

A Study of the Feasibility of Creating the Waitukubuli National Trail Dominica

Caribbean Natural Resources Institute



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Waitukubuli Ecological Foundation

DFID Department for
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Caribbean Natural Resources Institute

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Waitukubuli National Trail, Dominica

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SUMMARY OF CONCLUSIONS

This study has concluded that the creation of a long-distance trail in Dominica, to be known as the Waitukubuli National Trail, is both desirable and feasible. This trail has the potential to contribute significantly to the social, economic and cultural development of Dominica, and to the management of the country's natural assets.

The total investment cost for the establishment of the National Trail is estimated at approximately EC\$ 9,600,000. After completion, annual maintenance costs are estimated at approximately EC\$ 1,200,000. Based on revenue projections, the annual operational deficit of the trail is estimated at approximately EC\$ 720,000 and it is expected that this deficit will be covered by government's budget allocations.

Projections indicate that the trail will inject up to EC\$10 million into the national economy over the next five years, and that it will, once established, contribute a minimum of EC\$ 5 million per year.

The establishment of the trail will be an ambitious and difficult undertaking, and its success will depend on a holistic approach and on the convergence of a number of elements including:

- A clear and concrete commitment by policy-makers and opinion leaders.
- Public participation in, and commitment to, the process of creating the trail.
- The adoption of a broad tourism and economic diversification policy and strategy.
- The integration of the trail as a core feature of Dominica's overall tourism development and marketing strategy.
- The development of small businesses, as well as local products and services, within communities touched by the route of the trail.
- The eventual design and implementation of a collaborative management arrangement that allows individual agencies to retain their management responsibilities, while establishing a co-ordinating mechanism.
- The strengthening of the organisational capacity of all governmental and civil society organisations involved in this collaborative management arrangement and in related sectors and activities.
- The formation of a cadre of competent and qualified guides, properly organised, and capable of offering a service of the highest quality.
- An overall improvement of the tourism product in the country, with particular attention to accommodation and transportation services.

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- The formulation and implementation of a comprehensive marketing strategy aimed at creating an awareness of Dominica and an interest in the trail as a tourism product.
 - Effective environmental management at all levels, and especially with respect to waste management.

The process of establishing the trail should be guided by a strategic plan that addresses all these requirements.

The time-frame for implementation should be short. In order to maximise its impacts, the trail should be fully established within a period of five years.

Dominica should seek technical and financial assistance in order to ensure timely implementation of this important project.

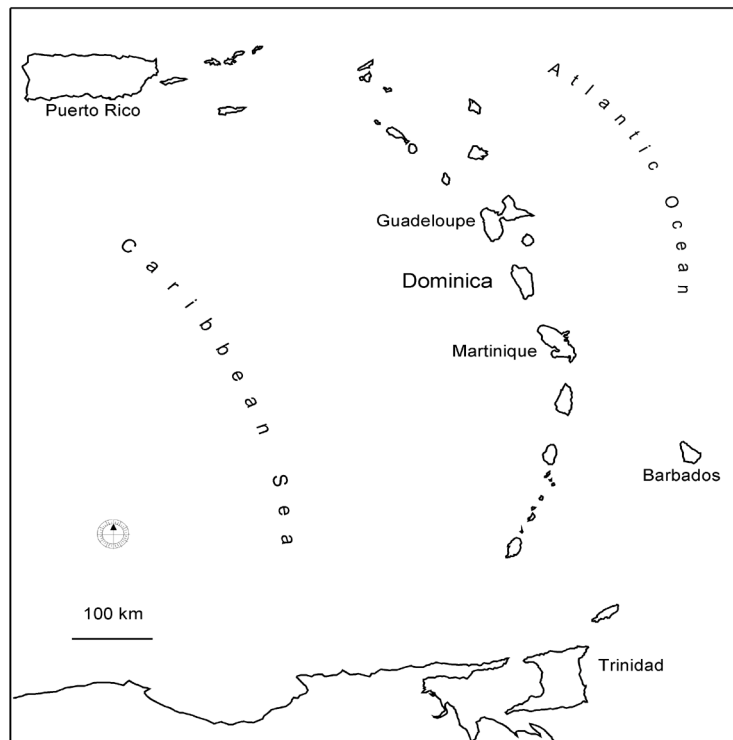
1. INTRODUCTION AND PRESENTATION OF THE STUDY

The concept of the Waitukubuli National Trail was first conceived in 1993 and formally described by the Waitukubuli Ecological Foundation (WEF) in 1995 (Wiltshire 1995). The Foundation's Chairman, Bernard Wiltshire, was inspired by the examples of national trails in the countryside of England, Scotland and Wales, and while walking Offa's Dyke, he realised that it could be highly beneficial for Dominica to develop a long-distance trail. Since then, the Foundation and its Chairman have been the leading proponents and advocates of this development, and they have used various fora and media to articulate and promote their vision and ambition.

The first concrete proposal for the design of this National Trail was made in 1997, when a route was proposed by a consultant to the French Mission for Co-operation and Cultural Affairs in the Lesser Antilles, as part of a major exercise aimed at describing Dominica's hiking trails and formulating recommendations regarding their development and management (Gallet 1997). While this proposal did not benefit from detailed studies and field visits, it had the merit of testing options and assumptions, and of reinforcing the view that the creation of this trail was technically feasible.

In order to advance the conceptualisation of this idea and to seek the views of key stakeholders, a one-day workshop was convened in Dominica on 16 December 1998, at the initiative of the WEF and with financial support from the Business Partnership Unit of the Department for International Development (DFID) of the United Kingdom. The workshop aimed to

Map 1: The Eastern Caribbean showing the location of Dominica



assess the extent of local support for the idea, and to identify the roles and responsibilities of the various stakeholders. The meeting confirmed the high level of interest and enthusiasm that the concept had generated and received at many levels. It also identified a number of key issues, listed primary objectives, and recommended strategies for implementation. It confirmed the need for a full-fledged feasibility study.

In June 2000, DFID-Caribbean provided financial and technical support for a national consultation aimed at developing objectives and terms of reference for a feasibility study, and subsequently confirmed its readiness to provide funding for such a study. On the basis of the conclusions of this workshop, in November 2000, DFID contracted the Caribbean Natural Resources Institute (CANARI) to be its managing agent for the study. In anticipation of this agreement, a workshop with UK-based tour operators, facilitated by Bernard Lane of the University of Bristol, was held in London in September 2000. Other components of the study began in early 2001. DFID's support to this process must be seen in the context of the Department's overall strategy for the region, as formulated in the strategy paper for the Windward Islands (DFID 2001).

As is the case in most studies of this nature, the focus was not exclusively on determining feasibility. While testing and assessing the feasibility of implementing the project as defined by its original proponents, this work also sought to determine the strategies, approaches and components that could make this project successful. In many respects, this has been both a feasibility study and a planning study, and it contains a number of guidelines and recommendations aimed at assisting actual implementation. It therefore provides the main elements of a strategic implementation plan.

The study was undertaken on behalf of and in close collaboration with the WEF. It benefited immensely from the inputs, guidance and feedback of its Chairman Bernard Wiltshire, and from the active involvement of other WEF members, including Patricia Linton and Anthea Robinson. The study also involved a wide range of governmental agencies, civil society organisations and individuals in Dominica, who should all be thanked for their extremely valuable contribution to this process. Special mention should be made of the Forestry and Wildlife Division, and notably of David Williams and Ashton Lugay, who provided critical information, expertise, advice and logistical support at every step along the way.

The study benefited from the inputs of eight consultancies:

- Marie-José Edwards made recommendations on the product, and assessed environmental issues.
- Bernard Lane provided an early assessment of market potential, offered detailed and insightful comments on all aspects of the study, and served as a permanent and welcome source of advice and encouragement.
- David Lang conducted a detailed inventory and classification of all trails and other relevant features, and prepared background maps.
- Milton Lawrence examined the economic and financial issues and impacts, and worked with Ashton Lugay to quantify investments and maintenance costs.
- Betty Perry-Fingal examined the trail's potential social, economic and cultural impacts at the

community level.

- Yves Renard prepared a case study of the experience of long-distance trails in Guadeloupe and Martinique, as well as a study of the policy and institutional context and issues.
- Robert Cleverdon Associates (Robert Cleverdon and Polly Pattullo) conducted a marketing study and developed a marketing profile.

The feasibility study was carried out over a period of 15 months, and suffered a number of substantial delays due to technical and logistical difficulties encountered in the conduct of one of the consultancies, and delays in the constitution of a National Trail Steering Committee, which was established by Cabinet in September 2001, but did not become operational until January 2002. In the absence of this committee it was not possible to make decisions and policy recommendations on critical matters, especially the selection of the trail's route.

The process followed for the conduct of this study involved:

- The eight consultancies mentioned above.
- A workshop with UK-based tour operators held in September 2000 at the Dominica High Commission in London.
- One technical workshop (October 2001) bringing together all Dominica-based consultants and key resource people.
- Two main workshops (April and September 2001) and three meetings of the National Trail Steering Committee (December 2001, February and March 2002), to review progress and advise on process and policy recommendations.
- Regular communication between the WEF, DFID-Caribbean and CANARI.

This final report summarises the conclusions and recommendations of the study and was prepared by Yves Renard, with the assistance of Bernard Lane, Milton Lawrence and Bernard Wiltshire. Readers are encouraged to refer to the individual reports by consultants (see list on page 49) but should remain aware that conclusions and recommendations contained in these reports have not necessarily been accepted by CANARI, and may therefore be contradicted by the contents of this final report. The present report thus constitutes the only official and quotable account of the results and conclusions of the feasibility study.

2. THE CONCEPT: DEFINING THE WAITUKUBULI NATIONAL TRAIL

In the context of sustainable development, the specific objectives of developing and managing the Waitukubuli National Trail will be:

- To enhance and significantly transform the tourism product of Dominica and increase its marketability and competitiveness, resulting in a quantitative and qualitative improvement in the impacts of tourism on economic development at the national and local levels;
- To promote and support rural development, with special emphasis on the needs of poor and marginalised communities;
- To provide a focus for the strengthening of social capital, for the development of national pride and identity, and for community cohesion and unity;
- To provide a source of recreation and enjoyment for all Dominicans; and,
- To encourage, promote and valorise environmental conservation and sustainable development at all levels.

Principles and criteria

A number of principles and criteria should guide the establishment of the trail, namely:

- *Environmental integrity*: the development and operation of the trail should have as few negative environmental impacts as possible, and should actually contribute to environmental conservation and natural resource management in the country.
- *Economic impacts*: the trail should help generate employment and revenue, creating special opportunities for poor and marginalised people, and contributing to a more equitable distribution of benefits.
- *Geographic distribution*: the trail and its social and economic impacts should touch as many rural communities as possible, and should result in reducing geographic disparities and bringing isolated communities into the mainstream of national development.
- *Inclusivity*: the trail should be attractive to both Dominicans and visitors, it should balance its objectives in order to remain a truly national asset, while contributing, to the maximum extent possible, to tourism development.
- *Diversity*: the trail should offer a variety of experiences, it should give access to as many scenic areas and places of interest as possible, it should provide a mix of wilderness, rural landscapes, culture and community experience. It should aim at a diverse market, from the specialist hiker to the visitor in search of a diverse experience. This diversity should also be found in the benefits it provides: the trail should offer educational, recreational, scientific and therapeutic opportunities, it should be a complete product that touches all aspects of the lives of Dominicans and their visitors.
- *Heritage*: the trail should be rooted in Dominica's history, culture and traditions, and it should actively promote the heritage component of the visitor's experience. It should therefore encompass a significant Carib element (passing through the Carib Territory, and interpreting Carib heritage).

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- *Building on what exists:* the trail should use as many of the historical trails as possible, since these trails are part of the product, and it should use existing routes to the maximum extent possible.
 - *Feasibility:* trail development should avoid unnecessary difficulties, and it should limit new trails on private land to the strict minimum.
 - *Effective and efficient management:* the trail should be tightly managed, well maintained, respectful of standards, guaranteeing visitor safety. It should avoid bureaucratic structures and procedures.
 - *Sustainability:* the trail should become a central component of the country's tourism product. It should be established according to a long-term vision and strategy, and all efforts should be made to ensure its long-term viability and sustainability.
 - *Participation:* the trail should be established and managed in a participatory way. It should be truly national, i.e. owned and cherished by all, and linked to all sectors of society.

Trail development

Technical studies have indicated that the trail should be primarily a linear trail:

- With connecting segments, and with a few options;
- With linkages to specialised segments (e.g. bird watching, geological features);
- Generally not on roads, but with exceptions (feeder roads and agricultural roads can be used in some instances);
- Distinct from horseback and mountain biking trails;
- But with the possibility of pony trekking on some of the sections, as long as conflicts and impacts are avoided; and,
- That can be hiked (and marketed) in full, or in sections of various lengths and duration.

In the selection of the route, priority has been given to the use of existing trails, even if they have been abandoned and have become overgrown. There are several reasons why it would be desirable to use existing trails, and also to respect, integrate and maintain traditional uses of trails whenever these trails become portions of a new National Trail, as long as these uses remain compatible with National Trail objectives and conservation requirements:

- The use of existing trails will greatly increase feasibility, may reduce cost, and will most likely limit, if not avoid, negative environmental impacts.
- Using existing trails, where feasible, will limit newly opened areas and reduce risk of increasing predial larceny.
- Traditional users of existing trails actually contribute to management, if only because they prevent overgrowth of vegetation.
- Some traditional uses actually enhance the product: hikers on a forest trail will always be happy to encounter local people who use the same trail to reach a nearby village or go to the city to sell produce.
- Local uses associated with an established trail help enhance security: a trail that is used normally by local people will be more secure than an isolated track that is used only by

foreign visitors.

- Local uses increase popular acceptance and support: they make the trail part of the local socio-economic landscape, instead of allowing it to remain a mere tourism product.

Guided by these objectives and principles, and having reviewed all existing trail sections (Lang 2001), a preferred route has been identified (see map 2, page 9). Because several of its segments have not recently been walked by people involved in this planning process, this route should be considered as indicative at this stage. Its total length has been estimated at 184km, or 115 miles. It is made of the following segments (maximum one day of hiking per segment, except when indicated otherwise; the names underlined indicate communities where accommodation would be provided):

1. Scotts Head to Grand Bay: 10.756 km
2. Grand Bay to Delices: 11.209 km
3. Grand Bay to Giraudel: 12.533 km
4. Delices to Fresh Water Lake (Laudat) via Boiling Lake: 9.603 km
5. Giraudel to Fresh Water Lake (Laudat); option of doing this segment in two days, with overnight at Wotten Waven or Morne Prosper: 13.813 km
6. Laudat to Pont Cassé/William: 13.572 km
7. Pont Cassé/William to Castle Bruce: 10.717 km
8. Castle Bruce to First Camp via Carib Territory and Marigot (two to three days, several opportunities for accommodation along the way, plus overnight shelter #1, located at First Camp): 27.565 km,
9. First Camp to Layou (overnight shelter #2): 13.794 km
10. Pont Cassé/William to Layou (overnight shelter #2): 10.449 km
11. Layou to Heights of Colihaut (overnight shelter #3): 10.514 km
12. Heights of Colihaut to Foot of Diablotin or Syndicate (overnight shelters #4 and #5): 9.459 km
13. Foot of Diablotin to Bornes: 9.901 km
14. Bornes to Penville: 7.380 km
15. Penville to Capuchin: 6.799 km; option Penville to Cabrits (Portsmouth): 12.947 km

These segments of the trail will be given names (either related to historical events, people or natural features) in order to give each part an identity. In addition, the trail could be promoted and marketed in distinct sections made of several segments, e.g. a "Southern Loop" or a "Great Ridge Trail".

There will be an "official" starting point of the trail at Scotts Head, but access to the trail will be possible at several points around the route. Most of the segments will therefore offer the possibility of day hikes and some, of circular hikes. The starting point will have a symbolic gate and point of entry.

Map 2: The proposed Waitukubuli National Trail route



Trail facilities and infrastructure

Along the trail, there will be a total of twenty-two shelters (*joupas*), of two types:

1. Seventeen shelters of type 1, for rest and emergency only, with benches, providing temporary resting space for 12 people.
2. Five shelters of type 2, for overnight use in the segments of the trail located between William/Pont Cassé and Bornes, providing rustic accommodation for 12 people, with toilets.

Along its route, the trail will have an international signage system that meets three criteria of:

- Aesthetics and limited environmental impact (visual, physical, pollution);
- Effectiveness: it should be easily seen and understood, and should be simple to maintain; and,
- Specificity to the National Trail: it should clearly indicate to the visitor that he/she is on the National Trail, not on another component of Dominica's trail system.

Since there exist several signage systems, it will be preferable to select one (and only one) that comes from one of the source countries of visitors, either the United States, the United Kingdom or France. Dominica has recently tested and used the signage system used and certified by the French *Fédération Française de la Randonnée Pédestre* for its *Sentiers de Grande Randonnée*, and it appears suited to local needs.

At each point of entry and exit (nine in all), there will be parking facilities and basic visitor services, including one general information panel, one small building with interpretation facility, and parking space for six cars and two buses. These points of entry and exit will serve as focus of local development activities, and will be linked to local accommodation facilities (see below) and to the development of local artistic and cultural products.

For information and promotional purposes, one large sign will be erected at each air and sea port of entry, with a total of six signs.

| Facilities needed to support the trail | |
|--|--|
| Interpretation and orientation | This function should be primarily performed at the Interpretation and Orientation Centre (recommended at Pont Cassé, other options include Scotts Head and Roseau) |
| Marketing and promotion | This function should be performed by a range of existing facilities, including all tourist information bureaus, and should be co-ordinated by the Centre |
| Management | This function should be co-ordinated from the Interpretation and Orientation Centre, but with several technical aspects being co-ordinated from the Forestry Division at the Botanical Gardens |

There will be one main interpretation and orientation centre, constructed in a central location, (not too distant from Roseau to allow access to cruise ship passengers – the preferred location is Pont Cassé), with one reception area, one shop, four offices, one conference room capable of accommodating two hundred people and equipped with conference and training facilities, storage space and toilets. It will serve as the focal point for management, public information, marketing and sales, and the conference room will be used as a mechanism for revenue generation. (All other formal and informal tourist information facilities will be used for the promotion of the trail.)

There will not be special arrangements for garbage collection. Regulation and public education will ensure that there is no garbage left along the route.

Accommodation will be provided in the following ways:

- In or near villages (this confirms that the trail should reach a community after each segment of approximately 6 to 8 hours of hiking);
- In guest houses, bed and breakfast, hotels, camp sites and eco-tourism resorts located near the points of entry and exit (all facilities to be certified under the Sisserou certification scheme currently being introduced by the National Development Corporation (NDC));
- In the northwestern sections of the trail, i.e. between Pont Cassé and Bornes, where overnight shelters will be needed in five locations; and,
- In hotels and guesthouses in Roseau, Portsmouth and other parts of Dominica for people who will use only one or a small number of segments.

All accommodation, except the shelters, will be provided by the private sector. As part of a national effort aimed at improving the quality of accommodation in Dominica, the focus will be on locally built, locally managed, locally sourced and locally serviced accommodation. Entrepreneurs and investors will be encouraged to meet the specific demands of the hiking clientele, including separate beds in double room accommodation. Vegetarian and other natural foods will be available. Technical assistance will be provided to new projects in order to guide architectural design, business planning and general operations. The need for facilities to be able to accommodate groups will also be taken into account. Education and sensitisation programmes will aim at raising the environmental awareness of operators. Camping along the trail will be prohibited, except at designated campgrounds that are part of the accommodation facilities. These will be officially designated campsites operated by the private sector in accordance with public policy.

Guiding

Guiding will be very strongly encouraged and promoted, but will not be made compulsory, except in some of the more dangerous areas such as the Boiling Lake. There are a number of reasons why guiding is considered desirable:

- It will enhance security, in a number of ways (knowledge of terrain, ability to deal with dangerous and unusual situations);
- It will create employment;
- It can help minimise environmental impacts, by reducing the need for facilities and informing visitors on desirable behaviour;

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- It will improve the product offered to visitors, especially since guides can provide interpretation and facilitate access to local culture;
 - It can facilitate links with local community, with guides playing the roles of linguistic and cultural interpreters;
 - It can reduce costs by limiting the need for permanent equipment and facilities, e.g. signage; and,
 - It can assist with routine management tasks, e.g. reporting back on trail conditions, gathering litter or carrying out small maintenance tasks (either on a voluntary or paid basis).

In order to be useful and effective, guides must be excellent, the services they provide must be of the highest quality, and the system for the management of guiding should be effective and efficient. Minimum and standard rates for guiding services will be set and advertised. Best practice for guide training will be brought in, drawing on experience in other countries and regions with similar environmental and socio-economic conditions, e.g. Central America.

Other trail products

The trail will require two main publications:

- A guide book, translated in at least two foreign languages (French and German), with an overall geographic and historical background on Dominica, a description and interpretation of the route and the areas and communities it touches, maps of segments and sections, and all relevant practical information; and,
- A detailed map of the whole National Trail and all other relevant features.

Users of the trail will be recognised and rewarded in the following ways:

- T-shirts will be sold as souvenirs and as means to identify hikers;
- Certificates will be given to persons who walk the trail, or portions of it, and wish to retain a memento of that experience; and,
- Pins will be given as proof of payment of user fees.

3. ENVIRONMENTAL ISSUES

Environmental issues associated with the development and operation of the Waitukubuli National Trail can be found at four levels:

- The potential environmental impacts of trail construction and use;
- The requirements for the management of these impacts;
- The environmental requirements of the overall tourism product; and,
- The potential impact of the trail on environmental policy and behaviour at the national level.

In order to address the potential environmental impacts of trail construction and use, there will be need for a clear process to assess the impacts of each section at the design and construction stages. Specific issues to be taken into account will be the occurrence of sensitive ecosystems and habitats, the presence of endangered species, and risks of erosion. Seasonal changes will also have to be taken into consideration.

The issue of solid waste management will be easy to address, considering the level of environmental consciousness of the trail's clientele, who will be asked to bring their waste to disposal sites near entry/exit points at the end of each day. The only section where there will be need for a collection system will be the Syndicate/Morne Diablotin area, and this system should be part of a management agreement with local communities.

In order to minimise environmental impacts, visitors will be asked to avoid leaving the established trails, and the trained guides will help ensure that this rule is respected. The hiker will of course remain liable for any environmental damage caused while using the trail.

One key element of environmental management will be monitoring, as there will be need for up-to-date information on impacts. Monitoring will be done against the baselines and initial environmental audits carried out as part of the detailed planning process for each segment of the trail. Staff of management agencies and local guides will both have a role to play in data collection, and in reporting changes, problems and events that may lead to negative environmental impacts.

The third environmental dimension that needs to be considered relates to the requirements of the market and specifically to the fact that:

- Visitors will not only be concerned with the quality of the trail, but will also be concerned with the country's overall environmental quality. The success of the National Trail therefore demands effective environmental management at all levels and in all areas; and,
- Visitors will also expect environmental sensitivity on the part of the people with whom they interact. Environmental awareness therefore needs to be raised in all sectors of society.

The fourth aspect of the potential environmental impact of the trail relates to the larger picture of environmental management and sustainable development in the country. In this regard, the impact will most likely be positive, as a successful trail will demonstrate the social and economic benefits that can be generated from sound environmental management and sustainable use. At a more local level, the trail can also help spread the impact of hiking activity, and thus avoid placing excessive pressure on a small number of sites.

4. MARKETING

Future marketing efforts should be built on existing strategies, and should recognise that nature already constitutes the main component of Dominica's tourism product. In a survey of stay-over visitors carried out in 1995 and 1996, the natural product was stated as the main reason why people visit Dominica, with more than one third of all respondents, and over 50% of North American respondents, giving nature-based activities as their primary reason for visiting Dominica (Westbrook *et al.* 1997a). A survey of cruise ship visitors carried out over the same period indicates that nature tourism is not a significant reason for cruise ship visitors to come to Dominica, but that 95% of these visitors end up visiting at least one nature tourism site (including the Botanical Gardens in Roseau), and that their level of satisfaction is very high, with 76.9% of these visitors giving "natural beauty / nature / lush greenery / rainforest" as the main reason for liking Dominica (Westbrook *et al.* 1997b).

This feasibility study (Robert Cleverdon Associates 2002) has concluded that the National Trail has the potential to attract a cross-section of a significant and fast-growing segment of the international tourism market. It has also concluded that there is potential interest on both "sides" of the hiking market, i.e. the "hard adventure market", characterised by intensive, focused and arduous usage, and the "soft adventure market", including visitors who will use a hiking trail as part of a range of recreational activities in the destination (see box, page 15: Profile of the trail's potential clientele).

The main countries of origin of the trail's potential clientele include:

- Europe: primarily UK, Germany, France and Holland,
- North America,
- Guadeloupe and Martinique: this is the single most important source of visitors to Dominica at present, and it offers potential for expansion, especially through hiking clubs and non-governmental organisations, and,
- other Caribbean countries.

The success of this trail will require a comprehensive marketing strategy. The key elements of this strategy should be as follows:

- There should be a strategic marketing focus to raise awareness in international source markets of Dominica as a destination for non-mainstream forms of discretionary tourism.
- There should be a clear strategy for the development of the trail, with this being integrated into the island's overall tourism development strategy.
- The trail should be developed and marketed as a unique product, its originality should be emphasised, it should be made famous and should excite interest.
- Marketing should focus on the trail as a "challenge" - both internally and externally, but it should also cater for clients interested in less demanding experiences.

Profile of the trail's potential clientele

This study (Robert Cleverdon Associates 2002) has identified the profile and characteristics of the trail's potential clientele as:

- **Age** - all except the very young and very old with concentrations in 31 to 50 bracket, but significant volumes, too, in the 20s and over 55s.
- **Gender** - broadly equal, with slightly more male than female in the adventure category.
- **Education** - generally well educated at college level or above.
- **Occupations** - professional and business, more white than blue collar.
- **Income** - mid-to-high, many dual income households with average household income being in the range of US\$45,000 to 70,000 a year, according to surveys conducted by the Travel Association of America and Great Outdoor Recreation Pages (a leading US online retailer of adventure tours).
- **Travel experience** - well-travelled though the strong growth suggests that there are new "entrants" to the eco-tourism and adventure segments having "graduated" from mainstream activities or moving from domestic to more far flung destination or moving up from being backpackers as their income levels permit.
- **Repeat** – users of long-distance trails seldom repeat visits, but often use word of mouth to encourage others to try trips they have already made
- **Activity level** - widely variant from intensive to modest (little more than a gentle walk), depending on age, health and type of interest.
- **Travel arrangements** - either small specialist tour operator or independent travel, with the majority booking "direct", i.e. bypassing the travel agent, either by phone or online, and proceeding directly to a tour operator or facility.
- **Facility requirement** - again varies: from core tourists who are focused on the activity of their trip and have little concern for creature comforts, though they would resist staying in resort-type hotels and would expect adequate supply of equipment necessary for their chosen activity; to soft core tourists, the "top end" of which would want modest-to-good quality local-style accommodation, and the lower end would be less selective.
- **Travel characteristics** - typically travel with a partner/friend(s) though increasing volumes in the soft core taking their families; few staying less than a week on an overseas nature or adventure trip with most lasting 10 days or over, though this may edge down in line with overall market trends for a reduction in holiday length.
- **Spending levels** - again a considerable variation with budget adventure travellers spending modestly but the "top end" of the soft core segment spending relatively heavily at between US\$75 to US\$150 a day in the destination
- **Media influence** - by far the most significant feature is the high level of familiarity with, and usage of, the Internet among these travellers; but also good levels of consultation of specialist media and club/association membership.

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- The safety of Dominica as a destination -- a tropical rainforest without any danger – should be emphasised in the marketing efforts.
 - Marketing of the trail should aim to create a strong aspirational, "cult" status, to create a mystique around the trail and the experiences it offers.
 - Lessons from the experience of other long distance walking trails should be applied in its development and marketing.
 - The trail should be marketed to a wide range of prospective market segments e.g. the over 50s as well as the more adventurous hiker.
 - The history of the existing trails on the island should be used in the marketing strategy and materials for the trail, thus giving "depth" to Dominica's tradition for trails.
 - Segments and sections of the trail should be given names (either related to historical events, people or natural features) in order to give each part an identity, thus heightening tourists' sense of achievement at having successfully walked the Jacko Steps, the old Carib Trail section or the "Southern Loop".
 - There should be a focus on improving the standards of guides, accommodation and other facilities and services available to the trail's users.
 - The fact that there are active, effective and environmentally-conscious management systems should be used in the marketing efforts, and it should be made clear to potential clients that the trail is being managed, that revenue is going back into management, that there is a security and safety plan that includes provision for evacuation, and that there is an institution that will guarantee the product and provide "after-sale service".
 - The strategy should build on, and reinforce, the Nature Island concept in the marketing strategy and communications for the trail, and utilise the island's organic attractions: e.g. pure river water, world's "oldest" woman, local foods and crafts, etc.
 - Dominica should seek to sustain environmental awareness in the development and implementation of a marketing strategy, and should project the image of an environmentally responsible country and society.
 - Dominica should also seek to develop synergy in marketing the trail, tourism and agricultural and related products, as the Nature Island logo and slogan have more than just tourism resonance.

Marketing instruments and channels will include the following:

- The specialist foreign tour operators sector will be kept fully abreast of news of development of the trail, including its strategies, plans and activities in respect of marketing. A short non-commercially-made video circulated to this group demonstrating the progress in clearing and laying the trail, along with the announcement of plans, would be an inexpensive way of doing this and would be appreciated by these tour operators.
- A website page will be established and linked to other key websites in destination marketing, Dominican tourism operators, and specialist associations and clubs.
- The Internet will also be used actively for advertising and promotion, targeting sites

frequently visited by people who fit the profile of the potential users of this trail.

- Travel journalists will be encouraged to visit and be hosted, since the articles and features they will generate constitute a medium which is given high weighting by prospective tourists in most of the segments being targeted.
- Dominica's tourism marketing agency should continue to attend relevant trade shows, and should ensure that the National Trail features prominently in its promotional efforts at these events.
- The marketing agency should also host familiarisation tours with tour operators in order to introduce them to the product. In this regard, it should be noted that the reasons given by foreign tour operators for not coming to, and for not selling Dominica include: lack of information 59%, specialise in other areas 14%, too little variety of nature sites 9%, low biodiversity 9%, high cost 4.5%, and difficult access 4.5% (Evans *et al.* 1997).
- Ties will be forged with special interest walking/rambler groups, who will be kept informed of progress in the development of the trail. These include, for example, the American Hiking Society, the Sierra Club, the UK's Ramblers Association or the *Fédération Française de la Randonnée Pédestre*.
- Membership lists from specialist walking groups or from magazines, radio stations and other media whose subscribers/listeners match the trail's target segments will be acquired and used in promotional campaigns.
- Joint flyers with selected small specialist tour operators will be produced.
- Special events will be used to organise promotional activities, for example with the US National Trails Day, which falls on the first Saturday of June of every year.
- Special marketing efforts will be targeted towards potential clienteles in the neighbouring islands of Guadeloupe and Martinique, especially through their dynamic hiking and environmental associations. Similar initiatives will be taken with organised groups in other countries of the region.

5. ECONOMIC IMPACT

The impact of the establishment of the Waitukubuli National Trail on the national economy will be significant.

Revenue estimates suggest that over the first four years of project execution (i.e. years 2 to 5), visitor arrivals will approximate 6000. At an average spend of US\$125/night for an average stay of 5 nights, total revenue injected into the national economy is estimated at EC\$10 million. It is estimated that every four visitors will encourage at least one other visitor to come to Dominica, contributing another EC\$2.5 million towards future revenue. It is further estimated that approximately 50% of the revenue derived from trail visitors (EC\$5 million in the first 4 years) will be spent in rural communities.

A number of players in the economy will benefit from the business generated by visitors to the trail. These include, but are not limited to:

1. Taxi drivers,
2. Car rental companies,
3. Providers of accommodation services (hotels, guest houses, eco-inns, private house-owners, etc.),
4. Trail and tour guides,
5. Producers and providers of foods and beverages, including farmers,
6. Producers of craft and other local products (specifically the Caribs),
7. Entertainers (musicians, playwrights, cultural groups, dancers, etc),
8. Land owners, whose properties may gain value as a result of trail development and use;
9. Local government organisations and other related entities, and
10. Government (through departure taxes, hotel occupancy taxes, user fees, sales taxes, corporate/personal taxes, etc).

In terms of direct impact on employment, it is estimated that on completion of the trail, approximately 80 trail guides will be trained, certified and operating throughout Dominica. Another 180 persons are anticipated to be employed in the provision of various services to visitors in local communities.

The trail will have a positive impact on agriculture, providing an outlet for farm produce, as well as on construction, assuming that the accommodation needs will require substantial building investments.

In order to optimise the economic impact of this development, a number of assumptions have been made:

- The project for the establishment of the Waitukubuli National Trail will be executed within a five-year time-frame, including a first year for preliminary planning, after which all responsibilities for the trail will be absorbed by government and other agencies.
- Government will embrace the trail as a critical component of its tourism product and devote funds from its recurrent budget for trail maintenance.

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- Government will encourage a holistic approach to working with the agencies responsible for the management of the trail, crossing departmental and ministry boundaries when necessary.
 - Government will make land available for the construction of entry and exit facilities and parking facilities.
 - Government will absorb any costs necessary to continue any work begun with project funding.
 - Government will enact and enforce all appropriate legislation, including legislation relating to camping, and instruments will be introduced to prevent the transformation of parts of the National Trail into motorable roads.
 - Other actors within the economy will embrace the opportunity to ensure that the trail makes a contribution to the economy. These include:
 - the National Development Foundation;
 - the Credit Union movement;
 - the commercial banks;
 - the National Development Corporation;
 - the Dominica Hotel and Tourism Association;
 - the Dominica Association of Industry and Commerce.
 - During Year 2, some marketing will begin and approximately 500 visitors will visit and walk the existing trail segments.
 - During Year 3, marketing will continue and approximately 1000 visitors will visit and walk the existing trail segments.
 - During Year 4, approximately 1500 visitors will visit and walk the existing trail segments.
 - Year 5 will be the first year when the entire National Trail will be operational and open. Approximately 3000 visitors will visit and walk the trail.
 - Most visitor services will be provided by the private sector, including accommodation, food, entertainment, guiding, etc. The quality of these services will be improved, and their prices will be made competitive on a regional and international scale.
 - Visitors will be sufficiently sensitive and adequately informed of the need to carry their litter out of the trail, thus dispensing with the need for major garbage disposal.

As the project develops, there will be need to monitor the economic impacts of hiking in Dominica. The monitoring methodology should include both quantitative and qualitative elements. The quantitative analysis should cover the number of people, their origin, and an identification of their expenditure (volume, purpose and location). The qualitative aspect should use questionnaires to assess satisfaction, demand and observations, and to provide a profile of the clientele.

6. SOCIAL AND CULTURAL ISSUES

"If carefully developed and managed, eco-tourism can serve as a tool for effective positive, social, cultural, and economic advancement of local communities" (Evans *et al.* 1997c)

This feasibility study (Perry-Fingal 2001) has assessed the potential impact of the National Trail on rural communities, and has concluded that this development could be highly beneficial at the community level.

One key strategy will be to link communities with the trail by training and educating people on the needs of visitors, and how to provide for those needs, helping develop entrepreneurial skills in the communities, and providing technical and capacity-building support to develop appropriate forms of accommodation and other enterprises, i.e. invest in local people so that they have a sense of ownership of the trail and are capable of generating benefits from it.

There will also be need for local level business and marketing plans, especially for the villages and communities located at the trail's points of entry and exit, and there will be need to provide them with technical assistance to do this. This should begin with an assessment of specific training and technical assistance needs.

Emphasis should also be placed on cultural development, i.e. the promotion of local art forms and cultural products that are capable of enhancing the experience of the visitor.

Mechanisms for participation

From an economic perspective, a number of mechanisms are available to ensure local participation in trail-related businesses. These include the following:

1. The engagement of local communities in the development and construction of the trail. **Local "steering committees"** should be set up to ensure that local persons are given an opportunity to be involved in and contribute to the planning, design and construction of the trail segments in close proximity to their communities. This process is also likely to encourage their contribution to construction efforts, to increase their ownership of the trail and to encourage them to protect the trail.
2. The **empowerment of local government bodies** and other local stakeholders in the management of the trail segments in proximity to their communities is a powerful mechanism for ensuring participation. Such entities should be given the opportunity to manage the trail's entry and exit points and to earn some income from such ventures. These entities should also be given the responsibility for maintaining the facilities and, if feasible, for maintaining segments of the trail in close proximity to their communities in some arrangement with, and under close supervision of, trail management and the Forestry Division. This arrangement may be crucial in reducing the overall cost of trail maintenance.
3. The development of a system whereby **"local" trail guides** residing in close proximity to certain trail segments are licensed to be the sole providers of guiding services to visitors

could be considered. This approach may present some difficulties, as it may not be easy to restrict guides from other areas from operating in those designated trail segments. However, this system would definitely help in persuading those “local” trail guides to protect their designated segment, since their livelihoods would depend on the maintenance of such trail sections in good condition.

4. The **licensing of guides and other community service providers** would be another important step in ensuring local participation. A licensing procedure would ensure that minimum levels of service are provided to visitors and would encourage entrepreneurs to police their colleagues to ensure maintenance of standards.
5. Licensees would need to complete **designated training sessions** designed and delivered by the project management and in the post-project era by a designated state tourism promotion agency or other such institution. This training would ensure that the licensees are equipped with the technical and managerial skills to provide minimum standard services to visitors. Licensees would be provided with certification that visitors would be encouraged to insist upon before services were procured.
6. Some mechanism will be needed to ensure that **constant communication** is maintained with the service providers in the various communities. In effect, a type of monitoring and technical assistance programme would be instituted whereby problems and issues that arise could be resolved in a timely manner. This would assist in maintaining standards and encouraging further development of trail-related businesses.
7. Facilitation of the development of **“regional associations” of service providers** should be considered. This would be particularly important for trail guides and accommodation providers so that networking for the seamless transfer of business from one segment to another can be facilitated. The formation of such associations would also assist in the maintenance of minimum standards of service.

Programmes to encourage community participation

In order to foster community participation in trail establishment and management, there will be need for:

- Public awareness programmes aimed at informing people of the project, its objectives and its potential impacts.
- On-going information (press releases, field visits, website, newsletter) throughout the establishment phase, in order to keep people informed of progress.
- Consultation of key stakeholders at various stages of decision-making, ensuring that all important decisions are made through the involvement of those who are likely to be affected by these decisions.
- Development of partnerships with a range of local organisations, including Village Councils, development committees and other charitable organisations.

7. POLICY AND INSTITUTIONAL CONSIDERATIONS

In all components of the process to establish the Waitukubuli National Trail, there will be need to distinguish between the short-term needs (i.e. managing and funding the establishment of the trail and building the capacity to manage it) and the long-term requirements (i.e. ensuring the sustainability and viability of the trail).

As this planning and development process unfolds over the next five years, new institutional arrangements will emerge, and it would be artificial and irrelevant to attempt, at this early stage, to design these arrangements in detail. But it is already possible to define some of their key characteristics:

- There will always be need for a co-ordinating organisation, with responsibility for overall planning and management, policy, technical assistance, and monitoring and evaluation.
- In its system of governance, the co-ordinating organisation will need to have representation of all major stakeholders.
- The responsibility for developing and managing individual segments of the trail should be shared among various agencies: trails located within National Parks and Forest Reserves should remain under the authority of the Forestry and Wildlife Division, and trails located outside these areas should be managed under specific, and formal, collaborative arrangements and agreements (involving the Forestry and Wildlife Division, Village Councils, private sector interests, non-governmental organisations and community-based organisations as appropriate).
- The development and management of other facilities and services, including accommodation facilities, should be primarily in the hands of communities and the private sector, but with the benefit of technical assistance and facilitated access to credit facilities and counselling.

Trail co-ordinating agency

In the short-term (proposed here as five years), there will be need for a strong organisation to spearhead the planning and development process. This co-ordinating agency, working under the guidance of a National Trail Steering Committee, should have primary responsibility for:

- Overall co-ordination of the process;
- Fund-raising and relations with donors (including, whenever necessary, the management of grant funds and other income);
- Provision of technical assistance to private sector and community operators; and,
- Development of policy instruments, including standards (in collaboration with the NDC) and the drafting of a National Trail Act (see below for recommendation in this regard).

The design and implementation of the trail's marketing strategy should be carried out through close co-operation between the trail co-ordinating agency and the national tourism marketing agency. The trail co-ordinating agency should be responsible for the preparation and publication of the trail maps and printed guides.

In order to operate effectively, the co-ordinating agency will need:

- A core team of five persons
 - a co-ordinator,
 - an accountant and financial controller,
 - a communications and public relations specialist,
 - a planner/engineer, and
 - an administrative assistant;
- Office space to house this co-ordinating team and the core functions of the co-ordinating agency;
- A website; and,
- An operating budget that covers
 - salaries,
 - administration,
 - overhead costs,
 - website creation and maintenance,
 - design and implementation of the marketing strategy,
 - preparation and publication of a map and a guide,
 - training activities,
 - detailed planning and design of individual trail segments,
 - recruitment of consultants,
 - facilitation and conduct of participatory planning and policy formulation processes, and
 - provision of technical assistance to communities and private sector entrepreneurs.

If this organisation is to be the Waitukubuli Ecological Foundation, the Foundation will need to embark, as a matter of absolute priority, on a comprehensive organisational development process.

Institutional strengthening

The establishment and management of the National Trail will require adequate expertise and capacity within national organisations, but they will also benefit from external technical assistance. In this regard, the process has the opportunity to build on already established partnerships, for example with the Rural Tourism Unit at the University of Bristol. It will also need to explore the many other opportunities that exist, notably with other universities within and outside the Caribbean region, and with non-governmental organisations dedicated to hiking, nature tourism, and sustainable development.

The institutional strengthening of the Forestry and Wildlife Division should also become a national priority, as this is an absolute condition for the success of the National Trail initiative. This strengthening process will require that:

- All existing posts be filled at the appropriate levels of training and capacity.
- Alternative mechanisms be put in place in order to increase the financial resources available to the Division (see below recommendations regarding the management of user fees).

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- A new organisational structure be designed, to respond to the needs created by this initiative, and provisions be made for the recruitment of additional staff if needed.
 - Training be provided to existing staff in selected areas of trail management (signage, monitoring of uses, determination of carrying capacity).
 - Additional training be given to cover the issues of fauna and flora monitoring, interpretation and tourism management.

The next few years should also see a continuous process of institutional strengthening of the non-governmental and community partners, and of the various organisations of operators, i.e. taxi, nature tour operators, the Dominica Hotel and Tourism Association, and groupings of tour guides, in order to build their capacity to participate in the management of the trail and of its ancillary services. The approach to capacity-building should be linked to trail development and management activities: as these activities are being designed and undertaken, and as corresponding skills requirements are identified, "hands-on" training should be provided.

As noted earlier, this institutional framework should also depend on, and promote, an active involvement of users in trail management. This applies in particular to tour guides, who should be formally committed, through a licensing system, to the performance of a number of routine management functions, including: monitoring the status of trails and reporting maintenance needs to the co-ordinating agency; undertaking routine maintenance tasks such as the cleaning and clearing of signage; and participating, occasionally, in collective voluntary tasks.

Training and human resource development

The development and management of the trail will require skills and expertise, some of which may not be currently available in Dominica. The priority directions for training and human resource development will be:

- *Guiding*: the success of the trail will depend, to a large extent, on the availability of highly qualified and responsible guides who are able to offer a product of quality and to play their role in management, safety and public awareness. Short-term programmes should be held regularly, leading to the certification of successful participants.
- *Trail establishment and maintenance*: valuable expertise currently resides with the Forestry and Wildlife Division, but more people need to possess the required skills, especially within non-governmental organisations and community-based groups. The Division is best placed to design and conduct these training activities.
- *Monitoring*: there will be need for monitoring and evaluation in a number of areas, and this will require specialised training in various fields, including Geographic Information Systems (GIS), Global Positioning System (GPS) technology, rescue and emergency operations, social surveys and economic impact analysis.

Other training needs could be met through the on-going programmes of existing organisations, but the co-ordinating agency should be able, whenever the need arises, to design and offer short courses in areas in which the human resource needs to be developed.

Financing strategy

There will be need for a comprehensive fund-raising and financing strategy that includes a wide range of sources of income, including user fees, grants, commissions on bookings and nights at accommodation facilities, sales of goods, and donations.

The use of the National Trail will be subject to the payment of a fee, as provided under the current fee system. There will be need for a thorough review and a re-organisation of this system (Renard 2002), in order to:

- Increase revenue (this may require a raise in the rates used);
- Guarantee repayment of the loan provided by the Caribbean Development Bank;
- Ensure that surplus is redirected into management, as provided under the current agreement between the Government of Dominica and the Caribbean Development Bank; and,
- Ensure a fair distribution of that surplus among the various agencies involved.

Security and safety

Security and safety of trail users will require the following measures:

- A detailed safety and emergency plan will be drawn up, and information on the existence of this plan will be shared as part of the marketing effort, in order to demonstrate the quality and reliability of this product.
- This plan will demand that visitors are properly insured, and provide the trail co-ordinating agency and all management partners with a disclaimer of liability. An agreement will be made between the trail co-ordinating agency and an insurance company in order to make this coverage easily accessible in Dominica. (The state or any of the implementing agencies would however remain liable for damages caused by their interventions on a trail: accident during construction, faulty bridge, etc. It would therefore be necessary for the co-ordinating agency to be insured in order to cover such liabilities.)
- The plan will stipulate the procedure to be used in case of emergency, i.e. use of helicopters to remove victims of accidents, and identification of options for treatment (i.e. national hospital, or evacuation to a neighbouring island if required).
- The use of trained and certified guides will be strongly encouraged.
- Reference points with recorded GPS waypoints will be established all along the trail, and all guides will be aware of these positions, making it easier for rescuers to identify the location of an accident.
- Guides will be equipped with cell phones and will therefore be able to communicate with rescue teams and other sources of support. (Visitors who decide to hike without guides will be asked to carry cell phones – these will be available for rent from the co-ordinating agency and other outlets.)
- Individuals or community groups will be given the responsibility to manage individual shelters, with financial support from the private sector.
- The Red Cross, the Fire Brigade and the Police Force will be involved in the design of this

emergency plan, and will have a role to play in case of emergency.

This safety plan will be helped by the fact that the National Trail will be established mostly on the route of existing trails, which are known to surrounding communities, hunters and hikers. Voluntary help by local residents is often critical in emergency situations.

The issue of predial larceny, which has been raised by private landowners, will not be worsened by the creation and use of the National Trail. Whenever it passes through agricultural areas, the proposed route is using existing trails, and it will therefore not open new areas. Visitors using the trail will be asked to respect the property and produce of local farmers. As designed, it is very possible that the more intensive use of trails will actually assist in controlling and reducing predial larceny.

Standards and certification

The issue of standards will be approached with care. Since there are no international standards for trail design, it will be important for Dominica to establish its own norms. Dominica's Forestry and Wildlife Division has been using norms, and these appear fully adequate. What is needed at this stage is a detailed documentation of these norms in the form of a manual that can be used by all partners in the development of the National Trail. Similarly, there will be need for a manual to govern the design, construction and maintenance of all other facilities.

In addition to the standards that are being developed and applied by the NDC in various domains of tourism development, there will be need for specific standards and rules to govern guiding activity. A code of conduct for guides will be developed and used. The co-ordinating agency will establish a system of certification for guides to be accredited to the Waitukubuli National Trail. With respect to signage, a standardised system will be selected. If a system is borrowed from another country, copyrights should be acquired, and it should be possible to do so at no cost, as part of a co-operation agreement with a foreign national trail management agency.

The WEF should, early in the implementation process, register a patent and copyright in the name of the Waitukubuli National Trail, in order to make sure that this label is not misused and abused.

The Waitukubuli National Trail will also apply for certification under relevant international certification schemes. This will require a careful assessment of the potential benefits of each scheme, in order to select those that will contribute to the trail's desired image, and will have a positive impact on the trail's performance and marketability.

Legal instruments

Most of the legal instruments needed to establish and manage the trail are actually available, but there will still be need for a National Trail Act to harmonise and complement existing legislation. The main objects of this new act will be:

- To establish an organisation responsible for co-ordination and policy;
- To declare the route officially and give it protected status (thus preventing changes of use and facilitating enforcement);
- To provide for the formal transfer of some of the management authority to civil society and

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- private sector partners; and,
- To govern the collection, management and allocation of user fees.

It is recommended that this National Trail Act be developed and introduced towards the end of the initial implementation phase (i.e. approximately four years from the beginning of the project) in order for it to benefit from the lessons learned. Until the act is introduced, it will be possible to do all that is needed under existing legislation, as long as the Government of Dominica:

- Retains the National Trail Steering Committee, or a similar body, as the mechanisms for inter-agency collaboration in planning and policy formulation; and,
- Formally assigns day-to-day responsibility for the management of the implementation process to one organisation, which will serve as the co-ordinating agency.

8. FINANCIAL REQUIREMENTS AND FINANCING STRATEGIES

The total investment cost for the establishment of the Waitukubuli National Trail is estimated at EC\$ 9,592,449 over five years. This comprises capital costs of EC\$ 4,262,432, maintenance costs of EC\$ 2,405,170 and combined administration, programme and marketing costs of EC\$ 2,924,848. Beyond Year 4, when completion of the trail is expected, the annual maintenance cost is estimated at EC\$ 1,129,255 and continuing administration and programme costs at EC\$ 82,275 (see Table 1 on page 29), the latter essentially representing contributions to the mainstream budget of the state's main tourism promotion agency (see Appendices 2 to 7 for more detailed financial estimates).

Based on revenue projections, by the end of Year 5 the annual deficit on trail operations would be EC\$ 721,207 compared to the annual generation of revenue to the country of approximately EC\$ 5,000,000. Given an average current investment in trail maintenance of approximately \$80,000, it is anticipated that this shortfall could be met by government.

A number of financing options are available for funding the Waitukubuli National Trail:

1. Given the current economic situation in the country and the government's dependence on eco-tourism as one of the strategies for promoting economic development, the most favoured option and the one likely to generate the funds most expeditiously is donor funding.

A number of donors appear to have indicated interest in the development of the National Trail as a means of diversifying the economy generally and the tourism sector specifically. The financing of the project could be broken down into a number of discrete parts such as:

- capital investments,
- administrative support,
- programme support,
- maintenance support, etc.

Donors may also welcome a phased approach that would allow for a periodic assessment of progress and for adaptations to the implementation plan as it progresses.

Several donors could be approached to finance separate parts. It is likely that some donors may be more inclined to support certain parts of the project than others.

In its relations with donors over this project, Dominica should, to the maximum extent possible, seek to encourage co-operation and communication among donors, and to build a consortium of partners who would agree to support the project and would make complementary contributions towards its realisation.

2. Government could borrow funds to finance the project. This option is unlikely to be attractive at this time, given government's deteriorating fiscal position and its diminishing

Table 1 : Financial summary of trail development for years 1 to 5

| | YEAR 1 | YEAR 2 | YEAR 3 | YEAR 4 | YEAR 5 | TOTAL |
|--|----------------|------------------|------------------|------------------|------------------|------------------|
| EXPENDITURE | | | | | | |
| TRAIL DEVELOPMENT COSTS | | 464,179 | 464,179 | 434,879 | | 1,363,237 |
| Costed trail segments* | | 328,985 | 328,985 | 164,493 | | 822,464 |
| Allowance for uncosted trail segments** | | 135,193 | 135,193 | 270,387 | | 540,773 |
| TRAIL INFRASTRUCTURE COSTS* | | 524,920 | 524,920 | 262,460 | | 1,312,300 |
| Interpretive Signs | | 6,300 | 6,300 | 3,150 | | 15,750 |
| Directional Signs | | 6,240 | 6,240 | 3,120 | | 15,600 |
| Benches/Tables | | 24,780 | 24,780 | 12,390 | | 61,950 |
| Shelter Type 1 | | 170,000 | 170,000 | 85,000 | | 425,000 |
| Shelter Type 2 | | 100,000 | 100,000 | 50,000 | | 250,000 |
| Bridges | | 217,600 | 217,600 | 108,800 | | 544,000 |
| OTHER INFRASTRUCTURE, & FURNITURE AND EQUIPMENT ACQUISITION COSTS | | 1,266,048 | 191,923 | 128,923 | | 1,586,895 |
| Interpretation Centre*** | | 1,108,000 | 126,000 | 63,000 | | 1,108,000 |
| Entry/Exit Point Facilities* | | 126,000 | 65,923 | 65,923 | | 315,000 |
| Office Furniture & Equipment | | 12,000 | | | | 12,000 |
| Billboards*** | | 20,048 | | | | 20,048 |
| Tools/Equipment* | | 3,007 | 444,772 | 828,136 | | 2,405,170 |
| MAINTENANCE COSTS | | | | | 1,129,255 | |
| Trail | | | 265,584 | 531,168 | 779,988 | 1,576,740 |
| Interpretation Centre | | | 55,400 | 55,400 | 55,400 | 166,200 |
| Entry/Exit Point Facilities | | | 6,300 | 12,600 | 15,750 | 34,650 |
| Shelter Type 1 | | | 20,400 | 40,800 | 51,000 | 112,200 |
| Shelter Type 2 | | | 12,000 | 24,000 | 30,000 | 66,000 |
| Bridges | | | 50,766 | 101,532 | 126,915 | 279,213 |
| Benches/Tables | | | 9,912 | 19,824 | 24,780 | 54,516 |
| Directional Signs | | | 3,120 | 6,240 | 7,800 | 17,160 |
| Interpretive Signs | | | 2,098 | 4,196 | 5,245 | 11,538 |
| Billboards | | | 3,000 | 3,000 | 3,000 | 9,000 |
| Tools/Equipment | | 3,007 | 3,007 | 3,007 | 3,007 | 12,029 |
| Office Furniture & Equipment | | | 13,185 | 26,369 | 26,369 | 65,923 |
| ADMINISTRATION, PROGRAMME & MARKETING COSTS**** | | 937,115 | 778,415 | 776,915 | | 2,924,848 |
| Personnel Costs | 350,128 | 533,940 | 533,940 | 533,940 | 60,000 | 2,011,948 |
| Training Costs**** | | 87,000 | 73,500 | 73,500 | 22,275 | 256,275 |
| Consultancy Costs | | 116,950 | 46,750 | 26,750 | | 190,450 |
| Marketing Costs | | 199,225 | 124,225 | 142,725 | | 466,175 |
| TOTAL COSTS | 350,128 | 3,195,269 | 2,404,209 | 2,431,314 | 1,211,530 | 9,592,449 |
| REVENUE | | | | | | |
| USER FEES | | 27,000 | 54,000 | 81,000 | 162,000 | 324,000 |
| TRAIL AND TOUR GUIDE LICENSES | | 4,000 | 8,000 | 12,000 | 12,000 | 36,000 |
| LEVY ON ACCOMMODATION, RESTAURANTS, ETC. | | 21,094 | 42,188 | 63,281 | 126,563 | 253,125 |
| CONCESSIONS ON LOCAL FACILITIES | | - | 19,504 | 39,008 | 48,760 | 107,271 |
| SALE OF TOURISM RELATED MATERIAL AND PARAPHERNALIA | | 5,000 | 15,000 | 30,000 | 60,000 | 110,000 |
| PRIVATE SECTOR SPONSORSHIP OF SHELTER MAINTENANCE▯ | | | 32,400 | 64,800 | 81,000 | 178,200 |
| TOTAL REVENUE | - | 57,094 | 171,091 | 290,089 | 490,322 | 1,008,596 |
| OPERATIONAL REVENUE SHORTFALL***** | 350,128 | 883,028 | 1,052,095 | 1,314,962 | 721,207 | 4,321,422 |

No allowances have been made for inflation, particularly for construction and purchases phased over 3 years

* 40% built in Yr2, 40% in Yr3 and 20% in Yr4.

** 25% built in Yr2, 25% in Yr3 and 50% in Yr4.

*** Built/bought in Yr 2

**** These (Project) costs will end after 4 yrs. at which time the Tourism Promotion Agency and other management agencies will take over. Admin & Programme costs in Yr5 include continued training for guides and the private sector as well as the costs of hiring a permanent Coordinator to continue the coordination of trail related activity.

***** Excluding Capital costs. Yr5 represents the first year without donor support and indicates the type of financing gap that the government needs to meet from its recurrent budget.

capacity to borrow further. This option could only be pursued after a successful economic stabilisation programme. Financing the National Trail could be one of the projects included in the negotiations under the stabilisation programme currently being negotiated with donor agencies.

Another financing option that government could pursue is the issuance of bonds for the financing of the project. Proceeds from the use of the trail could then be directed to a special fund that would be used to repay investors.

3. Local voluntary contributions could reduce the funding requirements. Both communities and potential trail guides likely to benefit from the establishment of the trail could be approached to provide “sweat equity” for the project, particularly with regard to the provision of skilled and unskilled labour. As the trail will be divided into segments, different communities could participate in the construction of segments in close proximity, given that they are the ones most likely to benefit from visitors to those segments.
4. The fourth option is the consideration of a combination of the three options indicated above. Realistically, options 1 and 3 are the most feasible in the short term. In fact, such a combination is more likely to be attractive to potential donors.
5. In addition, the possibility of launching a subscription, which would allow Dominicans to support the trail, should be explored.

9. STRATEGIC IMPLEMENTATION PLAN

The implementation of this project will require a period of five years.

In order to manage this project, there will be need to establish a Project Management Unit (PMU). The functions of this Unit will be to:

1. Co-ordinate project implementation;
2. Raise and manage project funds;
3. Facilitate the design and construction of a Waitukubuli National Trail Centre;
4. Manage project activities in the areas of public awareness and mobilisation, training and capacity-building, and community development;
5. Collaborate with the National Development Corporation and other relevant agencies in the design and implementation of marketing activities; and,
6. Collaborate with the Forestry and Wildlife Division and other relevant agencies in the design of all technical components of this project.

This Unit should operate under the auspices of the National Trail Steering Committee. In order to strengthen the role and operations of this Committee, the Cabinet of Ministers should be asked to:

- Confirm the Steering Committee's mandate and role;
- Confirm the Steering Committee's composition as a multi-stakeholder body working under the auspices of the Ministry of Agriculture;
- Appoint formally its Chairperson;
- Develop and formalise its terms of reference; and,
- Mandate one organisation to assume legal responsibility for the operation of the PMU.

At this operational level, two options could be considered:

1. The PMU could be established within the Ministry of Agriculture; or,
2. The Unit could be placed within the WEF, with a Memorandum of Understanding between the Government and the WEF that would govern all operational aspects and assign specific responsibilities.

While both options have merit, this study recommends that the second option be chosen, because:

- It provides for greater flexibility while maintaining governmental supervision and leadership through the National Trail Steering Committee;
- It increases and diversifies funding opportunities;
- It facilitates greater community and civil society involvement;
- It avoids potential inter-ministerial disputes, and maintains a holistic approach; and,
- It fits a growing international pattern where non-profits organisations and private foundations are empowered and assisted to carry out a range of tasks for the common good.

This option will however require that the WEF engage in a comprehensive institutional development process. This process should include, *inter alia*:

- the formulation of a strategic plan for the organisation;
- a review of its legal statutes to ensure compatibility with its mission and objectives;
- the development of a membership base within Dominica and abroad;
- the establishment of institutional linkages within Dominica and abroad;
- fund-raising (based on a comprehensive fund-raising strategy);
- development of an organisational structure and recruitment of personnel; and
- design and introduction of internal management systems.

Project implementation will require three successive phases:

Phase 1: Building the foundation

In this first phase, the project will:

- Set-up the PMU;
- Raise required funding for this and subsequent phases;
- Provide institutional development support to the WEF, and enable it to recruit paid staff as a matter of priority;
- Design and establish the Waitukubuli National Trail Centre (site selection; conceptual and architectural design; securing land title and access; construction; operation, maintenance and management);
- Conduct broad mobilisation activities at all levels (sensitisation of policy-makers and opinion leaders, public awareness campaigns, relations with media personnel, promotion of hiking through special events and publicity, community consultations)
- Strengthen the capacity of key partner organisations within government and civil society;
- Develop standards for trail construction and management, and for related structures and services;
- Conduct a field reconnaissance and assessment of all trail sections, finalise a route, and develop a GIS with a description of each trail section, an identification and a description of main features, and the mapping of land tenure;
- Prepare an operational manual for trail construction and maintenance;
- Formulate the process by which individual segments of the National Trail will be designed and constructed (see box, page 33: activities to be undertaken for the design of sections of the trail);
- Design and construct a website;
- Design and conduct training programmes (tour guiding, trail construction and maintenance, signage, small business development, and resource and resource use monitoring);
- Define a marketing strategy (in collaboration with the EU-funded Eco-tourism Development Programme); and,
- Prepare a detailed implementation plan for phase 2.

Activities to be undertaken for the design of individual sections of the National Trail

- Detailed mapping with field visits and interviews with resource people to assess seasonal changes and special features, which may not be observed during the field visits.
- Land tenure analysis.
- If required, negotiation with landowners and execution of contractual agreement.
- If required, mapping by the Lands and Surveys Division and conduct of legal process to declare sections as public footpaths.
- Detailed technical design
 - trail design and specifications;
 - identification of measures for drainage and erosion control;
 - identification and design of steps;
 - bridges and other facilities;
 - signage;
 - special safety measures.
- Participation and consultation of stakeholders at all stages.
- Conduct of environmental baseline and impact assessment studies.

Phase 2: Pilot trail development

In this second phase, the project will select one region, most likely the southern segments of the trail, for a pilot development programme involving:

- Pilot trail development in sections representing approximately one third of the length of the proposed National Trail;
- Development and implementation of a programme of trail-related events for nationals and visitors, to celebrate its creation, promote involvement in its management, and encourage its use;
- Pilot community development activities in communities touched by these trail sections (local consultation and mobilisation, business development, technical assistance, local-level training and capacity-building, and construction of infrastructure at entry and exit points);
- Capacity-building programmes for all institutional partners;
- Implementation of the marketing strategy; and,
- Detailed evaluation at the end of the year, and use of lessons learned in the design of the third phase.

Phase 3: Completion

In this third and final phase, the project will:

- Complete trail establishment;
- Design and conduct community and enterprise development activities in all communities;
- Continue and expand training and capacity-building initiatives;
- Continue implementation of the marketing strategy;
- Design and establish permanent institutional arrangements to maintain and develop the trail and supersede the PMU;
- Draft and promote the Waitukubuli National Trail Act; and,
- Continue the programme of trail related events begun in Phase 2, including a completion celebration, and set in train the idea of an annual Trail Day.

APPENDIX 1

The Waitukubuli Ecological Foundation (WEF)

(economic development through environmental conservation)

The Waitukubuli Ecological Foundation (WEF) was established as a charity under the laws of England and Wales by Dominicans and friends of Dominica resident in London in 1996. In 1999 it was registered as a Non-Profit Organisation under the Companies Act of the Commonwealth of Dominica.

The Foundation aims to contribute to the holistic development of Dominica by developing, discussing and disseminating through public education and practice the approach that the development of the economy and the conservation of the environment should be conceived of together as an interconnected whole, a concept which should apply in all our strategic planning and thinking. It recognizes as a fact of reality that the effective conservation of the environment can only be achieved with public support which itself will depend on effectively addressing the people's concerns for their livelihood. The effort to conserve Dominica's God-given, wonderful natural environment should proceed by identifying those projects and areas that are simultaneously income generators as well as conservation measures.

One of the WEF's objectives is to do just that. The national trail is a case in point, for not only will it establish a key facility for the development of the tourism sector of the economy – ecotourism, but it will also be a significant conservation measure since it would create a benign conservation logic in giving the people a vested interest in maintaining the natural beauty and integrity of the environment in order to attract visitors to the trail for the economic benefits they would bring to rural communities and the island as a whole.

The choice of the words “ecological” and “Waitukubuli” in the name of the Foundation connotes the concept of environmental conservation as embracing more than just the natural environment, but includes all aspects of human socio-economic and historical-cultural activity. The WEF is therefore particularly interested in those areas where history, economics and environment converge. Such a juncture is provided by a project aimed at the discovery and restoration of the many Maroon ruins and caves around the island, which would not only create new and more interesting tourist attractions, but would also greatly enhance public appreciation of the island's history and heritage which would impact on the effort of nation building as well as of environmental conservation.

But perhaps the most significant project along these themes is the advocacy and promotion of the gradual transformation of the island's agriculture from its present reliance on artificial chemicals and poisons to a wholly or mostly organic culture. Organic agriculture would not only be the single greatest environmental conservation measure, but would also provide the basis for the revival and recovery of the island's agricultural economy. By these means we hope to contribute to the creation of a happier, healthier and more humane society within one of the most wonderful natural environments available anywhere in the modern world in the 21st century.

Membership to the WEF is open to Dominicans and friends of Dominica at home and abroad on subscription both to the finances and philosophy of the Foundation. For more information contact Bernard Wiltshire at the address below:

C/o P.O.Box 673, Roseau, Commonwealth of Dominica, Eastern Caribbean

Tel: (767) 448 0346; 446 0129; email: bernardwiltshire@cwdom.dm

Bernard Wiltshire

President of WEF and former Attorney General of the Commonwealth of Dominica.

APPENDIX 2

THE WAITUKUBULI TRAIL

Proposal to construct a trail for trekking through the central highlands of Dominica from one end of the island to the other.

INTRODUCTION

1 This is a project to create a trail for trekking right through the centre of Dominica, which would open up the natural and scenic delights of the island not only to a potentially significant market of overseas visitors, but also to the islanders themselves. It would give practical expression to the concept of sustainable tourism or eco-tourism, because its appeal would primarily be to the sort of visitors who love and respect the natural environment and are passionate about its conservation, while contributing to its economic development. Although the island is only about 30 miles long as the crow flies, because of the quite extraordinarily rugged nature of the terrain, a trail of this kind would encompass a distance of several hundred miles, making it one of the more notable footpaths of the world. It would have the advantage of a project combining economic development with social, cultural, even spiritual, benefits and would be in keeping with current world-wide effort to strike a proper balance between the competing demands of economic development and environmental conservation.

THE DOMINICAN BACKGROUND

2 Dominica is situated between latitudes 15.12 and 15.39 N and longitudes 61.14 and 61.29 W in the Caribbean chain of islands known as the Lesser Antilles. It is the most mountainous of that chain. Approximately 30 miles long and 16 miles wide, it is marked by a spinal chain of mountains and valleys running virtually along its entire length. It has a population of just over 70,000 people made up of the descendants of Africans, indigenous Caribs and Europeans. It is extraordinarily rugged. When attempting to describe it to the king of Spain, Columbus, reportedly lost for words, simply crumpled a piece of paper in his hand and threw it before the King. The mountains crown an extensive rain forest and are themselves covered in a mantle of green vegetation giving the land that mysterious wild-green aspect that has fascinated visitors ever since. Tourists, throughout the centuries, have commented on the breathtaking and strange quality which mark the beauty of its flora and fauna.

SOCIO – ECONOMIC AND CULTURAL BACKGROUND

3 Like the rest of the Caribbean islands, Dominica has traditionally been a monocrop economy exporting to the European (UK) market. But while there has been varying degrees of diversification in the other islands, the process is still in its initial stages in Dominica, and since the end of the Second World War, the economy has been based almost entirely on the export of bananas to the UK. However, although bananas have been the mainstay of the economy for four decades, low prices have prevented the accumulation of any surplus capable of allowing for investment in further economic development; and at present, these already low prices can only be maintained by special E.U. tariff arrangements which have come in recent years under increasing attack by European and American corporate interests. At the same time, the level of environmental pollution has increased significantly as a result of the widespread, and it must be said, inadequately monitored use of chemical inputs such as fertilizers and pesticides, administered by land and air. This cocktail of circumstances has resulted in economic stagnation and decline, a steady haemorrhage of the most creative section of the population through migration, particularly among the young and, a short to medium term threat to the social/cultural cohesion and viability of the community.

AN ALTERNATIVE APPROACH

4 The search for an alternative approach to economic and social development as the twentieth century draws to a close is an imperative if the island is to fare better in the next century. Dominica's main economic asset, apart from its people, is its natural environment. On this, and on its ecological systems, depend its potential for the successful diversification of its economy not only in agriculture, for example, where new directions will be required, but also in tourism and other fields. Its ability to compete in agriculture depends on the fertility of its soil which it enjoys because of its high rainfall. The protection of the rain forest is vital to this rainfall. It is, on the other hand, the unique and unparalleled variety of its natural beauty that is Dominica's chief tourism asset. The value of such an asset is entirely dependent on its conservation. This is a clear example of a situation in which investment in environmental conservation is also good business. The conservation of the natural environment should therefore be placed at the centre of economic policy and an alternative approach in both agriculture and tourism has now become inescapable.

SUSTAINABLE TOURISM

5 In tourism, official government policy has recognized for some time that the future lies in the concept of eco-tourism as the best way of turning the island's chief asset, its remarkable natural beauty, into a wealth creating resource for the whole country. This concept is important for Dominica because it permits the search for economic development and job creation not only in a way that does not

harm the environment, but also through its positive enhancement.

It used to be thought that Dominica was economically doomed by the same features that made it beautiful – its mountainous ruggedness; but in the present era of a world-wide environmental movement, the growing appeal of the wild and untouched has placed these very features at a premium. Dominica’s lush and varied topography, its many rivers, waterfalls and lakes, the green tranquility of its mountains and valleys, provide the basis for a tourism of lovers of nature, and of a growing community of discerning travellers with a sense of adventure; who seek a different kind of holiday abroad from that offered by the noisy beach resort variety. It is a tourism based on the enjoyment of nature, and its aim and the aim of the conservation movement are the same because it requires, for this continued enjoyment, that the natural environment be preserved as much as possible in its original purity. Popular support for environmental issues are strongest where they are linked with possibilities of earning a livelihood.

NATURE TRAILS

6 Dominica is usually referred to as the “nature island of the Caribbean”; and it is the place itself with all its varied and variegated displays of natural forms and colours that provide the main tourist attraction. An excellent way of making these available to the kind of people who would enjoy Dominica is by restoring the many ancient Carib and slave trails and transforming them into historical nature trails. This would in turn stimulate the development of nature reserves and lead to new discoveries of places of special interest, a process which would itself enhance the value of the industry.

THE WAITUKUBULI TRAIL

7 The Waitukubuli trail would be the jewel in the crown, the Great Nature Trail, the Great Highland Way, the Chinese Wall of Dominica, a human mark blended into the landscape, the National Trail, uniting the whole island from North to South, and providing the focus for a system of nature trails throughout the island. From Scotts Head in the South to Capuchin in the North, through all the vicissitudes of its winding ways, up the high mountains and down the lost valleys, the Trail will wind its way, embracing the sense of despair in the Valley of Desolation and mystery in the Boiling Lake, to fall triumphantly and with optimism upon the grand view of the unfolding hills of Trois Pitons and Diablotin and end, no doubt, on some tranquil shore of the Northern Capuchin coast where, on a clear day, people can be seen going about their business in neighbouring French Guadeloupe.

A ROLE FOR THE CARIB PEOPLE

8 The name Waitukubuli is more than mere coincidence, it was the Carib name for the island before the European intervention. This once intrepid community is now only a shadow of what it once was. Retreating, as have all indigenous peoples before the irresistible onslaught of European might, their numbers have dwindled to the point where, as the only surviving remnants of the island Caribs, they now face the danger of physical extinction. Their fortitude is legendary, but the world has largely ignored their plight. They have not only had a bad press, but a bad deal also. Yet their claims to our human consideration and compassion are unanswerable. It was the Caribs who probably created the first major trails throughout the island; it is their descendents who still survive; it is, therefore, fitting that the revival of this new interest in trails and the creation of a National Trail should be named after their name for the country. To do so would be to begin to reverse a much to be regretted pattern of neglect which has resulted in their isolation and increasing poverty. It would be to invite them centre-stage in the planning and development of a national project with long term prospects for the future, and to stem the psychological despair which must confront any ethnic group in their circumstances. It would also help to create a richer and more consciously inclusive concept of the Dominican polity. Because these trails were the basis of Carib, as well as future, transportation and communication, they must have been of the utmost economic significance, and as such, one of the pillars of the culture of all the people, whatever their ethnic origin.

The creation of the Waitukubuli Trail would therefore herald a renewed emphasis on the cultural dimension, on change as well as continuity, distinctiveness as well as mutual dependability of its various peoples. It would provide a golden opportunity, as we approach the new millennium, for Carib and African, and all those who share the country today, to realize what has always been implicit in their relationships – the need, possibility and promise of creating a new covenant of mutual recognition, caring and solidarity and the acceptance of joint responsibility for the development of the country. This project thus addresses many of the central issues facing Dominicans in the approach to the 21st century. It is an ideal millenium project.

AN ENTERPRISE OF THE WHOLE PEOPLE

9 Its construction would be a very significant undertaking. It could only be achieved by the whole people working together with international assistance. Running the length of the island, the Trail would provide a hinterland resource for the contiguous communities on its route and its self-propelling attractiveness would not fail to attract their involvement and ownership of those parts that traverse their areas. This project would provide the first opportunity for Dominicans to participate in a national enterprise, with a definite aim and vision of the future and with all the benefits that working together, purposefully in this way, would bring. It would probably do for Dominica, psychologically, in terms of national self-definition, what

the opening up of the West did for the United States, minus the violence and other excesses, of course. The creation of the trail could contribute to national self definition, and to international solidarity through the participation of voluntary international brigades in its construction.

MOTIVATING THE YOUTH

10 It would stimulate the interest of the youth in the country and involve them in a new way. The hard realities of the modern economy has all but dried up the idealism of youth. Economic depression and exposure to the full force of international satellite media has weakened their interest in the country itself and strongly motivated them to turn their attention permanently elsewhere, to the great metropolitan cities of Europe and North America. Unless a way can be found of expanding the economy in an appropriate manner, this trend is set to continue, leading only to a spiral of decline. A project which could generate enthusiasm for the country itself, as well as economic advantages for many, has great natural attractions for the young. Furthermore, as has already been shown, a new emphasis on national culture would strengthen national self-identity and self-confidence and encourage people to look to the country itself and to its available resources, for a solution for some of their economic problems. A video made of the creation of the trail would provide a powerful tool for environmental education - itself a very significant conservation measure. The trail, once completed, could provide a moral training ground for the young, requiring them to find in themselves, qualities of courage, endurance, comradeship as well as individual effort, self-sacrifice as well as joy in an achievement well earned, in undertaking to walk it – a kind of modern rite of passage for this and future generations.

ECONOMIC BENEFITS

11 The development of the trail and of trails generally would stimulate the growth of eco-tourism and of the economy as a whole. Handled properly, it could provide a new stimulus for attracting both international and national, public and private sector, investment in providing services and facilities for a growing industry. It would also stimulate such important conservation measures as river and forest restoration which would be crucial if the industry is to accrue value rather than depreciate with time. It is a project with great long term potential, but its middle and short term advantages are also evident.

POTENTIAL DRAWBACKS

12 As with any other project there are potential drawbacks. In particular, an increase in the number of visitors to the island with greater access to the interior, could, in time, lead to the sort of erosion which is now being experienced in the English country-side, for example. But this could be some considerable way off and

future generations would be better equipped to cope with it, especially if funds are progressively set aside by the present generation for appropriate conservation measures. There is also the danger of increased pollution if the country-side as a result of increased human use, but once again, education, and the sort of tourists targeted would minimize that danger.

THE WAY FORWARD

13 The climate of opinion in Dominica is highly receptive to the idea of such a project. The existence of a growing environmental awareness illustrated particularly by the work of the premier environmental organization in the island, the Dominica Conservation Association has created the climate for the success of this project. Developing eco-tourism has been official government policy for some time. This project would therefore fit in well with any national strategy for the future. What is needed now is a feasibility study which would include discussions with government and non-governmental organizations, such as DCA, analysis of the potential benefits and drawbacks, market research and a consideration of other modalities for going forward.

Bernard Wiltshire
November 1995

APPENDIX 3 - TABLE SHOWING TRAIL DEVELOPMENT COSTS

| SEGMENT* | DISTANCE | | LABOUR (man days) | LABOUR WAGES** | TRANSPORTATION*** | MATERIAL | |
|---|---------------|---------------|----------------------|-------------------|-------------------|-------------------|---------------------|
| | (miles) | (Km) | | | | MATERIAL**** | TRANSPORTATION***** |
| Scotts Head to Tete Morne | 5.50 | 8.85 | 40 | 12,324.80 | 2,000.00 | 23,232.00 | 5,445.00 |
| Tete Morne to Grand Bay | 1.16 | 1.87 | 25 | 7,703.00 | 1,250.00 | 7,349.76 | 1,722.60 |
| Grand Bay to Larouche | 5.00 | 8.05 | 70 | 21,568.40 | 3,500.00 | 7,920.00 | 1,856.25 |
| Larouche to Boiling Lake | 3.00 | 4.83 | 100 | 30,812.00 | 5,000.00 | 22,176.00 | 5,197.50 |
| Boiling Lake to Freshwater Lake | 2.25 | 3.62 | 35 | 10,784.20 | 1,750.00 | 14,256.00 | 3,341.25 |
| Freshwater Lake to Pont Cassé | 6.25 | 10.06 | 50 | 15,406.00 | 2,500.00 | 19,800.00 | 4,640.63 |
| Pont Cassé to William | 2.00 | 3.22 | 20 | 6,162.40 | 1,000.00 | 3,168.00 | 742.50 |
| William to Castle Bruce (near Ford) | 6.25 | 10.06 | 60 | 18,487.20 | 3,000.00 | 26,400.00 | 6,187.50 |
| Castle Bruce to Pedu Temps | 2.50 | 4.02 | 25 | 7,703.00 | 1,250.00 | 3,960.00 | 928.13 |
| Pedu Temps to Burubati | 4.75 | 7.64 | 40 | 12,324.80 | 2,000.00 | 20,064.00 | 4,702.50 |
| Burubati to Melville Hall | 6.00 | 9.66 | 5 | 1,540.60 | 250.00 | 3,168.00 | 742.50 |
| Melville Hall to D'leau Matthieu | 13.00 | 20.92 | 130 | 40,055.60 | 6,500.00 | 96,096.00 | 22,522.50 |
| D'leau Matthieu to Syndicate Estate | 11.00 | 17.70 | 80 | 24,649.60 | 4,000.00 | 46,464.00 | 10,890.00 |
| Syndicate Estate to Morne Turner | 4.50 | 7.24 | 40 | 12,324.80 | 2,000.00 | 33,264.00 | 7,796.25 |
| Morne Turner to Bornes | 3.50 | 5.63 | 80 | 24,649.60 | 4,000.00 | 25,872.00 | 6,063.75 |
| Borne to Repoisoir Estate | 5.00 | 8.05 | 60 | 18,487.20 | 3,000.00 | 21,120.00 | 4,950.00 |
| Repoisoir Estate to Cabrits | 7.00 | 11.27 | 70 | 21,568.40 | 3,500.00 | 22,176.00 | 5,197.50 |
| SUB-TOTAL | 88.66 | 142.68 | 930 | 286,551.60 | 46,500.00 | 396,485.76 | 92,926.35 |
| Allowance for uncoded trail segments***** | 25.68 | 41.32 | 856 | 263,700.61 | 42,800.00 | 189,790.50 | 44,482.15 |
| TOTAL | 114.34 | 184.00 | 1786 | 550,252.21 | 89,300.00 | 586,276.26 | 137,408.50 |
| GRAND TOTAL | | | | | | \$ | 1,363,236.97 |

* Only main routes used - some of the optional routes are longer

** Labour is provided in crews. For computing labour costs, each man day costs EC\$ 308.12 and comprises:

One supervisor @ \$65.86 per day (inc. Employers contribution to SS)

Two skilled workers @ \$49.22 per day (inc. Employers contribution to SS)

Three unskilled workers @ \$47.94 per day (inc. Employers contribution to SS)

** Rates based on current Govt. rates adjusted by 15% for wage increases & productivity

*** Labour transportation costed at \$50 per day

**** Fwije (tree fern) will be used to construct steps - material cost based on % of trail over which steps will be constructed

***** Material transportation costed at \$75.00 per load of 80 lengths of Fwije

***** Based on costs associated with the most challenging parts of the costed trail

APPENDIX 4 - TRAIL RELATED INFRASTRUCTURE DEVELOPMENT

| SEGMENT* | DISTANCE | | INTERPRETIVE SIGNS [∞] | DIRECTIONAL SIGNS [▣] | BENCHES/TABLES [▶] | SHELTERS TYPE 1 [▼] | | SHELTERS TYPE 2 ^{▼▼} | | BRIDGES [▲] | |
|-------------------------------------|--------------|---------------|---------------------------------|--------------------------------|-----------------------------|------------------------------|------------|-------------------------------|------------|----------------------|---------------------|
| | (miles) | (Km) | | | | NUMBER | COST(\$EC) | NUMBER | COST(\$EC) | NUMBER | COST(\$EC) |
| Scotts Head to Tete Mome | 5.50 | 8.85 | 2 | 1,500.00 | 11 | 1,430.00 | 5 | 5,250.00 | | | |
| Tete Mome to Grand Bay | 1.16 | 1.87 | | - | 3 | 390.00 | 2 | 2,100.00 | | | |
| Grand Bay to Larouche | 5.00 | 8.05 | 2 | 1,500.00 | 10 | 1,300.00 | 4 | 4,200.00 | 2 | 50,000.00 | 2 |
| Larouche to Boiling Lake | 3.00 | 4.83 | 1 | 750.00 | 4 | 520.00 | 7 | 7,350.00 | 1 | 25,000.00 | 4 |
| Boiling Lake to Freshwater Lake | 2.25 | 3.62 | 1 | 750.00 | 3 | 390.00 | 1 | 1,050.00 | 1 | 25,000.00 | |
| Freshwater Lake to Pont Cassé | 6.25 | 10.06 | | - | 10 | 1,300.00 | 2 | 2,100.00 | | | |
| Pont Cassé to William | 2.00 | 3.22 | 1 | 750.00 | 5 | 650.00 | 1 | 1,050.00 | | | 1 |
| William to Castle Bruce (near Ford) | 6.25 | 10.06 | 1 | 750.00 | 4 | 520.00 | 3 | 3,150.00 | 1 | 25,000.00 | 5 |
| Castle Bruce to Pedu Temps | 2.50 | 4.02 | | - | 3 | 390.00 | 1 | 1,050.00 | | | 2 |
| Pedu Temps to Burubati | 4.75 | 7.64 | 1 | 750.00 | 8 | 1,040.00 | 3 | 3,150.00 | 1 | 25,000.00 | 3 |
| Burubati to Melville Hall | 6.00 | 9.66 | | - | 4 | 520.00 | | | | | |
| Melville Hall to D'yeau Matthieu | 13.00 | 20.92 | 3 | 2,250.00 | 15 | 1,950.00 | 6 | 6,300.00 | 3 | 75,000.00 | 4 |
| D'yeau Matthieu to Syndicate Estate | 11.00 | 17.70 | 1 | 750.00 | 8 | 1,040.00 | 3 | 3,150.00 | 2 | 50,000.00 | 3 |
| Syndicate Estate to Mome Turner | 4.50 | 7.24 | 2 | 1,500.00 | 6 | 780.00 | 4 | 4,200.00 | 2 | 50,000.00 | 2 |
| Mome Turner to Bornes | 3.50 | 5.63 | 1 | 750.00 | 8 | 1,040.00 | 5 | 5,250.00 | 1 | 25,000.00 | 4 |
| Borne to Repoisoir Estate | 5.00 | 8.05 | 2 | 1,500.00 | 8 | 1,040.00 | 5 | 5,250.00 | 2 | 50,000.00 | 4 |
| Repoisoir Estate to Cabrits | 7.00 | 11.27 | 3 | 2,250.00 | 10 | 1,300.00 | 7 | 7,350.00 | 1 | 25,000.00 | 4 |
| TOTAL | 88.66 | 142.68 | 21 | 15,750.00 | 120 | 15,600.00 | 59 | 61,950.00 | 17 | 425,000.00 | 34 |
| GRAND TOTAL | | | | | | | | | | 250,000.00 | |
| | | | | | | | | | | | 544,000.00 |
| | | | | | | | | | | | 1,312,300.00 |

∞ Costed at EC\$750 per sign

▣ Costed at EC\$130 per sign

▶ Costed at EC\$1,050 per bench/table

▼ Costed at EC\$25,000 per shelter

▼▼ Costed at EC\$50,000 per shelter

▲ Costed at an average of EC\$16,000 per bridge (including material & labour)

APPENDIX 5 - OTHER INFRASTRUCTURE DEVELOPMENT AND EQUIPMENT ACQUISITION COSTS

| ITEM | NUMBER | COST |
|---------------------------------|--------|------------------|
| Interpretation Centre* | 1 | 1,108,000 |
| Entry/Exit Point Facility** | 9 | 315,000 |
| Office Furniture & Equipment*** | 6 | 131,847 |
| Billboards**** | 6 | 12,000 |
| Tools/Equipment***** | 5 | 20,048 |
| TOTAL | | 1,586,895 |

* Based on the approximate cost of construction of the Cabrits Interpretation Centre (adjusted for inflation) and expanded to accommodate a meeting room for up to 200 persons

** Facilities will be built at the following points: Scotts Head, Giraudel, Grand Bay, Wotten Waven, Larouche, Pont Cassé, Carib Territory, Melville Hall and Penville and costed at EC\$35,000 each.

*** Includes 13 computers & printers, office furniture and reception chairs for four offices in the Interpretation Centre and 9 Entry/Exit Point Facilities, and tables and chairs to accommodate a meeting of 200 persons.
 **** Erected at the entrance to two airports and four seaports

***** The following is a list of the smaller items to be acquired for each of five crews working on the trail network simultaneously.

| ITEM***** | Number | Unit Price | Total Price |
|--------------------|--------|------------|-----------------|
| pickaxes | 2 | 68.90 | 137.80 |
| shovels | 2 | 52.95 | 105.90 |
| spades | 2 | 58.95 | 117.90 |
| mattocks | 2 | 66.90 | 133.80 |
| rakes | 2 | 33.95 | 67.90 |
| crowbar | 1 | 77.95 | 77.95 |
| wheelbarrow | 1 | 386.25 | 386.25 |
| buckets | 4 | 33.95 | 135.80 |
| chainsaw | 1 | 2,079.00 | 2,079.00 |
| chain | 2 | 115.00 | 230.00 |
| chainsaw files | 12 | 5.50 | 66.00 |
| tarpaulin | 2 | 48.00 | 96.00 |
| sledge | 1 | 75.00 | 75.00 |
| cutlasses | 6 | 20.00 | 120.00 |
| cutlass files | 12 | 7.50 | 90.00 |
| measuring tape | 1 | 37.75 | 37.75 |
| containers (5 gal) | 1 | 52.50 | 52.50 |
| TOTAL | | | 4,009.55 |

APPENDIX 6(a) - ANNUAL TRAIL MAINTENANCE COSTS

| SEGMENT* | DISTANCE | | (man days) | LABOUR | | MATERIAL | |
|---------------------------------------|---------------|---------------|-------------|-------------------|-------------------|-------------------|---------------------|
| | (miles) | (Km) | | WAGES** | TRANSPORTATION*** | MATERIAL**** | TRANSPORTATION***** |
| Scotts Head to Tete Morne | 5.50 | 8.85 | 25 | 7,703.00 | 1,250.00 | 6,969.60 | 1,633.50 |
| Tete Morne to Grand Bay | 1.16 | 1.87 | 15 | 4,621.80 | 750.00 | 2,204.93 | 516.78 |
| Grand Bay to Larouche | 5.00 | 8.05 | 45 | 13,865.40 | 2,250.00 | 2,376.00 | 556.88 |
| Larouche to Boiling Lake | 3.00 | 4.83 | 55 | 16,946.60 | 2,750.00 | 6,652.80 | 1,559.25 |
| Boiling Lake to Freshwater Lake | 2.25 | 3.62 | 25 | 7,703.00 | 1,250.00 | 4,276.80 | 1,002.38 |
| Freshwater Lake to Pont Cassé | 6.25 | 10.06 | 35 | 10,784.20 | 1,750.00 | 5,940.00 | 1,392.19 |
| Pont Cassé to William | 2.00 | 3.22 | 10 | 3,081.20 | 500.00 | 950.40 | 222.75 |
| William to Castle Bruce (near Ford) | 6.25 | 10.06 | 35 | 10,784.20 | 1,750.00 | 7,920.00 | 1,856.25 |
| Castle Bruce to Pedu Temps | 2.50 | 4.02 | 15 | 4,621.80 | 750.00 | 1,188.00 | 278.44 |
| Pedu Temps to Burubati | 4.75 | 7.64 | 30 | 9,243.60 | 1,500.00 | 6,019.20 | 1,410.75 |
| Burubati to Melville Hall | 6.00 | 9.66 | 5 | 1,540.60 | 250.00 | 950.40 | 222.75 |
| Melville Hall to D'leau Matthieu | 13.00 | 20.92 | 80 | 24,649.60 | 4,000.00 | 28,828.80 | 6,756.75 |
| D'leau Matthieu to Syndicate Estate | 11.00 | 17.70 | 50 | 15,406.00 | 2,500.00 | 13,939.20 | 3,267.00 |
| Syndicate Estate to Morne Turner | 4.50 | 7.24 | 25 | 7,703.00 | 1,250.00 | 9,979.20 | 2,338.88 |
| Morne Turner to Bornes | 3.50 | 5.63 | 50 | 15,406.00 | 2,500.00 | 7,761.60 | 1,819.13 |
| Bornes to Reposoir Estate | 5.00 | 8.05 | 40 | 12,324.80 | 2,000.00 | 6,336.00 | 1,485.00 |
| Reposoir Estate to Cabrits | 7.00 | 11.27 | 40 | 12,324.80 | 2,000.00 | 6,652.80 | 1,559.25 |
| Allowance for uncosted trail segments | 25.68 | 41.32 | 534 | 164,489.70 | 26,692.47 | 189,790.50 | 44,482.15 |
| SUB-TOTALS | 114.34 | 184.00 | 1114 | 343,199.30 | 55,692.47 | 308,736.23 | 72,360.05 |
| TOTAL | | | | | | | 779,988.05 |

* Only main routes used

** For computing labour costs, each man day costs EC\$ 308.12 and comprises:

One supervisor @ \$65.86 per day (inc. Employers contribution to SS)

Two skilled workers @ \$49.22 per day (inc. Employers contribution to SS)

Three unskilled workers @ \$47.94 per day (inc. Employers contribution to SS)

*** Wage rates are based on (2002) Govt. rates adjusted by 15% for inflation & productivity

**** Labour transportation costed at \$50 per day

***** It is estimated that 30% of the Fwije material will be replaced annually

***** Material transportation costed at \$75.00 per load of 80 lengths of Fwije

□ Based on the average cost of maintenance for costed trail segments

**APPENDIX 6(b) - ANNUAL INFRASTRUCTURE AND EQUIPMENT
MAINTENANCE/REPLACEMENT COSTS**

| ITEM | NUMBER | ORIGINAL COST | MAINTENANCE/ REPLACEMENT COST* |
|---------------------------------------|--------|------------------|-----------------------------------|
| Interpretation Centre | 1 | 1,108,000 | 55,400.00 |
| Entry/Exit Point Facility | 9 | 315,000 | 15,750.00 |
| Shelter Type 1 | 17 | 425,000 | 51,000.00 |
| Shelter Type 2 | 5 | 250,000 | 30,000.00 |
| Bridges | 34 | 544,000 | 126,915.20 |
| Benches/Tables | 59 | 61,950 | 24,780.00 |
| Directional Signs | 120 | 15,600 | 7,800.00 |
| Interpretive Signs | 21 | 15,750 | 5,244.75 |
| Billboards | 6 | 12,000 | 3,000.00 |
| Tools/Equipment | 5 | 20,048 | 3,007.16 |
| Office Furniture & Equipment | | 131,847 | 26,369.36 |
| TOTAL | | 2,899,195 | 349,266.47 |
| GRAND TOTAL ANNUAL MAINTENANCE | | | 1,129,254.52 |

* Annual allowance for maintenance estimated as follows:

- 5.0 % for Interpretation Centre and Entry/Exit Facilities
- 12.0 % for Shelter Types 1 & 2
- 23.0 % for Bridges
- 50.0 % for Directional Signs
- 33.33% for Interpretive Signs
- 25.0 % for Billboards
- 40.0 % for Benches/Tables
- 15.0 % for Tools & Equipment
- 20.0 % for Office Furniture

APPENDIX 7 - ADMINISTRATIVE, PROGRAMME AND MARKETING COSTS

| | YEAR 1 | YEAR 2 | YEAR 3 | YEAR 4 | TOTAL |
|--|----------------|----------------|----------------|----------------|------------------|
| PERSONNEL COSTS* | | | | | |
| Project/Training Coordinator | 141,780 | 141,780 | 141,780 | 141,780 | 567,120 |
| Financial Controller | 40,780 | 122,340 | 122,340 | 122,340 | 407,800 |
| Communications/Marketing Specialist | 19,094 | 114,564 | 114,564 | 114,564 | 362,786 |
| Planner | 114,564 | 114,564 | 114,564 | 114,564 | 458,256 |
| Administrative Assistant | 33,910 | 40,692 | 40,692 | 40,692 | 155,986 |
| Total Personnel Costs | 350,128 | 533,940 | 533,940 | 533,940 | 1,951,948 |
| TRAINING COSTS | | | | | |
| Programme Staff Training/Orientation** | | 13,500 | | | 13,500 |
| Trail/Tour Guide Training*** | | 33,750 | 33,750 | 33,750 | 101,250 |
| Community Entrepreneurs Training**** | | 33,750 | 33,750 | 33,750 | 101,250 |
| Training related accommodation and snacks***** | | 6,000 | 6,000 | 6,000 | 18,000 |
| Total Training Costs | - | 87,000 | 73,500 | 73,500 | 234,000 |
| CONSULTANCY COSTS | | | | | |
| Legal^ | | 16,200 | | | 16,200 |
| Organisation and Management^^ | | 27,000 | | | 27,000 |
| Survey^^^ | | 40,000 | 40,000 | 20,000 | 100,000 |
| Trail Development^^^^ | | 27,000 | | | 27,000 |
| Tourism Marketing^^^^^ | | 6,750 | 6,750 | 6,750 | 20,250 |
| Total Consultancy Costs | - | 116,950 | 46,750 | 26,750 | 190,450 |
| MARKETING COSTS | | | | | |
| Website◆ | | 60,000 | 10,000 | 12,500 | 82,500 |
| Magazine Ads◆◆ | | 54,000 | 54,000 | 54,000 | 162,000 |
| Participation in Trade Shows◆◆◆ | | 20,100 | 20,100 | 20,100 | 60,300 |
| Brochures▶ | | 20,000 | | 21,000 | 41,000 |
| Organisation of FAM Trips▶▶ | | 30,125 | 30,125 | 30,125 | 90,375 |
| Production of Videos▶▶▶ | | 15,000 | 10,000 | 5,000 | 30,000 |
| Total Marketing Costs | - | 199,225 | 124,225 | 142,725 | 466,175 |
| GRAND TOTAL | 350,128 | 937,115 | 778,415 | 776,915 | 2,842,573 |

- * Includes Salary, Employers contribution to Social Security, Health Insurance, allowance for a Gratuity of 20% of salary
- * In Yr1, the Coordinator & Planner will be recruited for the 12 mth period, the Financial Controller for 4 mths, the Communication/Marketing Specialist for 2 mths and the Admin Assistant for 10 mths.
- ** 10 man days
- *** Based on 5 man day training sessions for 40 guides per year in groups of 10
- **** Based on 5 man day training sessions for 40 community entrepreneurs per year in groups of 10
- ***** \$100 per day for accommodation and \$10 per day per trainee for minimal snacks
- ^ 10 man days
- ^^ 20 man days
- ^^^ 4 man months per year
- ^^^^ 20 man days per year
- ^^^^^ 5 man days per year
- ◆ Includes cost of production in Yr1 and maintenance in Yr1, Yr2 & Yr3
- ◆◆ 2 high profile ads per year
- ◆◆◆ Participation of 2 persons at 2 trade shows per year
- ▶ Repeat in Yr3
- ▶▶ Cost of accommodating 10 travel agents for 5 days per year
- ▶▶▶ Videos updated each year as the construction of trail segments and new facilities progresses

APPENDIX 8 - REVENUE

| | YEAR 2 | YEAR 3 | YEAR 4 | YEAR 5 | TOTAL |
|--|---------------|----------------|----------------|----------------|------------------|
| USER FEES* | 27,000 | 54,000 | 81,000 | 162,000 | 324,000 |
| TRAIL AND TOUR GUIDE LICENSES** | 4,000 | 8,000 | 12,000 | 12,000 | 36,000 |
| LEVY ON ACCOMMODATION, RESTAURANTS, ETC.*** | 21,094 | 42,188 | 63,281 | 126,563 | 253,125 |
| CONCESSIONS ON LOCAL FACILITIES | | 19,504 | 39,008 | 48,760 | 107,271 |
| SALE OF TOURISM RELATED MATERIAL AND PARAPHERNALIA**** | 5,000 | 15,000 | 30,000 | 60,000 | 110,000 |
| PRIVATE SECTOR SPONSORSHIP OF SHELTER MAINTENANCE ▣ | | 32,400 | 64,800 | 81,000 | 178,200 |
| TOTAL REVENUE | 57,094 | 171,091 | 290,089 | 490,322 | 1,008,596 |

* US \$10 fee per trail user. It is estimated that 500 visitors will visit during Yr2, 1000 during Yr3, 1500 during Yr4 and 3000 in Yr5.

In addition, an equivalent number of local hikers will use the trail and will contribute US\$10.00 per person

** These figures are for the use of the trail and do not include fees derived from visits to current sites.

*** Each guide will be charged a license fee of \$100 per year.

**** A 5% Government Tax will be levied on Accommodation, Restaurants and Bars. Figure represent estimates of **additional** revenue generated. Estimates are that visitors will spend an average of 5 nights with average spend of US\$125/night. Leakage of 50% of tax revenue is estimated.

***** Equivalent to fifty percent of the cost of maintenance of the facilities

***** Includes guidebooks, maps, etc.

▣ Based on sponsorship of shelter maintenance by the benefiting private sector in return for advertising at those shelters

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The Caribbean Natural Resources Institute (CANARI) is a regional non-governmental organisation concerned with issues of conservation, environment, and sustainable development in the insular Caribbean.

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The Institute has specific interest and extensive experience in the identification and promotion of participatory and collaborative approaches to natural resource management.

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