



TOURISM SATELLITE ACCOUNTING IN THE CARIBBEAN

**International Conference On Statistics
Eastern Caribbean Central Bank, St.Kitts
September 5th –7th, 2007**

**Prepared and Presented by
McHale ANDREW
Caribbean Tourism Organisation/ Caribbean Regional Sustainable Tourism
Development Programme (CTO/CRSTDP) Research & Development Adviser**

TOURISM SATELLITE ACCOUNTING IN THE CARIBBEAN

1. Introduction

The travel and tourism sector is, without a doubt, the largest sector in the world economy and a significant element of economic activity in almost every country but even more so in the Caribbean, which perhaps has the highest tourism penetration level of any region in the world. The World Tourism Organization (UNWTO) estimates a total of 842 million international visitor arrivals in 2006 with a total expenditure of US\$735 billion! International tourism receipts combined with passenger transport currently total more than US\$ 820 billion - making tourism the world's number one export earner, ahead of automotive products, chemicals, petroleum and food.

In the Caribbean (32 CTO member countries), the equivalent figures for 2006 are 22.2 million stayover arrivals, 19.2 million cruise passenger visits and about US\$21 billion in expenditure. While this may seem small in comparison to the world total, the fact is that the region's tourism arrivals and receipts command a disproportionately larger share of the global total than do their share in the world's population and GDP; CTO member countries with only 1 % of the world's population consistently attract about 3% of global tourism arrivals and world tourism expenditure.

However measured, tourism in the Caribbean is not only the single largest sector in terms of its contribution to GDP, its foreign exchange earnings and its employment but it is the only sector that can and does increase the region's effective market size on a daily basis. The region has traditionally relied on the limited measurement of tourism through the proxy of hotels and restaurants' value added in the National Accounts. Currently, what tourism statistics are available are mostly sparse and concentrated on simple analyses of regional and international tourist arrivals and rough estimates of tourist expenditure, without adequate in-depth analysis of the impact of tourism activity on the respective economies or on the regional economy.

The two major challenges facing tourism policy-makers, statisticians and researchers are therefore: (i) how to present a rational, universally acceptable and technically sound definition of the tourism sector within clearly delineated boundaries; and (ii) how to more precisely measure the economic value-added and impact of the tourism sector. Those challenges derive from the fact that the “tourism industry” or the group of industries identified in the tourism sector does not exist as a distinct entity in the traditional national accounts or national statistical system. Thus, data on the range of economic activities directly attributable to tourism may be found in the statistical infrastructure, but they are disjointed, and widely dispersed among other economic sectors. Consequently, the value-added of the tourism sector has been consistently underestimated in traditional national income accounting.

Recognizing that, with a few country specific exceptions, one of the biggest limitations in the regional tourism sector is the absence of a reliable, thorough and internationally uniform statistical database from which one could measure the full economic impact of tourism, TSA implementation in the Caribbean has become a topical issue with many initiatives aimed at facilitating that process now at various stages of conceptualization. A number of regional institutions and several governments in the region have acknowledged the necessity for more precise measurement of tourism through TSAs in order to provide policymakers with more reliable information on which to gauge the economic value-added of the sector. Indeed, a number of initiatives designed to facilitate the implementation of TSAs are ongoing with support from institutions such as the Caribbean Development Bank (CDB), the Caribbean Community (CARICOM) Secretariat and the Caribbean Tourism Organisation (CTO).

2. History of TSA

After years of targeted statistical systems development in collaboration with other international institutions, in 1993 the United Nations Statistical Commission adopted a new System of National Accounts (SNA) which recommended the adoption of a new concept called “Satellite Accounting”, designed to enhance and expand countries’ ability to more accurately capture the economic impact of previously undefined “sectors” such as

health, tourism and the environment. The resulting analytical work would be done within the framework of existing national accounting systems but in a more flexible manner without overtaxing or compromising the central national accounting system.

The TSA seeks to measure the *relationship between the demand for goods and services generated by tourists and non-tourists on one hand and, on the other hand, the overall supply of these goods and services*. Essentially, the TSA categorizes distinct sections from the existing national accounts and restructures them separately to measure the total economic and employment impact of consumer expenditures, capital investment, government revenues and expenditure, foreign trade and business expenditure from tourism. The development of a TSA therefore entails *the reconciliation of supply and demand* for a series of tourism-related products including entertainment, transport, accommodation, food, travel services and other products. Tourists' expenditure on these commodities must therefore be estimated as must the supply of these goods.

The World Tourism Organization (UNWTO) describes the TSA as the "only way to have an overall view of tourism's impact on the economy on an equal footing with all other sectors". The TSA is now preferred as the most reliable method for measuring the economic impact of the tourism sector in any given country. The methodology has the full endorsement of the UNWTO, as well as the UN, OECD and EUROSTAT. It allows countries to measure tourism's true share of GDP in addition to other critical indicators such as induced impacts, job creation and tourism capital formation in a manner that facilitates direct comparisons with other key sectors.

Some CTO member countries, notably The Bahamas, Dominican Republic and Trinidad & Tobago, have already attempted to implement a TSA but it is generally acknowledged that a regional approach would be more prudent as it would allow countries to learn from the experiences of others and to adapt the TSA methodology to the realities and peculiarities of the region. Implementing a TSA is a most complex and involved process, which requires the involvement of an expert (s), who could be engaged to assist with the development of a more appropriate model for determining the tourism sector's national output and for forecasting its performance. The exercise would include discussions with national tourism

organisations (NTO), central banks, national and regional research institutions and national statistical offices (NSO). Careful examination of economic statistical systems, tourism data compilation and reporting methods would be undertaken and, where necessary, “supply and use” tables would be developed as a necessary platform for pursuing the rigorous statistical systems building that is required for successful implementation of a TSA

3. The 10 TSA Tables

This methodological framework, referred to as the *UNWTO TSA Recommended Methodological Framework* (RMF), involves the compilation of ten tables showing the inter-relationships among the economic variables in the TSA system. The tables were designed to show the interaction of the TSA variables and their link with those of the national accounts. The ten TSA tables are organised in such a way as to present firstly the data on tourism consumption expenditure (in cash) associated with the different forms of tourism (Tables 1 to 3). Next, the non-cash transactions occurring within the domestic economy are added to generate internal tourism-consumption aggregates (Table 4). These in turn can be compared to supply in the domestic economy so as to provide the framework for the development of analyses based on an input-output structure (Tables 5 and 6). Tables 7-9 present employment and other variables such as gross fixed capital formation or tourism collective consumption. Finally, Table 10 presents some important non-monetary indicators associated with tourism.¹ A summary of these tables is presented in Table 1 below.

¹ UNWTO 2001

TABLE 1: THE 10 TSA TABLES

Table 1	Inbound tourism expenditure; an element of aggregate demand
Table 2	Domestic tourism expenditure; part of total consumption
Table 3	Outbound tourism expenditure
Table 4	Internal tourism final consumption
Table 5	Production accounts of tourism industries and other industries
Table 6	Domestic supply and internal consumption by products
Table 7	Employment in tourism industries
Table 8	Tourism gross fixed capital formation
Table 9	Tourism collection consumption by functions and levels of government
Table 10	Non monetary indicators of tourism

Source: UNWTO

4. UNWTO TSA vs. WTTC Estimation Model

The UNWTO recommended methodology is fundamentally different from the World Travel and Tourism Council's (WTTC) approach in that, while the former seeks to build on the existing system of national accounts and construct an accurate and reliable TSA within that system, the latter is done by projecting the tourism sector's economic performance and contribution based on estimated relationships between various demand and supply variables within the economy. Those relationships rely heavily on data that may not always be forthcoming in small developing countries. Thus, although the WTTC approach may be easier to do and more appealing to the average observer, it does not necessarily rely on tested, well-established and reliable relationships between economic variables in a tourism economy.

Since the construction of a TSA cannot be done simply as a tourism sector issue but would have to be an integral component of the National Accounts and national statistical systems,

a more holistic approach to establishing a sustainable TSA system would require national statistical capacity building such as that envisaged by the UNWTO approach.

Nevertheless, there is now an urgent need for a uniform system of TSAs adapted to the realities of the region and credible enough in their results and approach to allow for targeted economic policy development, fiscal policy initiatives, business and economic planning and more efficient resource allocation. ***An attractive but unreliable approach devoid of credibility and rigorous construction would be tantamount to churning out “telephone numbers”.***

It is important to underscore the point that the TSA as an integral aspect of a country’s national incoming accounting process cannot be compromised in order to make it more palatable to tourism interests. ***The TSA on its own does not measure the overall economic impact of tourism*** but rather through a more precise determination of the *value-added* of the tourism sector, it provides a more reliable estimate of tourism’s *direct impact* on the economy, which can then be used with other statistical estimates to determine the sector’s *indirect and induced impacts*, which together contribute to the assessment of the more popular *total economic impact*.

5. Regional TSA Development Initiatives

A host of initiatives designed to facilitate the implementation of TSAs are ongoing with support from institutions such as the Caribbean Development Bank (CDB), the Caribbean Community (CARICOM) Secretariat, the Caribbean Technical Assistance Centre (CARTAC) and CTO. The CTO has been urged and mandated by its Board of Directors and Ministers of Tourism to pursue the coordination of TSA implementation with a view to promoting the introduction of a better, more reliable and accurate mechanism for capturing the true contribution of tourism to economic growth and development. To that end, the CTO coordinated a meeting of Caribbean agencies interested in the implementation of TSAs in the region on May 29th 2006. The meeting took place at the CTO headquarters and included representatives from the CDB, the Organisation of Eastern Caribbean States (OECS), the Eastern Caribbean Central Bank (ECCB), the University of the West Indies’ Sir Arthur Lewis Institute for Social and Economic Studies

(UWI/SALISES) and CARTAC, all of which have an interest in the development of statistical systems, if not specifically TSAs, and have traditionally provided some measure of technical and financial assistance to the statistical development efforts of the region. The CARICOM secretariat, while not represented, sent a written submission to the meeting. The major decision from that meeting was a commitment by the various institutions to continue or to initiate specific roles in the TSA implementation process and to work within an established regional framework in that respect.

The Specific activities that were agreed by the institutions are set out as follows:

Institution	Activities
CARICOM	<i>Assisting with TSA readiness initiatives (ongoing)</i> <i>Secure financial and technical resources (ongoing)</i> <i>Training (ongoing)</i> <i>Technical coordination of TSA implementation</i>
OECS	<i>Advocacy among relevant ministers and planners</i> <i>Seek sources of financial and technical resources</i>
ECCB	<i>Member country coordination</i> <i>General statistical development programmes</i> <i>Related statistical coordination (BOP & National Accounts)</i>
UWI/SALISES	<i>Assist with assessment of member country readiness</i> <i>Training of identified personnel and development of relevant methodologies</i>
CARTAC	<i>Ongoing assistance with national accounts and basic statistics training (including tourism related)</i>
CDB	<i>Seek to provide funding based on a project proposal</i>
CTO	<i>Convene TSA committee meetings as required</i> <i>Coordinate and host technical workshops</i> <i>Provide technical support and funding for specific activities</i> <i>Undertake short-term TSA planning, customization and assessment consultancy</i> <i>Provide assistance for continuing development of System of Tourism Statistics (STS)</i>

The CTO, under the EU funded Caribbean Regional Sustainable Tourism Development Programme (CRSTDP), conducted a workshop targeting senior officials from national

tourism and statistics offices in February 2007 in Barbados. The workshop (i) updated the understanding on TSA techniques and requirements; (ii) critically assessed the various TSA implementation efforts and shared TSA development experiences in the region; (iii) discussed the best approach and methodology for regional TSA development;(iv) received considered input from member countries on technical, administrative and management issues related to TSA implementation; (v) assessed implementation readiness including training and statistical systems development; and (vi) examined the requirements for customization, funding and sustainability of the implementation process.

Fifty-two (52) regional participants from CARIFORUM countries and the wider CTO membership, including ten (10) presenters/panellists/resource persons attended the workshop sessions. All of the Fifteen (15) CARIFORUM member states were invited and fourteen (14) of them were represented at the workshop, with Haiti the only one not sending a participant. The non-CARIFORUM CTO member countries represented were Anguilla, Bermuda, British Virgin Islands, Curacao, Montserrat, St. Barthélemy and Turks & Caicos. Participants were generally senior practitioners from the National Statistics Offices (NSO), the National Tourism Organisations (NTO), Central Banks and Ministries of Tourism as well as some of the regional institutions involved in the TSA multi-agency initiative, namely the CARICOM Secretariat, Caribbean Development Bank (CDB), Eastern Caribbean Central Bank (ECCB) and the OECS Secretariat. The UNWTO provided the main presenter who was also a key technical resource.

Participants overwhelmingly indicated satisfaction with the workshop. The consensus was that it certainly met the stated objectives, imparted essential knowledge on TSA related issues and concepts, presented key ideas for future TSA implementation, created many opportunities for future networking and facilitated a deeper understanding of TSA implementation issues and requirements in the region.

6. Stages of TSA Implementation

The UNWTO as well as countries that have successfully implemented TSAs around the world have identified a number of key stages that should be followed in developing TSAs. Since the development of a country's national accounts system is fundamental to TSA development, the system of national accounts, particular conversion to SNA 93 is integral to the process. The key stages of effective TSA implementation are set out in Table 2 below.

TABLE 2: STAGES IN TSA DEVELOPMENT

1.	Establish inter-agency platform
2.	Obtain a thorough understanding of the country's tourism industry
3.	Ensure that there is a good understanding of the TSA RMF (10 TSA Tables)
4.	Conduct a feasibility study (includes diagnosis of STS)
5.	Develop a robust STS
6.	Develop country's national accounts/SUT
7.	Undertake a pilot project to develop the first TSA

7. Regional Coordination

It is clear at this point that the various exercises require some regional coordination and collaboration if the already difficult task of TSA implementation is to be executed effectively and sustainably. Thus, a regional statistical expert (s) with adequate experience in TSA development and a thorough understanding of the region's statistical systems would be required to work with interested national statistical offices for at least a year once the implementation approach is agreed. *It may be in the best interest of NTOs to fund that*

expertise where possible but otherwise that technical assistance could be funded from regional or international donor institutions.

The multi-agency committee, along with Directors of Statistics, would have thereafter to forge agreement on the specifics of TSA implementation in interested CTO member countries and agree on an outline implementation plan for the development of TSAs in the region. While some countries have continued to pursue their own TSA development initiatives based on levels of readiness and commitment, a regional approach wherein implementing countries would share their experiences, technical expertise and methodology with other interested countries would be quite useful in moving the process along. The multi-agency committee would therefore have to support such a process and agree with countries on the specific roles of each agency and their contributions to the TSA implementation process in CTO/CARICOM member countries.

The implementation process would be helped by the completed CTO/CRSTDP's *TSA Readiness Assessment and Implementation Plan* project that reviewed the various methodologies with a view to determining the most appropriate for the Caribbean, conducted a readiness assessment of relevant countries for TSA implementation, and recommended an approach and implementation plan for TSA development in the region. Table 3 below summarizes the current status of ongoing TSA projects in the region, while Table 4 outlines the assessed readiness criteria.

TABLE 3: SUMMARY OF CURRENT TSA PROJECTS

COUNTRY	TSA STATUS	COMMENTS
Antigua & Barbuda	Not started.	No information received, emails not responded to nor telephone calls returned. Unable to assess situation.
Bahamas	Preliminary TSA completed. SUT almost complete.	Consultant Global Insights hired to produce preliminary TSA. SUT assistance provided by CARTAC.

Barbados	Not yet started but SUT almost complete.	SUT assistance provided by CARTAC. Country included in CARICOM Pilot TSA project.
Belize	Started but process stalled.	Technical assistance received from Sweden but process stalled. Need to re-start.
Dominica	TSA feasibility study completed.	Included in CARICOM Pilot TSA project.
Dominican Republic	Full-fledged TSA completed.	Currently working on a series and has offered technical assistance to the region.
Grenada	Not yet started.	Included in CARICOM Pilot TSA Project.
Guyana	Not yet started. Still to convert to SNA 93.	Assistance required in converting to SNA 93. IDB project to assist country.
Haiti	Not yet started. Still to convert to SNA 93.	No information received. However, CTO/CRSTDP mission in December provided some basic information. Weak statistical infrastructure. May need special project to build statistical system.
COUNTRY	TSA STATUS	COMMENTS
Jamaica	Started as part of the SNA 93 revision. SUT almost completed.	CIDA to provide technical assistance. Jamaica to begin pilot TSA.
St. Kitts and Nevis	Not yet started.	STS development required. SUT attempted but incomplete.
St. Lucia	Pilot TSA underway.	Part of CARICOM Pilot TSA project. St Lucia was the selected to be the first country for the TSA pilot project. SUT almost complete.
St. Vincent and the Grenadines	Not started. STS study underway. SUT in progress.	CDB funded project on STS in progress.

Suriname	Not yet started.	STS requires further development.
Trinidad & Tobago	Simulated TSA completed. Pilot SUT completed with assistance from CARTAC.	Full SUT for 2005 underway. Full TSA to be done. Some technical assistance required.

TABLE 4: SUMMARY OF TSA READINESS ASSESSMENT CRITERIA

COUNTRY	Agency Platform 93	SNA 93	Started SUT	STS	10 TSA Tables	Level of Awareness	Started Project
Antigua and Barbuda	NR	NR	NR	NR	NR	NR	NR
Bahamas	yes	yes	yes	adequate	8	good	yes
Barbados	no	yes	no	adequate	0	good	no
Belize	no	no	no	adequate	0	poor	yes
Dominica	no	yes	no	inadequate	0	poor	no
Dominican Republic	yes	yes	yes	adequate	10	good	yes
Grenada	no	yes	no	inadequate	0	poor	no
Guyana	no	no	no	inadequate	0	good	no
Haiti	NR	NR	NR	NR	NR	NR	NR
Jamaica	yes	yes	yes	adequate	1	good	yes
St. Kitts and Nevis	no	yes	no	adequate	0	poor	no
St. Lucia	no	yes	yes	adequate	3	good	yes
St. Vincent and the Grenadines	no	yes	yes	adequate	0	poor	no
Suriname	no	no	no	inadequate	0	poor	no
Trinidad & Tobago	no	yes	yes	adequate	6	poor	yes
NR - indicates no response							

8. Implementation Strategy and Schedule

The following provides a synopsis of the various stages of TSA implementation and readiness and outlines the proposed implementation strategy and schedule for selected Caribbean countries (CARIFORUM) based on the CTO/CRSTDP's *TSA Readiness Assessment and Implementation Plan*.

GROUP 1

Bahamas, Trinidad and Tobago

Implementation Strategy: Full TSA

Both the Bahamas and Trinidad and Tobago have produced simulated/preliminary TSAs. Though broadly consistent with the UNWTO TSA RMF, the use of estimates and assumptions to fill data gaps may pose some issues of credibility and accuracy to the results. Though both countries worked closely with consultants in developing assumptions, the robustness of the results were doubtful as the international standards were not always followed and the different methodologies used did not allow for cross country comparisons. Both countries have however acknowledged the limitations of their initial efforts and are both currently engaged in producing full TSAs following the TSA RMF and both are close to completing their SUTs for the new reference years. The main tasks therefore left for those two countries are as follows:

- Formalise inter-agency collaboration and ensure regular meetings
- Review STS
- Complete and reconcile SUTs
- Complete full TSA
- Conduct review of full TSA
- Make adjustments and publish results of full TSA

Resource Requirements:

Technical assistance for review stage

Dedicated staff of three for TSA project – a senior statistician and two statisticians

Timeline: December 2009

Group 2

Barbados, Belize, Dominica, Grenada, Jamaica, St Lucia

Implementation Strategy: Pilot TSAs

Four of these countries are already engaged in the CARICOM Pilot TSA project funded by the Government of Spain. Given that funding has been secured for another three-year period, this project could be expanded to include Belize and Jamaica. (Jamaica may have access to other funding/technical assistance as well). These countries all appear to have a good STS or have completed a diagnosis of their STS. St Lucia has already started the Pilot TSA project and the model is to be replicated within this group. A feasibility study has been completed for Dominica and CARICOM has indicated that it can proceed to the pilot project stage. This would involve:

- Set up inter-agency team
- Conduct feasibility study
- Complete SUT
- Prepare/Complete Pilot TSA

Resource Requirements

Technical assistance for SUT completion

Technical assistance for TSA project

Dedicated staff - 1 senior officer, 1 junior officer

Appropriate computer hardware and software, where required

Timeline: December 2009

Group 3

Antigua & Barbuda, Guyana, Haiti, St Kitts and Nevis, St Vincent and the Grenadines, Suriname

Implementation Strategy: Development of STS, National Accounts (SUTs)

These countries do not yet have a robust STS with quite a few of them not having data on visitor expenditure. Most of these countries are also still grappling with conversion to SNA 93. This group is really starting from scratch and has the opportunity to get it right from the very start. This group may need to be split into two for maximum effectiveness. The key tasks to be undertaken are summarized as follows:

- Set up inter-agency team
- Ensure a good understanding of the TSA framework and its proposed tables
- Conduct feasibility study
- Develop STS
- Assess SNA
- Convert to SNA 93 where necessary
- Construct SUT where possible

Resource Requirements

Technical assistance for SNA 93, SUT, and Feasibility Study

Dedicated staff - 1 senior officer, 3 junior officers

Appropriate computer hardware and software, where required

Funding for staff

Timeline: December 2010

The following table sums up the proposed TSA implementation strategy for the region based on the CTO/CRSTDP's *TSA Readiness Assessment and Implementation Plan*.

TABLE 5: COUNTRY IMPLEMENTATION STRATEGY

COUNTRY	TSA STATUS	RECOMMENDATION
Antigua Barbuda	No information received.	Group 3: STS & SUT
Bahamas	Preliminary TSA completed. SUT almost complete.	Group 1: FULL TSA
Barbados	Not yet started but SUT almost complete.	Group 2: Pilot TSA
Belize	Started but process stalled.	Group 2: Pilot TSA
Dominica	TSA feasibility study completed.	Group 2: Pilot TSA
Dominican Republic	Full-fledged TSA completed.	To provide technical assistance to other Caribbean countries
Grenada	Not yet started.	Group 2: Pilot TSA
Guyana	Not yet started. Still to convert	Group 3: STS & SUT

	to SNA 93.	
Haiti	Not yet started. Still to convert to SNA 93.	Group 3: STS & SUT
Jamaica	Started as part of the SNA 93 revision. SUT almost completed.	Group 2: Pilot TSA
St. Kitts and Nevis	Not yet started.	Group 3: STS & SUT
COUNTRY	TSA STATUS	RECOMMENDATION
St. Lucia	Pilot TSA underway.	Group 2: Pilot TSA
Suriname	Not yet started.	Group 3: STS & SUT
Trinidad & Tobago	Simulated TSA completed. Pilot SUT completed with assistance from CARTAC.	Group 1: FULL TSA

Way Forward

Following discussions with the respective countries as well as among the regional multi-agency committee, revision and finalisation of the strategy for TSA development in selected Caribbean countries with an indicative implementation plan would be the key next step. However, this is only a start and targeted training programmes, including attachments to successful TSA implementing agencies and participation in ongoing statistical training programmes such as that put on by CARICOM and CARTAC would be key.

Some countries, as indicate above, have already embarked on their own TSA implementation initiatives and only require the part-time guidance of an expert and, in some instances, funding in order to complete the targeted tasks. In other instances, the

establishment and operationalizing of a coordinating mechanism for TSA Implementation, which would comprise some of the agencies invited to the first multi-agency meeting on TSA implementation and representatives from the respective NSO/NTO would be required. The CARICOM Secretariat has to therefore assume a key role in providing the necessary coordination, monitoring and oversight roles for ensuring the successful implementation of TSAs in its member countries, while elsewhere in the region, the CTO would be responsible for guiding its own member countries through the TSA implementation process. Nevertheless, there is a need for targeted support from regional and international institutions working with countries individually or within a regional framework. Developing a better understanding of the key components of a successful TSA and learning from the experiences of the CARIFORUM countries that have thus far implemented TSAs is crucial to jump starting this initiative. Just as well is the need to identify potential grant funding sources to facilitate implementation throughout the region.