ECLAC
SUBREGIONAL
HEADQUARTERS FOR
THE CARIBBEAN

ISSN 1727-9917

SERIE

studies and perspectives

Innovation in the tourism sector: a case study from the Commonwealth of Dominica

Nia Cherrett

UNITED NATIONS

ECLAC

S E R I E S

ECLAC
SUBREGIONAL
HEADQUARTERS FOR
THE CARIBBEAN

studies and perspectives

00

Innovation in the tourism sector:

A case study from the Commonwealth of Dominica

Nia Cherrett

UNITED NATIONS

ECLAC

ECLAC Subregional Headquarters
for the Caribbean
Port of Spain, June 2011

This document has been prepared by Nia Cherrett, Associate Environmental Affairs Officer, of the Sustainable Development Unit, of the Economic Commission for Latin America and the Caribbean (ECLAC) Subregional Headquarters for the Caribbean.

The Economic Commission for Latin America and the Caribbean (ECLAC) Subregional Headquarters for the Caribbean wishes to acknowledge the assistance provided by Mrs. Maureen Manchouck, Ms. Joycelyn Lee Young and Mr. Daniel Deen of the National Institute of Higher Education Research Science and Technology (NIHERST) in defining the parameters for the research, screening the questionnaire and undertaking a technical review of the draft. ECLAC also gratefully acknowledges the support given by Mr. Colin Piper, Ms. Monique Jacob-Ducler and Ms. Cyrilla Alexis-Garrick of the Discover Dominica Authority in the provision of information on the tourism sector and logistical support during the data collection phase of the study. ECLAC further wishes to acknowledge the valuable time, energy and cooperation granted by the tourism stakeholders of Dominica who participated in and contributed key insights to the study.

United Nations Publication
ISSN xxxx-xxxx
ISBN: 978-92-1-xxxxxx-x
E-ISBN: 978-92-1-xxxxxx-x
LC/L.xxxx-P
LC/CAR/L.296
Sales No.: E.XX.II.G.xxx

Printed in United Nations

Contents

Tables

Figures

Maps

Abstract

This study presents an analysis of innovation in the tourism sector of the Commonwealth of Dominica. The implementation of a questionnaire survey across a range of tourism sub-sectors yielded information on the scale of innovation activities, the characteristics of innovation firms and the internal and systemic factors that influence innovation. The key results of the analysis indicate that tourism businesses face a number of critical obstacles to innovation including challenging domestic economic conditions, lack of access to appropriate financing, weak customer demand, high cost of undertaking innovation activities and lack of skilled or qualified personnel. Based on these findings and suggestions put forward by survey respondents for encouraging innovation in the tourism sector, recommendations are offered to the Government of Dominica. The core recommendation outlined is the integration of an innovation-oriented perspective into the current tourism policy which is guided by six priority action points: (1) Increasing the demand for Dominica's tourism product; (2) Maintaining the nature island image; (3) Improving communication; (4) Removing administrative hurdles; (5) Developing appropriate finance mechanisms and; (6) Valuing innovation. These recommendations, which require both a long-term perspective and commitment of resources, aim to strengthen and stimulate innovation to sustainably enhance the economic performance of tourism in the Commonwealth of Dominica.

I. Introduction

A. The importance of innovation

The process of innovation entails the actions of renewal or change. This includes both the renewal of something that exists, as well as the introduction of something new. Within the business context Perdomo-Ortiz and others (2006) define innovation as a ‘dynamic capability’ based on patterns of thinking and action that allow an organisation to regularly modify the way it operates to improve its effectiveness. Innovation thus involves taking new ideas from creative thinking and putting them into practice. The result could be several types of innovation such as product innovations (a new product or a service that is new or considerably improved), process innovations (where the production process is altered), information handling innovations (where new forms of knowledge management are adopted), marketing innovations (evolution of the new methods of marketing with enhancements in product design or packaging), management innovations (where the way in which a business is managed is changed), and institutional innovations (where the structure of an organization is altered) amongst others.

As Okpara (2007) explains, no entrepreneur or enterprise, however successful and big, can continue to hold a place of leadership unless it recognizes that modern business operates in a world of galloping change which creates new problems, risks and opportunities and for which resources must be mobilized before changes make their impact felt. As a result, any established business wishing to achieve growth and sustainability must be able to react to changes by maintaining their competitive advantage, otherwise they face the possibility of 'decline' and 'extinction' (Drucker, 2007). Reacting to changes through innovation is therefore essential if firms and countries, are to thrive in today's highly competitive and connected global economy. As such, innovation is a powerful engine for development and for addressing social and global challenges, and it holds the key, both in advanced and emerging economies, to employment generation and enhanced productivity growth through knowledge creation and its subsequent application and diffusion (OECD, 2010).

B. Innovation in the tourism sector

Innovation is no less crucial for the development of a tourism industry, which is classified as a service sector. Tourism encompasses travel for recreational, leisure or business purposes. Producing and marketing tourism products is not the same as producing and marketing industrial products. The differences include: 1) tourism produces and sells experiences which are very intangible; 2) the experiences cannot be stored (simultaneous production and consumption) which presents a challenge in distinguishing between product and process innovations; 3) the consumption of tourism products involves the active participation of the customer; 4) the high information content requires that information and communication technologies (ICT) play a central role in the innovation activities of service firms, therefore making it difficult to protect innovations with methods such as patents; 5) human resources play a key role in the organisation and delivery of services which calls for adequate investment in the development of those human resources; 6) tourism production/marketing may often involve major capital assets (e.g. airlines, hotel chains, car rental firms); 7) the intermediation, distribution and final consumption stage may often require interaction of different personnel categories (e.g. travel agencies, restaurants, taxis) and; 8) the critical role of organisational change to enhance the firm's performance (Jacob and others 2002 and OECD, 2006). In addition to this, innovation activities in the tourism sector are most commonly non-technological in nature and are more incremental rather than a major single event. One innovation leads to another, producing slightly improved products and more efficient processes (OECD, 2006).

Based on these characteristics four main types of innovation in the tourism sector are identified (OECD & EUROSTAT, 2005):

- Product innovations: introduction of a good or service that is new or significantly improved with respect to its characteristics or intended uses (e.g. dive centre introducing whale watching tours).
- Process innovations: implementation of a new or significantly improved production or delivery process (e.g. implementation of eco-efficiency technology, such as solar panels and wind turbines, in hotels resulting in a reduction in the quantity of resources used in the provision of accommodation services).
- Organisational management innovations: implementation of a new organisational method in the establishment's business practices, workplace organisation or external relations (e.g. change in management from single foreign ownership to numerous local shareholders).
- Marketing innovations: implementation of a new marketing method involving significant changes in product design or packaging, product placement, product promotion or pricing (e.g. introduction of a website and online reservation system).

C. Innovation, the tourism sector and Caribbean Small Island Developing States

The economies of the Caribbean small island developing states (SIDS) frequently experience shocks caused by external factors originating in major global commercial centres. The consequences of this economic vulnerability, as are currently being experienced through the impacts of the global economic recession of 2008/2009, have implications for economic growth and economic development. These impacts have had negative repercussions on the tourism sector[1], currently one of the principal drivers of economic growth in the Caribbean. Innovation will need to be a crucial component of any 'survival strategy' adopted by a business striving to build and maintain a competitive edge in a stagnating market. Overcoming the reduced demand for tourist related services will require businesses to introduce new products, enhance the economic efficiency of their processes, adopt different organizational methods and explore novel marketing techniques.

Given the precarious circumstances of such a key economic sector in Caribbean SIDS[2], a greater understanding of the role of innovation in the tourism sector is required in order to better inform and guide future policies of economic growth and development. This need was highlighted in a recent regional science, technology and innovation study by Nurse (2007) which noted that to date, literature on innovation has largely focused on the manufacturing and agro-processing sectors and less on the service sectors of Caribbean SIDS. Policy, as laid out in the Mauritius Strategy (United Nations, 2005), also advocates the role of innovation, within the theme of science and technology, as a key cross-cutting issue for all sectors for SIDS sustainable development. As such, the strengthening of the science and technology base of SIDS economies through capacity development, technical support, and cooperation and experience sharing are initiatives that are encouraged throughout the region. These initiatives are further elaborated on in the Science, Technology and Innovation for Sustainable Development Caribbean Regional Policy Framework for Action (2007) in which the tourism sector is identified as a priority area.

The paucity of information on the role of innovation in the tourism sector in Caribbean SIDS and the international and regional policy frameworks which call for the strengthening of innovation capabilities are factors which motivated the undertaking of this study which is set in the Commonwealth of Dominica.

D. Tourism in the Commonwealth of Dominica

The Commonwealth of Dominica, the largest and most northerly of the Windward Islands, is located in the Eastern Caribbean (see Figure 1 for an outline of the island). Dominica, also referred to as the nature island, is renowned for its wealth of ecological and cultural attractions which make it a unique tourism destination in the region. However, as the Tourism Master Plan of Dominica (2006) states, despite the abundance of attractions, Dominica has failed to translate this resource base into a significant tourism industry. Within this context of eco-tourism and industry development challenges, and in the wake of the economic downturn, Dominica makes a unique case study for the exploration of the various facets of innovation in the tourism sector of a Caribbean SIDS nation.

In 2009 Dominica received 608,056 visitors, of which approximately 13 percent represented stay-over tourists and 87 percent cruise passengers (DDA, 2010). Although total visitor numbers increased by 59 percent since 2005, the proportion of stay-over tourists and cruise ship visitors has fluctuated little over the same period. Stay over arrivals most commonly originate from the Caribbean (55 percent) specifically the neighbouring islands of Martinique and Guadeloupe, and the USA (25 percent) (ECCB, 2009a). Approximately less than one third of the stay over visitors are of Dominican origin returning to

[1] See: ECLAC (2010) Preliminary overview of the economies of the Caribbean: 2009-2010. Striving for productive diversification after the great recession.

[2] At the 65th session of the United Nations General Assembly three resolutions were adopted to emphasize the role of tourism in sustainable development. One of the resolutions (A/RES/65/4) outlines the importance of sustainable tourism for SIDS and stresses the significance of the sector to the development agenda in terms of sustainability, employment and poverty elimination. Available from: http://www.un.org/Depts/dhl/resguide/r65.shtml

visit friends and family, the remainder are of foreign origin and visit Dominica to experience the natural and cultural attractions (CHL Consulting Ltd., 2006). Total visitor expenditure for the year came to EC$ 241.87 million (CSO, 2010).

Hotel and restaurant sector contributions to Gross Domestic Product (GDP), calculated at 2.36 percent, serve as a proxy for the tourism industry (ECCB, 2009b). This figure is an underestimation of the actual value of the tourism sector to GDP due to it being linked to most, if not all, other economic sectors which are accounted for separately. Nonetheless, Dominica remains, within the context of the Caribbean, a small tourist destination.

This small tourist destination however, offers many attractions. The nature paradise of Dominica, with its striking volcanic landscape, boasts 365 rivers, pristine tropical rainforest, waterfalls, sulphur/hot springs, birdlife, national parks, the world's second largest boiling lake, a UNESCO World Heritage Site, and spectacular diving, snorkelling and whale watching adventures. It is also one of the few islands in the Caribbean with a population of the indigenous pre-Columbian Carib Indians. Yet despite this abundance of resources the sector remains undeveloped. The Dominica Tourism Policy (2005) identifies the lack of focussed commitment on the government's part *'to produce the desired results in terms of the expected contribution to the country's economy and social and cultural fabric'* as the main hurdle in the development of the sector. The document charts a way forward to deal with the lack of competitive destination management and marketing budget, infrastructure constraints, competition from other global nature destinations and other Caribbean islands, calls for the involvement of the local community and the fostering of opportunities for local entrepreneurs and innovation.

E. Objectives of the study

In particular, this study sets out to determine the scale of innovation activities, the characteristics of innovation firms and the internal and systemic factors that can influence innovation. The report presents preliminary information on a data sparse service sector and serves to complement national innovation surveys being implemented across the region in various sectors[3] by the National Institute of Higher Education Research and Training of Trinidad & Tobago (NIHERST). The recommendations that arise from the findings of this study will also serve to guide policy development to strengthen and stimulate innovation in order to enhance the economic performance of tourism in the Commonwealth of Dominica.

[3] Along with the tourism sector, innovation studies undertaken by NIHERST have also explored the food and beverage industry, the chemical and non-metallic products industry and the publishing, printing and paper converter industry. More information can be found at: http://www.niherst.gov.tt/st-statistics/index.htm

II. Methodology

To ensure comparability with similar studies being undertaken by NIHERST, the process of investigation took the form of a questionnaire survey. Four steps were taken in the conduct of the survey: questionnaire design, sub-sector selection and sampling, data collection and data analysis.

A. Questionnaire design

The questionnaire developed for this study is based on the questionnaire used by NIHERST in their National Innovation Survey of the Food and Beverage Industry in Trinidad and Tobago (2007). The questionnaire was adapted for the context of the tourism sector and vetted by an expert from NIHERST. Further refinements were made based on the feedback received from the pre-test process with three tourism establishments in Dominica. The final questionnaire sought to elicit information on the following themes:

- Types of innovation activities;
- Drivers of innovation;
- Impact of innovation on key performance indicators;
- Obstacles to innovation activities;
- Role of information and collaboration in innovation and;
- Role of government support programmes in innovation.

See Annex 1 for full questionnaire and Annex 2 for the associated guidance material and definitions.

B. Subsector selection and sampling process

The process of selecting the subsectors and establishments for inclusion in the survey was guided by the research and statistics division of the Discover Dominica Authority (DDA). Based on DDA statistics and knowledge of the tourism sector, five sub-sectors were selected for inclusion (Table 1). A database for each of these sub-sectors was then compiled with data from the listings managed by the DDA, the Dominica Hotel and Tourism Association (DHTA) and the Bradt Travel Guide to Dominica (2007). Due to resource constraints, the sample size for the survey was set at 40. The final sample, representing an approximate proportion of each sub-sector, can be seen in Table 1.

TABLE 1
SELECTED SUB-SECTORS AND SAMPLE SIZE

Subsector	Total number listed	Proportion of total (%)	Sample size (n)	Proportion of subsector (%)
Accommodation	118	61	30	21
Tour Operators	22	11	3	14
Water Sport Operators	11	6	2	18
Vehicle Rental Companies	19	10	3	16
Taxi Associations	24	12	2	8
Total	194	100	40	21

Source: Economic Commission for Latin America and the Caribbean (ECLAC) on the basis of data gathered from the survey Innovation in the tourism sector of the Commonwealth of Dominica (2010).

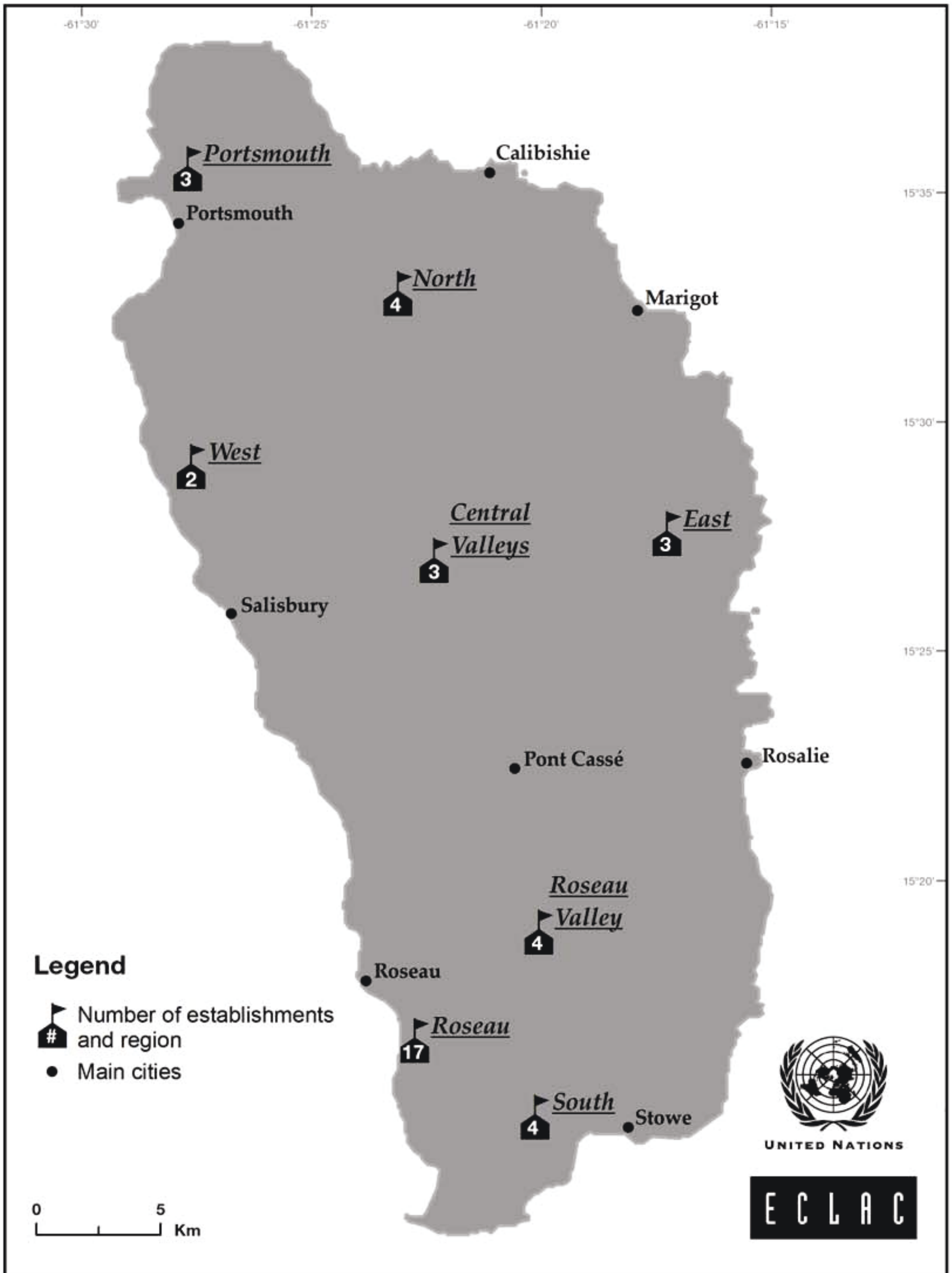
The selection of establishments from the database was based on two criteria: size of establishment and location. These criteria were chosen in order to ensure that the diversity in scale and geographic location, and hence the context in which establishments operate, were captured and represented in the study. This process involved stratifying the data into three different sizes (small, medium and large) as well as by location (south, Roseau, Roseau Valley, west, Portsmouth, north, east and the central valleys). The resulting representative sample, selected through stratified random sampling, is outlined in Table 2. Figure 1 shows the number of establishments sampled by geographic location.

TABLE 2
COMPOSITION OF SAMPLE BY SIZE AND LOCATION

Subsector	Size			Location							
	Small	Medium	Large	South	Roseau	Roseau Valley	West	Ports-mouth	North	East	Central Valleys
Accommodation	23	5	2	3	8	4	2	3	4	3	3
Tour operators	-	1	2	1	2	-	-	-	-	-	-
Water sport operators	-	2	-	-	1	-	-	1	-	-	-
Vehicle rental companies	1	2	-	-	3	-	-	-	-	-	-
Taxi associations	-	2	-	-	2	-	-	-	-	-	-
Total	24	12	4	4	16	4	2	4	4	3	3

Source: Economic Commission for Latin America and the Caribbean (ECLAC) on the basis of data gathered from the survey Innovation in the tourism sector of the Commonwealth of Dominica (2010).

MAP 1
LOCATION AND NUMBER OF ESTABLISHMENTS SAMPLED IN THE COMMONWEALTH OF DOMINICA IN 2010



Sources: Discover Dominica Authority (2010), Dominica Hotel and Tourism Associtation (2010), Bradt Travel Guide to Dominica (2007)
Coordinate System: Geographic (WGS84)
Map compiled by: Arianna Granziera
Map produced using ESRI ArcGIS Software
Date printed: February 2011

The designations employed and the presentation of material on this map do not imply the expression of any opinion whatsoever on the part of the Secretariat of the United Nations concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries.

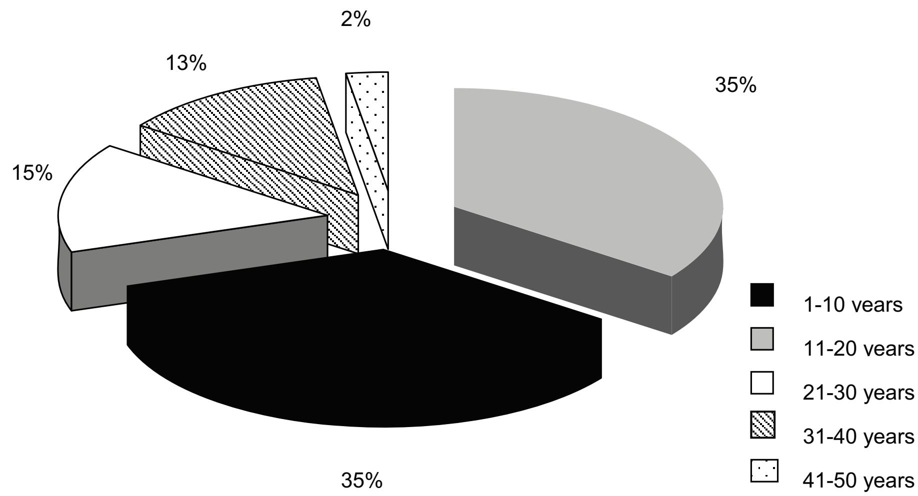
III. Analysis of results

A. Establishment of profiles

1. Age of establishments

The age distribution of the sampled establishments (Figure 2) is reflective of the emergence and growth of the tourism sector in Dominica. Only one establishment was in operation during the 1960s (representing 2 percent of the total). Five (13 percent) establishments entered into business in the 1970s, with two of these claiming to be the first and second official guest houses to open for business on the island. Another six establishments (15 percent) entered the market in the 1980s and for the next two decades a total of 28 establishments, 14 in the 1990s and another 14 in the 2000s (35 percent in each decade), came into operation.

FIGURE 1
AGE OF ESTABLISHMENTS
(percentage)



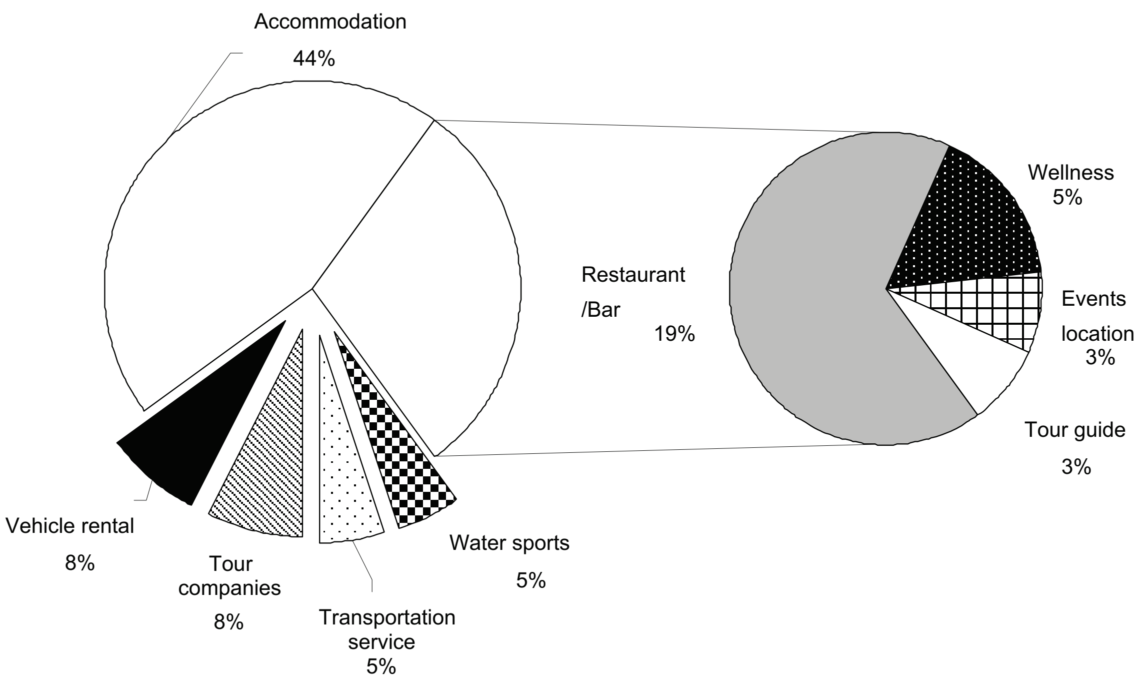
Source: Economic Commission for Latin America and the Caribbean (ECLAC) on the basis of data gathered from the survey, Innovation in the tourism sector of the Commonwealth of Dominica (2010).

2. Main activity

An objective in the selection of establishments for the survey involved identifying a sample which was proportionately representative of the formal key tourism sub-sectors in Dominica. As a result, almost three quarters (30 of 40) of the establishments surveyed are part of the accommodation sub-sector; however 12 of these 30 (30 percent) establishments offered an additional service deemed to be of equal, if not greater, importance as a revenue earner to the accommodation available. Eight establishments (19 percent) have a restaurant/bar, two (5 percent) offer 'wellness' services such as sulphur pool facilities and body massages, one (3 percent) is a burgeoning events location and one (3 percent) also conducts tours for guests.

Vehicle rental companies and tour companies each represent another three businesses (8 percent) while transportation services and water sports outlets each represent two (5 percent) of the establishments surveyed (Figure 3).

FIGURE 2
MAIN ACTIVITY OF ESTABLISHMENTS
(percentage)



Source: Economic Commission for Latin America and the Caribbean (ECLAC) on the basis of data gathered from the survey, Innovation in the tourism sector of the Commonwealth of Dominica (2010).

3. Ownership structure

Three different types of ownership structure prevailed amongst the survey respondents (Table 3). The greatest number, that is 33 out of the 40 establishments surveyed, were of local private ownership. However, it was determined that eight of these 33 establishments were entirely funded with foreign capital (from Canada, The Netherlands, Sweden, Switzerland, the United Kingdom and the United States of America) and only since the owners gained residency status did they qualify to be classified as local private owners. However, five establishments can still be classified as wholly foreign owned with two originating from Canada and one from the Netherlands. The other two businesses were each split between two different nationalities, one shared between Germany and Switzerland and the other between United Kingdom and the United States of America. Finally, two establishments represented a joint venture between a foreign private entity and a local private entity. The foreign investments came from Saint Vincent and the Grenadines and the United Kingdom. Interestingly, both these establishments shared a similar ethos of encouraging local and regional rather than international involvement in their businesses.

TABLE 3
OWNERSHIP STRUCTURE OF ESTABLISHMENTS

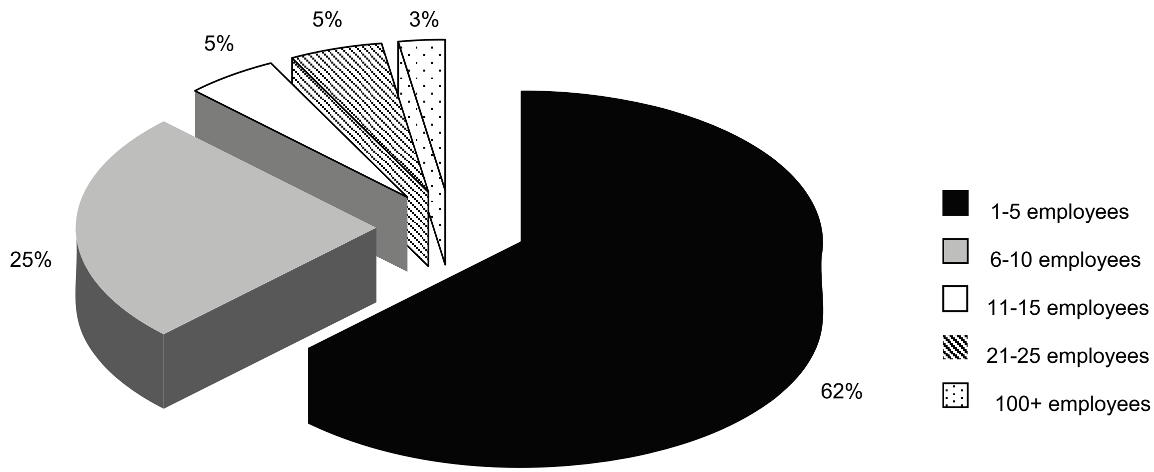
Ownership Structure	Number of Establishments
Local Private Ownership	
Local Origin	25
Foreign Origin…	8
…Canada	2
…Netherlands	1
…Sweden	1
…Switzerland	1
…UK	1
…USA	2
Sub-Total	33
Wholly Foreign Ownership	
Canada	2
Germany & Switzerland	1
Netherlands	1
UK & USA	1
Sub-Total	5
Joint Venture - Foreign Private/Local Private	
St. Vincent and the Grenadines	1
UK	1
Sub-Total	2
Total	40

Source: Economic Commission for Latin America and the Caribbean (ECLAC) on the basis of data gathered from the survey, Innovation in the tourism sector of the Commonwealth of Dominica (2010).

4. Employment

The number of employees accounted for in the sampled establishments totalled 288 individuals. A gender breakdown of this total shows that 56 percent (161 persons) are female and 44 percent (121 individuals) are male. Of the 40 establishments surveyed only 3 percent (i.e. one hotel) currently employed over one hundred staff (111 persons). This represents a fourfold difference to the next largest employment group, 21 – 25 employees, which is represented by five percent of establishments (two hotels), as is employment group 11 – 15 employees (also two hotels). Twenty-five percent of establishments fall within employment group 6 – 10 employees, (7 hotels, 1 dive centre, 1 tour company and 1 vehicle rental company) while the remaining 62 percent employ between 1 – 5 persons (Figure 4). The employment demographic represented in this sample is also indicative of the dominance of small-scale businesses in the tourism sector in Dominica.

FIGURE 3
ESTABLISHMENTS BY EMPLOYMENT GROUP
(percentage)

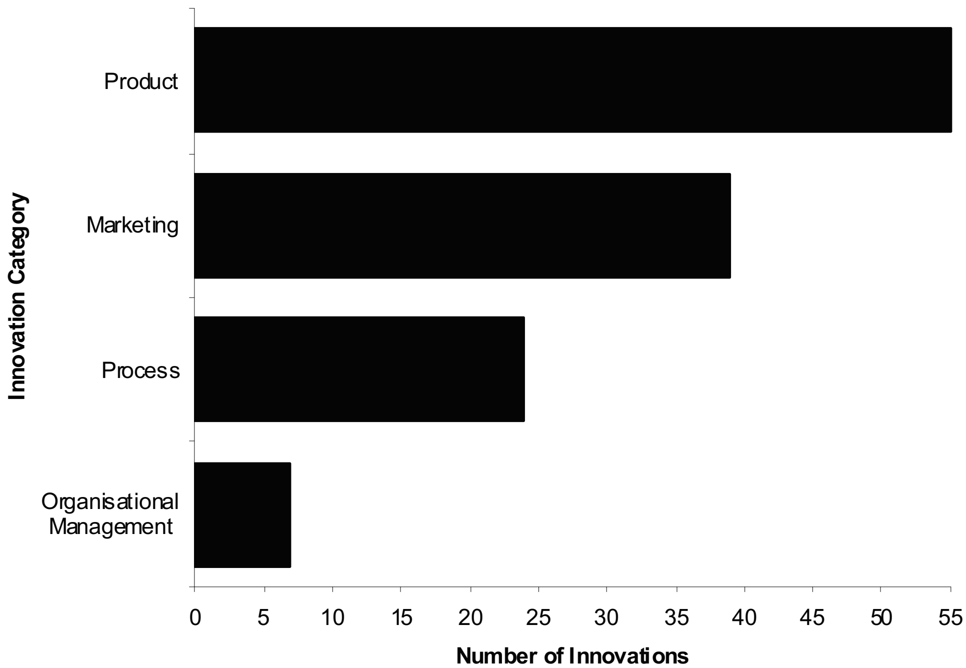


Source: Economic Commission for Latin America and the Caribbean (ECLAC) on the basis of data gathered from the survey, Innovation in the tourism sector of the Commonwealth of Dominica (2010).

B. Innovation activities

Innovation activities were identified within four main categories: product, process, organisational management and marketing (see Annex 2 for definitions). Between 2005-2009 the number of innovation incidents by category (Figure 5) ranked in order of frequency from product (n=55), to marketing (n=39), to process (n=24) and finally organisational management (n=7), which together total 125 innovations.

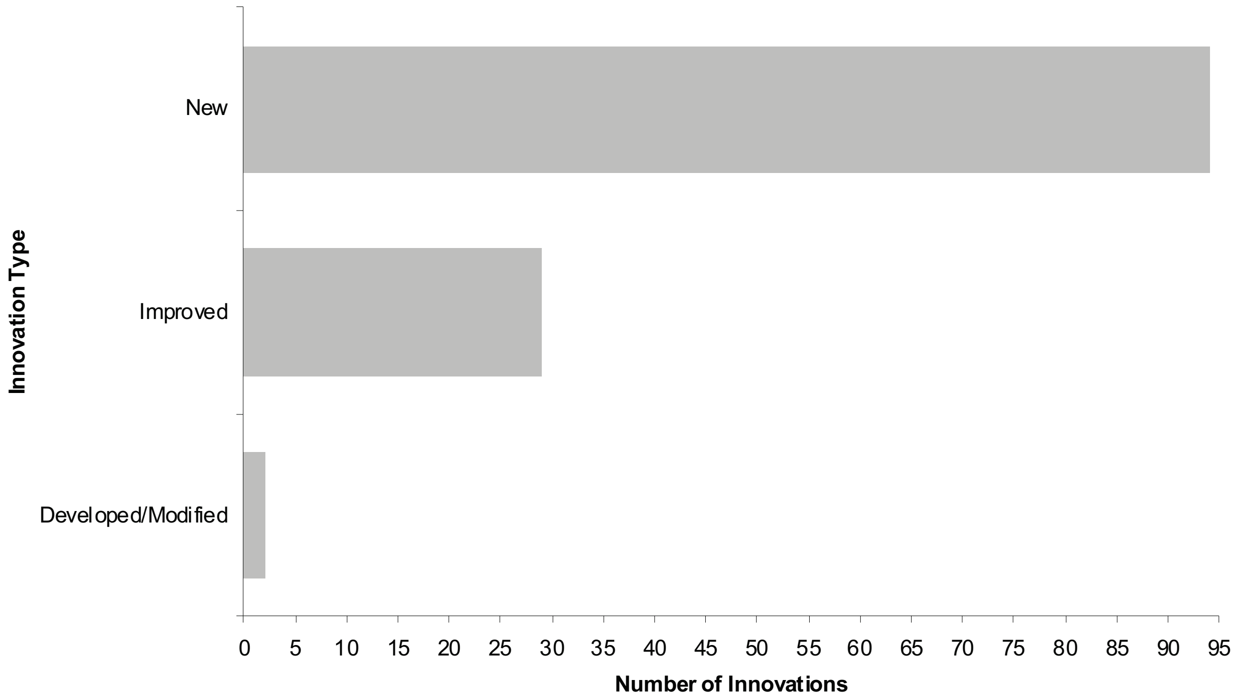
FIGURE 4
INNOVATION ACTIVITIES BY CATEGORY IN 2005 – 2009
(frequency)



Source: Economic Commission for Latin America and the Caribbean (ECLAC) on the basis of data gathered from the survey, Innovation in the tourism sector of the Commonwealth of Dominica (2010).

Once an activity was identified by category, survey respondents were then asked to further categorise their innovation into one of the following types: introduced a new good/service, improved an existing good/service, and developed a new good/service. As Figure 6 highlights ‘new’ introductions were the most frequent type of innovation activity (n=94) followed by ‘improved’ (n=29) and ‘developed/modified’ (n=2).

FIGURE 5
INNOVATION CATEGORIES BY TYPE IN 2005-2009
(frequency)



Source: Economic Commission for Latin America and the Caribbean (ECLAC) on the basis of data gathered from the survey, Innovation in the tourism sector of the Commonwealth of Dominica (2010)

The majority of these ‘new’ innovation activities was product (n=35) and marketing related (n=31). There were also ten ‘new’ innovations that were ‘started but later abandoned’ in the product (n=6), organisational management (n=1) and marketing (n=3) sectors. The ‘improved’ innovation activities mostly occurred in the product (n=13) and process (n=11) categories. The two ‘developed/modified’ innovations took place in the product (n=1) and organisational management (n=1) fields, making this the innovation type with the least number of innovations (Table 4).

TABLE 4
SUMMARY OF INNOVATION ACTIVITIES IN 2005-2009

	Innovation activity by type				Innovation activity by technological category			
	Yes	No	Started but Later Abandoned	Total Number of Innovations	Tech - ICT	Tech - Other	Non-Tech	New to National Market
Product								
New Product	35	18	6	41	2	0	39	7
Improved Product	13	31	0	13	1	1	11	0
Developed/Modified Product	1	39	0	1	0	0	1	0
Sub-Total	49	88	6	55	3	1	51	7
Process								
New Process	13	30	0	13	1	3	9	3
Improved Process	11	31	0	11	0	2	9	0
Developed/Modified Process	0	40	0	0	0	0	0	0
Sub-Total	24	101	0	24	1	5	18	3
Organisational Management								
New Organisational Management	5	33	1	6	0	3	3	0
Improved Org. Mgt.	0	40	0	0	0	0	0	0
Developed/Modified Org. Mgt.	1	39	0	1	0	1	0	0
Sub-Total	6	112	1	7	0	4	3	0
Marketing								
New Marketing	31	19	3	34	20	0	14	0
Improved Marketing	5	36	0	5	2	0	3	0
Developed/Modified Marketing	0	40	0	0	0	0	0	0
Sub-Total	36	95	3	39	22	0	17	0
Total	115	396	10	125	26	10	89	10

Source: Economic Commission for Latin America and the Caribbean (ECLAC) on the basis of data gathered from the survey Innovation in the tourism sector of the Commonwealth of Dominica (2010).

Most of these innovation activities were non-technological (Non-Tech) in nature (n=89) with two-thirds (n=51) falling within the product category. Next in frequency (n=26) were technological innovations associated with information and communication technology (Tech - ICT), the vast majority of which was marketing related (n=20). This can be attributed to the increasing trend in businesses setting up their website, managing online bookings and linking up to various social networks to enhance their profile locally, regionally and internationally. The greatest concentration of other technological (Tech-Other) innovations (n=10) is process oriented (n=5) and represents the introduction of renewable energy technologies such as solar panels and wind turbines. Finally, only 8 percent (n=10) of these innovation activities were new to the national market. One of the activities was based on the establishment of an events location for small musical performances and the remaining were all tours offering a new experience including, but not limited to, an adventure park and home-stay facility. Although not a part of the questionnaire, many survey participants offered details on future innovations they planned to implement over the coming months in response to a decline in customer demand. These were concerned with cost saving measures, such as the replacement of restaurant services with self-catering facilities in the accommodation sub-sector.

A closer examination of these innovation activities in relation to age of establishment shows that 50 percent of innovations were implemented by the youngest tourism establishments (1-10 years). The trend gradually decreases by age with only one innovation occurring in the oldest establishment (41 – 50 years). These findings are in line with the theory of product life cycle which describes a sequence of stages from introduction to growth, maturity, and decline (Moore, 1999). This explains perhaps why the younger establishments, keen to carve a niche for themselves in a competitive market, and journeying through the ‘introduction’ and ‘growth’ phase of the product life cycle are more innovation active (Table 5).

TABLE 5
INNOVATION ACTIVITY BY AGE OF ESTABLISHMENT

Age of establishment	Number of establishments	Number of innovations	Percentage
1-10 years	14	57	50
11-20 years	14	33	29
21-30 years	6	17	15
31-40 years	5	7	6
41-50 years	1	1	1
Total	40	115	100

Source: Economic Commission for Latin America and the Caribbean (ECLAC) on the basis of data gathered from the survey, Innovation in the tourism sector of the Commonwealth of Dominica (2010).

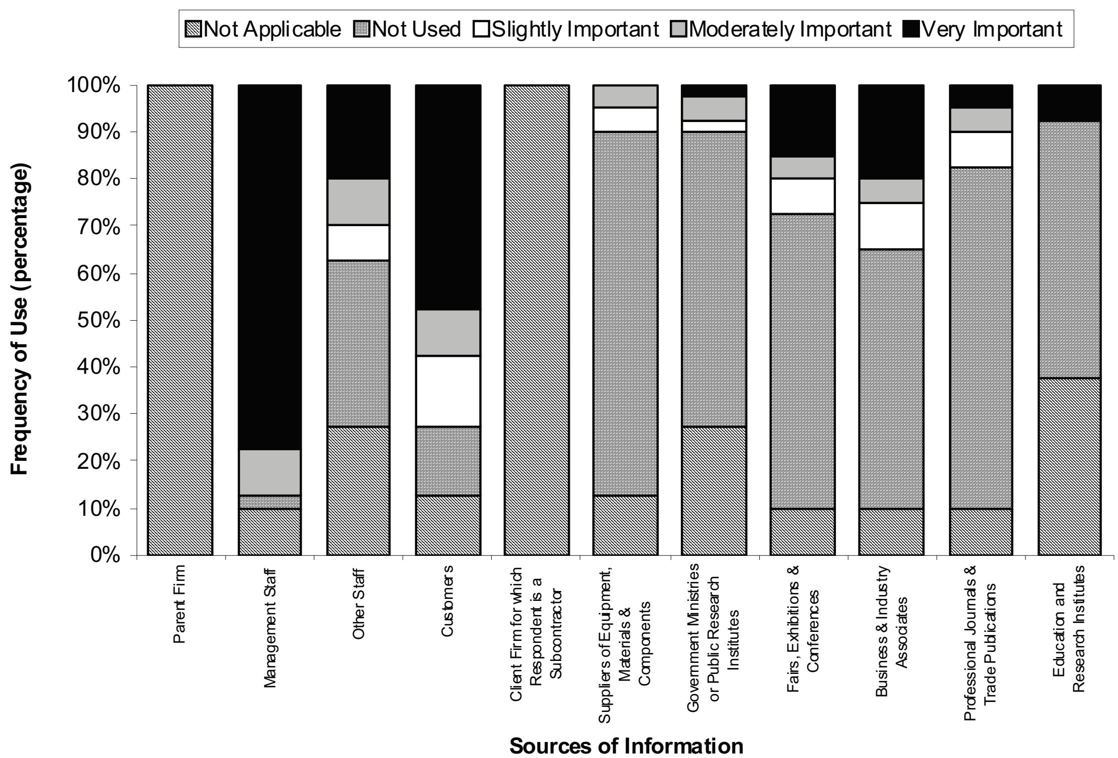
C. The dissemination of information

This section sets out to identify sources of innovation information and the nature of collaborative arrangements undertaken within the tourism sector in the years 2005-2009, to gain an understanding of the factors that are influencing the dissemination of innovation in the tourism industry.

1. Sources of innovation information

Management staff and customers were considered ‘very important’ sources of innovation information by 78 percent and 48 percent of respondents respectively. A further 20 percent indicated that other staff and business and industry associates were also ‘very important’. Some of these popular sources of information were also most commonly selected as ‘slightly important’ and ‘moderately important’ to innovation. Ten percent equally selected management staff, other staff, and customers as ‘moderately important’ while 15 percent felt that customers were ‘slightly important’ in influencing their innovation activity (Figure 7).

FIGURE 6
IMPORTANCE RATING OF SOURCES OF INNOVATION INFORMATION IN 2005-2009
(percentage)



Source: Economic Commission for Latin America and the Caribbean (ECLAC) on the basis of data gathered from the survey, Innovation in the tourism sector of the Commonwealth of Dominica (2010).

Sources of information frequently not used to inform innovation included: suppliers of equipment, materials and components (78 percent) due to businesses having little or no interaction with them; professional journals and trade publications (73 percent) mostly because of lack of access to these materials; government ministries or public research institutes (63 percent) which respondents felt offered no information and in the case of local research institutes did not exist; fairs, exhibitions and conferences (63 percent) as many did not have the resources to attend; business and industry associates (55 percent) and education and research institutes (55 percent), both of which offered very little innovation information.

As all businesses interviewed did not have a parent firm, nor were they subcontracting to a client firm, these sources of information were completely marked as ‘not applicable’. In addition, 10 percent of the ‘not applicable’ responses for all sources of information can be attributed to the four businesses which did not undertake any innovation activities. However, those businesses which were involved in innovation activities marked three sources of information as ‘not applicable’: other staff (28 percent), government ministries or public research institutes (28 percent), and education and research institutes (38 percent). Respondents marked other staff as ‘not applicable’ where only management staff were employed in a business. For government ministries or public research institutes and education and research institutes, respondents felt that they served little purpose as information providers to their innovation that they were better represented as ‘not applicable’.

2. Types of information

Table 6 presents a break down of the type of information obtained from sources by the innovation categories of product, process, organisational management and marketing. In line with the major sources of information identified in Figure 5, management staff and customers have played a key role across all four innovation categories. Management staff are highlighted as an integral source of information related to product, process, organisational management and marketing innovations by 75 percent, 38 percent, 10 percent, and 55 percent of respondents respectively. Customers were also selected as significant sources of information for all innovation categories, specifically by 63 percent of respondents for product innovations, 38 percent for process, 15 percent for organisational management and 45 percent for marketing. Other staff were marked as sources of information on product, process and marketing related innovations by 30 percent, 20 percent and 23 percent of respondents. Business and industry associates also contributed to information on product related innovation (30 percent).

TABLE 6
TYPES OF INFORMATION BY INNOVATION CATEGORY IN 2005-2009
(percentage)

Source of Information	Innovation Category											
	Product			Process			Management			Marketing		
	Not Applicable	Yes	No	Not Applicable	Yes	No	Not Applicable	Yes	No	Not Applicable	Yes	No
Parent Firm	100	0	0	100	0	0	100	0	0	100	0	0
Management Staff	25	75	0	63	38	0	90	10	0	43	55	2
Other Staff	58	30	13	70	20	10	95	3	3	60	23	18
Customers	28	63	10	63	30	8	80	15	5	43	45	13
Client Firm for which Respondent is a Subcontractor	100	0	0	100	0	0	100	0	0	100	0	0
Suppliers of Equipment, Materials & Components	60	10	30	78	5	18	90	5	5	70	7.5	23
Government Ministries or Public Research Institutes	78	8	15	83	8	10	93	3	5	80	5	15
Fairs, Exhibitions & Conferences	33	25	43	63	15	23	80	8	13	43	20	38
Business & Industry Associates	28	30	43	63	13	25	80	3	18	43	18	40
Professional Journals & Trade Publications	30	20	50	63	13	25	80	5	15	43	10	48
Education and Research Institutes	63	8	30	78	5	18	88	3	10	70	3	28

Source: Economic Commission for Latin America and the Caribbean (ECLAC) on the basis of data gathered from the survey, Innovation in the tourism sector of the Commonwealth of Dominica (2010)

3. Cooperative and collaborative arrangements

Cooperative and collaborative engagements involved the active participation in joint innovation activities between the respondent establishment and other establishments or organisations.

Of the 40 establishments interviewed, 17 (47 percent) had embarked on a collaborative arrangement for the implementation of an innovation activity in 2005-2009. Twenty percent of these co-operative arrangements were defined as ‘other’, with respondents choosing to refer to them as either local industry associates (15 percent), international industry associates (3 percent) and family friend (3 percent) rather than ‘competitors’ (Table 7). The reason for this distinction is that businesses recognise the competitive nature of the tourism industry in Dominica and as such believe they have a greater chance of succeeding if they cultivate a more collaborative approach where all players pool their resources together to reap greater returns. Having said this, cooperative arrangements were also entered into with ‘competitors’ (10 percent), as well as customers (5 percent), suppliers of equipment and materials, private research institutes and the government ministry (3 percent each).

TABLE 7
SOURCES OF COOPERATIVE AND COLLABORATIVE ARRANGEMENTS IN 2005-2009
(percentage)

Source	Yes	No
Competitors	10	90
Customers	5	95
Suppliers	3	97
Associated companies within your corporate group	0	100
Consulting & marketing firms	0	100
Private research institutes	3	97
Public research institutes	0	100
University or higher education institutions	0	100
government ministry	3	97
Other…	20	80
…local industry associate	15	85
…international industry associate	3	97
…family friend	3	97

Source: Economic Commission for Latin America and the Caribbean (ECLAC) on the basis of data gathered from the survey Innovation in the tourism sector of the Commonwealth of Dominica (2010).

4. Reasons for cooperative and collaborative arrangements

The greatest motivation for a business to embark on a collaborative arrangement has been to access new markets (87 percent) and critical expertise (73 percent). These statistics serve to support the respondents’ argument of the need to pool resources and therefore move away from the idea of competition among tourism stakeholders. Sharing costs was also highlighted as a reason for entering a collaborative arrangement (27 percent), as was accessing new distribution channels (20 percent) and accessing research and development (13 percent). The ‘other’ category was selected by 13 percent of respondents who stated two different reasons: invitation to develop a new product in response to a market opportunity and to establish good relations with neighbours and communities (Table 8).

TABLE 8
REASONS FOR COLLABORATION IN INNOVATION IN 2005-2009
(percentage)

Reasons	Yes	No
Sharing costs	27	73
Spreading risks	0	100
Accessing research and development	13	87
Accessing critical expertise	73	27
Accessing new markets	87	13
Accessing new distribution channels	20	80
Other[a]:	13	87

Source: Economic Commission for Latin America and the Caribbean (ECLAC) on the basis of data gathered from the survey Innovation in the tourism sector of the Commonwealth of Dominica (2010).

Note: [a] Other reasons included: i) developing a new product in response to a market opportunity and ii) to establish good relations with neighbours and communities.

D. Driving forces, impacts and obstacles to innovation

1. Reasons for innovating

Survey participants were presented with eleven possible reasons for engaging in innovative activities and asked to rate them on a scale of importance (Table 9). The majority of responses either fell within the ‘very important’ or ‘not important’ categories. Satisfying client’s needs was rated as the most important incentive for innovating by 83 percent of respondents. This reason was defined by one participant as the *“culmination of the whole tourism process/experience”* and so, unsurprisingly, satisfying client’s needs is consistently highlighted as a priority driver for innovation.

To improve service quality (described by an interviewee as *“the factor which makes or breaks your business”*), increase and maintain market share and be competitive were voted equally second in the ‘very important’ category by 75 percent of respondents. They were followed by the need to extend service range (72 percent), improve establishment’s image (69 percent) and increase profitability (67 percent). The lowest ranking was assigned to comply with local laws and standards (8 percent) because, as one respondent explained, *“this is an obligation not a choice!”*. This argument is further substantiated by the fact that 64 percent of respondents rated this reason as ‘not important’ and 17 percent as ‘not applicable’ because it is something *“they would have to do anyway”*. Cost reduction and the development of more environmentally friendly services were two other main reasons considered ‘not important’ by 61 percent and 50 percent of respondents respectively. Survey participants indicated that due to the economic downturn and high cost of operating a business in Dominica, reducing costs is not a key driver of innovation but that in fact most innovation activities incur high costs (and indeed is highlighted as an obstacle to innovation in section D3). The fact that developing more environmentally friendly services achieved greater presence in the ‘not important’ rating is surprising considering the nature island image of Dominica. However, the 39 percent of respondents who ranked it ‘very important' felt that this was a factor of specific relevance within the context of Dominica and as a result a motivation in their innovation activity.

Nine percent of respondents selected 'other' reasons as important to innovating with these reasons including: motivating the participation of the local community in a wellness activity, the easy maintenance of a product, and changes in personal circumstances.

TABLE 9
RATING OF REASONS FOR INNOVATING IN 2005-2009
(percentage)

Reason	Not important	Slightly important	Moderately important	Very important	Not Applicable
Extend service range	8	3	17	72	0
Improve service quality	8	0	17	75	0
Satisfy client's needs	6	3	6	83	3
Reduce costs	61	6	0	31	3
Increase and maintain market share	3	6	14	75	3
Be competitive	14	3	8	75	0
Increase profitability	8	11	14	67	0
Improve establishment's image	3	0	28	69	0
Develop more environmentally friendly services	50	3	0	39	8
Comply with local laws & standards	64	3	8	8	17
Other	92	0	3	6	0

Source: Economic Commission for Latin America and the Caribbean (ECLAC) on the basis of data gathered from the survey, Innovation in the tourism sector of the Commonwealth of Dominica (2010).

2. Impact of innovation

In rating the impact of their innovation activity on key performance indicators, interviewees mostly reported an 'increase' or 'no change' (Table 10). An increase in client satisfaction (83 percent), product differentiation (78 percent), improvement in establishment's image and service quality (69 percent each) was experienced. Respondents were able to determine these increases with certitude from client feedback, reviews and evaluations.

No changes were detected in profitability and compliance with regulations (both 58 percent), along with market share (53 percent) and employment (50 percent). The fact that profits did not increase can be linked to the economic issues outlined above (reasons for innovating) in reference to reducing costs as a catalyst for innovation. A respondent alluded that *"due to the exogenous economic conditions our profits have been affected"*. This could also be an attributing factor to the 'no change' in employment levels and market share. Those that experienced 'no change' in compliance with regulations clarified that they were already fully compliant with all relevant regulations and that their innovation activity was not driven by a need to comply with any regulation.

Environmental sustainability was for the most part reported as having not changed (39 percent) although it did receive the highest value in the ‘decrease’ category (17 percent). This can be attributed to construction related innovation activities which have required the use of additional natural resources (i.e. clearing of forest) and will continue to require non-renewable resources for the lifetime of the product (i.e. increased energy consumption for appliances such as air conditioning).

Finally, 42 percent of respondents felt that the ‘productivity’ indicator was ‘not applicable’ to their business where quality of service took precedence over quantity, and that this indicator was better suited to the manufacturing context.

TABLE 10
RATING OF IMPACT OF INNOVATION ON PERFORMANCE INDICATORS IN 2005-2009
(percentage)

Indicator	No Change	Decrease	Increase	Do Not Know	Not Applicable
Improvement of establishment's image	11	8	69	8	3
Profitability	58	8	25	8	0
Market share	53	6	36	6	0
Competitiveness	25	8	53	11	3
Productivity	14	6	33	6	42
Diversification	39	3	56	0	3
Product differentiation	17	3	78	3	0
Client's satisfaction	6	3	83	6	3
Environmental sustainability	39	17	31	6	8
Employment	50	11	39	0	0
Service quality	25	3	69	0	3
Compliance with regulations	58	6	22	0	14
Other	0	0	0	0	97

Source: Economic Commission for Latin America and the Caribbean (ECLAC) on the basis of data gathered from the survey Innovation in the tourism sector of the Commonwealth of Dominica (2010).

3. Obstacles to innovation

The obstacles that were most commonly considered ‘very important’ included domestic economic conditions (55 percent), access to appropriate financing (50 percent) and weak customer demand (48 percent) (Table11). Respondents had many opinions with respect to these three obstacles. In addition to the impact of the exogenous economic conditions affecting the domestic local conditions, as previously mentioned (see section ‘reasons for innovating’ and ‘impact of innovation’), respondents felt taxes (especially Value Added Tax) were too high, along with the cost of fuel/energy and service and maintenance costs, and that the presence of unregulated ‘black markets’ and the lack of adequately priced, quality and varied fresh produce were drawbacks to the effective running of their business. Access to appropriate financing has been an impediment to a number of establishments who felt that there was no financing mechanism designed to meet the needs of small scale businesses, including low interest rate loans. Weak customer demand was attributed to the lack of stay-over tourists which interviewees felt was a result of poor marketing to target audiences at national, regional and international levels, and the government focussing most of their efforts and resources on the cruise market. All survey participants expressed concern over the recent announcement that the country's most popular cruise line, Carnival Victory, would, after 21 years of service, no longer be making its weekly year-round calls to Dominica[4]. Although stakeholders acknowledged that this move signified the loss of 30 percent of the island's cruise business[5] they felt that this event would spur the government to take action and give the tourism sector the *"attention and overhaul it desperately needs"*. The global financial crisis was also cited as a factor contributing to weak customer demand in the tourism sector of Dominica.

The high cost of innovation activities (40 percent), as already noted, and lack of skilled or qualified personnel (38 percent) were the next most common obstacles to innovation. Respondents often expressed frustration at the lack of skilled personnel but also explained that their solution to this problem had been to conduct on the job training and capacity building. One 'other' obstacle listed by respondents as 'very important' included poor infrastructure (8 percent) with respect to quality of roads and limited landing facilities at the airport for jet planes.

When identifying obstacles to innovation 70 percent and 68 percent of respondents determined that resistance to change within the establishment and lack of information on innovation activities respectively were 'not important' obstacles.

[4] Dominica News Online, August 30th, 2010. Carnival Victory cancels calls to Dominica after 21 years. Available from: http://dominicanewsonline.com/dno/carnival-victory-cancels-calls-to-dominica-after-21-years/

[5] DDA (2010) Economic impact of Carnival cruise lines (Carnival Victory).

TABLE 11
RATING OF OBSTACLES TO INNOVATION
(percentage)

Indicator	Not important	Slightly important	Moderately important	Very important	Not applicable
High cost of innovation activity	38	15	8	40	0
Appropriate financing	45	3	3	50	0
Lack of skilled or qualified personnel	33	20	10	38	0
Resistance to change within establishment	70	5	13	13	0
Lack of information on innovation activities	68	5	15	13	0
Lack of information on market	58	8	18	18	0
Domestic economic conditions	23	10	13	55	0
Legislation/legal restrictions/administrative procedures affecting innovation	50	10	10	30	0
Weak customer demand	38	10	5	48	0
Lack of marketing capability	48	13	18	23	0
Lack of external technical support services	55	8	5	33	0
No difficulty	0	0	0	0	100
Other	0	0	0	8	93

Source: Economic Commission for Latin America and the Caribbean (ECLAC) on the basis of data gathered from the survey, Innovation in the tourism sector of the Commonwealth of Dominica (2010).

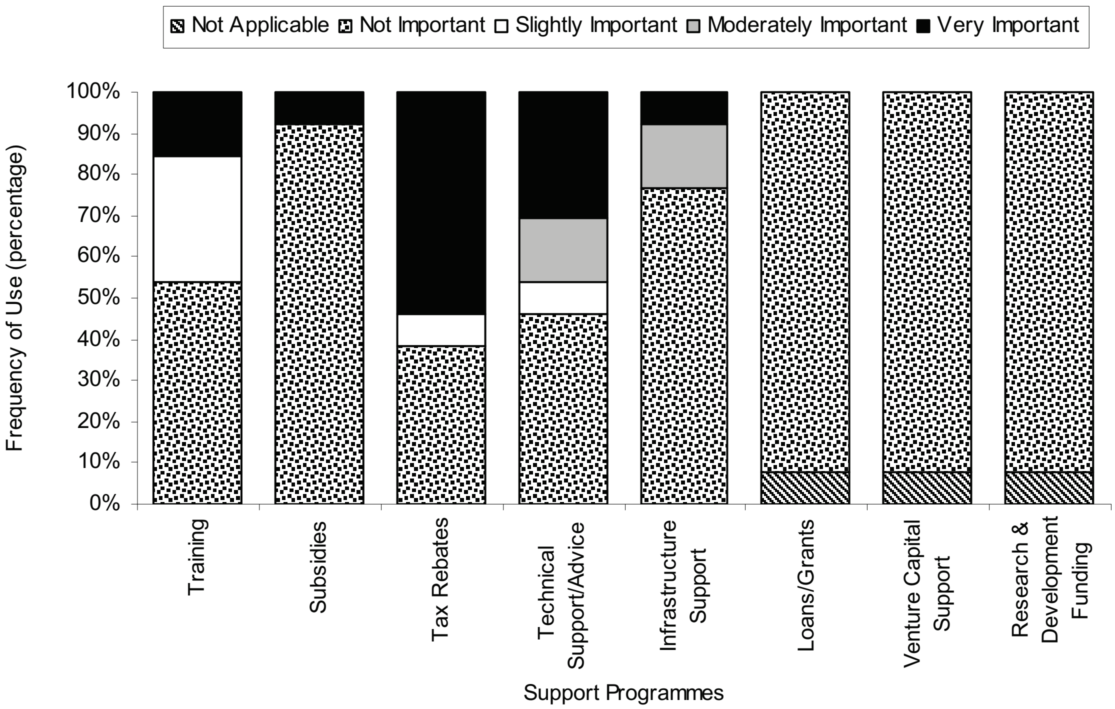
E. Role of Government support programmes in innovation

Innovation can only perform the function of providing economic growth in the presence of favourable state incentives. As such, this section seeks to investigate the contribution that government support programmes have made to the development of innovation activities in tourism.

1. Government support programmes

The survey also set out to establish the role of the government with respect to innovation in the tourism sector from the perspective of the businesses. Of the 36 businesses which were involved in innovative activity only 39 percent (14 establishments) made use of government support programmes. These establishments then rated the importance of eight different support programmes to their innovation (Figure 8). Those that did not make use of government support programmes explained that it was either because *'none exist'* or when they applied they were told they were *'not qualified to receive any support',* and were often not given a clear reason as to why they did not qualify.

FIGURE 7
IMPORTANCE RATING OF GOVERNMENT SUPPORT PROGRAMMES FOR INNOVATION
(percentage)



Source: Economic Commission for Latin America and the Caribbean (ECLAC) on the basis of data gathered from the survey, Innovation in the tourism sector of the Commonwealth of Dominica (2010).

The rating most commonly assigned to the support programmes was 'not important'. Subsidies, loans/grants, venture capital support, and research and development funding were selected by 92 percent of respondents as 'not important' to their innovation activity. Another 77 percent stated infrastructure support as also 'not important'. In terms of playing an important role in undertaking innovation activities, the three most common support programmes were tax rebates (54 percent) and technical support/advice (31 percent) which were classed as 'very important' and training (31 percent) which was assigned the 'slightly important' status.

The eight percent of respondents who indicated loans/grants, venture capital support and research and development funding as 'not applicable' instead of 'not important' did so because they were emphatic about making the point that these options do not exist for tourism establishments in Dominica.

When posed an open question in relation to how government can encourage innovation in businesses, respondents were very forthcoming with ideas and proposals. Five main themes emerged from the dialogue and are presented in Table 12.

TABLE 12
SUGGESTIONS FOR GOVERNMENT ON HOW TO ENCOURAGE INNOVATION

Themes
Appropriate Financing Schemes
Fiscal concessions given to renewable energy initiatives. Creation of small business development loans. Intensify cooperation with the EU on the strategic framework of assistance in tourism. Establish a financing scheme which accepts alternative forms of collateral other than land for members of the Carib community where communal land tenure laws prevail.
Legislation & Administrative Procedures
Process for claiming duty free concessions needs to be made transparent. Fire safety and boat inspection an extremely long process, it needs to be made more efficient. Adoption of the DDA certification scheme for accommodation needs to be made easier for people. A more ‘hands-on’ approach, with field experienced personnel from the DDA is required. Recognise that establishments in different locations and with different types of products which attract different types of clients *are different* and therefore accommodation standards need to be adjusted to reflect this. Ensure consultation processes are meaningful by incorporating stakeholder’s suggestions into legislation and standards, otherwise it is a waste of time and government bodies lose their credibility. DDA certification of tour guides should not be determined on where they get training, but instead on competency. If found competent then DDA should certify. Expensive annual medicals required as part of the food safety regulations for catering staff should either be reduced or subsidised. Environmental impact assessments should be made a legal requirement in order to guide and encourage more environmentally sensitive construction activities. Introduce a green certification standard for tourism businesses.
Marketing
Increase the profile of Dominica as a holiday destination at the international level. Complement and enhance the existing marketing strategy of the DDA. Adopt and encourage a ‘cluster’ marketing approach and joint marketing within Dominica and the region. Transferring the marketing efforts from cruise ship tourism to the ‘stay over’ tourism market. Increase the marketing budget for the tourism sector and the DDA as a whole. Maintain nature island image.
Communication
The DDA need to clarify what exactly their role is in the tourism sector, they need to outline their mission statement/mandate and services offered. The IDA and DDA need to provide detailed information to potential investors on the what, where, when and how of setting up a business in Dominica. Action undertaken by the government is often in conflict with the ‘nature island’ image it is promoting (e.g. proposals to build a golf course and the construction of an asphalt plant on the Layou River). These ‘mixed signals’ are confusing and generating much suspicion and mistrust of the government amongst the public. Clarification of the government’s vision for the tourism sector as well as greater consistency between their rhetoric and actions are called for. Communication between tourism stakeholders and government needs to be improved. It is currently not at an

equal level and for this to be overcome a better understanding of people's needs, challenges and efforts on the ground is required.

Disruption to services and infrastructure (e.g. road works) need to be better communicated to businesses so they can accommodate the needs of their clients appropriately and with minimal disruption.

Other

Transport & Infrastructure: lobby to improve the timely connection of flights to Dominica with international arrivals in neighbouring islands; subsidise inter-island ferry; improve quality of roads and install clear signs and directions; better internet capability required.

Training: the current tourism course at the state college is too theoretically focussed with students entering employment with no practical experience. More practical elements needed in the course to better equip personnel in the work environment; better training of staff in tourism sector at ALL levels; ensure fairness in marketing and funding of training.

Social & Cultural Sensitization: educate foreign investors on the 'do's and don'ts of Dominica culture; encourage businesses to work/collaborate with local communities and employ locals.

Source: Economic Commission for Latin America and the Caribbean (ECLAC) on the basis of data gathered from the survey, Innovation in the tourism sector of the Commonwealth of Dominica (2010).

2. Awareness of tourism policy

After the first round of interviews, it was noted that the respondents' information on government support programmes, and tourism policy in general, was not consistent. The conflicting responses given by establishments who did not use government support programmes is testament to this fact (see section E.1). In an attempt to explore the level of tourism policy awareness of the tourism stakeholders the researcher added an extra question into the survey for the second round of interviews (n=20). Seventy percent of respondents stated they were aware of a tourism policy for Dominica and the majority of these (70 percent) referred to the Tourism Master Plan (2006) as the island's tourism policy. Although only five percent said that no tourism policy exists for the island, 25 percent claimed they simply did not know. The following remark echoed a lot of sentiments expressed when this policy question was posed: *"I believe a tourism policy does exist, on paper, but I'm sure nobody pays attention to it or follows it"*. These statistics serve to highlight that, in addition to a lack of awareness of Dominica's tourism policy, stakeholders perceive a disconnect between the policy rhetoric and the actual implementation of the policy on the ground.

IV. Conclusions and recommendations

A. Conclusions

The majority of tourism establishments surveyed comprised small businesses of local private ownership in the accommodation sector which were predominantly engaged in non-technological product innovations. Marketing innovations of a technological nature were the next most common, followed by non-technological process innovations. Innovation related to organizational management made an insignificant contribution to innovation activities. The younger establishments could be described as those driving innovation in the sector as they were most frequently engaged in innovation activities.

Innovation was mostly informed by management staff and customers whilst collaborative arrangements were principally formed with local and international industry associates in order to access both new markets and critical expertise. The drive to innovate commonly originated from the necessity to satisfy client's needs, improve service quality, increase and maintain market share and be competitive. The resulting impacts of innovation were frequently reported to be increases in client satisfaction, product differentiation, improvements in an establishment's image and service quality.

The obstacles to innovation repeatedly noted to be of importance included challenging domestic economic conditions, lack of access to appropriate financing, weak customer demand, high cost of undertaking innovation activities and lack of skilled or qualified personnel. The small number of establishments who made use of government support programmes identified tax rebates, technical support and training as important to innovation. Respondents gave a range of suggestions as to how the government can encourage innovation in the tourism sector in relation to financial schemes, legal and administrative procedures, marketing, and communication amongst others. These discussions brought to light the general lack of awareness of the tourism policy amongst stakeholders and a perceived disconnect between government policy and action in the tourism sector of Dominica.

To survive in the current economic climate businesses will be forced to change the way they operate (indeed some are already beginning). Entrepreneurship and subsequent innovation capability will largely determine the extent to which a business will thrive under the new conditions. In order to cultivate an innovation friendly environment during this period of economic uncertainty an innovation-oriented perspective needs to be incorporated into the current tourism policy.

B. Recommendations

In light of these conclusions it is recommended that the government of Dominica integrate an innovation-oriented perspective to current tourism policy. This review of policy would focus on eliminating the barriers to innovation in order to make innovation processes a matter of routine across the sector. As the OECD (2006) reports, this process enables the cultivation of innovation creation mechanisms that encourage a spirit of enterprise and the development of new business models, attracting additional investment for the renewal of equipment and installations. An innovation-oriented tourism policy would thus enable stakeholders to make more appropriate innovation choices that would have a greater chance of success, thereby improving productivity and stimulating growth: an ideal environment to promote during this time of reduced tourism activity and general economic incertitude. An innovation-oriented tourism policy could, for example, serve a similar purpose to that of a sectoral or broader macroeconomic stimulus package that other governments in the region are implementing in order to bolster tourist arrivals or to protect sector employment.

The first step in initiating an innovation-oriented perspective is for the government and tourism sector to jointly review the findings of this report in a workshop and together examine the key challenges and identify the steps required to overcome them. This will ensure that final innovation-oriented tourism policy is relevant to Dominica and not just conceptually constructed[6]. In the final stages of policy development, refinements can be made with further inputs from stakeholders through a participatory consultation process that would serve to strengthen, legitimise and sanction the final policy. The introduction of innovation creation mechanisms into a tourism policy may require a variety of measures including the following action points:

1. Increasing the demand for Dominica's tourism product

Under the current low levels of demand for Dominica's tourism product, as evidenced by the stay-over tourist statistics for the island, any efforts to encourage innovation in the sector may prove a futile endeavour. As a result, demand-side innovation-oriented policies will need to be prioritised. The two key action points highlighted for Dominica are the need to increase accessibility to the island and in line with this, develop an effective marketing strategy, both of which will also require innovative action.

Accessibility and marketing are not new challenges to the tourism sector. In fact, various government funded studies such as the Dominica Tourism Policy 2010 (Ministry of Tourism & National Development Cooperation, 2005), the Dominica Sustainable Tourism Policy and Marketing Strategy

[6] Innovation literature offers an extensive theoretical foundation (e.g. Keller, 2006) to help inform and construct a conceptual basis for an innovation oriented tourism policy as it discusses the components of an innovation-oriented tourism policy and the various innovation creation mechanisms (i.e. hands on training, production and dissemination of information and an efficient information technology infrastructure to name a few). A solid understanding of these models will help to better appreciate and contextualize the innovation challenges stakeholders have identified in this report.

(Chemonics International, 2007) and the current Tourism Master Plan (2006) present quite an exhaustive list of strategies to address these challenges. For example, improving air and sea access to the island have included discussions to upgrade marine access facilities, support the inter-island ferry service, create a yachting sector, encourage airlines to fly in at night, expand the Melville Hall airport to accommodate larger jet planes, work with airline companies to improve connections with international arrivals on neighbouring islands, implement measures to reduce the cost of flights and establishing a small national airline for Dominica.

Options for enhancing the destination's image and increasing awareness of the country, its economic opportunities and investment possibilities have included destination marketing, niche marketing and cluster/cooperative marketing which are supported by market research in priority market segments and locations, establishing performance indicators, a monitoring system, and a market intelligence[7] function.

Marketing however, is only a viable tool if there is a consensual understanding and agreement among all stakeholders, including the government, of the product being sold. Evidence suggests that this understanding and agreement does not currently prevail in Dominica. This report revealed high levels of concern amongst stakeholders interviewed with respect to the disconnect between the nature island image promoted by, and the actions of, the government. It is therefore imperative that the government's actions mirror the nature island image it is promoting and that this image is maintained in all efforts to incorporate an innovation-oriented perspective in tourism policy. A couple of key steps will be required to effectively increase the demand for Dominica's tourism product:

- Financial commitment and the allocation of a larger budget to address tourism infrastructure constraints are required from the government. Increasing the demand for Dominica's tourism product will require the investment of resources in well researched, planned and implemented activities that will in turn generate economic benefits.
- Revisit the existing guidelines on product development in the Tourism Master Plan (2006) and focus on sustainably developing the market segments which are unique to Dominica and the Caribbean region (e.g. whale watching or indigenous community-based tourism) rather than trying to create new segments which are already well established and found in abundance across other Caribbean islands (e.g. golf tourism). A philosophy of developing unique and authentic experiences that can only be found and delivered in Dominica by Dominicans must permeate this process. Part of this process could also include granting the Carib community greater autonomy in the development of their tourism product and creating synergies between the tourism sector and other economic sectors such as agriculture. Developing a more focussed and detailed product development policy with input from stakeholders will ensure that there is unanimous understanding on the tourism product Dominica offers. This will pave the way for the development of a more targeted and effective tourism marketing strategy.

2. Maintaining the nature island image

In conjunction with the integration of an innovation-oriented perspective into the sector is the need to maintain a nature island image. The fact that environmental sustainability was rarely considered in innovation activities and that some businesses reported a decline in environmental sustainability brought about by the implementation of innovation activities does not augur well for Dominica's nature island image. As a result, rules and regulations across the tourism industry that promote the nature island image must be identified and agreed upon. Once they are legitimate, it would be necessary for the government to both abide by such rules and to enforce them. While the application of rules and regulations concerning a nature island policy are absent no one will take them into consideration and free riders will

[7] The action of defining, gathering, analyzing and distributing information about products, customers, competitors and any aspect of the environment needed for the purpose of accurate, confident and strategic marketing decision making by executives and for the sector.

continue to take advantage of them. Three considerations for reflection in the rules and regulations developed are:

- The encouragement and support of environmentally friendly initiatives in the tourism industry. In order to maintain credibility with the nature island endeavour and to strengthen the eco-friendly actions of tourism stakeholders the government can provide fiscal concessions, such as duty free concessions to projects that involve renewable energy, waste management, water use reduction, organic agriculture and low carbon emissions technology and associated materials. Alongside these concessions a ‘green rating’ system could be introduced to recognise establishments complying with eco-efficiency standards. For example, the accommodation sector could use the hotel star rating as normal but the stars would be turned green once the establishment complied with the green standards.
- Protecting the environment from potentially damaging innovation activities undertaken by tourism stakeholders in order to ensure that all visitors enjoy the same unique, high quality experience. Sustaining a tourism activity which is in harmony with its human and natural environment from ‘cradle to grave’ will require establishing regulations which will sensitize stakeholders to the nature island ethos. For example, the construction and operation of a new dive centre would have to consider the enforcement of rigorous environmental impact assessments and the eco-design of buildings which would qualify for fiscal concessions on renewable energy technology. Such regulations would encourage minimal disruption to the environment not just during the construction stage but also through the lifetime of the initiative.
- Investigate the feasibility of introducing fair trade tourism. This is defined by Tourism Concern[8] as a key aspect of sustainable tourism that aims to maximize the benefits from tourism for local destination stakeholders through mutually beneficial and equitable partnerships between national and international tourism stakeholders in the destination. It also supports the right of indigenous host communities, whether involved in tourism or not, to participate as equal stakeholders and beneficiaries in the tourism development process. The introduction of fair trade criteria into the tourism sector would include fair wages and working conditions, fair purchasing, fair operations, equitable distribution of benefits and respect for human rights, culture and the environment. Combining such fair trade principals with the nature island ethos would provide the basis for a truly sustainable tourism industry in Dominica.

The creation of any new regulations should follow the principles of transparency and efficiency, as laid out in recommendation 4, recalling that the aim is to remove barriers to innovation and not create them.

3. Improving communication

Key to any functional and prosperous economic sector is effective and efficient communication between the government and stakeholders. No tourism policy or regulation related to innovation or otherwise, will succeed in the absence of a two-way communication channel, and as such should be one of the key challenges to address. The approach to overcoming the current communication problems will need to be twofold. Firstly, the government needs to ensure that all stakeholders in the industry are familiar with Dominica’s tourism sector priorities and understand the role of the relevant government agencies, as well as both the circumstances in which these agencies are able to provide support in innovation

[8] Tourism Concern is an independent, non-industry based, the United Kingdom charity that works to promote forms of tourism that provide meaningful benefits to people in destination communities. For more information on fair trade tourism and the work of Tourism Concern see: http://www.tourismconcern.org.uk/

activities and their limitations. Articulating the role of key government tourism agencies and policy may involve:

- The DDA dedicating a page on the website and/or creating a pamphlet which clearly outlines the role of the DDA in the tourism sector of Dominica, the services they offer and how they may be accessed;
- The Invest Dominica Authority (IDA) creating an information package for investors which lists the various steps and procedures involved in establishing a tourism business in Dominica, the legislative context along with the rules and regulations associated with any concessions, the government fiscal support for implementing innovation activities, the available finance schemes, and a copy of the most current tourism sector policy guidelines.

Secondly, the government needs to redress the perceived current inequality experienced by some stakeholders in accessing the services of the DDA. It is suggested that the DDA consider the long-term strategy of decentralising their mode of operation to become an extension service. This arrangement would operate in a similar manner to that of an agricultural extension service whereby the services of the DDA would extend beyond the confines of their office in Roseau and into different parts of the island. Having a number of extension officers assigned to work in certain locations across the island would make the DDA more accessible to a greater number of stakeholders whilst also enabling the DDA to engage with stakeholders on a more personal level. By working on-site, DDA personnel would have an enhanced appreciation of the challenges faced by businesses and therefore be in a better position to design more appropriate regulations and also guide businesses in identifying and realising appropriate innovation opportunities. The improved rapport and service would increase the likelihood of tourism businesses cooperating and complying with industry regulations managed by the DDA.

As the implementation of this endeavour would require significant resources, it is suggested that, as a short-term measure, the DDA consider establishing one or two extension officers who would only be responsible for coordinating and guiding accommodation businesses in the adoption of the DDA certification scheme for at least one year as a trial run. This would enable the DDA to explore the usefulness and feasibility of having a larger yet cost effective extension service which would respond to the needs of stakeholders across Dominica, and also secure long term financing. Cooperating with the European Union on the strategic framework of assistance in tourism for this initiative may be a viable route for securing financing.

4. Removing administrative hurdles

There is a need to identify ways to increase the efficiency of administrative procedures associated with the implementation of an innovation activity. Reducing the time and effort a business spends on administrative procedures will increase the time available for pursuing innovation activities. Two steps for consideration include:

- Issuing a clear directive which informs businesses of the requirements for qualification for any tax concession/financial rebate or support programme offered by the government. In addition, when a business is denied the support, a written communiqué that provides explanations and offers suggestions on strategies to enhance the chances of approval of applications would be issued;
- Reducing the number of official procedures and associated paperwork required for inspections, certifications, licensing, importing of goods and other legal/administrative processes linked to innovation activities in the tourism industry.

5. Developing appropriate financing mechanisms

Identifying and promoting different forms of finance schemes is necessary. The current finance schemes available to tourism businesses are more suitable for large enterprises in stable economic environments. As this is not the case for the majority of businesses in Dominica, the government should make it a priority to examine alternative finance schemes such as soft loans. While offering a below-market rate of interest these soft loans should also provide other concessions to borrowers, such as long repayment periods or interest holidays. Special consideration also needs to be given to members of the Carib community where communal land tenure laws prevail and land cannot be used by the banks as collateral.

6. Valuing innovation

Innovation in the tourism sector of Dominica is being driven by the youngest businesses, that are striving to offer different experiences and a greater quality of service in order to establish themselves in a competitive market. The majority of these business owners invested considerable time, in some cases years, in identifying niche markets and creative ways to implement and market their products and services before establishing their enterprise. Once established, these businesses, mostly led by creative, dynamic individuals, have been continuously modifying and improving their product and identifying new ways to attract clientele, quite successfully. The high value placed on innovation in these cases has not only brought benefits to the businesses themselves but also to the sector and Dominica society as a whole (e.g. wellness treatments targeted at tourists are also available to Dominicans which can contribute to an improved quality of life). Stakeholders must therefore recognise that the benefits of innovation extend beyond the boundaries of an enterprise and that this added value needs to be taken into account. Thus, the development of an innovation friendly tourism sector alone is likely to have minimal effect if stakeholders do not value innovation enough to invest the time and effort it requires. Hence, if the government of Dominica chooses to introduce innovation-oriented policies into the tourism sector, this should be complemented by strategies to capture and reward value added generated through innovation. In this regard, innovation strategies should be closely linked to the national tourism incentive framework. Further, they will have to ensure that it is supported with a public awareness raising campaign so that stakeholders are informed of, and are able to respond to, the opportunities and incentives to innovate.

In reviewing these action points and identifying strategies for their implementation it is necessary to recognise that such change requires a long-term perspective and long-term commitment of resources. Innovation-oriented reforms in the tourism sector must be Dominica-specific and embrace multiple approaches that are equitable, viable and sustainable not just for the economy but also society and the environment.

Bibliography

CCST(Caribbean Council for Science and Technology) (2007), *Science, Technology and Innovation for Sustainable Development: Caribbean regional policy framework for action*, Port-of-Spain, Trinidad and Tobago.

CI (Chemonics International) (2007), *Dominica sustainable tourism policy and marketing strategy*, Washington D.C., USA.

CHL Consulting Group Ltd., (2006), *Tourism Master Plan 2005 - 2015: Commonwealth of Dominica*, County Dublin, Ireland.

Crask, P., (2007), *Dominica,* 1st edition, Connecticut, USA, The Globe Pequot Press Inc.

CSO (Central Statistics Office of the Commonwealth of Dominica) (2010), *A decade in review. Tourism statistics of the Commonwealth of Dominica: 1999-2009,* Roseau, Dominica.

DDA (Discover Dominica Authority) (2010), *Visitor arrivals in the Commonwealth of Dominica: 2010 preliminary statistics*, Roseau, Dominica.

Drucker, Peter F. (2007), *Innovation and Entrepreneurship*, New York, USA, Butterworth-Heinemann.

ECCB (Eastern Caribbean Central Bank) (2009a), *Annual and Economic Financial Review of the Eastern Caribbean Central Bank,* Basseterre, Saint Kitts and Nevis.

____ (2009b), *National Accounts Statistics 2009,* Basseterre, Saint Kitts and Nevis.

ECLAC (Economic Commission for Latin America and the Caribbean) (2010), *Preliminary overview of the economies of the Caribbean: 2009-2010. Striving for productive diversification after the great recession,* (LC/CAR/L.252) Port-of-Spain, Trinidad and Tobago.

Jacob, Marta and others (2002), *Innovation in the tourist sector: results from a pilot study in the Balearic Islands*, Fundación COTEC Project

Discussion Paper, Illes Balears, Spain, Institut Mediterrani d'Estudis Avançats, Universitat de les Illes Balears.

Keller, Peter (2006), "Innovation and product development in tourism: creating sustainable competitive advantage", *Towards an innovation-oriented tourism policy: a new agenda?*, Berlin, Germany, Schmitt.

Ministry of Tourism and National Development Cooperation (2005) *Dominica Tourism 2010 Policy*, Roseau, Commonwealth of Dominica.

Moore, Geoffrey (2002), *Crossing the Chasm: marketing and selling high-tech products to mainstream customers*, 2nd edition, New York, USA, Harper Collins Publishers.

NIHERST (National Institute for Higher Education, Research, Science and Technology) (2007), *National innovation survey of the food and beverage industry in Trinidad and Tobago*, Port-of-Spain, Trinidad & Tobago.

Nurse, Keith (2007), "Science, Technology and Innovation in the Caribbean", document presented at the Meeting on Technology Policy and Development in Latin America of the Economic Commission for Latin America and the Caribbean, Santiago, Chile.

OECD (Organisation for Economic Co-operation and Development) (2006) *Innovation and growth in tourism*, Paris, France.

____ (2010), *The OECD Innovation Strategy: Getting a Head Start on Tomorrow*, Paris, France.

OECD (Organisation for Economic Co-operation and Development) and EUROSTAT (Statistical Office of the European Communities) (2005) *Oslo Manual: Guidelines for collecting and interpreting innovation data*, Paris, France.

Okpara, Friday (2007), "The Value of Creativity and Innovation in Entrepreneurship", *Journal of Asia Entrepreneurship and Sustainability*, vol. 3, No.2.

Perdomo-Ortiz, Jesús, Javier González-Benito and Jesús Galende (2006), "Total quality management as a forerunner of business innovation capability", *Technovation*, vol. 26, No.10.

UN (United Nations) (2005) "Mauritius strategy for the further implementation of the programme of action for the sustainable development of small island developing states", *Report of the International Meeting to Review the Implementation of the Programme of Action for the Sustainable Development of Small Island Developing States,* A/CONF.207/11, New York.

Annex

Annex 1.
Innovation questionnaire

UNITED NATIONS

ECLAC

Questionnaire on Innovation in the Tourism Sector of the Commonwealth of Dominica

Section I: Contact Information

1. Name of Establishment:____

2. Year Established:____

3. Address:____

4. Telephone:______________________ Ext#:______________________

5. Fax:____

6. Email:____

7. Name of Respondent (optional):____________________________________

8. Position in the Establishment (optional):_______________________________

Section II: Structure of the Establishment

9. What is the ownership structure of your establishment**:** (please ☒ appropriate box)

Local private ownership	☐	**Skip to Q12**
Local state-owned	☐	
Wholly owned by foreign corporation	☐ →	**Skip to Q11**
Joint venture – foreign private/government	☐	
Joint venture – foreign private/local private	☐	

10. If your establishment is joint venture, please state:

Shares foreign (%) ______________________

11. What is the nationality of the foreign owner/joint venture partner?

12. What is the main activity of your establishment?

____

13. How many full-time employees has your establishment had since 2005:

____

14. How many were:

Male ____________

Female ____________

15. Is your establishment sub-contracting for another establishment?

Yes ☐ No ☐

16. Is your establishment outsourcing for another establishment?

Yes ☐ No ☐

<u>Section III: Activities of the Establishment</u>

17a. Did your establishment undertake any of the following PRODUCT related innovative activities since 2005?

PRODUCT						
Activity	**Yes**	**No**	**Started but later abandoned**	**Technological**		**Non-Technological**
				Information & Communication Technology	**Other Technological Area**	
Introduced a new product	☐	☐	☐	☐	☐	☐
Significantly improved an existing product	☐	☐	☐	☐	☐	☐
Developed or modified a new product	☐	☐	☐	☐	☐	☐

<u>If NO to ALL skip to Q18a</u>

If YES please describe the innovation activity:

____

____

17b. If you developed a new PRODUCT does it have a patent?

Yes ☐

No ☐

17c. Were these PRODUCT related innovative activities:

	Yes	No
New to the national market	☐	☐

18a. Did your establishment undertake any PROCESS related innovative activities since 2005?

PROCESS						
Activity	**Yes**	**No**	**Started but later abandoned**	**Technological**		**Non-Technological**
				Information & Communication Technology	**Other Technological Area**	
Introduced a new process	☐	☐	☐	☐	☐	☐
Significantly improved an existing process	☐	☐	☐	☐	☐	☐
Developed or modified a new process	☐	☐	☐	☐	☐	☐

<u>If NO to ALL skip to Q19a</u>

If YES please describe the innovation activity:

____

____

____

18b. Were these PROCESS related innovative activities:

	Yes	No
New to the national market	☐	☐

19a. Did your establishment undertake any ORGANISATIONAL MANAGEMENT related innovative activities since 2005?

ORGANISATIONAL MANAGEMENT						
Activity	**Yes**	**No**	**Started but later abandoned**	**Technological**		**Non-Technological**
				Information & Communication Technology	**Other Technological Area**	
Introduced a new form of org. management	☐	☐	☐	☐	☐	☐
Significantly improved an existing form of org. management	☐	☐	☐	☐	☐	☐
Developed or modified a new form of org. management	☐	☐	☐	☐	☐	☐

<u>If NO to ALL skip to Q20a</u>

If YES please describe the innovation activity:

____

19b. Were these ORGANISATIONAL MANAGEMENT related innovative activities:

	Yes	**No**
New to the national market	☐	☐

20a. Did your establishment undertake any of the following MARKETING related innovative activities since 2005?

MARKETING					
Activity	**Yes**	**No**	**Started but**	**Technological**	**Non-**

			later abandoned			Technological
				Information & Communication Technology	Other Technological Area	
Introduced a new marketing technique	☐	☐	☐	☐	☐	☐
Improved an existing marketing technique	☐	☐	☐	☐	☐	☐
Developed or modified a new marketing technique	☐	☐	☐	☐	☐	☐

<u>If NO to ALL skip to Q21</u>
<u>If NO to Q17 and Q18 and Q19 and Q20 skip to Q26</u>

If YES please describe the innovation activity:

____
____
____
____
____
____

20b. Were these MARKETING related innovative activities:

	Yes	**No**
New to the national market	☐	☐

Section IV: Objectives of Undertaking Innovative Activities

21. Indicate the importance of the following REASONS for innovating:

Reasons	Not Important	Slightly Important	Important	Very Important
Extend Service Range	☐	☐	☐	☐
Improve Service Quality	☐	☐	☐	☐
Satisfy Client's Needs	☐	☐	☐	☐
Reduce Costs	☐	☐	☐	☐
Increase & Maintain Market Share	☐	☐	☐	☐
Be Competitive	☐	☐	☐	☐
Increase Profitability	☐	☐	☐	☐
Improve Establishment's Image	☐	☐	☐	☐
Develop More Environmentally Friendly Services	☐	☐	☐	☐
Comply with Local Laws or Standards	☐	☐	☐	☐
Other, please specify:	☐	☐	☐	☐

Section V: Impact of Innovative Activities

22. Rate the IMPACT of your innovation on the following indicators of your establishment's performance:

Impact	No Change	Decrease	Increase	Don't Know
Improvement of Establishment's Image	☐	☐	☐	☐
Profitability	☐	☐	☐	☐
Domestic Market Share	☐	☐	☐	☐
Competitiveness	☐	☐	☐	☐
Productivity	☐	☐	☐	☐
Diversification	☐	☐	☐	☐
Product Differentiation (including changes in quality)	☐	☐	☐	☐
Client's Satisfaction	☐	☐	☐	☐
Environmental Sustainability	☐	☐	☐	☐
Employment	☐	☐	☐	☐
Service Quality	☐	☐	☐	☐
Compliance with Regulations	☐	☐	☐	☐
Other, please specify:	☐	☐	☐	☐

Section VI: The Role of Sources of Information in Innovation

23. Rate the importance of the following SOURCES OF INFORMATION for your innovation activities:

Sources	Not Used	Slightly Important	Important	Very Important
Internal Sources				
Parent Firm	☐	☐	☐	☐
Management Staff	☐	☐	☐	☐
Other Internal Sources	☐	☐	☐	☐
External Sources				
Customers	☐	☐	☐	☐
Client Firm for which Respondent is a Subcontractor	☐	☐	☐	☐
Suppliers of Equipment, Materials & Components	☐	☐	☐	☐
Government Ministries or Public Research Institutes	☐	☐	☐	☐
Fairs, Exhibitions & Conferences	☐	☐	☐	☐
Business & Industry Associations	☐	☐	☐	☐
Professional Journals & Trade Publications	☐	☐	☐	☐
Education & Research Institutes	☐	☐	☐	☐
Other, please specify:	☐	☐	☐	☐

Section VII: The Types of Innovation Information Obtained from Sources

24. What TYPE OF INFORMATION on innovation did you obtain from your sources?

Impact	Product Related	Process Related	Marketing Related	Management Related
Internal Sources				
Parent Firm	☐	☐	☐	☐
Management Staff	☐	☐	☐	☐
Other Internal Sources	☐	☐	☐	☐
External Sources				
Customers	☐	☐	☐	☐
Client Firm for which Respondent is a Subcontractor	☐	☐	☐	☐
Suppliers of Equipment, Materials & Components	☐	☐	☐	☐
Government Ministries or Public Research Institutes	☐	☐	☐	☐
Fairs, Exhibitions & Conferences	☐	☐	☐	☐
Business & Industry Associations	☐	☐	☐	☐
Professional Journals & Trade Publications	☐	☐	☐	☐
Education & Research Institutes	☐	☐	☐	☐
Other, please specify:	☐	☐	☐	☐

Section VIII: The Role of Cooperative & Collaborative Arrangements in Innovative Activities

25a. Indicate whether your establishment has engaged in any formal form of cooperation or joint innovative activity with any of the following actors since 2005:

Source	Yes	No	Don't Know
Competitor	☐	☐	☐
Customers	☐	☐	☐
Suppliers	☐	☐	☐
Associated Companies within your corporate group	☐	☐	☐
Consulting & Marketing Firms	☐	☐	☐
Private Research Institutes	☐	☐	☐
Public Research Institutes	☐	☐	☐
Universities or Higher Education Institutes	☐	☐	☐
Government Ministry	☐	☐	☐
Other, please specify:	☐	☐	☐

If NO or DON'T KNOW for ALL skip to Q26

25b. Indicate which of the following reasons are important in determining the involvement of your establishment in cooperative and collaborative arrangements since 2005:

Reasons	***Important***	***Not Important***
Sharing Costs	☐	☐
Spreading Risks	☐	☐
Accessing Research & Development	☐	☐
Accessing Critical Expertise	☐	☐
Accessing New Markets	☐	☐
Accessing New Distribution Channels	☐	☐
Other, please specify:	☐	☐

Section IX: Obstacles in Undertaking Innovative Activities

26. Indicate the extent to which any of the following have been OBSTACLES or hindrances to your innovative activity since 2005:

Obstacles	Not Important	Slightly Important	Moderately Important	Very Important
High Cost of Innovation Activity	☐	☐	☐	☐
Lack of Financing	☐	☐	☐	☐
Lack of Skilled/Qualified Personnel	☐	☐	☐	☐
Resistance to Change within Establishment	☐	☐	☐	☐
Lack of Information on Innovation Activities	☐	☐	☐	☐
Lack of Information on Market	☐	☐	☐	☐
Domestic Economic Conditions (e.g. Inflation)	☐	☐	☐	☐
Legislation/Legal Restrictions/Administrative Procedures Affecting the Innovation	☐	☐	☐	☐
Weak Customer Demand	☐	☐	☐	☐
Lack of Marketing Capability	☐	☐	☐	☐
Lack of External Technical Support Services	☐	☐	☐	☐
No Difficulty	☐	☐	☐	☐
Other, please specify:	☐	☐	☐	☐

If you answered NO to Q18, Q19, Q20 and Q21 skip to Q27c

X. The Role of Government Support Programmes in Innovation

27a. Did your establishment make use of government support or assistance in its innovation activity?

Yes ☐

No ☐

Don’t Know ☐

27b. Rate the importance of the following government support programmes, to your establishment, for innovation:

Programmes	Not Applicable	Not Important	Slightly Important	Moderately Important	Very Important
Training	☐	☐	☐	☐	☐
Subsidies	☐	☐	☐	☐	☐
Tax Rebates	☐	☐	☐	☐	☐
Technical Support/Advice	☐	☐	☐	☐	☐
Infrastructure Support	☐	☐	☐	☐	☐
Loans/Grants	☐	☐	☐	☐	☐
Venture Capital Support	☐	☐	☐	☐	☐
Research & Development Funding	☐	☐	☐	☐	☐
Other, please specify:	☐	☐	☐	☐	☐

27c. Please give suggestions on how government can encourage innovation in your establishment:

____
____
____
____
____
____
____
____
____
____
____
____
____
____
____

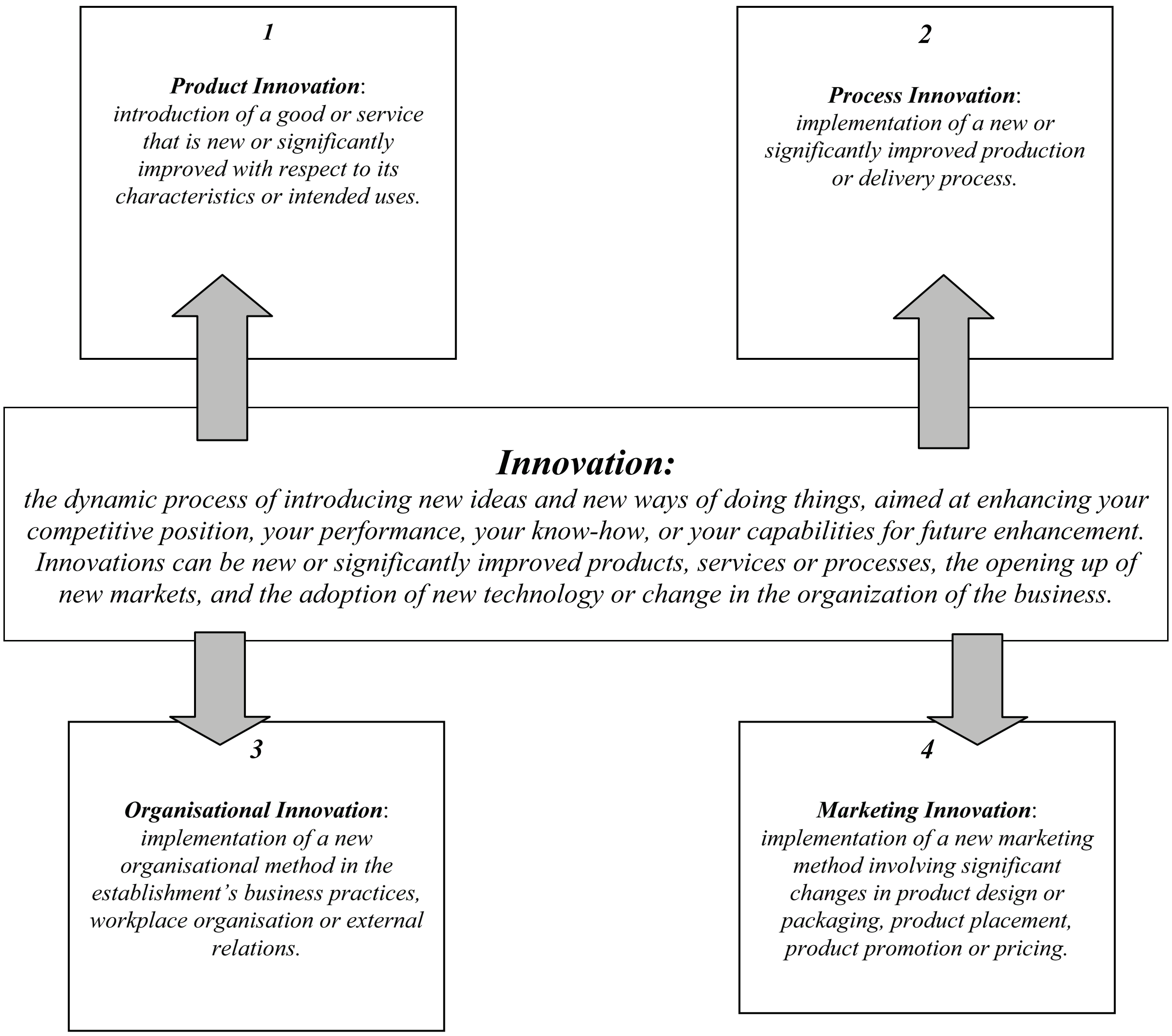
Thank You for Completing this Questionnaire!

Ms. Nia Cherrett
Associate Environmental Affairs Officer,
Sustainable Development Unit,
ECLAC Subregional HQ for the Caribbean,
1 Chancery Lane, PO Box 1113,
Port-of-Spain, Trinidad & Tobago
Tel: (868) 224-8076 Fax: (868) 623-8485
E-mail: Nia.Cherrett@eclac.org
Website: http://www.eclacpos.org

UNITED NATIONS

ECLAC

Annex 2
Questionnaire Guidance Material: Definitions



Source: Adapted from OECD & EUROSTAT (2005) Oslo Manual: Guidelines for Collecting & Interpreting Innovation Data.

Distinguishing between **PRODUCT** and **PROCESS** innovations:

- If the innovation involves new or significantly improved characteristics of the service offered to customers, it is a **product** innovation.

- If the innovation involves new or significantly improved methods, equipment and/or skills used to perform the service, it is a **process** innovation.

- If the innovation involves significant improvements in both the characteristics of the service offered and in the methods, equipment and/or skills used to perform the service, it is both a **product** and a **process** innovation.

Product innovations do **<u>not</u>** include: • Minor changes or improvements; • Routine upgrades; • Seasonal changes; • Design changes that do not alter the function or technical characteristics of the goods or services; • Simple resale of goods and services purchased from other enterprises.	**Process** innovations do **<u>not</u>** include: • Minor changes or improvements; • Increases in production or service capacity by adding manufacturing or logistics systems that are very similar to those already in use; • Innovations that have a significant client interface, such as pick-up service (these are product innovations).
Examples of **product** innovations: • New products in catering; • Trendy/more comfortable hardware in hotel room; • New architecture/design; • Price innovations; • New destination/experience.	Examples of **process** innovations: • Staff training; • Information & communication technologies; • Collaboration in various fields; • Service optimisation; • Improving cost effectiveness and efficiency.

Source: Adapted from OECD & EUROSTAT (2005) Oslo Manual: Guidelines for Collecting & Interpreting Innovation Data.

UNITED NATIONS

ECLAC SUBREGIONAL HEADQUARTERS FOR THE CARIBBEAN

Series
ECLAC studies and perspectives

Issues published

A complete list as well as pdf files are available at

www.eclac.org/publicaciones

www.eclacpos.org

12. Innovation in the tourism sector: a case study from the Commonwealth of Dominica, LC/L.*.***-P, LC/CAR/L.296, Sales No. E.**.II.G.** (US$ 10), 2011.
11. Availability, collection and use of data on disability in the Caribbean subregion, LC/L.3334-P, LC/CAR/L.283/Rev.1, Sales No. E.11.II.G.52 (US$ 10), 2011.
10. Sustainable development from a human rights perspective and the challenges it represents for the Caribbean SIDS, LC/L.3024-P, LC/CAR/L.123, Sales No. E.09.II.G.33 (US$10), 2010.
9. Public debt sustainability in the Caribbean, LC/L.3023-p, LC/CAR/L.175 Rev.1, Sales No. E.09.II.G.32 (US$10), 2008.
8. Exploring policy linkages between poverty, crime and violence: a look at three Caribbean States, LC/C.2916-p, LC/CAR/L.172, Sales No. E.08.II.G.50 (US$10), 2008.
7. Disability in the Caribbean: A study of four countries: A socio-demographic analysis of the disabled, LC/L.2898-P, LC/CAR/L.134, Sales No. E.08.II.G.34 (US$10), 2008.
6. Population ageing in the Caribbean: a four country study, LC/L.2823-P, LC/CAR/L.128, Sales No. E.07.II.G.148 (US$10), 2007.
5. Debt accumulation in the Caribbean: origins, consequences and strategies, LC/L.2710-P, LC/CAR/L.106, Sales No. E.07.II.G.58 (US$10), 2007.
4. Nutrition, gender and poverty in the Caribbean subregion, LC/L.2705-P, LC/CAR/L.105, Sales No. E.07.II.G.54 (US$10), 2007.
3. Suriname: the impact of the May 2006 floods on sustainable livelihoods, LC/L.2690-P, LC/CAR/L.114, Sales No. E.07.II.G.41 (US$10), 2007.
2. Caribbean tourism and agriculture: linking to enhance development and competitiveness, LC/L.2687-P, LC/CAR/L.76, Sales No. E.07.II.G.38 (US$10), 2007.
1. Caribbean economies 2006: a preliminary overview, LC/L.2686-P, LC/CAR/L.113, Sales No. E.07.II.G.37 (US$10), 2007.

- Readers wishing to obtain the listed issues can do so by writing to: Distribution Unit, ECLAC, Casilla 179-D, Santiago, Chile, Fax (562) 210 2069, E-mail: publications@cepal.org.; or to Programme Support Unit, ECLAC Subregional Headquarters for the Caribbean, P.O Box 1113, Port of Spain, Trinidad and Tobago, Fax (868) 623-5595, E-mail: registry@eclac.org.

Name:...

Activity: ....

Address: ....

Postal code, city, country: ....

Tel.:..................................Fax: ....E.mail:...