

Measuring Sustainable Tourism (MST): Developing a statistical framework for sustainable tourism

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Discussion Paper #6

COLLECTING INFORMATION ON MEASURING SUSTAINABLE TOURISM FROM COUNTRIES

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1. Background

Ultimately, the most important aspect of the MST initiative is advancing the organization of information within countries to improve decision making with respect to sustainable tourism. The design of a statistical framework for sustainable tourism is a crucial step towards this objective.

A statistical framework should be targeted correctly to respond to both the policy issues of relevance and the feasibility of compiling statistics and accounts in countries. Consequently, gathering country and destination level experiences and collecting data that demonstrates the situation in the different countries in relation to MST is therefore an important part of the project. In some cases this information may be collected via the conduct of pilot studies. Discussion paper #5 discusses the issues surrounding the design of pilot studies.

This discussion paper focuses on the kind of information that has been shown to be relevant for informing on sustainable tourism and that, as a consequence, should be considered to be incorporated in a statistical framework for sustainable tourism. This paper is based on a review of documentation of country experiences and international initiatives, provided to UNWTO and/or research as part of the MST Working Group and related discussions¹. It also draws heavily from the ongoing pilot studies in countries.

2. Proposed approach for the collection of information on measurement of sustainable tourism

Commonly, international agencies develop templates and questionnaires to gather information from countries concerning the current status and methods in specific areas. Tourism and environmental satellite accounts are no exceptions. The challenge at this point in the development of a statistical framework for sustainable tourism is that there is no established standard or benchmark against which countries' situations might be compared or which might form a basic structure for the collection of information on the measurement of sustainable tourism.

The collection of information referred to here is a voluntary process focused on descriptive information rather than the collection of data. It may be connected with the agreement to undertake a pilot study for a specific country or destination, i.e., it is envisaged that the collection of information would be completed as part of the pilot study.

¹ This documentation is steadily increasing and can be found on the MST website: http://statistics.unwto.org/studies_experiences

Perhaps the largest challenge in collecting this information is limiting the extent of overlap with related collection of information on methods that are regularly in train. Relevant examples in the space of sustainable tourism include

- The collection of information on tourism statistics by UNWTO
- The collection of information on the status of TSA implementation by UNSD
- The collection of information on tourism statistics and TSA by Eurostat and OECD
- The collection of information on environment statistics and environmental-economic accounts by UNSD

There are also ongoing processes to confirm the selection of indicators for monitoring the UN SDGs and related methods.

With this in mind, the topic areas described in section 3 are proposed as being the initial areas for the collection of information on measuring sustainable tourism. In due course, more detailed and/or comprehensive sets of topics might be developed.

Where a process is undertaken in a country to provide information about topic areas such as those proposed in section 3, statisticians or other focal points are encouraged to engage with a wide variety of stakeholders using the proposed list of areas as a starting point.

The proposed topic areas and the associated questions are introductory in nature and seek to provide a suitable platform for ongoing discussion. As a consequence, the questions are likely to raise many more questions of detail. Where the collection of information on measurement of sustainable tourism is being undertaken in the context of a pilot study, it is suggested that this additional detail be incorporated through a series of face-to-face discussions or similar dialogue. Over time, as shared understanding of the situation with respect to sustainable tourism measurement improves more refined and specific elements can be incorporated.

It is noted that the primary difficulty in advancing this area of measurement will not be the availability of detailed statistics. Rather, the primary hurdle will be continuing to recognize the need for engagement and integration across agencies, sectors and disciplines. Thus, starting at a more introductory level, by means of pilot studies, is intended to help establish the broad platform required for ongoing advance in this area.

3. Proposed topic areas

The following topics are proposed as the basic framework for collecting information useful for understanding the relevance and feasibility of implementing statistics and accounts on sustainable tourism. They are intended as a starting point for discussion and should not be considered a final or definitive list. Before collecting information on these topics, it is important to define initially the intended spatial area under consideration – i.e. a destination, sub-national region or country. The topics proposed should be suitable for discussion at any of these spatial levels (region of interest) although the relevance of different topics at different levels will vary.

i. Stakeholders in sustainable tourism

Here, the aim should be to list all of the agencies and relevant contact points within the region of interest. Starting from such a list, in developing answers about the remaining topics it may be appropriate to form a small group of interested people so as to ensure appropriate involvement in the process and to ensure that the answers incorporate the most up-to-date information. Such a small group may be nested within the institutional arrangements listed under point (iii) below.²

Suggested groups of stakeholders to consider in forming the list are:

- Supporters and data users (some of whom may also be data providers)
 - Government central agencies - finance, treasury, planning
 - Sector specific government agencies – tourism, transport, environment
 - Central Banks

² This is very much related to the Inter-institutional Platform advocated by UNWTO in its technical assistance and capacity building initiatives, and to the institutional arrangements described in several UN compilers' guides such as the [IRTS 2008 Compilation Guide](#).

- Tourism boards and networks
- Regional and destination level agencies
- Data providers (some of whom may also be data users)
 - national statistical offices
 - tourism departments and research agencies
 - environment and natural resource management agencies
 - immigration and transport departments
 - government research and technical agencies (e.g. geospatial data, meteorological data)
 - private sector tourism bodies
 - regional and destination level agencies
- Universities
- International and local NGOs and civil society organizations
- Private industry associations, particularly tourism networks

ii. **Current and potential policy and legislation concerning sustainable tourism**

Ensuring the connection to use of information is a fundamental aspect of developing the statistical framework. Here the aim should be to capture information on areas of policy and legislation that concern sustainable tourism. The connection to sustainable tourism may be direct, e.g. there may be specific policies aimed at supporting tourism businesses to be more environmentally friendly; or indirect, e.g. there may be important aspects of local planning requirements that impact on the potential to achieve sustainable tourism outcomes. Most broadly, it will be relevant to consider any national development plans or visions, particularly as they relate to sustainable development. Work on sustainable tourism should sit within such broad national visions.

Discussion of the issues here may be usefully informed through consideration of the set of 12 policy themes for sustainable tourism described in the 2005 UNEP/UNWTO report. These themes are summarized in Discussion paper #1: Framing Sustainable Tourism and listed below in Box 1.

Box 1: Policy themes for sustainable tourism	
1. Economic viability	7. Community Wellbeing
2. Local prosperity	8. Cultural Richness
3. Employment quality	9. Physical Integrity
4. Social Equity	10. Biological Diversity
5. Visitor Fulfillment	11. Resource Efficiency
6. Local Control	12. Environmental Purity
<i>Source: UNEP/UNWTO 2005, Making Tourism More Sustainable: A Guide for Policy Makers</i>	

A related area may concern reporting requirements. Where there are expectations of information being provided to or by governments and related to sustainable tourism, including for example information to report on progress towards the UN SDGs, these potential uses of data on sustainable tourism should be noted under this topic.

Information on sustainable tourism will not only be relevant to government decision making but should also be of direct relevance to tourism businesses. Discussion with this sector may bring to light potential applications of improved data on sustainable tourism, including for example, providing a standardized basis for benchmarking or for meeting sustainability criteria for certain tourism products.

Once a list of possible applications and uses has been made, there will be foundation for and it will be relevant determining priorities to ensure that the work on measuring sustainable tourism is best targeted.

In addition, it will be possible to consider in more depth the data requirements in terms of frequency of data (monthly, annual, etc.), data accuracy and general issue of data quality.

iii. **Institutional arrangements concerning sustainable tourism**

Discussion of the previous two topics should bring to light any institutional arrangements that are currently in place pertaining to the management of sustainable tourism. Here the aim should be to report any such arrangements. These may be internal to government, industry based or cross sector in nature and may involve any of the entities mentioned in point (i) above.

In advancing work on the measurement of sustainable tourism, it is likely to be beneficial to use or adapt an existing institutional arrangement. Different arrangements may be relevant in relation to the use of statistics for sustainable tourism management and the production of these statistics; co-ordination between these two perspectives is needed.

iv. **Past and current measurement of sustainable tourism**

Here the aim should be to list any past or current research work that has investigated sustainable tourism or created relevant metrics and indicators. Where indicator sets have been developed, a listing of the selected indicators and any relevant definitions would be useful information.

This information can be used to identify priority areas for measurement, form the basis for identifying experts to support the work and provide insights to the feasibility of advancing work on measuring sustainable tourism. Where datasets are available these may also be used in implementing a statistical framework.

There have been many examples of these types of initiatives³ such as those within the UNWTO INSTO and the European ETIS programs. See Discussion paper #1: Framing sustainable tourism, for a summary of initiatives and references.

v. **Availability of data for measuring sustainable tourism**

Under this topic a summary should be provided of the current suite of tourism data that are available for the country of interest and any relevant regions or spatial units. Note should be made of

- the frequency of the data (monthly, annual, etc)
- the level of industry detail
- the level of spatial detail that is available
- the agency responsible for the data (in parallel with point (i) above)
- the data collection methods (survey based, administrative data, etc).

a. **Tourism statistics and accounts**

Data requirements of IRTS and TSA:RMF are important in identifying the relevant information. Specific data areas of interest include⁴:

- Visitor flows (e.g. domestic/inbound/outbound/ /same-day/overnight, by country of residence, by purpose, by mode of transport, etc.)
- Accommodation data
- Average length of stay
- Tourism expenditure (by visitor type, by product)

³ Several examples of country experiences and international initiatives provided to UNWTO and/or researched as part of Working Group and related discussions are available on the MST website: http://statistics.unwto.org/studies_experiences

⁴ UNWTO compiles country data on many of these areas, see Annex 1 for the Index of basic data and indicators and <http://statistics.unwto.org/content/data-1>.

- International trade in tourism services
- Tourism employment (e.g. employees, jobs, hours worked, gender, employee/self-employed)
- Information on tourism industries (e.g. number and size of establishments, output, value-added, capital formation, non-monetary data, etc.)
- Tourism satellite accounts (using TSA:RMF) (e.g. tourism expenditure, tourism shares and ratios, tourism direct value added)
- Studies based on modeling approaches
- Tourism satisfaction information
- Information on the visitation of sites

b. Environment statistics and accounts

Data requirements of SEEA are important in identifying the relevant information. Specific data areas of interest include:

- Land cover, land use and other geo-spatial data
- Data on marine and coastal areas including beaches
- Data on natural disasters (occurrences, impacts)
- Data on environmental stocks and flows
 - Water (incl. abstraction and use, sewage, water quality)
 - Energy (incl. energy use and source)
 - GHG emissions
 - Solid waste and recycling
 - Air quality
 - Other (e.g. specific pollutants, noise)
- SEEA accounts
 - Physical flow accounts (e.g. water, energy, GHG emissions, waste, material flow)
 - Asset / resource accounts (e.g. minerals, timber, fish, water)
 - Land cover / land use accounts
 - Ecosystem accounts
 - Environmental expenditure and environmental goods and services accounts

c. Economic statistics and accounts

Specific data areas of interest are:

- National accounts data including supply and use tables
- Employment data by industry
- Business survey data by industry
 - Output
 - Wages and salaries, intermediate costs
 - Investment
- Government expenditure
 - Transport and tourism infrastructure expenditure
 - Environmental management and protection expenditure

d. Social and cultural statistics

Specific data areas of interest include:

- Population census data providing information on population by geographic area
- Cultural assets and sites (location, visitor numbers, revenue/fees, assessed condition, significance (e.g. inclusion in UNESCO lists))
- Locally produced or artisanal products and services (number of producers, sales)

vi. **Statistical infrastructure and capacity**

To support the longer term implementation of a statistical framework for sustainable tourism the co-ordination and management of data is required. While not required in order to establish demonstration accounts, initial planning and assessment of the capacity to provide statistical infrastructure is needed.

Here a description of the current state of relevant pieces of statistical infrastructure should be provided including information on:

- A national business register, especially the extent to which tourism businesses can be identified and the extent of information about the location of businesses.
- Data sharing arrangements between government agencies and other bodies (e.g. water supply companies, energy providers, tourism networks)
- Statistical legislation concerning the collection of data and the publication of information
- Technological, systems and database related capacity
- Statistical and national accounting human resources, experience and skills

vii. **Conclusions and next steps**

After completing investigation of the topics above, it would be useful to consider the key findings, possible opportunities to advance the measurement of sustainable tourism and next steps. As a means of structuring the findings, it may be appropriate to consider the information in terms of:

- Relevance of sustainable tourism information given policy and analytical requirements
- Feasibility of producing sustainable tourism information
- Opportunities to progress the development of sustainable tourism information
- Risks likely to be encountered in advancing work on sustainable tourism information

The findings themselves should provide a firm basis for the discussion of the relevance and feasibility of measuring sustainable tourism. Indeed, through the process of collecting the various pieces of information the topics of most interest from a policy and analytical perspective should become reasonably clear and, further, the potential to compile appropriate statistics and accounts should emerge.

The coverage and structure presented in this paper is a draft based on the indicative structure for a statistical framework for sustainable tourism described in other discussion papers. Pending further advances in the development of a statistical framework the advice and proposals in this paper will need to be adapted.

Annex 1: Index of basic data and indicators

Basic data and indicators		Notes	Units
1. INBOUND TOURISM			
Data			
Arrivals			
1.1	Total		('000)
1.2	◆ Overnight visitors (tourists)		('000)
1.3	◆ Same-day visitors (excursionists)		('000)
1.4	* of which, cruise passengers		('000)
Arrivals by region			
1.5	Total		('000)
1.6	◆ Africa		('000)
1.7	◆ Americas		('000)
1.8	◆ East Asia and the Pacific		('000)
1.9	◆ Europe		('000)
1.10	◆ Middle East		('000)
1.11	◆ South Asia		('000)
1.12	◆ Other not classified		('000)
1.13	* of which, nationals residing abroad		('000)
Arrivals by main purpose			
1.14	Total		('000)
1.15	◆ Personal		('000)
1.16	* holidays, leisure and recreation		('000)
1.17	* other personal purposes		('000)
1.18	◆ Business and professional		('000)
Arrivals by mode of transport			
1.19	Total		('000)
1.20	◆ Air		('000)
1.21	◆ Water		('000)
1.22	◆ Land		('000)
1.23	* railway		('000)
1.24	* road		('000)
1.25	* others		('000)
Arrivals by form of organization of the trip			
1.26	Total		('000)
1.27	◆ Package tour		('000)
1.28	◆ Other forms		('000)
Accommodation			
Total			
1.29	◆ Guests		('000)
1.30	◆ Overnights		('000)
Hotels and similar establishments			
1.31	◆ Guests		('000)
1.32	◆ Overnights		('000)
Expenditure			
1.33	Total		US\$ Mn
1.34	◆ Travel		US\$ Mn
1.35	◆ Passenger transport		US\$ Mn
Expenditure by main purpose of the trip			
1.36	Total		US\$ Mn
1.37	◆ Personal		US\$ Mn
1.38	◆ Business and professional		US\$ Mn
Indicators			
1.39	Average size of travel party		Persons
Average length of stay			
1.40	Total		Days
1.41	◆ For all commercial accommodation services		Nights
1.42	* of which, "hotels and similar establishments"		Nights
1.43	◆ For non commercial accommodation services		Days
1.44	Average expenditure per day		US\$

Basic data and indicators	Notes	Units
2. DOMESTIC TOURISM		
Data		
Trips		
2.1	Total	('000)
2.2	◆ Overnight visitors (tourists)	('000)
2.3	◆ Same-day visitors (excursionists)	('000)
Trips by main purpose		
2.4	Total	('000)
2.5	◆ Personal	('000)
2.6	* holidays, leisure and recreation	('000)
2.7	* other personal purposes	('000)
2.8	◆ Business and professional	('000)
Trips by mode of transport		
2.9	Total	('000)
2.10	◆ Air	('000)
2.11	◆ Water	('000)
2.12	◆ Land	('000)
2.13	* railway	('000)
2.14	* road	('000)
2.15	* others	('000)
Trips by form of organization		
2.16	Total	('000)
2.17	◆ Package tour	('000)
2.18	◆ Other forms	('000)
Accommodation		
Total		
2.19	◆ Guests	('000)
2.20	◆ Overnights	('000)
Hotels and similar establishments		
2.21	◆ Guests	('000)
2.22	◆ Overnights	('000)
Indicators		
2.23	Average size of travel party	Persons
Average length of stay		
2.24	Total	Days
2.25	◆ For all commercial accommodation services	Nights
2.26	* of which, "hotels and similar establishments"	Nights
2.27	◆ For non commercial accommodation services	Days
2.28	Average expenditure per day	US\$
3. OUTBOUND TOURISM		
Data		
Departures		
3.1	Total	('000)
3.2	◆ Overnight visitors (tourists)	('000)
3.3	◆ Same-day visitors (excursionists)	('000)
Expenditure		
3.4	Total	US\$ Mn
3.5	◆ Travel	US\$ Mn
3.6	◆ Passenger transport	US\$ Mn
Expenditure by main purpose of the trip		
3.7	Total	US\$ Mn
3.8	◆ Personal	US\$ Mn
3.9	◆ Business and professional	US\$ Mn
Indicators		
3.10	Average length of stay	Days
3.11	Average expenditure per day	US\$

Basic data and indicators	Notes	Units
4. TOURISM INDUSTRIES		
Data		
Number of establishments		
4.1	Total	Units
4.2	◆ Accommodation for visitors	Units
4.3	* of which, "hotels and similar establishments"	Units
4.4	◆ Food and beverage serving activities	Units
4.5	◆ Passenger transportation	Units
4.6	◆ Travel agencies and other reservation services activities	Units
4.7	◆ Other tourism industries	Units
Accommodation for visitors in hotels and similar establishments		
Monetary data		
4.8	◆ Output	US\$ Mn
4.9	◆ Intermediate consumption	US\$ Mn
4.10	◆ Gross value added	US\$ Mn
4.11	◆ Compensation of employees	US\$ Mn
4.12	◆ Gross fixed capital formation	US\$ Mn
Non-monetary data		
4.13	◆ Number of establishments	Units
4.14	◆ Number of rooms	Units
4.15	◆ Number of bed-places	Units
Indicators		
4.16	Occupancy rate / rooms	Percent
4.17	Occupancy rate / bed-places	Percent
4.18	Average length of stay	Nights
4.19	Available capacity (bed-places per 1000 inhabitants)	Units
Travel agencies and other reservation service activities		
Monetary data		
4.20	◆ Output	US\$ Mn
4.21	◆ Intermediate consumption	US\$ Mn
4.22	◆ Gross value added	US\$ Mn
4.23	◆ Compensation of employees	US\$ Mn
4.24	◆ Gross fixed capital formation	US\$ Mn
Non-monetary data		
◆ Domestic trips		
4.25	* with package tour	Percent
4.26	* without package tour	Percent
◆ Inbound trips		
4.27	* with package tour	Percent
4.28	* without package tour	Percent
◆ Outbound trips		
4.29	* with package tour	Percent
4.30	* without package tour	Percent

Basic data and indicators		Notes	Units
5. EMPLOYMENT			
Data			
Number of employees by tourism industries			
5.1	Total		('000)
5.2	◆ Accommodation services for visitors (hotels and similar establishments)		('000)
5.3	◆ Other accommodation services		('000)
5.4	◆ Food and beverage serving activities		('000)
5.5	◆ Passenger transportation		('000)
5.6	◆ Travel agencies and other reservation services activities		('000)
5.7	◆ Other tourism industries		('000)
Number of jobs by status in employment			
5.8	Total		('000)
5.9	◆ Employees		('000)
5.10	◆ Self employed		('000)
Indicators			
Number of full-time equivalent jobs by status in employment			
5.11	Total		('000)
5.12	◆ Employees		('000)
5.13	* male		('000)
5.14	* female		('000)
5.15	◆ Self employed		('000)
5.16	* male		('000)
5.17	* female		('000)
6. COMPLEMENTARY INDICATORS			
Demand			
6.1	Gross travel propensity		Units
6.2	(inbound tourists + domestic tourists) / population		Units
Macroeconomic indicators related to international tourism			
6.3	Inbound tourism expenditure over GDP		Percent
6.4	Outbound tourism expenditure over GDP		Percent
6.5	Tourism balance (inbound minus outbound tourism expenditure) over GDP		Percent
6.6	Tourism openness (inbound plus outbound tourism expenditure) over GDP		Percent
6.7	Tourism coverage (inbound over outbound tourism expenditure)		Percent
6.8	Inbound tourism expenditure over exports of goods		Percent
6.9	Inbound tourism expenditure over exports of services		Percent
6.10	Inbound tourism expenditure over exports of goods and services		Percent
6.11	Inbound tourism expenditure over current account credits		Percent
6.12	Outbound tourism expenditure over imports of goods		Percent
6.13	Outbound tourism expenditure over imports of services		Percent
6.14	Outbound tourism expenditure over imports of goods and services		Percent
6.15	Outbound tourism expenditure over current account debits		Percent