportunities, as a complement to fishing, and an alternative to illegal poaching. Using the GTC turtle monitoring as the core product offering, the project has generated part time employment to 13 individuals in various facets as part of the ecotourism cooperative.

Members of the coop all participate in the monitoring activity, whether as captains or deckhands, or collecting data when turtles are brought ashore. This hands-on interaction with the turtles as a species to be protected rather than harvested, combined with the positive feedback provided by the travelers on the trips as well as researchers, fosters pride and has helped to open the eyes and change attitudes of individuals involved in the program.

Members of the cooperative who were previously involved in sea turtle poaching, or even as cooks who prepared sea turtle dishes, are now among the most staunch advocates for the species' preservation, and have become stewards in their community for natural resource conservation. Attitudes of coop members towards conservation have expanded and evolved from sea turtle conservation to include support for mangrove and dune preservation, active participation in meetings to declare the Bay as a Natural Protected Area, and even signing on to legal demands for public hearings regarding proposed developments.

Members of GET also seek to have a broader impact in their own community. Coop members are taking what they've learned about cooperative management to the notoriously dysfunctional *fishing* cooperatives in Magdalena Bay, focusing on aspects of transparency, equality and sustainability as core tenets of cooperative philosophy. Better cooperative management holds the promise of reducing pressures on fisheries resources through increased awareness and incentives to view fisheries as a *shared* resource. In order to reach the youth

population, the GET cooperative will also use funds raised this season through trips sales to finance the participation of local youth in an academic field program focused on mangroves, sea turtles and sustainable fisheries.

Stakeholders: Roles & Responsibilities

RED Sustainable Tourism: RED leads training, business and strategy planning, as well as sales and marketing for the project in Magdalena Bay.

Grupo Ecotortuguero: GET participates in all project meetings and design of strategy towards the successful launch of the conservation-focused tourism cooperative.

Vigilantes de Bahía Magdalena: As the local conservation organization in Magdalena Bay, VBM acts as the community liaison and provides logistical support to the operation of trips. As the local representative of GTC, VBM performs the turtle monitoring activity which serves as the basis of the tourism products offered by GET.

Grupo Tortuguero de las Californias: GTC assists with the permitting process for data collection and economic use of a protected species. GTC also provides logistical and technical support to the project.

Process

1. Product, Market, and Community Assessment: Assess potential for demand-driven products that take advantage of local abilities, resources, and knowledge in national and international markets. Assess community willingness to implement project.
2. Business and Conservation Planning: Co-write business plan with community. Co-develop conservation strategies (5% for conservation and community fund, trip revenue finances sea turtle monitoring).
3. Self-analysis and ongoing discussion of community members' economic realities
4. Design of internal rules (GET) to support and strengthen sustainability criteria (participation in local conservation efforts including beach cleanups and festivals) and sanctions against prohibited activities (sea turtle consumption or poaching).
5. Training: Business operations, Guiding, and Tourism Services
6. Soft launch of product to test products in market, and reinforce community buy-in
7. Ongoing training
8. Implement sales and marketing strategies
9. Operate tours
10. Implement Conservation and Community Development strategies

Lessons Learned

- Participatory research: Incorporating participatory research in the tours, where local citizens are trained to perform field research and data collection has been an effective method of 'opening eyes' of local coop participants. Coupled with the positive feedback of travelers it serves to generate pride and foster a sense of stewardship of natural resources.
- Involving youth: The above lesson is compounded when cooperative members' children are invited to interact with traveler's children. The same is achieved by operating trips at cost for schools and educational institutions.
- Experiential exchange: Promoting exchanges with other community businesses and cooperatives through meetings, trainings, or on trips, produces a positive exchange of knowledge and experiences, as well as genuine camaraderie. It also serves to set the bar in terms of standards of operation and ecological responsibility, and generates healthy competition and a sense of regional perspective.
- Client orientation: Making travelers aware that they are part of the project promotes communication between travelers and coop members, and reinforces the sense of pride of stewardship of natural resources discussed above.

Case Study

Strategy 2.3 – Link Benefits of Sustainable Tourism to the Community as a Whole

Vizcaíno Biosphere Reserve, MEXICO

Summary

The community of Punta Abreojos resides within the Vizcaíno Biosphere Reserve, a CONANP (Natural Protected Areas Commission) administered protected area in the state of Baja California Sur, Mexico. Located near the center of the Baja California peninsula, Abreojos is relatively isolated, which has helped preserve the natural surroundings, and provide a buffer from the intense development pressures felt throughout the rest of the state. Since its founding in 1938, the town has sustained itself from the abundant fisheries resources of the zone, boasting a successful oyster cultivation program and an MSC certified lobster fishery. The local fishing cooperative, recognized internationally as a model for sustainability, has grown to be more than the chief economic driver in the town, but also a provider of infrastructure and social services in this remote outpost.

Yet even the town's isolation cannot protect Punta Abreojos from the internal and external pressures of growth and development. Forced to balance the need to provide economic opportunities to younger generations with maintaining sustainable limits on fisheries resources, the cooperative has struggled to create jobs and preserve its natural resources. In recent years the coop has fought outside efforts to build a cruise terminal and a salt production facility. More recently, rights to use of the *Estero Coyote* – the pristine estuarine habitat just outside of town, have been placed on the open market, with a number of outside buyers expressing interest in developing the area. The community of Abreojos has responded by proactively purchasing the usage rights of the estuary, in a move to 1) guarantee the survival of this unspoiled habitat for future generations; 2) protect an important nursery area for commercially fished species; and 3) invest in sustainable tourism as an economic alternative.

The cooperative joined with the Center for Marine Biodiversity Conservation – Gulf of California (CMBC-GC) to research the economic value of the *Estero Coyote's* natural resources, and with RED Sustainable Tourism to develop a business plan for sustainable tourism development of the zone that would provide long-term benefits to the entire community of Punta Abreojos. A plan for investment in the area was accepted by the community based on the tenets of 1) sustainable job development through tourism; 2) use of the area for educational programs for local youth; and 3) protection of habitat and species within the estuary including mangroves, sea turtles, fish and other marine life, and migratory and marine birds.

Stakeholders: Roles & Responsibilities

Cooperativa de Punta Abreojos: The Cooperative has been the driver of the process, providing the long-term vision and funding for the sustainable use of the *Estero Coyote*, and seeking out the technical resources necessary.

CMBC-GC: This group of researchers has linked science with economic valuation to present a compelling model for linking species and habitat preservation with economic well-being.

RED Sustainable Tourism: RED is working with the community and with CMBC-GC, providing market analysis, business planning, and tourism operations training.

Process

11. Community outreach: constant process of keeping the larger community informed of the issues and process, making them stakeholders in any decisions made.
12. Scientific Assessment: performing specific analysis to quantify economic and conservation value of commercially fished species, as well as conservation value of mangroves and surrounding habitat.
13. Product and Market Assessment: design demand-driven products that take advantage of local abilities, resources, and knowledge.

14. Identification of Conservation and Community Development strategies: support of sea turtle monitoring program; development of environmental education program for local youth; economic opportunities for youth and women.
15. Begin training in: Business operations, Guiding, and Tourism Services
16. Implement sales and marketing strategies
17. Operate tours
18. Implement Conservation and Community Development strategies

Lessons Learned

- Community buy-in: The effort from the start of the cooperative and CMBC-GC to maintain the community informed, paved the way for a constructive process with investment of stakeholders.
- Linking science and economic development: The value of the estuary as protected habitat for commercial fisheries played a crucial component towards constructing the case for obtaining the usage rights of the estuary. Sustainable tourism development provided the added 'plus' for youth, women, and elements of the community not directly involved in fisheries.

Case Study

Strategy 3.1 - Target Resource Extractors with Sustainable Tourism Employment

Sea Turtle Research Project, WIDECAST – Gandoca, COSTA RICA

Summary

Gandoca Beach in Costa Rica is the site of a sea turtle conservation program that began in 1984 under the guidance of ANAI and is now administered by WIDECAST and a community organization in partnership with the Costa Rican Ministry of the Environment, Energy, and Telecommunications (MINAET). Before work began to conserve sea turtles and their nests it was estimated that close to 100% of nests were poached and adult females were killed and sold on the black market. With the dedicated work of turtle biologists and local community members the Gandoca-Manzanillo Wildlife Refuge was established in 1985 to protect the endangered animals. In just 5 years it was estimated that up to 90% of nests were protected and this was due in large part to the strategy of enlisting not only local community members, but also specifically former poachers. This practice is exemplified in the case of Eric Alguera who was a former poacher making a living by digging up sea turtle nests to harvest the eggs. He also consumed turtle eggs and meat, but for the past 10 years he has been dedicated to conserving the same animals he once exploited. Not only does Eric Alguera help to manage groups of volunteers and guide visitors, but he also helps to train others, he has traveled to Pacuare, Ostional, Parismina and Moín in Costa Rica, and even to Mexico to train other local residents. This strategy does not stop at reaching one person but has the potential to have a multiplying effect, as conservation becomes a family value with other relatives and even multiple generations of the Alguera family helping to protect and conserve turtles.

Stakeholders: Roles & Responsibilities

WIDECAST: Providing the opportunity for former egg-poachers to become involved in conservation.

Poachers willing to change: All of this is also predicated on finding local allies and poachers who are willing to change and embrace conservation. The process can be aided by not just enlisting the support of poachers but in providing them with alternative livelihoods

Process

1. Establish a conservation project with credibility among local communities
2. Identify opportunities for participation of local residents
3. Identify resource extractors
4. Enlist the support of extractors with specific tasks
5. Empower them with increasing responsibility

Lessons Learned

- Poachers and resource extractors should not be excluded from conservation. In fact, including poachers strengthens conservation by removing a conservation threat and adding in their place an ally for conservation.
- Empower poachers: By giving poachers increasing responsibilities such as trainings, and an opportunity to tell their story, the lessons learned by the poachers can be shared and spread to a wider audience.
- Provide alternative livelihoods: Poachers are often illegally extracting resources not out of malice but out of necessity. It will be essential to provide alternative livelihoods to these resource extractors to facilitate their shift away from poaching. For example, the same skills and knowledge that help poachers succeed can also be helpful in tracking and finding turtles while guiding or supporting researchers.

Case Study

Strategy 3.2 – Develop Sustainable Tourism Products that Directly Mitigate Conservation Threats

Weaving for Nature, WIDECAS/AAMVECONA – COSTA RICA/PANAMA

Summary

“Weaving for Nature” is a program started by WIDECAS, a regional conservation NGO specializing in sea turtle conservation and economic alternatives, and its regional partner AAMVECONA in several communities in Costa Rica as well as the San San Puento community in Changuinola, Panama. AAMVECONA is a local NGO currently working to conserve and protect biodiversity in the RAMSAR listed wetland, San San Pond Sak. AAMVECONA specializes in working with the sea turtles and manatees found in their site. The particular geography of the beach at San San Pond Sak makes it highly susceptible to solid waste contamination. Located at the mouth of the Sixaola River each sea turtle nesting season begins



Photo: AAMVECONA

Figure 47: Women weaving bags

Photo: AAMVECONA

with a highly labor-intensive process of cleaning up the fallen trees and trash that wash up on its shores after being flushed into the sea by the river. Among the many kinds of plastic and trash are thousands of plastic bags. These bags not only contaminate the area, but they also present a very direct threat to sea turtles, specifically leatherback sea turtles, as the leatherbacks mistake the bags floating in the water washing up on shore for their favorite meal, jellyfish. In order to combat this direct conservation threat, in 2006, WIDECAS and AAMVECONA sent women from the communities where they work to receive training in Colombia financed by Disney on how to weave the plastic shopping bags into purses and shoulder bags to sell to visitors. The average purse takes about 70 plastic bags to create and it has been estimated that the project has resulted in the removal of around 12,000 plastic bags from critical nesting habitats for sea turtles.

The project has been a success and with each bag retailing for US\$15-\$30 sales provide monthly incomes of US\$180 or more to dozens of women in Costa Rica and Panama, 25 women in San San Puento alone, as well financing for conservation activities. In fact, the project has so surpassed the Colombian project that initially trained them, offering three times as many products and higher sales as well as increased quality, that Disney has requested that the Weaving for Nature project send women to evaluate their project and support quality improvements. The theory behind the program was also so sound that WIDECAS has begun a sister project to use glass bottles – a ubiquitous sight



Photo: AAMVECONA

Figure 46: Beach bag woven from plastic bags

Photo: AAMVECONA

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Photo: WIDECAS Costa Rica

Figure 48: Glass beads made from beverage bottles

at many beaches in the region – to make glass beads for jewelry. This product is yet another example of how you can transform a direct conservation threat into a source of income for local communities and financing for sea turtle conservation. The primary weakness is that incomes produced are directly linked to the price of products sold, and this occurs in a market where consumer power outweighs producer power. Under these conditions it is challenging for producers to receive fair wages for their work, though not impossible. The key factor in producing triple bottom line benefits of profits, community development, and conservation will be to identify products with high sales value and relatively low labor requirements.

Stakeholders: Roles & Responsibilities

WIDECAST: WIDECAST arranged the initial trainings and supports sales of the bags to volunteers and visitors.

AAMVECONA: AAMVECONA sent local women to participate in the initial trainings and provides a point of sale to visitors and volunteers.

Disney: Provided initial trainings in Colombia to teach the women how to transform the plastic shopping bags into purses, beach bags, and other forms for sale.

Process

1. Identify direct conservation threats (solid waste) and indirect threats (low incomes of community members) for sea turtle conservation that can be addressed by this strategy.
2. Identify and engage local group that will produce the products or provide the services to be undertaken by the project.
3. Identify potential products that could be produced by local communities to reduce the threat to provide an alternative livelihood. The ideal product would use local knowledge and culture to avoid the costs associated with trainings and to make a more interesting product steeped in local traditions.
4. Develop the product
 - a. Create a business plan that describes products and services, marketing strategies, operations plans, staff requirements, and financial projections.
 - b. If no products or services can be produced/provided with local knowledge then it will be necessary to organize training
5. Implement sales and marketing strategies
6. Divide revenue to reinvest in training and product expansion, providing local livelihoods, and supporting conservation activities.

Lessons Learned

- **Address multiple threats:** The strength of this strategy is that it addresses conservation needs on many levels. It addresses direct threats (solid waste) as well as indirect threats (poverty alleviation, apathy among local communities) and is able to magnify its impact.
- **Careful selection of product:** Because this strategy works particularly well with artisan products it is important to take into consideration the relatively low price-setting power of producers vis-à-vis consumers and select products that represent high sale values and low labor requirements in order to maximize benefits to local livelihoods.



Photo: WIDECAST Costa Rica

Figure 49: Glass bead art

Photo: WIDECAST

Case Study

Strategy 4.1 - Increase the Role of Local Residents in Monitoring and Research

Playa Chiriquí Sea Turtle Research Project, Sea Turtle Conservancy – Ngöbe-Buglé Comarca, PANAMA

Summary

Beginning in 1998, a group of residents of Río Caña, a community in the Ngöbe-Buglé Comarca, formed the Asociación de Protección de Recursos Naturales Ngöbe-Buglé (APRORENANB) to attempt to protect the diminishing population of Hawksbill sea turtles nesting on Playa Chiriquí. This group planned on enforcing a ban on sea turtle harvesting every other year along the 20 or more kilometers of the beach. Though the methodology of a once every two year ban would have proved to be ineffective, their initiative and motivation prompted the Instituto Tropical de Ecología y Conservación (ITEC) to support their efforts beginning in 1999. In the beginning the project worked with extremely lean budgets and all monitors worked as volunteers. ITEC liaised with community leaders and APRORENANB to secure the trust and relationships necessary to work together to protect the turtles. In the following 4-5 years they were able to train turtle patrols and to conduct research, collecting data on turtle biometrics and nesting habits.



Figure 50: Community of Río Caña

In 2003 the Sea Turtle Conservancy (STC), then the Caribbean Conservation Corporation (CCC), entered and held a series of meetings with APRORENANB, the Comarca's governing council, the Panamanian Environmental Authority (ANAM), and leaders from surrounding communities to enter into a formal agreement of cooperative work resulting in 5-year commitments for cooperation. They organized patrol groups and began to pay the patrols for their time, improving the research station, and expanding work to include nearly all of Chiriquí Beach, as well as Escudo de Veraguas, and Playa Roja. CCC also began an environmental education campaign in local schools with their local resident partners leading the talks.

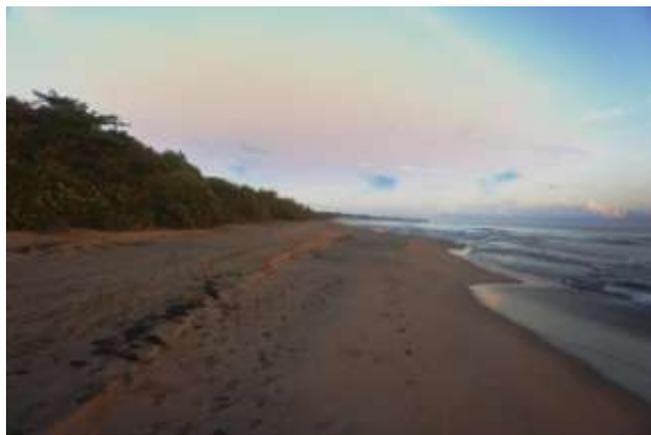


Figure 51: Chiriquí Beach

Though the beach is one of the most important nesting beaches for leatherbacks the focus of the project is protecting the hawksbill turtles, and the community members are involved in all aspects of the turtle project from data collection, marking nests, tagging turtles, nighttime patrols, installation of protective cages to defend nests against dogs, and giving environmental talks at local schools. This focus on hawksbills comes from the fact that local populations never developed a custom for eating eggs and left the leatherbacks alone, but the hunted the hawksbills for their shells and decimated this population. Currently, the project

provides jobs for about 25 people each earning at least \$100 a month and social security, as well as an

additional 30 people indirectly or temporarily employed in odd jobs and ancillary occupations. The project also tries to bring Río Caña residents who work with the project each year to the Sea Turtle Symposium to share their

experiences and learn more about sea turtles. The community, now in its 11th year of sea turtle conservation, is looking to expand to tourism activities as well in order to generate more income for local families and to support sea turtle conservation work.

Stakeholders: Roles & Responsibilities

Sea Turtle Conservancy: STC organizes all work, secures financing sources, oversees patrol groups, provides logistical support, and gives trainings to local community members within the conservation project. STC also gives support to educational programs and the annual ecological fair.

APRORENANB: APRORENANB provides manpower and organizational support to the project. The association liaises with the Comarca's governing council and national government institutions. The group also sponsors and organizes an annual ecological fair to raise awareness and build constituencies for conservation.

ANAM: ANAM is responsible for establishing and enforcing regulations for the protected area.

Process

1. Identify local groups and leaders willing to work in conservation, or ideally, currently doing conservation work
2. Present project ideas and plans to local groups and leaders, including government agencies when appropriate
3. Formalize agreements with clear roles and responsibilities
4. Select personnel
5. Build infrastructure
6. Train community members in necessary skills
7. Implement community-driven sea turtle research project

Lessons Learned

- Not just workers, but allies: Local residents involved in monitoring and research are not just a source of labor; they are also important allies and community ambassadors for conservation messaging. This is even more important when working in indigenous areas where community members working with the project will be able to give educational workshops in indigenous languages. Empowering local communities can result in stronger, wider, and more lasting changes.
- Trust is essential: Working with local communities can be difficult work, but everything is made easier with the support and trust of local leaders. Many communities have spent years feeling neglected by national government institutions, or worse, in opposition to them. This is especially true in indigenous regions. As such, gaining the trust of local leaders is essential to be able to achieve desired results. In this case, a long process of meetings and talks leading to a cooperative agreement laid the groundwork for the project.
- Provide alternatives: In this case there existed a community organization seeking out ways to conserve natural resource, but in most cases this will not be your fortune. As a result of this fortuitous condition there were 4-5 years of cooperative conservation work with local community members volunteering long hours to support the project, however in many cases it might be necessary to provide economic alternatives to help facilitate transitions away from resource extraction towards conservation.

Case Study

Strategy 4.2 - Increase the Role of Visitors in Monitoring and Research

San San Pond Sak Turtle Monitoring Project, AAMVECONA – Sand San Pond Sak, PANAMA

Summary

The Asociación de Amigos y Vecinos del la Costa y la Naturaleza (AAMVECONA) works with the Wider Caribbean Sea Turtle Network (WIDECAST) to implement research and conservation efforts aimed at protecting the nesting sea turtles visiting their shores. This is important work, as recent as the late 90's turtles were still be killed in large numbers on the beaches of San San Pond Sak with 80 leatherbacks killed in just one year on one occasion, but thanks to the hard work of WIDECAST and AAMVECONA in 2009 only 2 were killed and in 2010 none were killed at this site.

In 1999, AAMVECONA was founded as part of the PROARCA project in order to co-manage the RAMSAR-listed wetlands. During the following PROARCA II project, AAMVECONA entered into a partnership with WIDECAST in 2004 to begin receiving volunteers to support sea turtle conservation work. AAMVECONA cleans up the beach that is often full of obstacles like fallen trees and solid waste swept out to sea by the Sixaola River and washed back on shore by the tides. They also monitor over 4 kilometers of beach and engage in sea turtle research (tagging, measuring, and reporting). The project uses nurseries to protect sea turtle nests, which need to be constructed at the beginning of each season. This work would be impossible without the help of volunteers who come from all over the world to support this work.



Photo: Sheryl Lee

Figure 52: San San Pond Sak protected area, PANAMA



Figure 53: International volunteers helping with research and monitoring

Volunteers' stays differ depending on the site but AAMVECONA houses volunteers in rustic dorms on the beach, while in Gandoca volunteers stay in family hotels or in home stays with local families, and in Cahuita volunteers stay in the guardhouse of the environmental ministry. Volunteers in San San Pond Sak are organized into 4 shifts of 4 hours patrolling the 4.5 km of beach from 8:00 p.m. until 4:00 a.m. The greatest benefit for AAMVECONA from the volunteers is the work that they help to accomplish. Without this source of labor their work would not be able to reach the scope it has. This is especially true of nighttime patrols. It has been shown that just the presence of volunteers and researchers on the beach serves as a potent deterrent to sea turtle poaching. This is even more important as local and national authorities often lack the resources to adequately patrol and monitor sea turtle beaches.

AAMVECONA markets and sells their voluntourism products in partnership with WIDECAST in a bi-national project and receive about 200 volunteers each year in the San San Pond Sak site from April until July with groups of up to 35 at a time. These volunteers pay between US\$17-\$20 per day and in 2010, these volunteers represented a revenue of US\$50,000 to the project. This revenue was further augmented by travel philanthropy programs, such as the US\$3,000 sent from volunteers that arrived with an international tour operator ISV who collected donations from friends and family after returning home. Another travel philanthropy program with EcoTeach donated funds for boat repairs. Further, the presence of volunteers creates jobs for local communities. In San San Pond Sak there are about 6 jobs directly

linked to the volunteers and another 10 jobs indirectly tied to their presence. These workers will earn between US\$10-\$15 per day for the 3.5 months that the volunteers are active at the site.

Stakeholders: Roles & Responsibilities

AAMVECONA: AAMVECONA organized volunteer work groups, patrols the beaches, and conducts research. They also provide services for volunteers (food, lodging, logistical support, etc.). AAMVECONA also publishes findings and shares data with regional partners WIDECAS and Sea Turtle Conservancy. These regional partnerships help to strengthen scientific understanding of turtle populations who migrate outside of national boundaries.

WIDECAS: WIDECAS provide technical trainings for AAMVECONA staff and they are responsible for marketing and sales to tour operators who bring in volunteer groups.

Autoridad Nacional de Ambiente (ANAM): ANAM is the government body in charge of protected area management. They administer management plans and enforce regulations.

Tour Operators: WIDECAS and AAMVECONA work with numerous tour operators to bring in volunteer groups. These include ISV, i-to-i, and EcoTeach among others. These groups are responsible for international marketing and they organize travel logistics as well as any necessary insurance and logistics associated with international travel.

Process

1. Outline conservation needs and existing capabilities.
2. Analyze market potential and assess community interest for a volunteer program.
3. Develop business plan and budgets
4. Organize a strong research project and solidify links with local communities. Without a strong research program there can be no volunteer program. While there may be work for volunteers to do, the competitiveness of volunteer sea turtle programs in Mexico and Central America mean that a voluntourism project would not survive without this component.
5. Secure necessary permissions and agreements with public and NGO sector partners. Often working within protected area, sea turtle projects wishing to have volunteers will need protected area managers to approve any project before it begins. Also, linking with existing NGOs can strengthen your technical and commercial capabilities.
6. Train staff in their various roles as cooks, guides, researchers, patrolmen, etc.
7. Develop infrastructure needed to house and feed volunteers. These might home stays in the beginning but expansions will require more developed infrastructure.
8. Develop and implement marketing plans through direct linkages to international volunteer placement tour operators or through networking with existing local volunteer programs.
9. Operate volunteer program
10. Set aside end-of-year profits to re-invest in the business for maintenance, improvements and expansions
11. Contribute remaining profits to conservation fund.

Lessons Learned

- **Form alliances:** Alliances not only strengthen marketing resources but they can also help to provide a source of technical assistance. Also, since sea turtles migrate outside of national borders alliances help to construct a more complete understanding of the dynamics of their movements and behaviors.
- **Be careful to maintain “the balance”:** Bringing relatively large numbers of volunteers to help in your project represents costs and benefits. Though they can be a source of revenue and labor, increasing the number of



Photo: Sheryl Lee

Figure 54: Sea turtle egg nursery at San San Pond Sak

people present also results in an increased impact on ecosystems. Further, it is necessary to ensure that volunteers serve to strengthen research and conservation and does not become strictly a business. Losing sight of this balance may not only harm ecosystems but will undermine long-term client satisfaction and may lead to a decline in the business-side as well.

- Be careful to respect local customs: Volunteers are often foreigners with different attitudes and customs, some sharing and cultural exchange is positive and even desirable, however some of these customs may create tension with local communities, this is especially true of casual attitudes towards drinking and sexuality. Make sure volunteers respect local customs while at the site and behave accordingly.
- Language barriers: It will be essential to have some staff that can communicate effectively with volunteers. Many opportunities can be lost to use volunteers more effectively if they cannot communicate special knowledge and skills. Also, in case of emergencies effective communication is essential.

Case Study

Strategy 5.1 – Utilize Sustainable Tourism Profits to Support Conservation Activities

Discover Grenada Turtle Tours, Ocean Spirits Inc./Rare - Grenada, W.I.

Summary

“Discover Grenada Turtle Tours” is a community tourism product designed to support sea turtle conservation efforts on the Caribbean island of Grenada. The project is a collaboration between Rare, an international NGO specialized in community-based tourism development, and Ocean Spirits Inc. (OSI), a Grenadian environmental organization that had worked with sea turtle conservation efforts in Grenada for more than a decade.

At the heart of the project lies Levera Beach, a mile-long stretch of glistening white sand on the northern tip of the island. Levera is one of the top five most important Leatherback turtle (*Dermochelys coriacea*) nesting sites in the Caribbean, with upwards of 900 turtles nesting on the beach between April and August. Unfortunately, as recently as eight years ago, the number of sea turtle nests whose eggs were poached by local residents was as high as 90%. Sea

turtle eggs are highly sought after as an aphrodisiac throughout the region, and are illegally sold for about US\$0.25 each in Grenada.



Photo: Ocean Spirits

Figure 56: OSI’s monitoring program

program to nearby Bathway Beach, the country’s second most critical Leatherback nesting beach, which was losing nearly 100% of its nests to poaching. The Bathway monitoring program would cost approximately US\$7,500 to establish. Funding is always a challenge for any NGO, big or small, and donor money for Bathway Beach wasn’t available.

Discover Grenada Turtle Tours

Rare, an international NGO specializing in community tourism development, established a partnership with OSI in which the two organizations worked together to develop a new turtle-watching tour to create jobs for local residents as well as generate funding for OSI’s conservation activities. A Memorandum of Understanding (MoU) was developed that defined the role of each organization as well as committed US\$7,500 in turtle tour profits to fund OSI’s Bathway Beach program (after business costs had been paid).



Figure 55: Project location, GRENADA

In addition to community outreach and environmental education, Ocean Spirits’ sea turtle conservation efforts focus primarily on monitoring and research. At Levera Beach, OSI’s successful monitoring program had all but eliminated poaching. OSI wanted to expand its monitoring

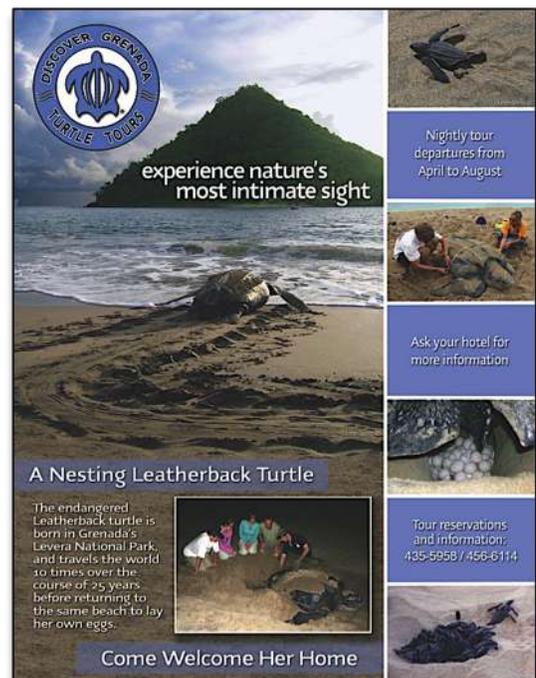


Photo: Rare

Figure 57: “Discover Grenada Turtle Tours” poster



Figure 58: “Discover Grenada Turtle Tours” t-shirts proved to be a good source of revenue for the project

Photo: Rare

Staff training began in January 2008, along with the development of promotional materials targeting international visitors in local hotels. The most effective promotion was weekly sea turtle PowerPoint presentations given by the turtle tour staff to hotel guests, who could then sign up for a tour or simply buy T-shirts, hats, and other merchandise. During the first four-month nesting season, Discover Grenada Turtle Tours had 233 clients and generated US\$15,577 in gross sales. After operational costs were paid, the remaining \$6,987 in profit was

contributed to OSI’s conservation activities. Although not the total \$7,500 amount, the profits contributed significantly to OSI’s conservation work.

Stakeholders: Roles & Responsibilities

Ocean Spirits Inc.: OSI assisted in training local naturalist guides basic sea turtle biology. OSI also acted as a liaison to nearby communities as well as to government agencies in charge of permitting. Finally, OSI provide their library of sea turtle photos for promotion, as well as the use of OSI name and logo to help promote the tours and their conservation impacts.

Rare: Rare provided much of the small business technical assistance including business planning, staff training (managers, cooks, drivers), sales and marketing strategy and design. Rare also helped with the development of tourism operations and systems (accounting, reservations, payments).



Figure 59: Roles of project partners in formation of the tourism enterprise

Process

1. Identify direct **conservation threats** (poaching) and indirect threats (lack of monitoring) to be addressed.
2. Analyze tourism **market potential** (supply and demand) and assess **community interest** in sustainable tourism
3. Finalize sea turtle **conservation strategies and costs**
4. **Develop MoU** between conservation NGO, business development NGO, and community representatives which includes:
 5. Each stakeholder’s roles and responsibilities, particularly time and financial commitments
 6. Develop **tour products and services:**
 7. Create a **business plan** that summarizes products, marketing strategy, operations plan, staff and training needed, and financial projections
 8. **Train staff** in their various roles as managers, guides, cooks, drivers, etc.
 9. Implement **marketing & promotional strategies** (website, brochures, etc.) as well as **tourism operations plans and procedures.**
 10. **Operate tours** and use profits to first ensure operational costs are covered (office, phone, electricity, etc.)
 11. **Set aside end-of-year profits** to re-invest in the business for improvements & expansion
 12. **Contribute remaining profits to conservation activities**

Lessons Learned

- Private Sector Partnerships: Early on the turtle tour staff reached out to hotels and tour operators to help promote the tour. Most committed immediately upon hearing of the community and conservation benefits of the project.
- Hotel Presentations: The presentations at the hotel were an effective promotional tool because it allowed the turtle tour staff to really tell the story behind project and explain the linkages between tourism and conservation. They were also a great time to sell merchandise.

Case Study

Strategy 5.2 – Develop Travel Philanthropy Programs

Turtle Spotters Program, Sea Turtle Conservancy – Tortuguero, COSTA RICA

Summary

The Sea Turtle Conservancy (STC) has worked closely with the Costa Rican government and local communities at the Tortuguero site in northern Costa Rica for over 40 years. In 1975, the project helped to establish a national park that protects 65,711 acres of land and 113,014 acres of water at the Western Hemisphere's most important nesting site for green sea turtles. The nesting beach stretches about 22 miles and in recent years around 600 leatherback turtle nests and over 100,000 green sea turtle nests have been reported each season.²² Their work focuses on the conservation of the site's green and leatherback sea turtles through monitoring, research, legislation, capacity building and public outreach. Part of this conservation work is to minimize the potentially negative impacts posed by the visitors that number over 100,000 a year in Tortuguero National Park.

This work has helped to significantly reduce the poaching at Tortuguero though visitation impacts still needed to be further minimized. To address this issue STC implemented the "Turtle Spotters Program" in 2004 which held visitors in cabañas on the beach until a turtle was sighted at which point visitors would walk to the site indicated to a guide by a turtle spotter along a path behind the nesting beach. This reduced visitor impacts and employed local community members as turtle spotters. However, the costs of implementing this project needed to come from a more reliable source than the voluntary donations from hotels and tour operators who often decided not to participate. In 2006, STC, together with partners in the Ministry of the Environment and Energy and the local community and with support from ProParques created brochures and stickers that would be sold to visitors to support the initiative. Visitors were encouraged to wear their stickers proudly to show their support for conservation while on their tour. The donations were small - US\$4 for international visitors and US\$2 for locals – however its impact was significant. In its first year the Turtle Spotters stickers and brochures raised over US\$80,000 from nearly 80% of tourists on turtle tours within its first two months. Over the season the program collected over US\$100,000 and managed to pay for the Turtle Spotters Program's operational costs and expand and improve infrastructure. Visitors felt a sense of pride in being able to show

Nature tourists are often inclined to donate small sums to help protect the natural resources and support local communities they interact with on their excursions. They feel pride in being able to help preserve these natural places and contribute to local development. With a very simple, but innovative approach aimed at financing a specific initiative, STC was able to not only pay for operational costs to add another layer of protection for the nesting turtles at Tortuguero, they were also able to surpass operational costs and support the expansion of the program. These donations need not be large but they can add up over time.

Stakeholders: Roles & Responsibilities

Sea Turtle Conservancy: STC trained tour guides and designed a flow of visitation that would reduce negative impacts on nesting sea turtles. The organization then helped to produce brochures and stickers that would be sold to visitors.

Ministry of Environment, Energy, and Telecommunications: MINAET administers the protected area, sets regulations and is responsible for enforcement of regulations.

The Local Community: The local community was employed as Turtle Spotters and to do night patrols. The local community also participates as guides and support the research of STC.

²² Sea Turtle Conservancy. *Sea Turtle Research Season Reports from Tortuguero*. (2011)
<<<http://seaturtletracking.com/costarica.php?page=season-reports>>>

Tour Guides: Tour guides are one of the sales channels for the stickers and brochures. They also are the primary source of information about turtle ecology for most visitors making them an important part of turtle conservation. They can be a force driving visitors to become more engaged and excited about turtle conservation. In practice it was more difficult to sell stickers and brochures through the guides and there were high rates of non-participation.

Hotels: Hotels and sustainable tour operators became the primary sales channels for the stickers and brochures.

Process

1. Identify direct threats (visitor impacts) and indirect threats (lack of financing) to sea turtle conservation.
2. Define the project to be financed and budget required for implementation.
3. Coordinate with implementing partners to define roles and responsibilities, especially financial management issues.
4. Design and produce materials to be sold in order to leverage donations from visitors
5. Establish prices based on expected needs and predicted willingness/ability to pay
6. Promotion and sale of brochures and stickers using revenues to finance and expand operations.

Lessons Learned

- Specific projects to be financed: Visitors should fully understand what they are contributing to and will feel more engaged and more willing to contribute to specific conservation projects, especially when they are directly linked to the specific ecosystems and communities they interact with on their trip.
- Small can be large: Small donations can add up over time. Not all sites will have over 100,000 visitors per year, but even smaller crowds giving smaller sums can add up over time. The important thing is to define projects that can be easily financed with the predicted income from donations.
- Give so you can receive: The Turtle Spotters Program *sold* stickers and brochures. Visitors are more likely to donate when they receive some small keepsake or memento. Giving is often associated with good feelings that are strengthened when the donors can be recognized for their contributions. The stickers worn by visitors enabled them to proudly display their support for conservation. Similar projects by other groups have *sold* awareness bracelets, postcards, or other trinkets. The important thing is for visitors to have something to take home that is also relatively low-cost as to maximize the portion of donations that finances conservation.
- Guide training is important: The experience of STC in Tortuguero illustrates the importance of training guides. This is highlighted when visitors are no longer walking along the beach but waiting in designated sites that could imply long periods of inactivity. While waiting visitors should still feel engaged and guides should take advantage of the time to convey important conservation messages and teach visitors about sea turtle ecology. This results in tourists that feel they have experienced a satisfying tour from start to finish rather than a lot of waiting with a few moments of interactions.

Case Study

Strategy 6.1 - Develop Partnerships Between Communities, NGOs, and Universities

Scientific Tourism Program, Honduras Coral Reef Fund – Cayos Cochinos, HONDURAS

Summary

Honduras Coral Reef Fund (HCRF) is the organization responsible for co-management of the Cayos Cochinos protected area (MNMCC) and they also support research within the park. In 1995, the Smithsonian Tropical Research Institute (STRI) installed a scientific research station on Cayo Menor, and this station has been used by university groups and research organizations to study the area's ecology ever since. These research trips include three major expeditions: STRI in 1995, ProAmbiente in 1997, and a national and international team formed by WWF in 2002. The station is also used regularly by numerous organizations and student groups such as: Caribbean Coastal Marine Productivity (CARICOMP), Atlantic Gulf Rapid Reef Assessment (AGRRA), Caribbean Marine Protected Area Managers (CAMPAM), the United States Geology Service (USGS), Operation Wallacea, and by independent researchers. The initial intervention by STRI was facilitated through contacts of one of the founding board members of the HCRF in order to provide the needed technical expertise to guide the development of an adequate management plan.

Currently this research station receives regular groups of researchers organized by Operation Wallacea and Biosphere Expeditions. These groups bring in annual revenues of around US\$100,000 - US\$150,000, which more than covers expenses and contribute approximately 50% of the HCRF's annual operating budget. These scientific tourism groups also spend time within local communities during their trip, which provides alternative livelihoods through tourism for the Garifuna communities in the area of influence. The arrival of these groups is also a form of promotion for the destination, as these students and professors return and promote the destination to colleagues and friends. These groups arrive every year and the Foundation has agreements with Operation Wallacea and Biosphere Expeditions. In their early years there was an active search for partners and sales channels, but as the reputation of the Foundation's programs grew it these partnerships formed and solidified.

Beside the financial benefits of these programs for the Foundation and the conservation of the MNMCC, there are also technical advantages. The research conducted by the research groups is of extremely high quality and feeds directly back into the formation of a more complete understanding of the area's ecology. This understanding then informs the management plan, making the management plan not just a random collection of regulations, but a nuanced strategy based on rigorous scientific studies.

Like any project, however, these partnerships are not without challenges and risks. The increased presence of researchers represents an increased impact from visitation, and the mitigation and minimization of these impacts are extremely important. The success of this project also means that more researchers and students want to come and experience the area and study its ecology. This increased demand means that infrastructure needs to be developed to be able to handle increased visitation without harming the surrounding ecosystems.

Stakeholders: Roles & Responsibilities

Honduras Coral Reef Fund: The Fund is in charge of organizing activities, providing equipment and laboratories, maintaining infrastructure, and organizing logistics for groups once they arrive at the station.

Operation Wallacea & Biosphere Expeditions: These SAVE tour operators are responsible for selling tours at universities in the USA, Canada, and Europe.

Local Communities: Local Garifuna communities enliven the expeditions by organizing home stays and traditional folk dancing exhibitions. These community members also often are employed in tourism services.

Sociedad de Inversiones Ecologicas (SIEC): SIEC supports the foundation with grants and donates equipment.

NGOs and Universities: These groups of partners bring in students and scientists to study the local ecology. They benefit from having a protected site where they can study ecology, write papers, and publish articles. The protected area and its managers benefit from having high-level technical expertise supporting a more complete understanding of that ecology which feeds into conservation plans.

Process

1. Secure partnerships with essential government agencies and lobby for protected area status.
2. Protected area declaration (in this case through executive decree)
3. Secure partnerships with civil society groups and scientific NGOs/universities
4. Build research station
5. Search for sales partners and enter into agreements to organize research trips
6. Continue to develop and improve facilities and programs
7. Use the scientific knowledge developed through these trips to improve management and conservation plans
8. Dedicate a portion of year-end surpluses to improvements and expansion
9. Dedicate a portion of year-end surpluses to conservation and ecosystem protection

Lessons Learned

- The Importance of Partnerships: None of these programs would have been possible without the support of partners in national government in the protection of the MNMCC, sales channels in Operation Wallacea and Biosphere Expeditions, and scientific organizations supporting research and infrastructure development.
- Watch your impacts: Successful projects bring increased visitation, meaning you will need to be careful to mitigate the impact of visitors to ensure that you are not harming the ecosystems you intend to protect.
- Not just money: The support you can glean from these projects cannot be measured purely in monetary terms. The research performed in the area you are protecting will help to inform management plans ensure that the proper protections are in place and functioning. This of course, is not to downplay the importance of financial support for conservation projects obtainable from these kinds of scientific partnerships.

Case Study

Strategy 6.1 – Develop Partnerships Between Communities and Protected Areas

Verde Camacho Sanctuary, RED Sustainable Tourism Project, Sinaloa, MEXICO

Summary

The Verde Camacho Sanctuary is a CONANP (National Natural Protected Areas Commission) administered protected area in the state of Sinaloa, Mexico. Just 20 minutes north of Mazatlan, the Sanctuary boasts a remarkably intact estuarine ecosystem that hosts marine and migratory bird species, crocodiles, and rich mangrove canals. The beaches within the Sanctuary are the most productive olive ridley nesting beaches in all of Mexico, and are home to a sea turtle research and conservation project spanning more than 30 years as part of BITMAR (UNAM's sea turtle research effort).

The local community of El Recreo has always had a direct impact on the conservation of the natural resources, in particular, the nesting sea turtles. Historically, many local residents collected sea turtle eggs for consumption and sale. Throughout the years though, they have become increasingly active in conservation not only of the sea turtles, but more recently in the entire Sanctuary ecosystem. El Recreo is comprised of fisher families that fish shrimp seasonally in one of the few manners considered to be sustainable, applying a technique used throughout centuries that employs the traditional *tapos* and the *atararray* tools. This method results in almost no bycatch, and does not use feed, bait, or other additives to the estuary.



Figure 60: Sea turtle hatchings in Verde Camacho

They faced two key hurdles to their efforts achieving success. First, a limit to CONANP's resources and technical capacity for tourism development. And second, the risk of cultivating an unsustainable paternalistic relationship with the community.

To achieve long-term stewardship of the Sanctuary's natural resources, stakeholders would have to identify strategies that put conservation in the hands of local residents, independent of government financial support.

BITMAR and CONANP invited RED Sustainable Tourism to work with these institutions and the residents of El Recreo to first develop tourism products and a suitable marketing platform, as well as to devise conservation strategies tied directly to these products.



Working together, these stakeholders have worked together to produce a business plan for the community owned and operated business, begun training modules, and have operated test trips with local schools which have demonstrated the product's market potential, and provided tangible experience to community participants.

Stakeholders: Roles & Responsibilities

CONANP staff in the Verde Camacho Sanctuary: CONANP provides ongoing logistical support to the project, assistance with permitting, and access to project financing. CONANP also contributes to the development of conservation strategies.

Community of El Recreo: The tourism working group from El Recreo participates in all trainings and strategy development, in addition to operating tours.

BITMAR-UNAM: BITMAR serves as the primary community liaison throughout the project and assists with training. BITMAR also provided the science and research based program for the conservation activities within Verde Camacho, and contributes to the development of the project's conservation strategies.

RED Sustainable Tourism: RED leads training, business and strategy planning, as well as sales and marketing for the project in Verde Camacho.

Process

1. Historical assessment: understand the relationship between the community, institutions involved, and natural resources
2. Product and market assessment: design demand-driven products that take advantage of local abilities, resources, and knowledge
3. Identification of conservation and community development strategies: stewardship of sea turtles, beaches, and estuary; watershed campaigns; opportunities for youth and women; replacement/support of PETS and PROCODES with tourism revenue
4. Begin training in: Business operations, guiding, and tourism services
5. Soft launch of product to test products in market, and reinforce community buy-in
6. Continue training
7. Implement sales and marketing strategies
8. Operate tours
9. Implement conservation and community development strategies

Lessons Learned

- Partnerships increase project reach: The pursuit of a formal partnership between the CONANP, the community, BITMAR, and RED, have created a synergy of interests which improves the project's chances for success in terms of reaching markets, obtaining funding for training and business startup costs, and achieving tangible conservation and community goals.
- Conservation as a product provides agility in markets: Negative press in Sinaloa has caused a drop off in international travel to the region, and eliminated the potential cruise market. Creating a conservation-focused curriculum has provided a market that is more stable (local schools and other institutions) in spite of retraction of traditional markets for tourism.

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