Towards a Sustainable Community-Based Sea Turtle Conservation Programme in Dominica

2008

Action Plan for a Sea Turtle Conservation and Tourism Initiative in the Commonwealth of Dominica

– A Community Based Approach

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Action Plan for a Sea Turtle Conservation and Tourism Initiative in the Commonwealth of Dominica

– A Community Based Approach

2008

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TABLE OF CONTENTS

LIST OF FIGURES AND TABLES

ACKNOWLEDGEMENTS

SUMMARY OF RECOMMENDATIONS

This Action Plan lays the foundation for a national dialogue that will propel Dominica in a natural evolution from a single sea turtle research and conservation project (the Rosalie Sea Turtle Initiative, or RoSTI) to a coordinated national programme of sea turtle research, conservation, management, and livelihood development. In order to achieve a national Sea Turtle Conservation and Tourism Initiative designed to "enhance the standard of living for persons living in communities near major sea turtle nesting beaches, while at the same time offering greater protection to nesting turtles and their young", the Action Plan makes the following recommendations:

Recommendation 1 – Participating *community-based organisations should remain independent* and work together with DomSeTCO under the terms of a Memorandum of Understanding (MOU).

Recommendation 2 – A *Sea Turtle Management Committee should be established* to be comprised of representation from organisations participating in the Sea Turtle Conservation and Tourism Initiative MOU, with organisations to be added or removed as time goes on and as appropriate to the success of the programme. In addition, there should be representation on the Management Committee from natural resource agencies (Forestry, Wildlife and Parks; Fisheries) and other agencies (e.g. tourism, education, law enforcement), along with research organisations, and the private sector, as needed, in order to achieve an organised and positive implementation of the Sea Turtle Conservation and Tourism Initiative.

Recommendation 3 – The *roles and responsibilities should be clearly defined* for each member of the Sea Turtle Management Committee.

Recommendation 4 – *Assess (and develop) the capacity of DomSeTCO and community organisations* to assume responsibility for decision-making, planning and management of their role in the Sea Turtle Conservation and Tourism Initiative.

Recommendation 5 – Institutional development of community groups should seek to *build capacity for managing tour guides and beach patrols*, including staff and wages, rostering, discipline, evaluation, team-building actions, and professional training.

Recommendation 6 – For effective implementation of the Sea Turtle Conservation and Tourism Initiative, each community organisation should develop an *Operational Management Plan* specific to the nesting beach where their tour guiding activity takes place.

Recommendation 7 – For effective implementation of the Sea Turtle Conservation and Tourism Initiative, each community organisation should develop a *Community Ecotourism Handbook* with standards for managing visitors, carrying capacity, health and safety, and staff protocols (e.g. hiring, training, evaluation).

Recommendation 8 – For effective implementation of the Sea Turtle Conservation and Tourism Initiative, each community organisation should develop a *Marketing Plan* to address strategic objectives, market trends, retail products, and competition.

Recommendation 9 – A *Five-Year National Sea Turtle Research Plan* for Dominica should be developed, highlighting information gaps and research projects needed to inform and improve sea turtle management and conservation at a national scale.

Recommendation 10 – The Sea Turtle Conservation and Tourism Initiative cannot be successful without the *development of supporting infrastructure*, including payment centres, land access, beach facilities (an area for arrival, waiting, and interpretation), etc.

Recommendation 11 – For effective implementation of the Sea Turtle Conservation and Tourism Initiative, *persons must purchase a ticket granting access to the nesting beach* during the annual nesting season and be accompanied, while on the beach, by a trained and licensed Tour Guide.

Recommendation 12 – *Identify challenges facing community organisations* relative to their assuming responsibility for decision-making, planning and management of the Sea Turtle Conservation and Tourism Initiative – and identify solutions.

Recommendation 13 – *"One community group – one nesting beach."* In order for Turtle Watches to be successful, experience in other areas has demonstrated that the concept of a sole concessionaire is fundamentally important.

Recommendation 14 – For effective implementation of the Sea Turtle Conservation and Tourism Initiative, *supporting linkages must be developed with related enterprises* such as small business enterprises, training and education, and research and monitoring.

Recommendation 15 – For effective implementation of the Sea Turtle Conservation and Tourism Initiative, a *mechanism for long-term monitoring and evaluation* is needed.

I. INTRODUCTION

With support from the United States Agency for International Development, through its Caribbean Open Trade Support (COTS) programme in the Eastern Caribbean, the Dominica Sea Turtle Conservation Organisation (DomSeTCO), in partnership with the Wider Caribbean Sea Turtle Conservation Network (WIDECAST), has been tasked with developing a nation-wide scientifically sound, non-invasive sea turtle research, conservation, and ecotourism program that can be implemented in collaboration with Government, coastal communities, the tourism industry, and visitors to the island.

The resulting program has focused heavily on leadership training in coastal communities interested in assuming greater responsibility for sea turtle survival in Dominica and has included technical training in population monitoring and research, data collection, and habitat conservation, including a public outreach component. Importantly, the program has aimed to facilitate a sustained commitment to conservation goals by fostering capacity for income generation at the community level. Training guides to lead Turtle Watches, building on Dominica's reputation as an ecotourism destination and WIDECAST's expertise in this area, has provided a basis for new professional livelihoods that both create a more diversified income base in participating communities and also discourage sea turtle poaching at major nesting beaches.

Prior to implementation of this program, discussions with Government and relevant communities in the South East and North East[1] confirmed that there was consensus regarding the need for livelihood diversification in ways that support *The Nature Island* market niche, and that a professional "Turtle Watch" tour product was a high priority. Notwithstanding, there was no national capacity to support such diversification in ways that met the standards of international best practice. Therefore, the program has sought to identify the appropriate community structure, regulatory framework, and institutional development necessary to create a Turtle Watch programme in Dominica, while at the same time to maintain nightly beach patrols at the nation's primary nesting beaches in order to collect basic population data, to nurture a feeling of civic pride in the protection of these grand and ancient creatures, and to reduce illegal killing of the animals during their egg-laying period.

Through community consultations, partnerships with experts, literature reviews and other processes, the program has created a legacy of supporting documents, including this Action Plan, a Field Procedures Manual, a Tour Guide Manual, a complete geo-referenced national map of nesting beaches (for three species of sea turtle), standardised data collection forms, and more. **The intent of this Action Plan is to invite and guide an ongoing dialogue among stakeholders interested in defining and pursuing a viable Sea Turtle Conservation and Tourism Initiative in Dominica.**

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[1] The 'South East Community' (4.000-4,500 residents) includes Grand Fond to Delices. The 'North East Community' (ca. 7,000 residents) includes Wesley to Marigot. As practicable, the program will also involve communities north of the Carib Territory in planning meetings and technical training.

II.   PROBLEM ANALYSIS

The challenge of creating truly sustainable livelihood choices for rural communities is widespread, and this is certainly true for many of the communities along the largely un-developed East coast of the Commonwealth of Dominica. The ability of these communities to sustain fundamental needs is limited: farming is affected by weather conditions and changing international trade dynamics, tourism visitation remains comparatively low, transportation is complicated by road disrepair, fuel costs, and oft-unreliable public access, and clothing, construction material, food and other necessities are very costly. Some basic services can only be obtained in larger communities; others (e.g. banking, protective, health, higher education, and a range of other governmental services) are only available in the capital city of Roseau.
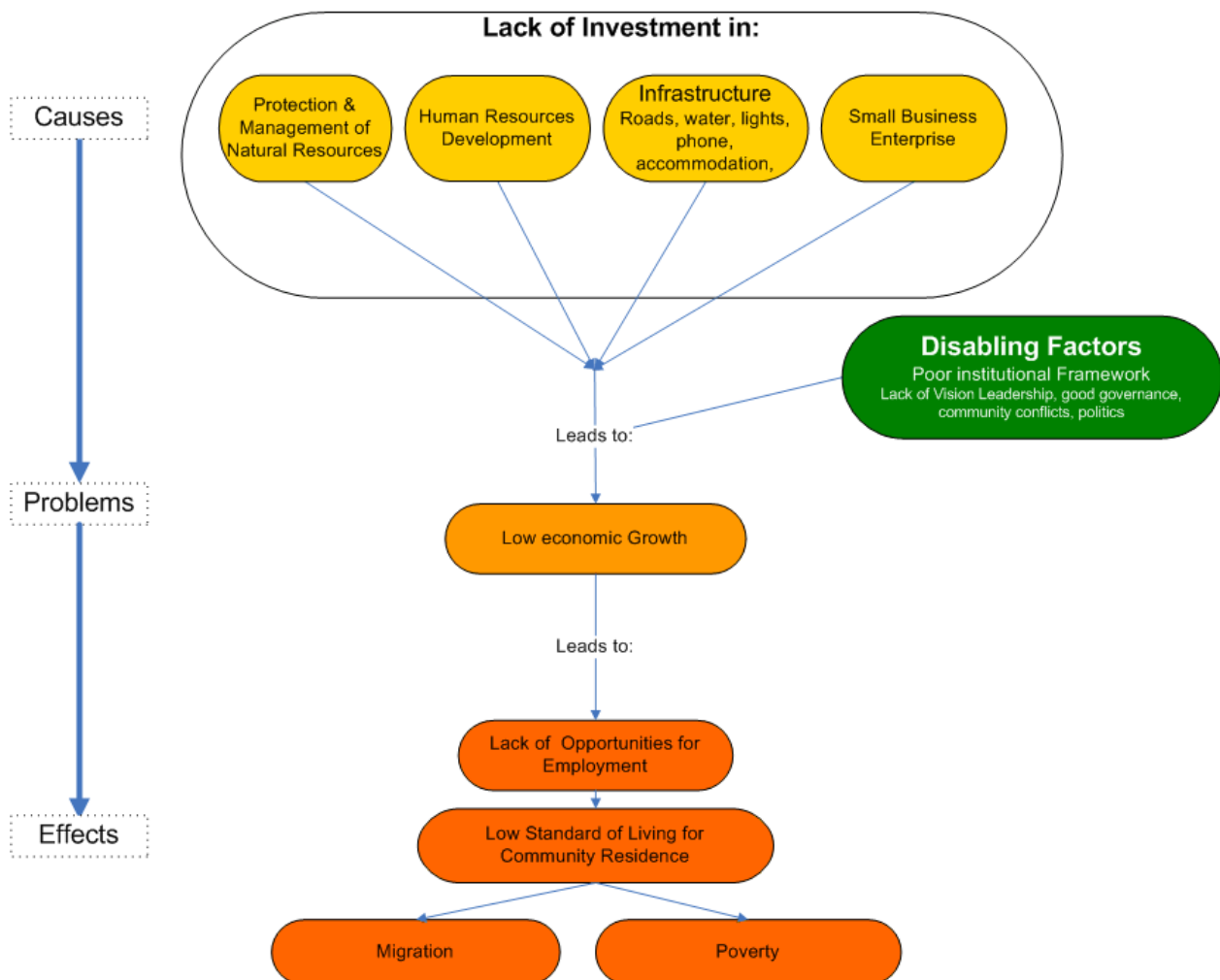
Figure 1. Problem Tree: Factors Affecting Sustainable Livelihoods.

An assessment of causal factors and their effects in relation to the creation of sustaina-ble livelihood choices must be clearly understood before we can consider (and apply) appropriate solutions. Figure 1 (above) represents a problem tree that looks at issues related to sustainable livelihoods in a simple and logical way, illustrating the causes and effects of low economic growth in local communities.

Lack of protection and Management of Natural Resources

Causes

Marine Turtles

Lack of Appropriate legislation & enforcment

Culture & Traditions

Lack of Awareness

Planned or Unplanned Development

Unregulated and incorrect fishing techniques

Other Natural Resources:
Forest
Wildlife
Waterfall
Others

Problems

Increasing Poaching Activities

Erosion of Beach & Heavy Siltation, quarrying,

Bycatch of Turtle

Effects

Decreasing number of Turtles Nesting in Dominica

Figure 2. Problem Tree: Factors Affecting Sea Turtles.

Although there are relatively few individuals directly involved in sea turtle hunting, legal-ly or illegally, the number of turtle meat consumers is significant in Dominica. Cultural beliefs about the protein content and the potency of turtle meat drive demand for turtle meat in the country, and especially in rural areas. Recognising this, it is important, once again, to identify causal factors and their effects – this time as they relate to the depleted status of the nation's sea turtle resource (Figure 2).

The use of Problem Trees in strategic planning assists stakeholders in identifying impor-tant cause and effect relationships, and then prioritising actions needed to reduce or eliminate root causes.

III. GOALS FOR THE SEA TURTLE CONSERVATION AND TOURISM INITIATIVE

The goal of the Sea Turtle Conservation and Tourism Initiative is to: Enhance the standard of living for persons living in communities near major sea turtle nesting beaches, while at the same time offering greater protection to nesting turtles and their young. The operational objectives are as follows:

A. Economic Development

- ❑ *To promote training and self-employment skills for community residents as nature tour guides and other entrepreneurial activities.*
- ❑ *To enhance the development of other sectors of the community by fostering the establishment of backward and forward linkages between Heritage Tourism and local agriculture, cuisine, accommodation, and other services.*

B. Socio-cultural and Community Development

- ❑ *To develop community awareness of the significance and value of the natural heritage of areas within and around the communities.*
- ❑ *To enhance self-worth and develop civic pride toward culture and the way of life.*
- ❑ *To realize the economic potential and other developmental benefits that could accrue from multiple use management of natural ecosystems within and around communities.*

C. Environmental Protection

- ❑ *To increase participation in natural resources management by community residents.*
- ❑ *To promote Heritage Tourism as a tool for the sustained conservation of natural ecosystems and species, by using educational programs and the spectacular ecological behaviour of egg-laying Leatherback turtles as the principle focus for this activity.*
- ❑ *To safeguard the nesting habitat of sea turtles, and conserve other natural resources, from negative human and other impacts.*

Heritage Tourism can generate significant direct and indirect employment among community residents in the areas of tour guiding, accommodation services, agriculture, and story telling. These service industries are, by their nature, labour intensive.

The goods and services required to support a tourism market are broadly based. Hence, activity in the tourism sector will in turn stimulate a wide range of related sectors such as public works, agriculture, food and beverage services, transportation and communications, and accommodation.

Tourism can be a force for improving the quality of life in a community by building capacity, creating jobs, and creating business opportunities that contribute to social stability. Maintaining a quality environment and protecting natural and historic resources instils pride and provides additional recreation and leisure opportunities for citizens. Cultural development is encouraged by the involvement of community groups and individuals.

IV. STRUCTURE OF THE SEA TURTLE CONSERVATION AND TOURISM INITIATIVE

> **RECOMMENDATION 1**
>
> **Participating community-based organisations should remain independent and work together with DomSeTCO under the terms of a negotiated *Memorandum of Understanding* (MOU).**

After consultation (during preparation of this Action Plan) with partners, experts and other stakeholders[2], we recommend that community-based organisations participating in the Sea Turtle Conservation and Tourism Initiative work together with DomSeTCO under the terms of an MOU (Figure 3) in order to implement programme activities.
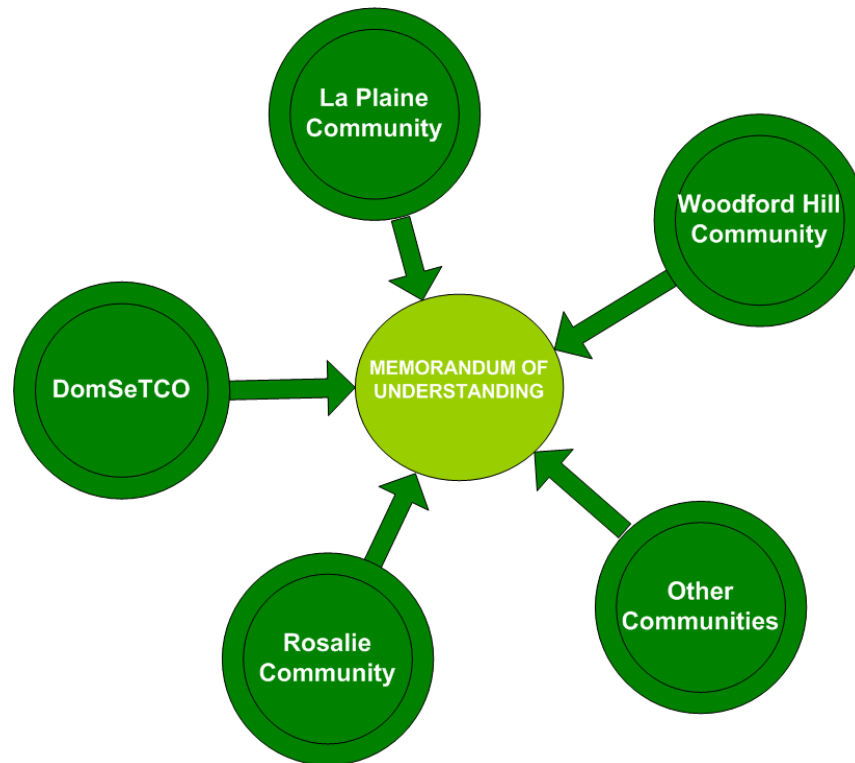
Figure 3. Proposed Relationship Between Participating Community Groups and DomSeTCO.

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[2] Errol Harris (Chairman, DomSeTCO); Hon. Ron Green (Parliamentary Representative); David Williams (fmr Director, Forestry, Wildlife and Parks Division); La Plaine Village Council; Community Organisations (NEWCEPT- North East Wildlife Conservation, Environmental Protection & Tours, NET – Nature Enhancement Team, LEAP – La Plaine Environmental Advancement and Protection); Samantha Letang (Quality Control Specialist, Discover Dominica Invest Dominica); Andrew Magloire (Director, Fisheries Division); Minchinton Burton (Director, Forestry, Wildlife and Parks Division); Beverly Deikel (Owner, Rosalie Bay Nature Resort); Sam Raphael (Owner, Jungle Bay); and several members of the La Plaine community.

DomSeTCO itself needs to develop a core professional staff dedicated to: *nurturing its community partners* (e.g. hosting training and peer-exchanges, maintaining an inventory of tags and tagging equipment, assisting with fund raising and marketing, mediating disputes, bringing new communities into the program), *facilitating a responsible and standardised* national sea turtle conservation, management and livelihood program (e.g. liaising with Government, soliciting an annual Forestry permit to conduct the work, overseeing data collection, conducting program evaluations, maintaining a technical reference library), and generally being proactive about ensuring programme success (see Section IV "Structure of the Sea Turtle Conservation and Tourism Initiative": DomSeTCO) and Figure 4.
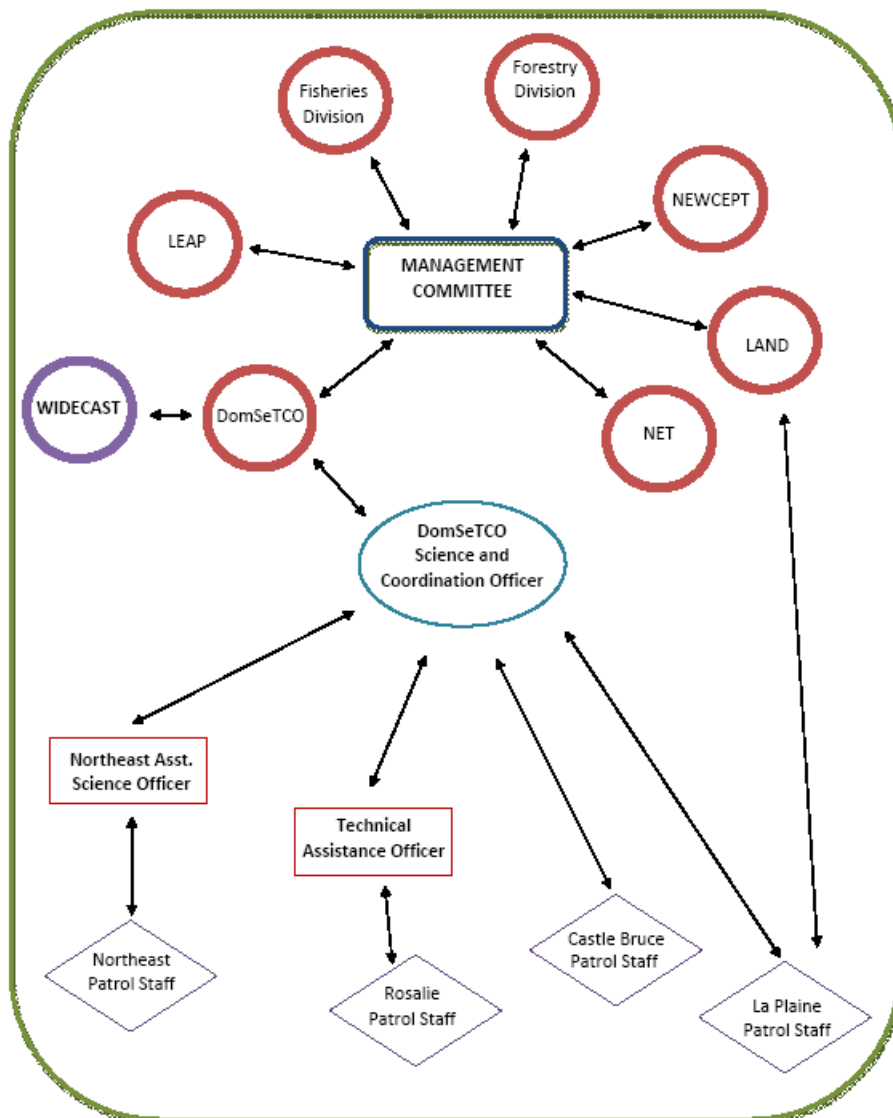
Figure 4. Proposed Organisational Chart for DomSeTCO. The figure is based on the operational scheme adopted in 2008. The most experienced beach patrollers (e.g. Dexter George at Rosalie) should also have an important and ongoing role to play in mentoring, data oversight, and operational stability.
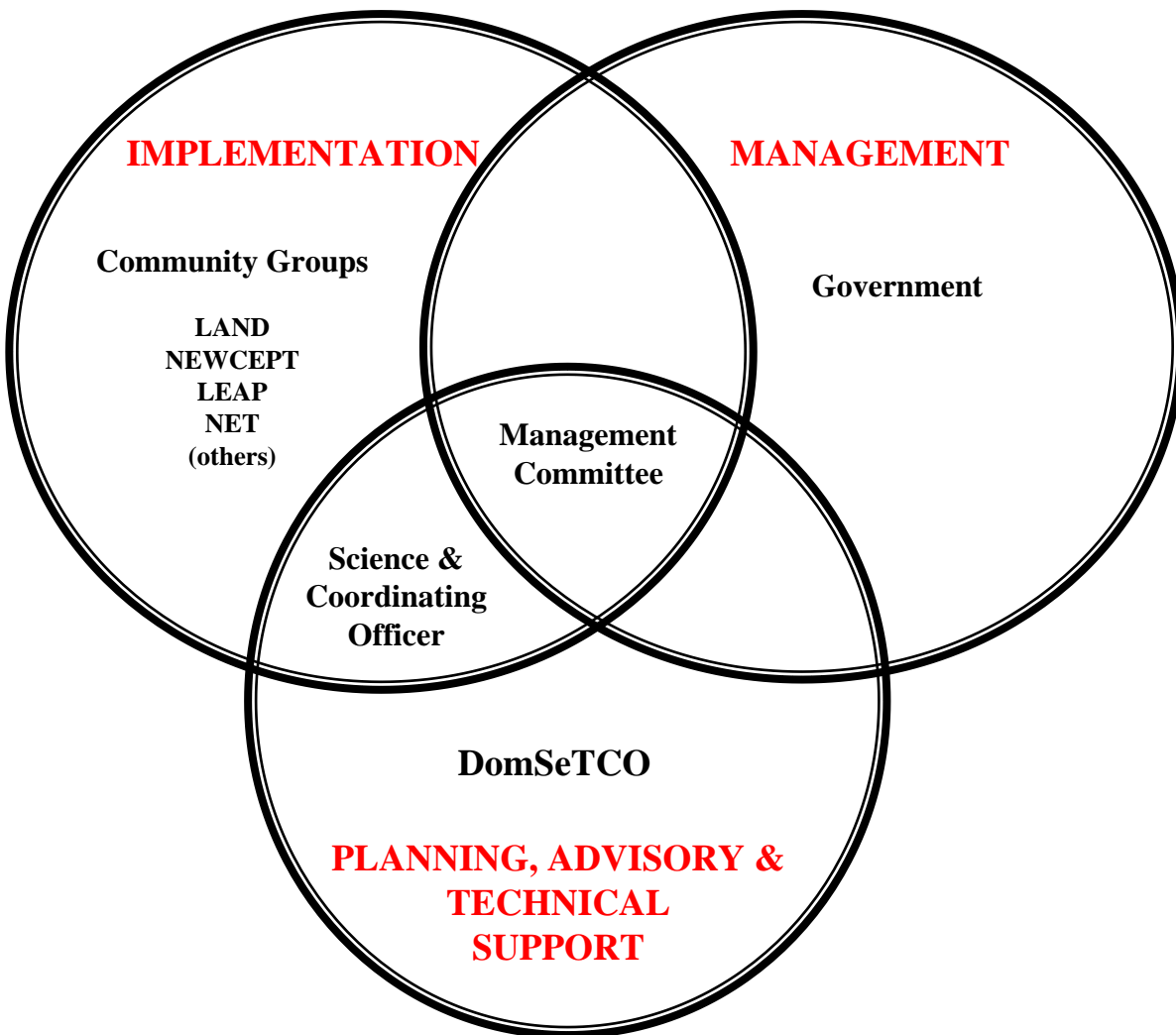
Figure 5. Proposed Communication Structure for Inclusive Sea Turtle Conservation in Dominica.

Figure 5 shows the roles of the various stakeholders in the conservation of the sea turtle resource in the Commonwealth of Dominica. Although all stakeholders should be expected to play a key role in programme planning, management, implementation and evaluation, Figure 5 emphasizes which stakeholder/ sector has overall responsibility in the development of these various aspects of sea turtle conservation. The diagram also defines the flow of communication among stakeholders, demonstrates the importance and need for all players to collaborate with each other, and identifies the Management Committee as representing the main coordinating body for the conservation development process. Finally, we highlight the formal and informal impetus for communication and collaboration.

There is clearly a common interest among community groups, government agencies, non-governmental organisations (NGOs), and private entities (for example, eco-lodges in the area) in more effectively protecting the sea turtles that utilise at least four major nesting beaches: La Plaine (Bout Sable), Rosalie, Cabana (Londonderry), and Castle Bruce. There is equal interest in working together for the greater good of the people living in communities near these nesting beaches.

Based on discussions with community organisations operating in each of these areas, we recommend that these organisations remain independently registered and administered – each having their own name, structure, bylaws, procedures and policies – and that they collaborate together under the terms of a mutually negotiated memorandum of understanding (MOU). This recommendation provides for very specific advantages:

First, members of each organisation can first take the time to build capacity within their organisation without having to devote time and effort to defining and building an umbrella organisation.

Second, each organisation is fully aware of its roles and responsibilities under the MOU, and each organisation can fully develop unlimited parameters for organisational growth and expansion outside of this MOU.

Third, since each individual organisation is already germinated, each can create and develop its vision and strategic plan without parental or sibling influences.

Fourth, each organisation will have equal involvement in decision-making, planning and implementation of activities developed within the context of the MOU.

> ### RECOMMENDATION 2
>
> **A *Sea Turtle Management Committee* should be established to be comprised of representation from organisations participating in the Sea Turtle Conservation and Tourism Initiative MOU, with organisations to be added or removed as time goes on and as appropriate to the success of the programme. In addition, there should be representation on the Management Committee from natural resource agencies (Forestry, Wildlife and Parks; Fisheries) and other agencies (e.g. tourism, education, law enforcement), along with research organisations, and the private sector, as needed, in order to achieve an organised and positive implementation of the Sea Turtle Conservation and Tourism Initiative.**

Due to the particular needs and common interests of stakeholders, it is recommended that a Sea Turtle Management Committee (hereafter, the Management Committee) be established with the goal of implementing the Sea Turtle Conservation and Tourism Initiative at a strategic level.

The Management Committee's main function is to facilitate coordination and communication among stakeholders, to lobby for the appropriate legislation and policy

support, and to holistically make decisions that are in the interest of Dominica while eliminating the obstacles that face individual communities.

The Committee should aim to strengthen all its members, empowering and supporting them to accomplish more than they could achieve individually or alone, and it should be structured to solicit and incorporate the views of international experts, such as WIDECAST and the University of the West Indies, as needed.

Among its responsibilities should be to periodically review and update this Action Plan to address important priorities that will assist in more effective coordination and implementation, and to ensure that there is consensus for the implementation of recommendations prioritised by the Action Plan. One high priority recommendation might be to develop a *Five Year National Sea Turtle Research Plan for Dominica* (see Recommendation 9), for which DomSeTCO would take the lead in terms of coordination and implementation.

RECOMMENDATION 3

The roles and responsibilities should be *clearly defined for each member* organisation of the Sea Turtle Management Committee.

Dominica Sea Turtle Conservation Organization (DomSeTCO)

"The Dominica Sea Turtle Conservation Organization (DomSeTCO) is dedicated to promoting strong linkages between science, policy, and public participation in the design and implementation of sea turtle research, conservation and education actions in the Commonwealth of Dominica." ~ *Articles of Incorporation, 2007*

DomSeTCO is an independent body created inter alia as a response to the need to evolve the Rosalie Sea Turtle Initiative (see "What should be the role of RoSTI?", below) from a place-based project to a national programme able to coordinate, replicate and evaluate sea turtle conservation and tourism nation-wide. As requests to extend the coverage of RoSTI further and further from its base in Rosalie Bay increased, it became clear that the structure of RoSTI – a pilot project begun in 2003 as "a practical example of how the sustainable management of depleted sea turtle stocks could be accomplished at the community level in Dominica" – did not lend itself to perpetual expansion. After five years of operation the project was stretched thin, and the challenge threatened to undermine its success.

In response, a dedicated group of individuals from the governmental and private sectors, met to create a national organisation specifically designed to help communities build their capacity to participate collectively and professionally in sea turtle research, management and conservation activities, as well as sea turtle ecotourism.

Given its charter and intentions, DomSeTCO's role should include but not be limited to the following, and these responsibilities must be clearly stated in the MOU:

- develop projects, in partnership with community organisations, that will result in achieving livelihood and conservation targets, while building strong community capacity
- promote sustainable conservation projects with strong community involvement, including projects that accrue financial benefits from conserving migratory sea turtles known to occur within our waters and on our coastal beaches
- encourage support initiatives that promote grassroots involvement in decision making, planning and implementation
- advance the development of projects that provide technical assistance and that build capacity within participating organisations and groups[3] who organise themselves with similar interests in conserving biodiversity and promoting grass-roots involvement in project implementation
- create alliances with programmes in other Caribbean countries where community members are benefiting economically, socially, and ecologically from their sea turtle conservation efforts
- forge consensus in the design and implementation of a *Five Year National Sea Turtle Research Plan for Dominica*
- invite the expertise of national and international experts to ensure that the best available science is used in the conservation and management of Dominica's sea turtles
- ensure, through a Science and Coordination Officer, that data collected on sea turtles and their nests remains consistent among nesting beaches, and of high quality
- promote national awareness of sea turtle biology and conservation issues
- serve as a national "clearinghouse" for sea turtle information, including keeping a reference library and a national sea turtle database, as well as engaging with WIDECAST to ensure that stakeholders are aware of training, funding, and other relevant opportunities at the Caribbean level

What should be the role of the Rosalie Sea Turtle Initiative (RoSTI)?

The Rosalie Sea Turtle Initiative was established in 2003 to study and conserve the sea turtles of Dominica, with an emphasis on Rosalie Bay: "The project objective is to demonstrate in Dominica how sea turtle conservation and sustainable management of depleted stocks can be achieved. The project is science-based, and features a strong public awareness component. Information generated by the project will form the basis of management recommendations to Government, the tourism sector (e.g. coastal ho-

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[3] These organisations and groups could include: community organisations, Invest Dominica & Discover Dominica, Government offices (Ministry of Tourism, Ministry of Agriculture: Forestry, Fisheries), and Dominica Hotel & Tourism Association, as well as international partners such as the University of the West Indies, Wider Caribbean Sea Turtle Conservation Network (WIDECAST), United Nations Development Programme (UNDP), and Nature Seekers in Trinidad and Tobago.

teliers), and community stakeholders, including those interested in participating in profit-making non-consumptive use options such as a 'Turtle Watching' programme open to the public." ~ *Research Activity Registration Form, Ministry of Agriculture and the Environment (Forestry, Wildlife and Parks Division), 2003*

The project was designed by and funded through WIDECAST, in partnership with Government, the Rosalie Bay Nature Resort and surrounding communities, and its successes include increasing the level of protection at Rosalie and elsewhere (for example, consistently reducing poaching at key sites), increasing national awareness of the plight of Dominica's depleted sea turtle stocks, and also creating community awareness which generated sufficient interest by the community to want to become (and stay) involved in the process. With the exception of a trained biologist hired to manage the project each year, project staffing (e.g. beach patrollers, event coordinators, artists) was entirely local.

As interest in the initiative grew – due inter alia to media attention, local festivals and sponsored events, and part-time employment – RoSTI responded to requests to extend its conservation and protection activities to other beaches, including Bout Sable (La Plaine), Londonderry, Castle Bruce, Turtle Point, and Hampstead. The project's Annual Reports (Franklin et al. 2004, Byrne and Eckert 2006, Byrne 2006, Stapleton and Eckert 2007) document this expansion and the data collected from nesting beaches studied.

Among RoSTI's objectives was a commitment to help build community-level capacity towards local management and control. For the most part this did not occur, and the reason it did not occur could be attributed to the fact that RoSTI as an organisation did not evolve with its own success. Responding to interest on the part of communities to become more involved would have been an evolved responsibility of RoSTI. Therefore, RoSTI should have redesigned its function to help develop community organisations for sustainable community management of this project.

Faced now with interest far beyond RoSTI's mandate to study and conserve the sea turtles of Rosalie Bay, and recognising the impossibility of accomplishing that mandate in light of evidence that sea turtles, especially Leatherbacks, nest freely among and between Dominica's beaches (meaning that protecting them at only one or two sites leaves them vulnerable to poachers elsewhere), what is needed is a national co-ordinating body tasked with "*developing projects, in partnership with community organisations, that will result in achieving strong livelihood and conservation targets, while building strong community capacity*" (see DomSeTCO, above).

We envision that a new generation of projects will build on the foundation laid by RoSTI, but that these projects will be community administered in a collaborative way, taking advantage of the strength provided and mutual support enabled by the MOU (see Recommendation 1) and the Management Committee (see Recommendation 2). *Together these projects will move Dominica in a very natural evolution from a <u>single project</u> (RoSTI) to a coordinated <u>national programme</u> for sea turtle conservation, management, and livelihood development.*

With this in mind, we recommend that the RoSTI Project Manager serve DomSeTCO and the Management Committee during a year of transition (2008), as follows:

- Train a Science and Coordination Officer (SCO) in sea turtle biology, field techniques, and database management.
- Assist community organisations in establishing and managing a beach patrol schedule during the annual nesting season (e.g. assist in creating standardised criteria and procedures for rostering), and communicate these procedures to DomSeTCO (through the SCO) for future reference.
- Assist community organisations in monitoring and evaluating the beach patrol schedule (e.g. how to supervise payment by monitoring "time-card" documentations), and develop standardised forms and procedures for same.
- Assist community organisations in ensuring that their field methods are in line with international best practices (e.g. join patrollers on the beach – and provide feedback to them – during regular visits to the island in 2008).
- Empower community organisations to build public awareness. For example, help groups to use computer programmes (such as PowerPoint) that create awareness presentations and help to develop their outreach skills by making presentations to schools and other audiences. Provide participating community organisations with a model sea turtle PowerPoint presentation that each can update and personalise for their own outreach efforts.
- Empower community organisations to be more effective in engaging the media and potential programme sponsors; e.g. develop a press release, organise community and national awareness events, write grant proposals, successfully solicit sponsorships.
- Help to ensure continuity and consistency in how sea turtle data are collected, assembled, archived and reported at both community and national levels [4]
- Serve as a technical resource to DomSeTCO, to the community organisations, and to Government in providing updated information on best practices of data collection (including analysis and reporting), field techniques (e.g. tagging, moving eggs, controlling predators, reducing lighting), and conservation outreach, upon request.

Following the year of transition (2008), a decision can be made concerning any on-going role for RoSTI. Perhaps the most logical outcome is that communities in the vicinity of Rosalie Bay will continue the work of RoSTI as part of a community-level portfolio, and in partnership with other community-led projects and DomSeTCO under an MOU (see Recommendation 1). In this way, the name "RoSTI" would cease to exist but the work would continue uninterrupted.

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[4] Database management skills may not be present, at least not initially, at the community level – so a decision to centralize all the data with DomSeTCO (to be maintained and shared, transparently, among data collectors) might be a good way to begin. Pooling data at the national level is also useful because the same turtles are nesting throughout the island – meaning that not much is learned, at least from a management standpoint, by analysing data at the level of individual beaches.

Community Organisations

Each participating community should have clearly defined roles and responsibilities which should be developed in partnership with DomSeTCO through the Management Committee for the implementation of the project. These responsibilities, which should include but not be limited to the following, must be clearly stated in the MOU:

- Creating awareness in the community and environs
- Conducting nightly beach patrols to tag, record and protect nesting turtles, their eggs and young
- Managing paying visitors, both local and international, on the nesting beaches where tour guiding is approved
- Conducting beach clean-ups on a regular (at least annual) basis
- Assuming responsibility for managing tour guides and beach patrols, including staff and wages, rostering, discipline, evaluation, and team-building
- Developing a management and accountability system with the Management Committee, including participating in whatever data-sharing agreement is mutually agreed upon
- Raising funds for project implementation and supporting DomSeTCO in its efforts to raise funds for capacity-building and other shared priorities

Community organisations should also foster and build a good relationship with residents and other organisations in their community. This is a good strategy for building community support that can encourage members to participate in the community building process. The involvement of the community organisations in site management through product development, community empowerment, networking, site promotion, and fund raising is crucial to the success of these groups. The efficiency of each organisation will depend on its ability to acquire the necessary technology, and to develop its human resources to implement and manage projects.

Government

The divisions of Forestry, Wildlife and Parks, and of Fisheries, are critical to the development process and are very important partners, supporters and mentors. Government has the legal mandate and responsibility for safeguarding the patrimony of the nation, and the Forestry, Wildlife and Parks Division has the authority to grant (and withdraw) permits to work with sea turtles (e.g. tag measure, relocate eggs, exhume hatched nests). Their contributions, which should include but not be limited to the following, should be clearly stated in the MOU:

- Provide community groups with technical support in establishing mechanisms to achieve effective nesting beach management, including crowd control and eliminating poaching
- Provide ecotourism development support and community access to resource use with permits and other mechanisms

- Provide support to the Management Committee in the context of governance and policy compliance on use of natural resources
- Provide technical assistance in record-keeping and database management, as well as other research-related aspects
- Provide information on government-related assets, including funding, training, facilities use, library materials, etc.

As needed, other government agencies, including tourism, youth, education, and law enforcement, should be invited to participate on the Management Committee. Each member of the Management Committee has an important role to play in supporting community-based research, conservation and outreach agendas, in addition to supporting the national service that communities play in dissuading poaching at the nation's major sea turtle nesting beaches.

Wider Caribbean Sea Turtle Conservation Network (WIDECAST)

In the past the Wider Caribbean Sea Turtle Conservation Network, a Caribbean regional network of sea turtle scientists, has contributed tremendously to Dominica's sea turtle research, conservation, and outreach programmes and, as such, should be invited to continue to provide such support. WIDECAST's contributions, which should include but not be limited to the following, should also be clearly stated in the MOU:

- Provide updated information on sea turtles and their status in the Caribbean Sea
- Play a major role in developing a *Five Year National Sea Turtle Research Plan for Dominica* in collaboration with the Management Committee comprised of DomSeTCO, Government agencies, communities and other stakeholders
- Encourage integrated resource management by assisting stakeholders in the establishment of techniques and mechanisms that will ensure a coordinated and collaborative approach to research and long-term population monitoring
- Provide specific recommendations for the management and recovery of depleted sea turtle stocks, based on internationally recognised standards
- Provide technical assistance to strengthen the capacity of DomSeTCO to:
  - o fundraise for project implementation and institutional strengthening, as well as to support research, management, conservation, population monitoring, community development, and public outreach priorities
  - o determine and evaluate sea turtle conservation priorities, and to promote science-based management planning and project implementation
  - o facilitate institutional strengthening, both of DomSeTCO itself and of the community organisations, such that local groups are able to identify, analyze and resolve issues related to sea turtle management and protection
  - o assist Government in modernising the regulatory framework, including the formulation of legislation, policies and standards, as appropriate, for the management of sea turtles at local and national levels
  - o encourage and promote institutional strengthening and technical capacity in government agencies responsible for sea turtle management

V. COMMUNITY CAPACITY FOR IMPLEMENTING THE SEA TURTLE CONSERVATION AND TOURISM INITIATIVE

<u>**RECOMMENDATION 4**</u>

Assess (and develop) the capacity of DomSeTCO and community organisations to assume responsibility for decision-making, planning and management of their role in the Sea Turtle Conservation and Tourism Initiative.

Capacity Building

The capacity of the community organisations, including DomSeTCO (see Appendix I), is a major element that needs to be assessed in order to determine what training needs exist. It is necessary that efforts be directed in building organisational capacity, particularly in the context of resources and readiness (see below). Community capacity is built through experience – by directly involving the community in decision making, planning and management of Turtle Watching (ecotourism) and conservation efforts.

Capacity building is often defined as "action that improves an organisation's effectiveness in achieving its mission", and it can be grouped into four areas:

- *Organisation Life Cycle* - new organisations need help to get established, and existing organisations need help to focus on and improve efficiency
- *Organisation Resources* - time, commitment, skills, expertise, money, facilities, and equipment
- *Organisation Readiness* – ability to take on the task for which the organisation was established
- *Access to Support and Resources* - trainers, tools, and networking support

New organisations often require assistance in start-up, such as:

1. *Registration*
2. *Bylaws*
3. *Financial Procedures*
4. *Other Policies*
5. *Code of Conduct*
6. *Strategic Planning*
    a. *Vision*
    b. *Mission*
    c. *Goals*
7. *Roles & Function*
8. *Programme Development & Management*

To attain – and maintain – capacity, organisations must invest in training. In particular, the following areas should be emphasised:

- Strategic planning
- Conflict management
- Small business management
- Environmental education and awareness
- Food preparation and service
- Craft design and display
- First aid

- Standard procedures (e.g. developing a Tour Guide Handbook for Dominica)
- Fundraising: proposal writing and follow-up

For organisations involved in conservation goals and formal tour guiding, it is essential that guides receive continuous training and feedback. Emphasis should be placed on:

- Visitor management
- Self / Guide management
- Basic sea turtle biology and conservation
    - Reproduction/nesting cycle
    - Ecology (e.g. migration, feeding/diet)
    - Basic research (e.g. tagging, measuring)
    - Data collection
- Record keeping and reporting
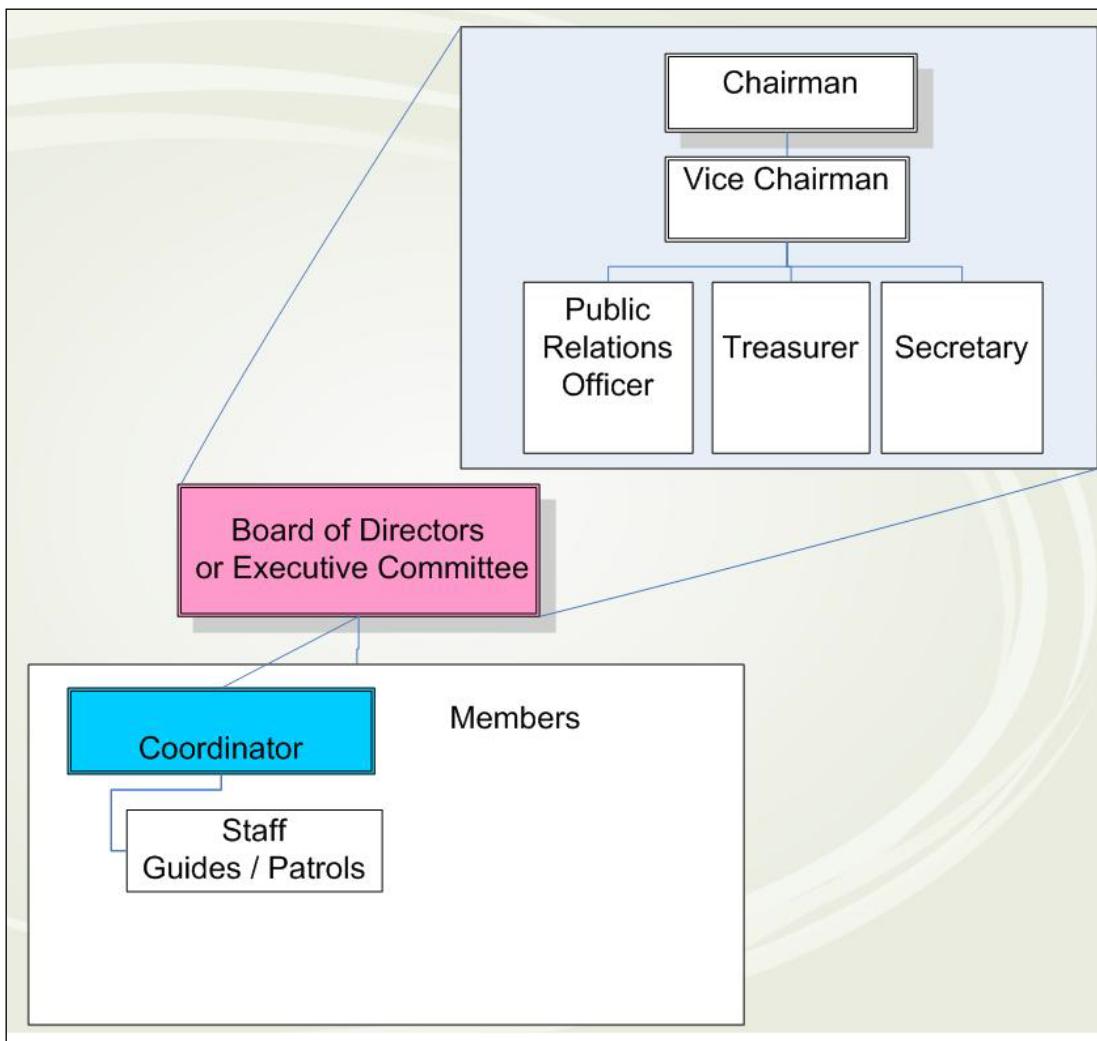
Figure 6. Proposed Organisational Structure for Participating Community Groups.

RECOMMENDATION 5

Institutional development **of community groups should seek to build capacity for managing tour guides and beach patrols, including staff and wages, rostering, discipline, evaluation, team-building actions, and professional training.**

Institutional Development

As a way forward, the community organisations should first engage themselves in a strategic planning exercise designed to develop a VISION of their future, as well as establish appropriate GOALS & OBJECTIVES leading to the achievement of their vision. This recommendation applies to all stakeholders; if it is not done, community groups, in particular, tend to whither and fade.

Community organisations should also engage in activities that assist in and promote the development of a STRONG COHESIVE EXECUTIVE TEAM supported by a formal structure within the organisation. The experience of community groups involved in sea turtle conservation and tourism elsewhere in the Caribbean (such as Nature Seekers in Trinidad) is that sustained participation of community members is likely to increase – and their confidence in the organisation is likely to increase – when a formal structure is in place.

With a strong internal executive team, a community organisation is better placed to contribute to the Management Committee (see Recommendation 2) and to play an important role in a science-based sea turtle conservation programme.

While a community organisation's sea turtle conservation and tourism programme is in its infancy stage, the organisation's Board of Directors or Executive Committee (see Figure 6) should take an administrative and/or leadership role in coordinating the activities. At a later stage, when the work is further developed and funding is available, the group should seek to hire a Coordinator. Groups should ensure that the selection process is highly transparent to avoid the germination of new conflict. The Coordinator should have the responsibility of creating value for the organisation, and ensuring quality and professional delivery of products and services to the target group (see also Sammy and Baptiste 2008).

Whatever structure is decided upon, it is important to evaluate the organisation as the work is defined through management and implementation. The structure can always be revised accordingly to meet the needs of the organisation and the needs of the community in the implementation of its activities.

RECOMMENDATION 6

For effective implementation of the Sea Turtle Conservation and Tourism Initiative, each community organisation should develop an *Operational Management Plan* **specific to the nesting beach where their tour-guiding activity takes place.**

Operational Management Plan

An Operational Management Plan for each nesting beach managed by a community organisation should be developed separately, and the terms of the Plan should be clearly understood by the responsible community organisation. Given the nature and diversity of sea turtle conservation, the supporting systems should be in place in order to ensure the proper management of both the sea turtles and the visitors at each of the nesting beaches: an Operational Management Plan explains these supporting systems.

The following elements, not necessarily in order of priority, should be given sufficient and careful consideration in the development of the Operational Management Plan:

Database Management Information System (DMIS) for record-keeping

There should be an appropriate system of record-keeping for the management of the programme both from a conservation and from a tourism prospective. A Database Management Information System for tracking customers, tour purchases (ticket sales), product purchases, and payment of staff for guiding and beach patrolling must be developed to increase efficiency in and provide for evaluation of daily operations.

The organisation must also document the number of tour guides working each night, as well as per year. These records will make for easy payment of stipends and facilitate evaluation of guides (e.g. it will be clear whether the guide worked the required hours).

Visitor flow and financial recording

An appropriate visitor management system for payment of tickets and guide fees should be developed (see Section VII, "Infrastructure and Essential Policies for Implementation of the Sea Turtle Conservation and Tourism Initiative").

If Government requires that tickets (permits) be purchased in order to gain access to major nesting beaches at night, these should be sold at the same time – at 3 or 4 designated sale centres – that guide tickets are sold.

Each nesting beach will have a carrying capacity (see Recommendation 7), and therefore only a certain number of tickets can be sold. Communication among ticket sale centres, as well as with tour guiding organisations, is necessary on this point. For example, if there is a limit of 100 tickets available per beach per night, the sales centres must know when 100 tickets have been sold by all the centres combined. When that limit is reached, sales staff must indicate that the night is full and that tickets are no longer available – but that tickets are available for a later date (or perhaps for another beach). This kind of record-keeping is very important because the community organisations are scheduling guides based on a certain number of visitors. If too few, or too many, visitors arrive at the beach, conflict can arise.

There should be records kept of the number of tour tickets sold to foreigners and to locals; these records assist in annual planning, evaluation, and report writing. An appropriate accountability system should be adopted; e.g. triplicate receipt books should be printed and used whereby the original and one copy are given to the visitor and one copy remains in the sales office. The visitor has the option to retain the *original* for their files, but the visitor must give the *copy* to their guide at the nesting beach so that verification of payment is assured *before* the tour begins.

Finally, a Customer Database is an important asset for a community organisation. Such a database can be use for making tour or product decisions based on customers' purchases and choices (e.g. which beach, meal, craft, etc. is preferred). The database can also be used to promote the upcoming season and/or other nature tours or offerings by sending e-mails, or direct mail, to former customers. There should be a notation made in the file if the Customer has indicated that s/he does not want to receive any information from the organisation.

Scientific data collection and record-keeping

Regular emphasis should be placed on the collection of data on nesting sea turtles and their young. The accuracy and clarity of information is of paramount importance to the conservation effort, and will reflect on the professionalism of the community. Accurate information is also important to Government offices charged with protecting the sea turtle resource on a national level, and it is through these offices that communities receive their permits to work with these species during an annual period of protection (see Appendix II).

Attempts must be made to ensure that community groups are both well-trained and adequately supervised (monitored) for at least two weeks on a nightly basis by an experienced data collector – such as the RoSTI Project Manager or a Forestry Officer – before delegating full responsibility to the community. Throughout the season, spot checks by Fisheries and/or Forestry staff, or DomSeTCO, must be done. In other words, there must be both a process of transition and a recognition that data collection and record-keeping are big jobs that can only be successfully undertaken with the support of all partners working together.

> *Following international best practices and keeping accurate records*
> *is the difference between good conservation practice and a programme*
> *that simply exploits and harasses sea turtles.*

Data forms (see Stapleton and Eckert, 2008) should be compiled nightly by the community organisation. Forms should be sequentially numbers and filed, in order, in a notebook. Data forms should be reviewed regularly, ideally weekly, by the DomSeTCO SCO who is responsible for national database management.

RECOMMENDATION 7

For effective implementation of the Sea Turtle Conservation and Tourism Initiative, each community organisation should develop a *Community Eco-tourism Handbook* with standards for managing visitors, carrying capacity, health and safety, and staff protocols (e.g. hiring, training, evaluation).

Community Ecotourism Handbook

A Community Ecotourism Handbook for each nesting beach managed by a community organisation should be developed separately, and the requirements described by the Handbook should be clearly understood by the responsible community organisation and its partners. The following elements, not necessarily in order of priority, should be given sufficient and careful consideration in the development of the Community Ecotourism Handbook:

Visitor management system

There must be a tour bookings system for everyone, including local residents, and there must be an efficient flow from one activity to another during every tour.

To facilitate these bookings and to centralize record-keeping, 3-4 payment centres should be selected and developed. It is at these payment centres that visitors must purchase a guide ticket and, if required, an entrance fee to the nesting beach (see Section VII, "Infrastructure and Essential Policies for Implementation of the Sea Turtle Conservation and Tourism Initiative").

To support and maintain the carrying capacity system (see below), all visitors, including local residents, should book their tours in advance. Because of the high level of interest shown in Turtle Watching by local communities, the community group should have some flexibility to achieve management of residents who may occasionally make spontaneous visits for Turtle Watching.

A comprehensive *Community Ecotourism Handbook* should include guidelines on the following:

- *Visitor Management*
- *Research Projects*
- *Methods for Data Collection*
- *Procedures for Data Collection*
    Turtles
    Visitors
- *Staff Roles & Responsibilities*
- *Management*
- *Implementing Community*
- *Health & Safety*
- *Support of Land Owners*
- *Beach Facility*
- *Others*

There should be an orientation on every tour, and this should be given shortly after the tour arrives to the beach. The orientation is a very critical part of the tour, and its objective is to prepare the visitor for the experience. The orientation should include a short history of the community, including how the community became involved in turtle conservation efforts, and a description of the tour that is to come including guidelines for safety of visitors and protection of turtles.

The flow of visitors from one point to the next should be efficient and smooth. The visitors must not be inconvenienced and must not be rushed. Visitors will be paying for their service so the tour guide's attitude must be friendly but firm with respect to rules and guidelines for the tour. At all times the service must be professional and efficiently carried out.

Tour guiding is a service industry, and the success of your business relies on the visitor having a good experience. This does *not mean* that the visitor is in charge! The far majority of visitors want a professional experience: they want everyone to follow the same rules, they want to feel as though they are not disturbing the turtles during the delicate period of egg-laying, and they want the tour guide to maintain respect and order during the tour.

Cautionary note: Critical to good visitor management is the fact that the community organisation should always have a plan to deal with unexpected events. What if a large group comes to the beach without a booking? What if communication between the payment centres broke down and twice the carrying capacity of tickets were sold for a particular night? What if a visitor is drunk? What if a poacher is encountered? What if a visitor trips and breaks his ankle?

In all cases and at all times the tour guide must have reliable communication (radio, cell phone) both to the group (for example to call for additional guides or other assistance on short notice) and to law enforcement officers who have an established relationship with the group and are reliable in their response to a troubling situation.

Depending on the nature of the tour, accommodations, transport, meals or other services might be involved. Again the tour guide should be well informed of these aspects and able to call (radio, cell phone) for clarification or additional assistance in any aspect of the tour, as needed. This communication should function from *all areas* of the beach, not just from the entrance point, parking lot, or visitor centre.

Carrying capacity for beaches

The Community Ecotourism Handbook should be clear on the carrying capacity that has been set for the Turtle Watching programme on all the beaches. This is to ensure that the development of tourism does not compromise the carrying capacity of the ecosystems.

Too many times unmanaged tourism results in environmental destruction. The elements that should be considered when arriving at this capacity figure is to look at the number of turtles, the number of tourists, the number of guides (and other services, such as accommodations or meals), the amount of parking and the level of development of other infrastructure, and the price per tour in order to arrive at a balance between the protection of the turtles, the ability of the program to provide a good tour guiding service, and the economic viability of the ecotourism programme.

There are several aspects of carrying capacity. First there is the total number of tickets that can be sold for each beach each night. Then there is the number of visitors that can be handled by each guide. Finally there is the number of visitors that should be standing around each turtle. These are very important decisions that must be made by each organisation.

~~ Recommendation: 1 turtle – 1 tour guide – 20 visitors ~~

Sample calculations: If the beach generally has many turtles and 20 people are allowed around each turtle, the carrying capacity might be 100 people – 5 guides, each with 1 turtle and 20 visitors. If there are few turtles or the beach is narrow and cannot accommodate 100 people or if the community only has 2 trained tour guides, then the decision might be made to establish a carrying capacity of 40 visitors – 2 guides, each with 1 turtle and 20 visitors. Lower carrying capacity makes it easier for everyone to see the turtle if there is only one turtle that night – e.g. the tours might alternate – first one tour for 15 minutes, while the other waits at a distance, then the other tour approaches for 15 minutes, and so forth.

Cautionary note: Selling too many tours can result in:

- sub-standard service (e.g. the guide will be overwhelmed, visitors will be unable to hear the orientation or tour presentation, visitors will be unable to see the turtle, rules for beach behaviour will be ignored)
- ecosystem harmed by too many vehicles and too many people on the beach (e.g. too many people walking on the beach is known to increase erosion and reduce nesting habitat)
- disruptions to turtle nesting, such as by noise or lights, so that it becomes less likely that the turtle will return to that beach for her next nesting

In each of these cases, the result is that the economic viability of the programme is lowered and the community may be unable to sustain tour guiding as a livelihood. If, on the other hand, a reasonable carrying capacity is established, the visitor receives professional service, the environment is not degraded, and the turtles are not disturbed – the tour guide livelihood will remain sustainable and profitable. The decision is yours.

Field equipment

Equipment, such as clipboard (with pencils and data forms), radio/cell phone, binoculars, whistle, head lamp, camera (including video camera), etc. might be needed and should be appropriately packed for protection from wind, sand, rain, etc. The availability of radio (or cell phone) communication is extremely important in the delivery of the service and the safety of the guides and visitors. The method of communication should be tested and found to be very effective on the beaches. If the programme allows tagging of the sea turtles – and if tour guides are conducting the tagging – then the use of appropriate tags and tagging equipment is needed.

See Eckert and Beggs (2006) and Stapleton and Eckert (2008) for details on field techniques for tagging, measuring, etc. as well as standard data forms and advice for data collection and record-keeping. Tagging can serve both conservation and management purposes, as well as being used to facilitate the development of an Adopt-A-Turtle programme (see insert).

To view an example of an Adopt-A-Turtle program, visit the website of Trinidad's Nature Seekers organisation at http://natureseekers.org/adoptaturtle.html. [5]

Health and safety of guests

The health and safety of visitors should be taken seriously by the community. Guides and beach-patrollers should be equipped with radio communication, and they should ensure that safety procedures are in place for the successful enjoyment of the tour. There should be an Emergency Procedure Plan developed by each community, with help from stakeholders. This should include partnerships with law enforcement and medical personnel which are aware of the nightly activity on the beach, will monitor a radio or cell phone through the night, and will respond to a call for help.

Caution should be taken to ensure that guests' property, such as vehicles and personal belongings, are secure at all time. As Dominica is still developing its tourism industry, insurance coverage should be explored, if appropriate.

Administration and staffing

There should be an organisation in the community responsible for the overall management of the conservation and tourism programme, working closely with Dom-

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"Adopt-A-Turtle"

Tagging can serve both conservation and management purposes, as well as being used to facilitate the development of an Adopt-A-Turtle programme.

Adopt-A-Turtle programmes offer visitors a chance to support your programme beyond just the purchase of a tour – and it also offers people who will never visit Dominica a chance to support your work, as well.

It is ideal (but not absolutely necessary) that turtles be tagged so that 'parents' can 'adopt' an individual turtle. When the nesting season is over you can send, by E-Mail, detailed information to each 'parent' on how many times the turtle nested, whether her nests hatched, etc.

If turtles are not tagged, then visitors can be encouraged to adopt 'a turtle' but not necessarily a particular individual.

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[5] "The Adopt-A-Turtle programme was initiated to raise funds to sustain the Matura Turtle Conservation Programme. The objectives of the Adopt-A-Turtle programme is to improve Nature Seekers financial capability to provide and sustain the Sea Turtles Research Programme at Matura. Once you are convinced that this is a project you would like to be involved with, the special attached form must be completed for our records. Later a *Certificate of Adoption* will be mailed to parents soon after. At the end of the turtle nesting season, general information will be sent out to parents (of adopted turtles) that can be determined from the data collected. The cost for adopting a turtle is US$ 35.00. This is an annual fee that will be made for the care, protection and conservation of your turtle. We highly recommend that school, groups, organizations, and individuals adopt turtles. Adopting a turtle can be a wedding gift, birthday gift, Mother's day, Father's Day gift or a personal gift. This is a very meaningful way to express friendships!"

SeTCO and Government (e.g. Forestry, Wildlife and Parks; Fisheries). A Coordinator, delegated by this community organisation, should be in charge of the implementation of the sea turtle ecotourism project in close collaboration with the interagency Management Committee under the terms of the MOU (see Section IV: "Structure of the Sea Turtle Conservation and Tourism Initiative"). Guides should be under the supervision of the Coordinator and efforts should be in place to develop a professional approach in executing duties.

The community group should ensure that there is another person, besides the Co-ordinator, involved in the management of the project. This could be an assistant to the Coordinator, a Master Guide, etc. This is to prevent the adverse effect of the departure of any one administrator on the project. Similarly, additional guides should be trained and upgraded in order to ensure that there is consistency in the quality of service provided at all times.

It is important to employ different "categories" of guides. New guides should start at a lower rank and rise, depending on the criteria set for promotion: e.g. *Apprentice Guide* for the first year, then proceeding through ranks *Guide I*, *Guide II*, *Guide III*, achieving the title of *Master Guide* after 5 years, assuming excellent ratings and evaluations during this time. This will facilitate and manage the issue of equity, and provide for self-improvement and promotion. Guides with more experience should be compensated appropriately. Tour guides, whether new or experienced, must:

- Be well-informed, outgoing generalists who can talk about a wide variety of topics involving the destination and not just be informed on the natural history of one specific area or just be informed in one subject of expertise.
- Be environmentalists who can inform and motivate their clients on environmental issues without being confrontational or overly controversial in their views.
- Be well informed about potential impacts, and be willing and able to prepare their clients well in advance about the rules of travel.
- Be diplomatic but direct if rules are broken and be able to take corrective action
- Be spontaneous and able to opportunistically take advantage of opportunities for learning.
- Be equipped with a "Guide Kit" that includes relevant field guides, trails maps, charts, extra binoculars, and first aid equipment.
- Know how to communicate with clients without always lecturing. Two-way communication involving input in a dialogue is highly important, and can lead to a learning process for the guides and other visitors.

Specific duties of tour guides, whether new or experienced, are to:

- Educate, inform, manage, and enlighten visitors.
- Work closely with the tour group leaders to assure a smoothly run tour.
- Adjust the schedule, when necessary, to maximize the tour (for example, giving a little more time if no other tours are waiting).
- Be professional at all times.

- Influence visitors' behaviour around sites and attractions.
- Know how many visitors are on your tour (or in your group) and be sure everyone is accounted for at all times!
- Be on time, in uniform (if appropriate), and well-groomed for duties.
- Show consideration and respect for others, including other guides, at all times.
- Promote (including by your own example) that littering is prohibited.
- Follow directions and instructions from superiors.
- Have a spirit of fun!
- Know the prices of all tour products (e.g. tours, souvenirs, meals, transport).
- Ensure that all payments have been made to the organisation.
- Be responsible for giving out Visitor Evaluation Forms, and taking charge of other tour-related reporting.
- Be dedicated to staff meetings, training opportunities, and other organisation-related commitments.

RECOMMENDATION 8

For effective implementation of the Sea Turtle Conservation and Tourism Initiative, each community organisation should develop a *Marketing Plan* to address strategic objectives, market trends, retail products, and competition.

Marketing Plan

A Marketing Plan should be developed be each community organisation. The following elements, not necessarily in order of priority, should be given sufficient and careful consideration in the development of the Marketing Plan:

Marketing objectives

The goals and objectives of marketing are:

- ❑ To create awareness of the special biological event of the nesting process of the Endangered Leatherback turtles (and other sea turtles) in Dominica.
- ❑ To develop and stimulate the uses of heritage/nature tours and other economic activities in the community such as Host Home (see Section IX: "Sustainability Network: Economic Linkages to Sea Turtles"), local crafts, and other heritage and/or nature tours.
- ❑ To create financial sustainability by encouraging visitors to use the services of the communities, thereby encouraging maximum visitor spending in the community and in support of community organisations and other residents.
- ❑ To create a positive and unique image for the communities by providing unique and very high quality services for sea turtle viewing, nature tour guiding, and other community-based experiences (e.g. cultural festivals, youth activities, craft expositions, sports events).

Marketing strategies and branding

'Adventure' – according to the Oxford dictionary – means inter alia "an unusual, exciting and daring experience". This is going to be a new experience for Dominica – offering a community-based sea turtle tour led by local people. Therefore the tour should be given a name that will entice Dominicans to try the service in a community: **La Plaine Turtle Watching Adventure**, **Rosalie Turtle Watching Adventure**, **Londonderry Turtle Watching Adventure**, **Castle Bruce Turtle Watching Adventure** (and so on) are recommended. It is important to know the name of the beach in the brand of the product because there are different locations where permits and tours will be sold. Using the name of the community in the brand will also assist in building community pride.

Many nature-conscious individuals, both locals and foreigners alike, want to be part of nature's unique experience. This puts the communities in control in offering such an adventure-type experience. Also because it is the plan to involve the community in the project, it enables the service offered to be unique. Since the community members involved tend to feel that they are a part of something different/unique and important, it is likely that they will share their experiences a lot. They will try their best to maintain and preserve its reputation, helping the product to stand out.

Showcasing the communities working together with other stakeholders – such as by brochures, site fliers, posters in hotels, postcards on sales, and a village sign – will help to realize marketing goals.

The most inexpensive and efficient way to promote Turtle Watching and other tour services is to build a quality product that will influence clients to spread the word about the good service. The result is that, with no additional effort (beyond providing an excellent tour), the organisation will benefit from repeat customers as well as those referred by satisfied customers. The asset most worth protecting in any tour guiding business is the satisfied customer!

Product strategies: emphasise community

The main product strategies should be elements of "local community" and "nature" combined with good facts in every aspect of the experience, and these should be presented in every tour available to visitors. The use of local guides, local craft, local cuisine, locally sourced products (e.g. organic produce), local culture and the natural attractions in the area will indeed enhance the experience and develop a unique image of the services that will be offered.

The focus will be to generate income through the use of the Turtle Watch Expeditions which will open the tours up to more foreigners, while encouraging locals to participate in the developing Adventures.

Turtle Viewing – this can be an indelibly imprinted moment, as guests have a first-hand opportunity to witnesses nesting by endangered sea turtles.

Because these giant reptiles will nest 3-7 times each season (and return at 2-5 year intervals), protecting the sea turtles means that income is assured year after year (as opposed to killing the sea turtles, which means that income is only derived once and then it's gone forever). The main element of the tour is the Turtle Watching. The whole tour is planned to make it as interesting and enjoyable as possible, offering more than just turtle viewing. If the turtles do not come to nest, a wonderful experience will still be obtained.

Heritage Tourism - this offers the guest an opportunity to be directly involved with the cultural expressions, values, local cuisine, customs and folklore of Dominica's local communities. The use of story telling, myth and legend can play a major role in making the guest experience very special and memorable.

The combination of culture, recreation and nature as a total package is very innovative compared to the average product offered currently in Dominica, and in the Caribbean Region in general. The product is enhanced by the fact that no two communities are alike and therefore, no two communities provide the exact same service or experience.

Competition, including identifying the target audience

Competition can be identified by using three approaches: organisations making the same product or service; organisations that are within the same strategic group (i.e. organisations that satisfy the same consumer need, or follow the same strategy in a particular market or industry); and any product that is cheaper and has the potential to attract customers away from the Nature Tour Experience. Table 1 identifies some of the many activities that can compete with the Nature Tour Experience, and therefore can affect the likelihood that a community-based product will be successful.

PRODUCT OR SERVICE	LEVEL I PRODUCT/ SERVICE FORM	LEVEL II PRODUCT CATEGORY	LEVEL III GENERIC COMPETITION SUBSTITUTE PRODUCT	LEVEL IV BUDGET COMPETITION
Nature Tour • Turtle Tour • Waterfall • Mountain Hike	Hotels, Tour Operators, Tour Guides, Areas/ Destinations that offer similar service(s)	Nature Experi-ence, Health focus (e.g. spa), Entertainment	Typical "Nightlife", Party, Restaurant, Night Club	Beach (or River) Party, Gym/ Spa, Stay home, Enjoy a day at the beach

Table 1. Levels of Competition that Compete with the Nature Tour.

There are various mediums by which promotional efforts can be made. These include websites, brochures, posters, photos and videos, radio and television exposure, and word-of-mouth are all ways to get your message out. Also, if national standards are met, Discover Dominica Authority (www.discoverdominica.com), Dominica Hotel and Tourism Association (www.dhta.org) and other official outreach sites will promote Turtle Watches and other community-based tour services.

Communication and promotional efforts should be directed to the following target audiences (i.e. consumer groups):

- Community Residents, including members of the community organisation, members of the community, and media representatives;
- International Visitors, including both leisure and eco-tourists; and
- Visiting Friends and Relatives.

Community Residents:

- *Employees/Members of the community organisation*: The goal of maintaining morale and providing employees with an indication of the results of their efforts is often the prime objective of marketing efforts. Organisational notices on bulletin boards, direct mail, and annual reports are some of the methods used to communicate with this group.

- *Community members*: Those persons who live and work in the community in which the community organisation operates should be the targets of Public Relation efforts. Such efforts may involve informing the community of activities that the organisation is engaged in, e.g. reducing pollution, beach clean-ups, protecting wildlife, providing employment, conducting research, emphasising civic pride. The effort here is to demonstrate to the community that the organisation has the welfare of all in mind. Special effort should be made to reach the members of the community to prepare them for the expansion of tourism.

- *Media*: Perhaps one of the most critical of external public relation activities is that directed toward the media. The media determines what you will read in the newspaper or see on television, what is "news" and how this news is presented. Because of the media's extreme power, they should be informed of the actions of the community. This will assist in developing support for conservation initiatives and also creating local markets. In addition, any opportunity to promote the programme in special magazines and/or periodicals should be encouraged.

  These outreach efforts should be done by the community, with guidance from DomSeTCO. DomSeTCO should take responsibility for encouraging the media to cover the activities of the community organisations, and should work with community-based sea turtle coordinators to ensure that each organisation has the capacity to interact with the media; e.g. that they have contacts inside media offices, that they are aware of how to submit a press release, etc.

International Visitors: Know your audience! "The core target group for ecotourism are 30-59 years old with higher education and above-average income" (Tomás 2002). This group is increasingly interested in the natural experience is seeking new and innovative ways to enjoy their vacations. This means that the targeted communities need to ensure that the product is well-developed to meet the need of the visitor and to compete with existing tourism and destination products. These tourists include eco-tourists, scuba divers, honeymooners, adventure tourists, and beach vacationers. Forging partnerships with local travel agents is useful, as is making sure that information is available at tourism centres; e.g. major hotels, Internet cafés, cruise-ship ports, airport immigration lounge, museums and other public attractions.

Visiting Friends and Relatives: A significant number of Dominicans are living abroad and regularly visit friends and relatives on-island. There is a great opportunity, therefore, to attract these visitors through local promotion to the area. Special discount packages should be prepared for this sector, as they often travel in large numbers (family groups).

Market trends

Tourists are always looking for new experiences and trying to discover new destinations. Aside from growing as an activity, tourism is changing "shape" and important new trends are emerging: for example, research shows that people are taking shorter vacations (but more of them) and that tourists are traveling in groups and are taking vacations closer to home (http://www.unwto.org). Clearly it is important to stay informed about these trends, especially as they pertain to Dominica and to the Caribbean region in general.

An important recent trend is that tourists are demanding more from the destination in terms of protecting the environment and ensuring positive impacts on communities. Hence, there is tremendous growth in the "new" tourism: ecological, cultural, heritage and agro-forestry tourism. This trend is largely due to demographic, economic and cultural changes related to the shrinking size of households (families) and the increasing urbanisation and migration of populations. Other trends affecting tourism are the increase in the number of dual-career partners in households, and more intense interest in conservation and 'green' issue, including making a personal contribution to safeguarding the global environment (http://www.unwto.org).

Turtle Watch tourism, if undertaken in the true spirit of ecotourism, which focuses on the appreciation and preservation of nature, aligns well with recent moves within the Caribbean to emphasise the region's biodiversity assets, the need for sustainable income opportunities at the community level, and the need for greater conservation of natural resources. The Special Committee on Sustainable Tourism within the Association of Caribbean States (of which Dominica is a member), has long sought to ensure that destinations can attract visitors – but in a way that does not harm the physical environment or the communities that surround them. These values are enshrined in the Convention on Sustainable Tourism Zone of the Caribbean (STZC), signed at the Third ACS Summit in December 2001 in Margarita, Venezuela and its Protocol.

VI. FIVE-YEAR NATIONAL SEA TURTLE RESEARCH PLAN

RECOMMENDATION 9

A *Five-Year National Sea Turtle Research Plan* for Dominica should be developed, highlighting information gaps and research projects needed to inform and improve sea turtle management and conservation at a national scale.

Research and Protection of Sea Turtles

In support of the Sea Turtle Conservation and Tourism Initiative, a *Five-Year National Sea Turtle Research Plan* (hereafter, the Research Plan) should be developed for Dominica. The Research Plan need not be lengthy but should summarise what is known, identify information gaps, describe projects that could address those gaps, and present a time-table and budget for implementation. The objective should be to ensure the recovery and survival of sea turtle populations in Dominica, including protecting egg-bearing females from shoreline development and direct take onshore and from fisheries interactions offshore.

The Research Plan is necessary for managing the development of projects, in the sense that projects should seek to contribute meaningfully to sea turtle conservation and management and, as a priority, either fill gaps and/or maintain long-term data collection efforts (*note*: sea turtle datasets become more valuable as time goes on because of the unique management value of information [e.g. growth, clutch frequency, remigration timing, habitat use] associated with tagged individuals seen over and over again). In addition, the Research Plan should promote the collection of baseline data against which to evaluate the effects of tourism (e.g. potential harassment of egg-laying females, compaction of nests from foot traffic along the beach, disorientation of hatchlings).

The emphasis on nightly monitoring of nesting turtles should be continued, and attempts should be made to develop and use evolving strategies, based on the experiences of the communities, to achieve a high degree of commitment to nightly beach patrol. Community managers, government agencies and other stakeholders need to know how many turtles are nesting and at what sites (beaches) in order to efficiently manage the Turtle Watch programme. Such data will also assist in managing and safeguarding the sea turtle resource from a national prospective.

Additional to patrols, the community should engage in activities related to education and awareness. Beach clean-ups, for example, should be an annual community-led activity before the turtle nesting season and efforts should be made to get the media, environmental groups and schools to participate. Clean-ups remove debris that can pose a danger to nesting turtles (and to tourist), foster civic pride in the surroundings, and also to highlight the up-coming Turtle Watch season.

At the present time there appear to be six (6) nesting beaches that would benefit from community-led beach patrols to monitor sea turtle populations and, in turn, these communities are best positioned to contribute information that is most useful to management. These beaches in the North are: Cabana (Londonderry), Turtle Point, and Hampstead, and in the South East: Coffee (Rosalie), Bout Sable (La Plaine), and Castle Bruce. Beyond simply monitoring sea turtle populations, regular patrols also reduce poaching and other illegal activity on the beaches. Each community group should invite and maintain a good relationship with the local police service in the area. Similarly, the police should understand the work being done by the communities so that, when called upon, the community group can expect a prompt response time. For the development of the Research Plan, the advice and support of WIDECAST should be obtained; their technical expertise would clearly be an asset to strengthen the plan.

VII. INFRASTRUCTURE AND ESSENTIAL POLICIES FOR IMPLEMENTING THE SEA TURTLE CONSERVATION AND TOURISM INITIATIVE

> **RECOMMENDATION 10**
>
> **The Sea Turtle Conservation and Tourism Initiative cannot be successful without the *development of supporting infrastructure*, including payment centres, land access, beach facilities (an area for arrival, waiting, and interpretation), etc.**

Payment Centres

To facilitate tour bookings and to centralize record-keeping, 3-4 payment centres should be selected and developed. It is at these payment centres that visitors must purchase a guide ticket and, if required, an entrance fee to the nesting beach. The payment centres should be centrally located in popular areas for both locals and foreigners in order that potential clients might have convenient access to purchasing Turtle Watching tours. If purchasing a tour is an easy procedure it will attract many visitors, especially locals. When purchasing a ticket, visitors should be asked to complete a Tour Guide Visitor Form with contact (local address and telephone number, which would be needed in order to contact them if the tour was cancelled, e.g. due to bad weather).

It is important that personnel of these offices communicate between centres in order to facilitate carrying capacity management (see "Carrying Capacity").

An appropriate accountability system should be put in place to ensure that the funds collected on behalf of the communities (e.g. from the purchase of tours) is deposited with the respective community group(s) in a timely way and without meddling into the internal accounting policies of these groups.

Visitor Facilities

At the present time, no major nesting beach has any kind of visitor facility for accommodating clients on tours. As a priority, attempts should be made to develop facilities by the community groups or to create alternatives to ensure visitor comfort and convenience. The facility must provide shelter from wind, rain and the roar of the surf so that everyone can <u>easily hear</u> the tour guide.

In a beach facility, licensed tour guides conduct a prepared tour briefing and present slide shows or movies appropriate to the tour. This serves to involve clients while they await a turtle to come on shore. This is also an opportunity for guides to assemble prior to receiving their tours, to offer information about related services (e.g. other tour packages), and to display community crafts and other retail products.

A professional designer or architect should be involved in the plans for the beach facilities. The ideal facility need not be fancy, but must offer: protection from the weather; a secure storage area for project field gear, interpretation materials (e.g. slide projecttor, brochures), retail inventory, and emergency and first aid supplies; a supply of potable water; electrical connection; plumbing (toilet, sink); simple seating, such as wooden benches; a white-washed interior wall against which to project slide shows or movie.

Any facility must be constructed with the sea turtles in mind – for example, no lights should be visible from the nesting beach and incoming traffic (whether vehicles or foot traffic) should not negatively affect the nesting habitat or the conduct of the tours. No construction should occur on the beach, or seaward of the line of permanent vegetation.

Beach Access

Acquiring lands (or partnership for use of lands) in the area of the nesting beach in order to have proper visitor control and to provide protection of the nesting turtles is essential to implementation of the sea turtle conservation and tourism initiative. To this end, attempts should be made to partner with the land owners or to acquire lands bordering major sea turtle nesting sites, such as Cabana (Londonderry), Turtle Point, and Hampstead in the Northeast and, in the Southeast, Rosalie and Bout Sable (La Plaine).

Predictable and safe beach access is very critical to the success
of community-led Turtle Watch tours.

In addition to early emphasis on partnership or acquisition, the appropriate regulatory framework must be adopted by Government, with citizen input, to ensure that visitors have purchased a ticket in order to gain access to the nesting beach at night (see Recommendation 11). At the present time, access to the beaches in the Northeast is through private and State lands; access to the Rosalie beach is by private lands; and access to La Plaine by private and State lands.

RECOMMENDATION 11

For effective implementation of the Sea Turtle Conservation and Tourism Initiative, *persons must purchase a ticket granting access to the nesting beach during the annual nesting season* **and be accompanied, while on the beach, by a trained and licensed Tour Guide.**

Regulating Beach Access

Lack of a clear policy on concessions (see above) and an inadequate framework for beach control (with respect to nighttime access in particular), are among the biggest challenges to a successful community-based Turtle Watch product.

The level of awareness and enthusiasm created by RoSTI over the years has significantly increased the number of visitors coming to the beaches to watch turtles lay their eggs. The current inability of communities or national authorities to establish and manage an appropriate carrying capacity for the beaches (see Recommendation 7) negatively affects turtles and their young, as well as decreases the quality of tour services. This, in turn, harms the ability of the community organisation to sustain the organisation, to retain its members' participation, to generate a profit, and to achieve its mission.

Even a community group that has trained and committed to a sustainable Turtle Watch product can be easily undermined by "guides" from other organisations or private sector entities better able to attract and transport clients.

These competing entities can, through market access and other assets (e.g. better access to international advertising, comfortable vehicles, or hotel guests), exclude the community group from the Turtle Watch product. This result defeats the purpose of the Sea Turtle Conservation and Tourism Initiative, which is to "enhance the standard of living for persons living in communities near major sea turtle nesting beaches, while at the same time offering greater protection to nesting turtles and their young." (see Section III, "Goals for the Sea Turtle Conservation and Tourism Initiative").

With this in mind, Government should grant a single concession per nesting beach and require that all visitors to that beach be accompanied by a trained and licensed Sea Turtle Tour Guide during nighttime hours (6:00 PM to 6:00 AM, daily). The guide must be employed by the organisation receiving the concession. The client (visitor) must have purchased a ticket in advance, and must have that ticket available to give to the guide upon their arrival at the nesting beach.

Without a ticket, the visitor cannot walk out onto the nesting beach between the hours of 6:00 PM and 6:00 AM, from 1 March to 31 August each year.

How this policy is actualised – for example under what legislative or Ministerial authority – should be decided by Government, following the appropriate consultation, ***as a matter of highest priority***.

Why is regulating beach access important?

Without a system of regulated beach access that is perceived to be fair to all stake-holders, there is no business environment in which to develop a sustainable tourism product.

By purchasing a ticket in advance (see "Payment Centres"), the visitor gains access to the nesting beach, is assured of a professional guided tour, and agrees to abide by pre-established conditions (e.g. no alcohol, controlled use of lights). In this way, the serious current problem of undisciplined and uncontrollable crowds disturbing the sea turtles and preventing responsible ecotourism, can be greatly reduced.

Regulating access is also related to the issue of concession (see "Competition Among Community Groups") in that competing tour services will confuse and discourage visitors, compromise the regulatory framework (the interloper might say, "You need a permit to walk with that Guide, but not with me"), make it difficult from a procedural standpoint to respect carrying capacity (see Recommendation 7), and introduce conflict at the nesting beach which will degrade and ultimately destroy the tourism product.

How might beach access be regulated?

Londonderry, Rosalie Beach, and Bout Sable (La Plaine) should receive an appropriate designation – perhaps Conservation Enterprise Zones, or Sea Turtle Management Areas – in order that certain conditions might be established. The legal route for this designation must be identified and pursued at the appropriate political level.

Trinidad and Tobago: a model for Dominica?

According to Fournillier and Eckert (1998), the 1960's and 1970's were dangerous years for sea turtles in Trinidad and Tobago. Thousands of pounds of meat (mostly Hawksbill and Green turtles) were traded annually from beaches and fishing depots throughout the country, but it was the killing of the giant Leatherback turtles that caused the most concern. The Leatherback killing was illegal because it targeted egg-bearing females hunted on nesting beaches during the closed season.

As awareness of the turtles' plight grew, so did pleas for conservation action. There was rising alarm that an unsustainable number of turtles, and especially adult females, were being killed each year. Bacon (1973) estimated that 30% of turtles nesting at Matura Beach on the East coast – and 100% of turtles nesting near villages on the North coast – were killed every year. Despite persistent efforts by local conservation groups and Forestry officials, it was not possible to provide complete surveillance of prominent nesting beaches along these remote coasts. In 1983, Dr. Carol James (Director, Wildlife Section) wrote, "Every year scores of rotting carcasses could be observed along beaches of Trinidad as a result of illicit slaughter by poachers who are unable to cart away all of the meat, and the major portion is left to rot."

Formal law enforcement alone was insufficient to curb this trend. A more effective and innovative approach was needed. In the 1980's, the Wildlife Section of the Forestry Division turned away from traditional "top-down" natural resource management and made a commitment to what has since become known as "community co-management". This growing trend in wildlife management emphasises a partnership with rural communities, whereby communities are trained and sensitised to a locally occurring and threatened natural resource and, as a result, these communities actively participate in resource protection.

Workshops, seminars and field projects were organised at communities near major Leatherback nesting beaches – and empowering these communities resulted in the formation of groups able to provide suitable services and facilities to a situation that previously lacked organisation and infrastructure.

Today groups such as Nature Seekers; Fishing Pond Environmental and Community Group; Grande Riviere Nature Tour Guide Association (GRNTGA); Toco Foundation; PAWI Sports, Culture and Eco-Club; Nariva Environmental Trust (NET); and the Manatee Conservation Trust in Trinidad – as well as SOS Tobago on the smaller island – are active and informed partners in natural resource conservation, providing beach surveillance, population monitoring, essential biological data, interpretation and outreach programmes, threat mitigation, and habitat maintenance. Many of these groups, based on pioneering efforts by Nature Seekers at Matura, also offer Turtle Watches to bring income into underdeveloped villages well positioned to create small business enterprises aimed at sea turtle conservation through ecotourism.

Critical to the success of these enterprises was the declaration of some of the nation's most important nesting grounds – Fishing Pond and Matura in 1990 and Grande Riviere in 1997 – as Prohibited Areas under the Forests Act (Chapter 66:01 Laws of Trinidad and Tobago). See Appendix III.

The Wildlife Section had considered a variety of legal options to enhance protection to nesting turtles, and had concluded that the only mechanism which could provide legislative support to a suitable range of short-term management actions was a provision under the Forests Act allowing designation of Prohibited Areas and imposing a large fine for entering the Prohibited Area without permission from the Forestry Division.

To address community concerns over the new restrictions, access was regulated only during peak nesting season (1 March – 31 August, annually) and only during nighttime hours (6:00 PM to 6:00 AM). Negotiations with the villages of Fishing Pond, Matura, and Grande Riviere resulted in agreement that all *bona fide* residents of the three communities would automatically receive free permits to allow unrestricted entry to nesting beaches. The Wildlife Section considered this necessary so that villagers could continue to enjoy traditional social interactions on the beach, *as long as such activities did not impact negatively on sea turtles* during the nesting period and as long as they carried their permit with them when they visited the beach.

Permanent signboards at the entrance to the Prohibited Areas alert the visiting public to what types of activities are permitted and what types of activities are not permitted in the management area. Signage explains inter alia that permits are required during certain hours, that beach fires and littering (and other actions that could disturb nesting turtles) are prohibited, that pets must be leashed and vehicles parked in designated areas, etc. The rules and conditions of access are also clearly printed on the back of the permit, and this permit can serve as a useful model for Dominica (see Appendix III).

Today the Turtle Watch programmes of the East and North coast of Trinidad have won several prestigious international awards, poaching has long since ended, and Nature Seekers is the largest employer in the village of Matura. Accomplishing these economic, social and conservation goals could not have been possible without strong partnerships with Government, technical support from international experts, and a pro-active regulatory framework that protected the communities' interests by ensuring that (i) visitors to the beach had to pay a fee in order to gain access, (ii) visitors had to be accompanied by a licensed tour guide, and (iii) only a manageable number of visitors (carrying capacity) were allowed into these Prohibited Areas at night.

VIII. CHALLENGES TO COMMUNITY CAPACITY FOR IMPLEMENTING THE SEA TURTLE CONSERVATION AND TOURISM INITIATIVE

> **RECOMMENDATION 12**
>
> *Identify challenges* **facing community organisations relative to their assuming responsibility for decision-making, planning and management of the Sea Turtle Conservation and Tourism Initiative – and identify solutions.**

The following challenges emerge, at one time or another, in all organisations. These challenges can be crippling in young, inexperienced organisations. They should be monitored and met with effective leadership and solutions.

Leadership and Management

There exists, among Dominica's community organisations, tremendous leadership power which is a very important enabling factor for success. The challenge is seen in the transfer of leadership skills, or succession planning, which is a function of leadership. Leaders must be able to communicate their vision with the group, develop strategies and create an environment for achieving the vision. Only when people grasp the vision can they commit to it, and buy-in is critical to motivating action.

In all community organizations, good management requires some level of flexibility and understanding in managing culture and in reinforcing positive behavior.

Management challenges will be reduced only when roles and function are clearly defined, when policies are understood by all members and staff, when there are clear policies for managing funds, and when people in decision-making positions are genuinely interested in building a community organisation and in meeting both short- and long-term goals.

Standards and Policies

It is difficult to initiate or establish standards and policies in community organisations. By design, when community organisations make policies or set standards they are planning to manage themselves. Executives or Board Members may not want to set appropriate standards and policies, because some of them may be employed by the group and the policies will affect them, as well. Yet, without standards and policy, fairness (or the perception of fairness) can be compromised and the organisation will fail.

Fundraising

Funding will always (always, always) be a challenge. Groups need to be innovative and creative in developing partnerships and in developing projects to help ensure that sustainability is achieved. There has to be a culture of team-building, not self-promotion. Know that it may take several years for the organisation to be financially stable, but also know that by working together, investing in capacity building, and managing finances wisely, success will come.

Organisational Inertia

Organisational inertia does not mean stability and it does not mean "lack of change", inertia represents a situation where the rate of change is low. Community organisations need to be planning consistently, and continuously nurturing the enabling factors necessary for their success. Organisation complacency can cause community groups to lose opportunities. It is also possible to lose members if they feel that the organisation is not effectively creating value. Thoughtful leadership and vitality in the mission are both very important in minimising inertia.

Staff/ Member Turnover

It is possible to have a high turnover of staff and members in community groups early in the development stages. People join organisations for various reasons, including to contribute their time and/or talents, to earn money, to belong, to interact with others, to learn, etc. It is the responsibility to the executive to learn about the staff and members of the organisation and to ensure that their needs are being fulfilled. Failing this, staff and members will go to other places to have these needs satisfied. If this is not done right – and seen as an ongoing priority – community organisations will lose their trained members and staff.

Turtle Poaching

Turtle eating is part of the culture of Dominica: the belief that turtle meat "makes you strong" is widely held throughout the country (Franklin et al. 2004). This traditional knowledge maintains localized demand for sea turtle meat and drives poaching activity. Although killing egg-bearing turtles at the nesting beach is against the laws of Dominica (see Appendix II), many poachers find the motivation to perform this inhumane act.

Because this brutal act focuses on the nesting females, it can undermine any possibility of increasing the current and future sea turtle population. This consumptive way of using the turtles is unsustainable (as demonstrated by population declines in recent decades), it does not broadly benefit communities, and it would not appear to provide any benefit to the nation (for example, the nation's main economic earner is tourism and bloodied carcasses on the beach do not positively contribute to the marketing focus of the "Nature Island"). DomSeTCO should make strategic attempts to address this issue in a direct way, as required by its mission. If the problem continues, the resource for which turtle tourism is based will be diminished and may disappear entirely.

In 2003, the Rosalie Sea Turtle Initiative (RoSTI) conducted a national survey (see Appendix IV, V) and found that the majority (60%) of respondents felt that people should not hunt turtles or collect their eggs, twice the number of those (32%) that believed this should still be allowed. An overwhelming number (95%) of those surveyed, and this was true across age and employment categories, thought that using turtles for tourism was an excellent idea; and 93% also thought that this type of ecotourism had the potential to bring economic benefits to local communities while sustaining an important part of Dominican culture.

The results of this survey support the idea that 'using' the nation's sea turtle resource in ways that generate sustainable income and that do not result in the loss of sea turtle populations are broadly supported at a national level. Therefore, it may be possible to meet the challenges posed by poaching by motivating public support for conservation, emphasising what it means to be Dominican, and opening a constructive dialogue (e.g. concerning more sustainable livelihood choices) with members of the community that rely on turtle killing for their livelihood.

Competition among Community Groups

> ### RECOMMENDATION 13
>
> *"One community group – one nesting beach."* **In order for Turtle Watches to be successful, experience in other areas has demonstrated that the concept of a sole concessionaire is fundamentally important.**

Sometimes more than one community-based organisation will express genuine interest in taking the lead in developing a Turtle Watching product at a particular site (i.e.

nesting beach). In the case of La Plaine, there are at least two groups with this interest – they both have strong leadership and in both cases that leadership is tightly connected to opposing political parties. This can be a very sensitive issue at both the community level and at the national level, and stakeholders should recognise that (i) everyone has a place in the community, and (ii) everyone has a responsibility to contribute positively to the development of the area.

Granting concessions

From a regulatory standpoint, as well as a business perspective, the Turtle Watch ecotourism product at each beach should be controlled by a single organisation with its members fully committed to and certified in tour guiding. This is essential to providing a high quality service to the tourist, avoiding conflict and confusion, and enabling a focus on capacity building and team-building rather than addressing external conflicts. Once the decision has been made to the grant the concession, all groups should be willing to work with the other stakeholders in Dominica to protect the turtles at both localised and national levels.

What this means in practice is that through community-led processes – shepherded, as needed, by a respected agency or other authority – one community group must be recognised as having managerial responsibilities over a particular nesting beach. In other words, one group (for each nesting beach) should be permitted by the Forestry, Wildlife and Parks Division to interact with the turtles (which are fully protected at their nesting grounds, see Appendix II), including tagging, data collection, etc., and that same group is granted a tour guiding concession[6] from the Ministry to conduct a tourism business at the nesting beach.

The history of the development of Turtle Watch tours in Trinidad, for example, has clearly demonstrated that any attempt to facilitate two (or more) groups on the same beach as having the same responsibility is likely to result in community-level conflict, a poor quality of tour service, reduced enforcement and protection of the beach due to lack of accountability (one group blaming the other for deficiencies in record-keeping, beach coverage, etc.), continued poaching, reduced benefits to community residents from unrealized programme sustainability, and reduced benefits to community residents due to time and energy spent in conflict resolution. Far better to take the time, up front, to grant a concession to the group best positioned to attend passionately to the tour business over the long term.

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[6] *Concession*: a contract granting the right to operate a subsidiary business; something conceded by Government or a controlling authority, as a grant of land, a privilege, or a franchise. *Concessionaire*: a person, group, or company to whom a concession has been granted, such as to operate a subsidiary business or service: e.g. a Turtle Watch at a particular nesting beach.

Getting Dominicans to Take Your Services

It is not common for Dominicans to pay for tour services, and introducing the concept of Turtle Watch Tours might meet with some objections, especially since in recent years Dominicans have been going to the beaches to watch turtles without paying a fee and without the benefit of a trained and licensed tour guide. The new, more professional approach to Turtle Watching will require a "soft and gentle" strategy to introduce the population to this new culture.

Also important is that the fee structure be fair and suitable to encourage the population to participate.

Possible examples are:

- Charge Adults $10.00 EC and Children (1-14 years) $1.00 EC
- Charge schools $1.00 for each member of the group
- Provide *bona fide* residents (i.e. residents living permanently within a certain distance of the nesting beach) with free permits, which must be carried when on the beach and must be renewed each year.

IX. SUSTAINABILITY NETWORK: ECONOMIC LINKAGES TO SEA TURTLES

> **RECOMMENDATION 14**
>
> **For effective implementation of the Sea Turtle Conservation and Tourism Initiative, *supporting linkages must be developed with related enterprises* such as small business enterprises, training and education, and research and monitoring.**

Overview

Community Tourism involves hosting and opening up one's community to visitors. Why do people wish to share their community with tourists? One could argue that community pride is enhanced through the act of hosting, or that cultural assets are maintained by preserving them for tourism. But the most important answer, even if it is not openly expressed, invariably relates to direct economic benefits.

Within the tourism industry on a community level there are linkages to be made economically. Some of the basic aspects of how the Community Tourism industry is structured are the same as the international tourism industry; e.g. there is a need to facilitate the development and potential of place-based recreational options such as fishing, hiking, swimming and photography. These options should be tailored and packaged with natural attractions, which together offer excellent merchandising opportunities.

Figure 7 shows the economic activities that can be developed around Turtle Watching to make the experience more rewarding to the communities and tourists. Due to the fact that Turtle Watching is a seasonal activity, generally profitable about six months of the year, it is clear that the more developed these other activities are, the better the chance that communities will achieve sustainability in the areas of tourism, employment, and environmental protection.
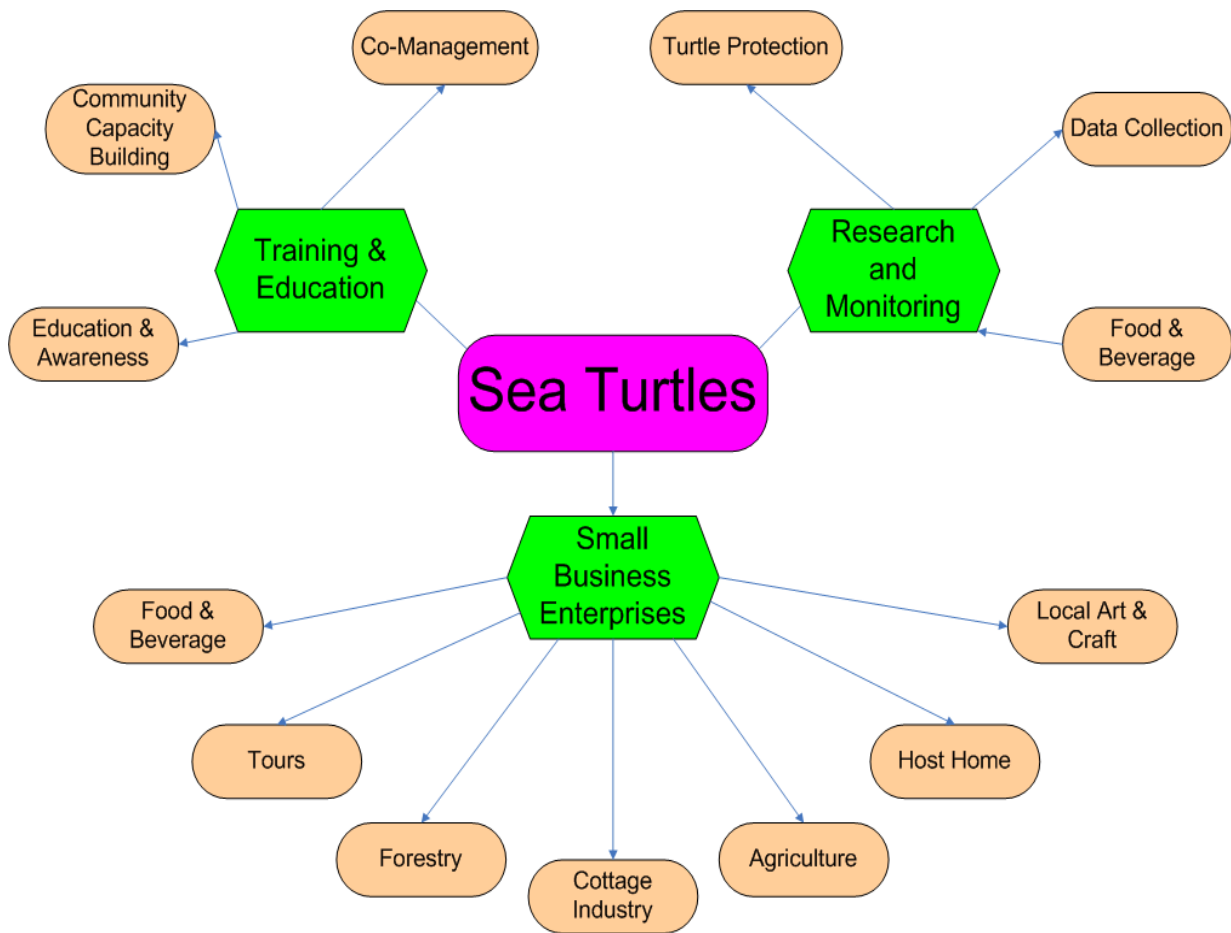
Figure 7. Potential Network of Economic Activities Linked to Turtle Watching at the Community Level.

Evaluating and Prioritising Projects

Economic linkages can be enhanced by undertaking projects designed to emphasise certain criteria. By establishing these criteria beforehand, the Management Committee will be better able to identify projects that meet community needs and reject those that are not as desirable: projects should meet at least three (3) of the following criteria (see Table 2) in order to be considered.

Economic Contribution	The project creates a significant level of income and employment benefits
Environmental Contribution	The project is developed in compliance with existing regulations and legislation governing the conservation and protection of the environment, and the project achieves significant conservation objectives (e.g. reducing poaching through beach presence)
Social and Cultural Impact	The project does not jeopardize the social well-being of villagers
Competitive Impact	The project complements, rather than competes with, existing tourism businesses, and it does not seriously jeopardize the financial viability of any individual enterprise in the community
Tourism Impact	The project adds to the tourism potential of the communities and, by extension, Dominica

Table 2. Projects Prioritised for Implementation under the Sea Turtle Conservation and Tourism Initiative should meet Established Criteria Related to Economic and Environmental Contributions, as well as Cultural, Competitive and Tourism Impacts. *Source*: Criteria adapted from Mills and Morrison (1992).

The following projects, all of which meet at least three (3) of these criteria, were favourably highlighted by stakeholders during interviews conducted as part of the development of this Action Plan.

Turtle Watching

Tourism activities are developing at the present time that include Turtle Watching as a unique tourist product. During the nesting season there have been, in recent years, as many as 400 persons on the nesting beach waiting to see turtles. Clearly there is an opportunity for communities to create a sustainable (albeit seasonal) income flow – and one advantage of this enterprise is that 'word of mouth' is an effective marketing strategy, requiring no cost. The message will go very far if the quality of service is good – but remember that word will also spread if the service is bad. (It is hard to recover from bad reports, always be mindful of your professional services.)

Because Turtle Watch clients gather at a Visitor Facility (see Section VII, "Infrastructure and Essential Policies for Implementation of the Sea Turtle Conservation and Tourism Initiative") prior to going out on the beach (and may remain there for some time before a turtle arrives), there is an opportunity to support other community-based businesses, including the sale of food, crafts, and other tours or tourism-related products.

Create an integrated community ecotourism enterprise

This project will attempt to develop other tour services to include waterfalls, historical sites, agriculture or organic farm tours, and others. This project will create employment generating tourism activities daily.

Tourists should have the opportunity to purchase a local lunch and hear local stories along the way, led by a licensed guide nationally accredited through the State College (Turtle Watch guides <u>must</u> also have had specific sea turtle ecotourism training; e.g. Baptiste and Sammy 2007). Communities trained in sea turtle tourism will be well-placed to participate in this enterprise. Communities should constantly seek to obtain training for residents, especially for guides and small business management, and to conduct outreach and marketing through websites, brochures, and media.

Establish visitor facilities at nesting beaches

Plans for these facilities should be designed with the activities in mind for which the facilities will be used; for example, the design should assist in managing the flow of clients from one point to another (from the moment they arrive), should make provision for slide shows (shown at the beginning of every evening tour), should facilitate that sale of local craft, food and other community services that are relevant to the clients.

Develop 'Host Homes' for accommodation

With the high level of migration from Dominica, rooms in local homes may be unused. At the appropriate time, community organisations should seek evaluate the feasibility of this project as an option for accommodation. This initiative will more widely spread the benefits to residents in the community – in return, residents share their homes and their family experience with tourists as well as providing lodging, meals, and other services. As tourism increases, residents may choose to add guest rooms to their homes, thus promoting economic growth in the area.

Initiate a community tourism exchange programme with Trinidad

Due to the limited resources and opportunities available at this early stage to coastal communities seeking to become seriously involved in tourism ventures, this programme aims to support community partnership in other countries. The exposure that can be gained by community residents can develop and enhance Community Tourism throughout the Caribbean Region. By learning from each other, it will be easier to develop the special niche of professional, community-based tourism products. One example of this training is the "Basic Course on Community-Based Sea Turtle Ecotourism, Guiding and Management" (Baptiste and Sammy 2007) taught by Nature Seekers to community organisations in Dominica in 2007, made possible by support provided by the United States Agency for International Development.

Others

- Agricultural or Organic Farming (to generate food, and as a tourist attraction)
- Bird Watching
- Health Tourism (for example, hot springs or hiking/fitness)
- Education and Awareness Projects

RECOMMENDATION 15

For effective implementation of the Sea Turtle Conservation and Tourism Initiative, a *mechanism for long-term monitoring and evaluation is needed*.

X.   MONITORING AND EVALUATION

The following indicators are provided by the Sustainable Economic Development Unit (SEDU), University of West Indies (St. Augustine), and have been adapted to be relevant to the local community level. The Economic, Social, and Environmental impacts of the Sea Turtle Conservation and Tourism Initiative should be monitored through the use of these indicators to ensure that the initiative is positively benefiting the community. Note that these indicators are long term in nature, emphasising the importance of creating capacity to monitor results and impacts over time.

Economic Indicators of Sustainable Tourist Development

1. Employment:
    a. total number of people employed including specialized staff such as cooks, managers, and accountants
2. Net Foreign Exchange Earnings for the community
3. Domestic linkages; involving agriculture and other local services
4. Externalities impact and cost to inter alia human health and the environment
5. Impact on domestic prices (labour, land, housing, food, other consumer goods)
6. Ownership of tourist accommodation and other facilities

Socio-Cultural Indicators of Sustainable Tourism Development

1. Acceptance of access restrictions (especially of residents) to beaches and tourist facilities
2. Contribution of tourist expenditure to:
    a. Maintenance/ preservation/ restoration of natural heritage
    b. Demand for cultural products (goods and services)
3. Community involvement in tourism planning and implementation
4. Impact of tourism on social cohesion/ tension
5. Attitudes of the community toward tourists

Ecological Indicators of Sustainable Tourism Development

1. Waste generation, treatment and impact:
    a. Quantity/ quality of waste generated by the tourism industry
    b. Methods of waste disposal
    c. Ecological impact of waste generation and disposal
2. Ecological impact of tourist to areas, such as sea turtle nesting beaches:
    a. Carrying capacity monitoring (effect on sea turtles, habitat)
    b. Social capacity monitoring (effect on services, quality of life)

XI. THE WAY FORWARD

As noted in the Introduction, the intent of this Action Plan is to invite and guide an on-going dialogue among stakeholders interested in defining and pursuing a viable Sea Turtle Conservation and Tourism Initiative in Dominica. DomSeTCO must now take this Action Plan and present it to the relevant communities and community organisations who have participated in its development, and promote continued discussion concerning "the way forward". The importance of an ongoing dialogue cannot be over-emphasised – it is an essential part of the community consensus building process.

The recommendations in this report can also form an agenda for each community organisation to discuss. Groups need to look at the issues of management of guides and patrols, visitor safety, collection of revenue, accountability, transparency, membership development, community awareness and capacity building, as well as the development of bylaws, financial procedures, policies, etc.

The next step after the community consultations and consensus building is to discuss a way forward with participating community organisations. If the recommendation on setting up of a Management Committee is supported, then Terms of Reference (TOR) should be developed and agreed upon by all stakeholders. The TOR should include the underlining reasons for coming together, the objectives to be achieved, the output at the end of a period, and the implementation of some or all of the recommendations of this Action Plan, including working together to ensure that fundamental decisions – such as those concerning regulated access to the nesting beaches during the annual nesting season – are make in a timely way by Government.

An evaluation should be conducted after a year to determine the level of successes achieved. This evaluation should focus on the structure (including the viability of the Management Committee), Terms of Reference, support of the community groups and other stakeholders, successes within the community groups (and factors enabling these successes), and closely assess the challenges that were encountered and the needs of the program in the future.

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Appendix I:
DomSeTCO "SWOT" Analysis

A review of the internal and the external environment of DomSeTCO resulted in the following description of <u>S</u>trengths, <u>W</u>eaknesses, <u>O</u>pportunities and <u>T</u>hreats. This SWOT analysis is provided to help match resources and capabilities towards achieving success in establishing a community-led Sea Turtle Conservation and Tourism Initiative in Dominica. Given this analysis (Table 3), DomSeTCO should not necessarily pursue the most lucrative opportunities; … rather it may have a better chance for developing a competitive advantage by identifying the best fit between Strengths and Opportunities.

Strengths	Weaknesses
1. Well experienced Coordinator and diversified Board of Directors 2. Established networks with local and international organisations 3. Demand for tours by locals & foreign tourists 4. Strong values in setting goals to help others 5. History of sea turtle conservation in Dominica has built expertise among Directors	1. Lack of organised system for controlling guide fees 2. Lack of knowledge of effective NGO management at the community level 3. Lack of trained and experienced tour guide staff 4. Narrow product line (at this time) 5. Limited financial resources 6. No permanent staff
Opportunities	**Threats**
1. Support from community groups 2. Support of Government agencies 3. Support of regional (Caribbean) experts 4. Demand from hotel operations in the area 5. Bird watching and trail guiding opportunities 6. Craft development opportunities 7. Live turtle watching on the internet 8. Dominica promoting and developing community tourism 9. Dominica attracts eco-tourists (Nature Isle) 10. 5-star hotel development in Londonderry 11. Capacity and support for organically grown produce 12. Sustainable livelihoods/income needed	1. Inability to create sustained benefits for community groups (which may weaken community participation over time) 2. Competition among community groups in La-Plaine 3. Turtle poaching in all communities leading to a decline in the turtle population 4. Threats to beach patrollers from poachers and drug dealers 5. General increase in crime 6. Economic downturn in the country 7. 5-star hotel development in Londonderry 8. Lack of protected beaches, no regulated access 9. Disenchanted community members due to conflict within some community groups 10. Perceived lack of beach access in Rosalie & Turtle Point 11. Potential carrying capacity conflicts associated with facilitating hotel guests 12. Airport extension project in Londonderry; excessive silt and runoff degrading nearshore habitat and nesting beach

Table 3. SWOT Analysis, with a Focus on DomSeTCO.

APPENDIX II:
FORESTRY AND WILDLIFE ACT, CHAPTER 60:02
COMMONWEALTH OF DOMINICA

Laws of Dominica

Forestry and Wildlife Act

Chapter 60:02, Act 12 of 1976

Amended by Act 35 of 1982

Amended by Act 12 of 1990

Chapter 60:02

Section 21

Ninth Schedule

Regulations for the taking of sea turtles

1. The word 'turtle' shall be deemed not to include the tortoise or land turtle (*Geochelone carbonaria*).

2. No person shall:
    *   Catch or take or attempt to catch or take any turtle between the 1st June and the 30th September both dates inclusive,
    *   Catch or take or attempt to catch or take any turtle which is under twenty pounds in weight
    *   Disturb any turtle nest or eggs or take any turtle eggs, or take or attempt to take any turtle laying eggs or on the shore engaged in nesting activities.

APPENDIX III:
FORESTS ACT, CHAPTER 66:01
REPUBLIC OF TRINIDAD AND TOBAGO

PERMIT TO ENTER PROHIBITED AREAS MATURA, FISHING POND AND GRANDE RIVIERE
[Under the Forests Act, Chap. 66:01, sections 2 and 8(f)]

Order No. …………………………… A No. **11833**

Name ……………………………………………………………………………………………..

Address …………………………………………………………………………………………….

……………………………………………………………………………………………………

Occupation …………………………………………………………………………………………

Purpose of Visit ……………………………………………………………………………………

Duration ……………………………………………………………………………………………

Permission is hereby granted to enter Prohibited Area at …………………………………………………

…………………………………….. subject to the provisions of the Forests Act and to regulations

made under this section 8, Chap. 66:01 and the attached conditions.

This Permit it Not Transferable.

Fee payable ………………………………………..

Date of Issue …………………………………………

Date of Expiry ………………………………………..

…………..……………….
Director of Forestry
(Conservator of Forests)

[Conditions Overleaf]

CONDITIONS

1. Permission granted for the purpose of Studying/Observing Marine Turtles during the Nesting Season 1st March to 31st August annually (between the hours of 6.00 p.m. and 6.00 a.m. only for Grande Riviere). Other activities which would have any negative impact upon marine turtles or their habitat during this period are strictly forbidden.

2. No making of fire on the beach.

3. No loudspeakers and excessive noises.

4. Fishing is permitted in zoned areas only for the period specified and is subjected to declaration of Catch on request by a Forest Officer or Police Officer.

5. Picnicking only during the day in specified locations.

6. Camping only for the purpose of Turtle Watching and/or Research in specified areas.

7. No high-powered artificial lights which exceed the beam power of hand torchlights.

8. No driving of vehicles on the beach.

9. Conditions also subjected to the Protection of Turtle and Turtle eggs Regulations made under section 4 of the Fisheries Act, Chap. 67 :51 and section 5 of the Conservation of Wildlife Act, Chap. 67:01.

10. Permits for one entry cost $5.00 for Adults and $2.00 for Children under 12 years old. Permit charges may be waived at the discretion of the Director of Forestry.

11. Multi-entry Permits for the season 1st March to 31st August cost $50.00 for Adults and $20.00 for Children under 12 years old.

12. Permit holders must be accompanied by tour guides authorized by the Forest Division.

13. Entry may be refused to persons with or without Permits at any time at the discretion of the Director of Forestry, should conditions for the management of marine turtles warrant such action.

Boundaries:

Matura – 8.85 kilometres in length.
Bounded on the north by the Primera Pria River, east by the Sea, south by North Oropouche River and west by the Coastline.

Fishing Pond – 10.46 kilometres in length.
Bounded on the north by the North Oropouche River, east by the Sea, south by Manzanilla Point and west by the Manzanilla Windbelt Reserve.

Grande Riviere – 1.6 kilometres in length.
Bounded on the north by the sea, east by the Grande Riviere River, south by the Coastline and west by the end of the beach which is 1.6 kilometres from the Grande Riviere River.

Appendix IV:

2003 PUBLIC AWARENESS SURVEY: RESULTS SUMMARY [7]

The Public Awareness Survey [*conducted by RoSTI: see Appendix V*] revealed some interesting results. In total, 180 surveys were completed by respondents, who represented a wide variety of Dominicans. The largest number of interviews (30.5%) was conducted with individuals aged between 20 and 34 years of age. Respondents in the '35-49 years of age' and the '50 years of age and over' categories were the next most abundant, comprising approximately 28% of the survey. Only 6% of those surveyed were 19 years and under, while 7% of people declined to submit their ages. [N.B. the percentages did not sum to 100% in the original Franklin et al. 2004.] The majority of those interviewed were male (70%) as opposed to female (30%). In terms of their occupations, only 12% of Dominicans involved in the survey were directly involved in the fishing industry.

The vast majority (81.7%) of those polled knew of the existence of between one and three species of sea turtle. Far fewer (6.7%) knew that there were more than five species of sea turtle, and 11% of Dominicans admitted that they could not name any sea turtles at all. Of those that knew sea turtles, many (73.9%) were able to correctly name them, either by the standard names or by their Creole/local equivalent, while 26.1% could not do this. Most Dominicans (64.0%) could identify the different species of sea turtles based on a combination of their size, shape, markings. As might be expected, this was particularly true for the giant leatherback. Respondents were far more misinformed on the difference between male and female turtles. While most were confident that they could differentiate between the sexes, only 36.0% correctly knew the difference. This is not surprising, since most people would never see an adult male turtle with its distinguishing tail extending 20 cm or more beyond the rear of the carapace (shell). Most encounters with turtles are with nesting females. Curiously enough, these encounters, too, must be relatively few since only 26.7% of those interviewed had seen a female sea turtle nesting.

Fully 73.0% of those Dominicans surveyed by the RoSTI project have never seen any species of sea turtle nest on the beach, which certainly explains the wonder and awe of residents who joined RoSTI staff on the beach this year and saw the ancient ritual for the first time.

Section Two of the questionnaire focussed on "Uses of Turtle, The Past". The first question in this section was whether sea turtles are important to the future of Dominica. An overwhelming majority (95%) agreed that they were. Eighty-one percent went further to say that they believe that sea turtles have been an important aspect of Dominican

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[7] *Excerpted from*: Franklin, A., R. Byrne and K.L. Eckert. 2004. 2003 Annual Report: Rosalie Sea Turtle Initiative (RoSTI). Prepared by WIDECAST for the Ministry of Agriculture and the Environment (Forestry, Wildlife and Parks Division). Roseau, Dominica, West Indies. 57 pp.

culture since they were children; only 15% disagreed. This influence of sea turtles in the culture of Dominica is supported by the more than 60% of Dominicans who recalled eating turtle meat and eggs on a regular basis. Many (56%) of those polled recalled that most turtle meat was shared within the village, and 27% noted that it was shared between villages as well.

In terms of the species of turtle eaten, 28% of respondents said that they ate any turtle species that was caught; 23% ate leatherbacks along with other species, while only 17% ate leatherback meat alone. A few individuals (16%) did not know what type(s) of sea turtles had been eaten. Although turtle meat was a highly enjoyed meal, relatively few people (25%) regarded it as a 'special meal'. While the price of turtle meat may have varied over the years, 40% of those interviewed (the largest segment) said that sea turtle meat normally cost between five and six EC$ per pound. A similar amount of people could not remember the price paid for turtle meat or how quickly it sold. Of those who could remember such details, 75% enthusiastically recalled how quickly it would be sold. Only 4% percent said that vendors of turtle meat would have to wait for a buyer.

Most people (74%) remembered that in years gone by, turtle shells would be used more for decoration than for utilitarian purposes. This mainly consisted of the polished shell being hung on a wall. Quite a few people (65%) also recalled the use of turtle scutes in the production of jewellery. Opinion was almost equally divided on whether these products were consumed locally, traded to merchants from the French Islands, or the respondent simply could not recall.

An interesting question centred on use of the giant leatherback. Data collected by the RoSTI project indicate that the leatherback and the hawksbill turtles are the most common species to nest on the shores of Dominica. Seventy-six percent of interviewees said that leatherback meat was eaten. When asked about its uses, 12% said that it was also noted for its oil (a product also savoured in years past in other Eastern Caribbean islands, including Grenada). A popular use for the oil was for medicinal purposes; 26% recalled this use from years past.

By far the most popular way to prepare sea turtle meat for a delicious meal is by stewing it, 84% of respondents readily agreed to this. Previously, many people indicated that they did not recall at what price turtle meat was sold, and this makes sense since respondents reveal that 76% of turtle meat was shared among family and friends (as opposed to just 12% which was sold).

Section Three focused on "Uses of Turtle, The Present" and how sea turtles are utilised as a resource today. When an interviewee was asked if s/he ate sea turtle meat at the present time, 49% said that they still do, 42% said that they do not, and 9% declined to respond. Interestingly, more people (47.2%, as opposed to 38.9%) thought that turtles were caught differently today than in previous years. Although responses indicated that turtle hunting was seasonal, most people did not know how many turtles were taken

daily. Similarly, the response to questions regarding the usage of nesting beaches was not well answered.

Twenty-seven percent of those polled admitted to taking part in the hunt, while 70% did not. Seventy-one of those interviewed think that fewer sea turtles are caught today, while 18% think that more sea turtles are caught today. A majority (55%) of Dominicans polled believe that there are fewer sea turtles in Dominica today than in years past. Importantly, most Dominicans (76%, as opposed to 20%) know the law concerning sea turtles.

Questions posed as part of Section Four revealed that consistently high numbers of people are aware of the role of sea turtles in Dominica's stories and legends. The vast majority (71%) of respondents had heard of at least one turtle story or legend, while slightly more people (74%) had heard tales of hunters predicting whether turtles would nest by observing "signs" in the sky at night.

Section Five of the survey looked towards the future and Dominican's attitudes toward conserving sea turtles. Seventy percent of Dominicans reported that they would be saddened if sea turtles became extinct and their decedents were unable to see them. Twenty-three percent and 7%, respectively, of respondents would not have been saddened if turtles became extinct or were undecided. The majority (60%) of respondents replied that people should NOT fish for turtles and eggs, twice the number of those that believed that this should still be allowed (32%); 8% were undecided. If turtle fishing is allowed to continue, 49% of those surveyed indicated that the practice should be regulated based on how abundant sea turtles are in the wild. For this question, however, the number of respondents who were 'undecided' was high (39%); 12% felt there should be no regulation at all.

An overwhelming number (95%) of those surveyed, and this was true across age and employment categories, thought that using turtles for tourism, such as RoSTI's Turtle Venture, is an excellent idea. Ninety-three percent also thought that this type of eco-tourism had the potential to bring economic benefits to local villages, while sustaining an important part of Dominica's local culture.

APPENDIX V:
2003 PUBLIC AWARENESS SURVEY: QUESTIONNAIRE

INTERVIEWER INFORMATION:

Date: _____   Time: _____   Location: _____

Interviewer(s):   _____

Introduce yourself to the interviewee. Explain that you are carrying out a survey as part of the *Rosalie Sea Turtle Initiative* (RoSTI) to find out about how important sea turtles are, and were, to the culture and everyday lives of the people of Dominica. Explain that it is important to find out about this historical relationship as many traditions are being lost as the country becomes more and more developed. Tell them that the results of the surveys will be made into a cultural book designed to share these important traditions and cultural heritage with the school children of today.

Ask the interviewee if they mind being taped (show them the tape recorder), or if they would prefer for notes to be taken during the interview. Tell them that you need to do this to help you remember things to prepare the book at a later date. Tell them that the interview is confidential and that only members of RoSTI and WIDECAST staff will have access to the information. Their name will not be used in any publication without their permission.

Inform them of the time it should take to complete the questionnaire. Let them know that you can make it brief if they are busy and time is limited, or it may last longer if they are interested and have a lot of information to share.

INTERVIEWEE INFORMATION:

Name: _____

Do they wish to remain anonymous?   Y ☐   N ☐

Occupation: _____ Age: _____ Sex: M ☐   F ☐

Area of Residence: _____

1.1. SECTION 1 – TURTLES, GENERAL INFORMATION

1. HOW MANY DIFFERENT KINDS OF SEA TURTLE DO YOU KNOW?
2. CAN YOU NAME THEM?
3. HOW DO YOU TELL ONE KIND FROM ANOTHER?
4. CAN YOU TELL A MALE FROM A FEMALE?
5. HAVE YOU EVER SEEN A SEA TURTLE NESTING?

1.2. SECTION 2 – USES OF TURTLE, THE PAST

1. DO YOU THINK SEA TURTLES ARE IMPORTANT TO THE PEOPLE OF DOMINICA?
2. DO YOU THINK THIS HAS CHANGED OVER THE PAST 70 YEARS / SINCE YOU WERE YOUNGER / A CHILD?
3. WHEN YOU WERE YOUNGER / A CHILD DID YOU EAT TURTLE MEAT OR EGGS REGULARLY?
4. WHEN TURTLE WAS CAUGHT, WAS IT SHARED WITHIN THE VILLAGE OR BETWEEN VILLAGES?
5. WHAT KINDS OF TURTLE WERE EATEN?
6. WAS TURTLE EATEN ON SPECIAL OCCASSIONS, OR WAS IT AN ORDINARY MEAL?
7. WHAT DID TURTLE MEAT SELL FOR?
8. WERE THE TURTLES SOLD RIGHT AWAY, OR KEPT UNTIL A BUYER WAS FOUND?
9. WERE ITEMS OF JEWLERY MADE FROM TURTLE SHELL?
10. DID PEOPLE USE TURTLE SHELLS AS DECORATION OR FOR "UTILITARIAN" PURPOSES, SUCH AS FOR BOWLS, ETC.?
11. WERE THESE ITEMS SOLD LOCALLY, OR TO TRADERS THAT WOULD COME TO THE ISLAND?
12. WHAT WAS THE GIANT LEATHERBACK TURTLE USED FOR?
13. WAS THE MEAT OF THIS TURTLE EATEN?
14. WAS THE OIL USED, IF SO WHAT FOR?
15. WAS THE OIL SOLD? HOW WAS IT STORED?
16. HOW WAS / IS TURTLE MEAT COOKED?
17. WHICH DISH IS BEST?
18. HOW WERE THE EGGS EATEN?
19. WERE THEY GIVEN AWAY TO FAMILY AND FRIENDS OR SOLD?

1.3. SECTION 3 – USES OF TURTLE, THE PRESENT

1. DO YOU STILL EAT TURTLE MEAT OR EGGS?
2. IF YES, HOW OFTEN?
3. ARE TURTLES CAUGHT DIFFERENTLY NOW TO WHEN YOU WERE YOUNGER?
4. HOW MANY TURTLES COULD BE CAUGHT PER DAY (AT SEA) OR PER NIGHT (ON THE NESTING BEACH) WHEN YOU WERE YOUNGER? WAS THE HUNT SEASONAL?
5. DID YOU EVER TAKE PART IN THE HUNT?
6. DO YOU THINK MORE OR FEWER TURTLES ARE CAUGHT TODAY?
7. DO YOU HAVE ANY OPINION AS TO WHETHER THERE ARE FEWER SEA TURTLES IN DOMINICA - OR MORE - THAN IN YEARS' PAST?
8. ARE THERE ANY BEACHES THAT USED TO BE USED FOR NESTING, BUT ARE NOT USED ANY MORE?

9. F SOME BEACHES ARE NO LONGER USED, WHY IS THAT?
10. DO YOU KNOW WHAT THE LAW IS REGARDING SEA TURTLES?

1.4. SECTION 4 – TURTLE STORIES AND LEGENDS

1. DO YOU KNOW OF ANY TURTLE STORIES OR LEGENDS?
2. COULD A HUNTER TELL FROM "SIGNS" IN THE EVENING OR NIGHT SKY WHETHER TURTLES WOULD BE ON THE BEACH THAT NIGHT?

1.5. SECTION 5 – THE FUTURE

1. WHAT DO YOU THINK THE FUTURE IS FOR TURTLES IN DOMINICA
2. WOULD YOU BE SAD IF TURTLES BECAME EXTINCT AND THERE WERE NONE FOR THE CHILDREN OF TOMORROW TO SEE?
3. DO YOU THINK PEOPLE SHOULD STILL FISH FOR TURTLE AND TAKE THE EGGS?
4. IF SO, DO YOU THINK THIS SHOULD BE REGULATED IN SOME WAY – BASED, FOR EXAMPLE, ON HOW MANY TURTLES ARE LEFT?
5. EVEN THOUGH THERE WERE NO FORMAL LAWS REGULATING TURTLE TAKE IN THE OLD DAYS, WERE THERE VILLAGE RULES GOVERNING HOW MANY (OR WHAT TYPE OF) TURTLES COULD BE TAKEN?
    FOR EXAMPLE, WERE THERE ANY RULES TO LET THE EGG-LAYING FEMALES LIVE SO THAT THEY COULD CONTINUE TO NEST IN THE FUTURE?
6. DO YOU THINK THAT USING THE TURTLES FOR TOURISM – SUCH AS TAKING TOURISTS ON "TURTLE WATCHES" – IS A GOOD IDEA?
7. DO YOU THINK THAT THIS TYPE OF "ECOTOURISM" COULD BRING ECONOMIC BENEFITS TO LOCAL VILLAGES, WHILE ALLOWING THE PEOPLE OF DOMINICA TO "KEEP ALIVE" AN IMPORTANT PART OF THEIR HERITAGE?