



2017
INTERNATIONAL YEAR
OF SUSTAINABLE TOURISM
FOR DEVELOPMENT



UNWTO Statistics and Tourism Satellite Account Programme

**COMMITTEE ON STATISTICS
AND THE TOURISM SATELLITE ACCOUNT**
Seventeenth meeting
UNWTO Headquarters, Madrid, Spain
24-25 January 2017

PROPOSED MST RESEARCH PROGRAM

Introduction

The following research program for the Measuring Sustainable Tourism (MST) project has been developed for discussion among the UNWTO Committee on Statistics and TSA at its January 2017 meeting. It has been developed in light of (i) the framing and discussion of MST at the MST Working Group meeting in October 2016 and (ii) with the aim of producing substantive drafts of a statistical framework for MST and an associated Technical Note¹ focused on linking economic and environmental aspects of tourism through the first half of 2017. The outputs from the research program will contribute directly to these planned outputs.

Work has commenced on some of the research tasks summarized in the table below and progress on others is planned to commence in the coming weeks. Other tasks are considered to be medium to longer term in nature and work would be expected to commence later in 2017 or in 2018.

The research tasks have been grouped into seven themes

1. Environmental flows
2. Environmental assets and ecosystems
3. Tourism employment, green jobs and environmental activity
4. Tourism destinations
5. Sustainable tourism indicators
6. Cultural and social dimensions of sustainable tourism
7. Data sources and compilation methods

The second part of this paper provides short descriptions of each of the proposed research tasks. The feedback and comments of Committee members would be most welcome.

¹ A Technical Note is a relatively short document concerning a particular theme of measurement (e.g. water, land) that describes basic concepts, main areas of measurement and accounting, associated indicators and approaches to compilation and data collection.

Table 1: Proposed MST Research Program – January 2017

Theme	Task	Research task	Status
1. Environmental flows			
	1	Options for allocation of business resource use and residual flows to tourism/visitors	Draft prepared for discussion at Committee mtg
	2	The consumption perspective – how can it be applied	To be commenced Feb/Mar 2017
	3	Allocation of transport related flows (fuel, emissions) to visitors, countries and destinations	To be commenced Feb 2017
	4	Supply chain allocations / measurement of embodied environmental flows	To be commenced Sept 2017
2. Environmental assets and ecosystems			
	5	Developing environmental asset accounts	To be commenced Apr 2017
	6	Application of ecosystem accounting to sustainable tourism	To be commenced Feb 2017
3. Tourism employment, green jobs and environmental activity			
	7	Approaches to measuring tourism employment and green jobs for sustainable tourism	To be commenced Feb 2017
	8	Approaches to recording environmental protection expenditure, environmental taxes, env. goods and services and green jobs	To be commenced Sep 2017
4. Tourism destinations			
	9	Defining destinations and destination typologies	To be commenced Feb 2017
	10	Modelling and integrating data for TSA and SEEA at destination level	To be commenced Apr 2017
5. Sustainable tourism indicators			
	11	Review and comparison of ST indicators sets and related research – confirm indicator themes and potential for use of statistical and administrative data	Commenced
	12	Approaches to the communication of indicators and connections to policy uses (incl. SDG)	To be commenced May 2017
	13	Options for indicators for an SDG sustainable tourism indicator theme	To be commenced Mar 2017
6. Cultural and social dimensions of sustainable tourism			
	14	Options for the measurement of cultural dimensions and local products	To be commenced Sep 2017
7. Data sources and compilation methods			
	15	Examining the potential of big data and geo-referencing	To be commenced Mar 2017
	16	Development of guidance on accounts compilation including development of a TSA compilation guide	To be commenced in 2017
	17	Potential approaches to the derivations of indicators in situations where accounts have not been developed	To be commenced in 2017

2. Description of research tasks

The following description of research tasks is provided to give an initial sense of the type of research question that is to be investigated. Suggestions for tailoring and aligning different research tasks are welcome noting the inherent connections between a number of the tasks.

In distinguishing the tasks, it is anticipated that the initial output associated with each task would be around 10 pages in most cases – i.e. initial organization of ideas, concepts and options. These notes would provide the basis for further discussion and exchange.

Theme 1: Environmental flows

Task #1: Options for allocation of business resource use and residual flows to tourism/visitors

The use of resources such as water and energy and the generation of residuals such as GHG emissions and solid waste by tourism businesses are common flows that can be measured using the framework of the SEEA. However, it is accepted that not all of the output of tourism industries is purchased by visitors. The question arises as to how to best allocate or apportion a share of these environmental flows to visitors. The aim in this research paper is to consider the pros and cons of different options for allocation. Of particular interest is describing the assumptions that may be implicit in the use of different assumptions. Note that the use of different methods for different types of flows may well be appropriate. Another consideration would be whether the methods should vary depending on the scale of analysis – i.e. destination versus national.

Task #2: The consumption perspective – how can it be applied

Building on Task #1, this research task goes the next step and considers, for the same environmental flows (water, energy, GHG emissions and solid waste) the methods that would be appropriate in estimating the attribution of flows based on visitor activity. This is related to but different from the objective in task #1. Since visitors are by definition outside of their usual environment, there is a challenge of attributing a flow not only to the group of visitors as a whole (tourism) but possibly to different sub-groups of visitors based on characteristics like residence, whether they are tourists or same-day visitors, by mode of transportation, etc. (in order to inform on questions of high analytical value).

The challenge here lies in appropriately defining the spatial boundaries for consumption. For national statistics in a closed (both economic and environmentally) system, the solutions will be the same as for task #1. But given that environmental boundaries are often open, that visitors travel between countries, and that we are seeking destination level statistics, other considerations and methods will need to be developed.

The aim here is thus to describe possible methods of presenting a consumption perspective in relation to these selected environmental flows. It is quite likely that different approaches are relevant for different flows. Ultimately, there should be an alignment of methods here with the delineation of spatial boundaries for destinations but at this stage it should be possible to develop relevant criteria for presenting the consumption perspective without knowing precisely how destinations might be defined.

Task #3: Allocation of transport related flows (fuel, emissions) to visitors, countries and destinations

In Tasks #1 the focus was on all tourism industries. However, these businesses operate in different ways and a specific case is the transport industry. Because these businesses operate by movement between locations within and between countries the allocation of relevant environmental flows is not as straightforward as for other businesses. There are national accounting conventions that apply in relation to the treatment of expenditures and revenue by these businesses and a first question is whether these conventions would apply in the case of environmental flows.

The related question is whether there are any particular or additional considerations in relation to transport that emerge when considering the calculation of a consumption perspective on these flows. For example, what is the best way to consider allocation of the GHG emissions from a British Airways plane travelling between Singapore and London and carrying passengers from the United States and Australia. This investigation should also consider the analytical benefits of any allocation and the associated feasibility.

Task #4: Supply chain allocations / measurement of embodied environmental flows

The final research task concerning environmental flows concerns approaches and data requirements required for understanding the connections between tourism activity and other industries. Again focusing on the four key environmental flows of water, energy, GHG emissions and solid waste, the suggestion here is to investigate how the quantities of these flows that are embodied in tourism products can be estimated. Thus while Task #1 and Task #2 consider direct environmental flows, the issue here is to estimate indirect environmental flows. A description of possible approaches and measurement issues is required.

Theme 2: Environmental assets and ecosystems

Task #5: Developing environmental asset accounts

The task here is to develop a structure for some environmental asset accounts of potential relevance in the assessment of sustainable tourism. Following the treatments in the SEEA Central Framework this task will be reflected in the design of accounts for individual environmental assets such as water, and possibly also fish and wildlife. The development of land accounts is also relevant but best considered under Task #6.

Task #6: Application of ecosystem accounting to sustainable tourism

Ecosystem accounting has been widely recognized as being of potentially direct relevance in assessment of sustainable tourism at destination level given its focus on accounting for spatial areas. This task will articulate the potential to apply the ecosystem accounting framework of SEEA Experimental Ecosystem Accounting to tourism with a focus on both the changing condition of ecosystems that support tourism activity (e.g. protected areas, beaches, reefs) and the flows of ecosystem services. Potentially, ecosystem accounting through its incorporation of public services provided by ecosystem assets can provide information that is useful in assessing trade-offs between tourism activity, other economic activity and flows of ecosystem services.

Theme 3: Tourism employment, green jobs and environmental activity

Task #7: Approaches to measuring tourism employment and green jobs for sustainable tourism

The task here is to develop a broad framing of employment as it relates to sustainable tourism. This will consider the need for information on the location of employment, occupation and job types, gender and age, training and skills, decent work and green jobs. The discussion of these topics will be considered in the light of broader consideration of these issues in statistics circles including labour and environmental statistics.

Task #8: Approaches to recording environmental protection expenditure, environmental taxes, environmental goods and services and similar activities with respect to sustainable tourism

The task here is to apply the accounting principles outlined in the SEEA Central Framework chapter 4 to tourism. The aim is to capture information on tourism businesses responses to environmental challenges and related activities of governments. The methodologically related topic of the development of measures of green jobs from a tourism perspective will be investigated in Task #7.

Theme 4: Tourism destinations

Task #9: Defining destinations and destination typologies

This is likely the most challenging research task since from a statistical perspective there has been little application of spatial principles to delineate areas for the integrated presentation of economic, social and environmental data. Further, in the measurement of sustainable tourism the revealed solution has been for different destinations to take their own approaches to defining the relevant spatial boundaries. The question that arises in this research task is whether a more agreed way forward to delineating spatial boundaries for destinations can be found to support statistical measurement and integration of data.

The main initial task here is to provide a summary of approaches that have been taken to this challenge and to assess whether some particular criteria emerge. Two starting points for research for MST purposes are the findings from the InRouTe project and summarizing the approaches applied in sustainable tourism observatories (INSTO). A third angle to consider is the recent adoption of a definition for destinations by UNWTO that may provide a basis for statistical measurement. Finally, it will also be relevant to consider the spatial approaches developed in the context of the SEEA ecosystem accounting and their application to measurement of sustainable tourism.

Beyond developing a summary of approaches it will be relevant to describe a process to support further discussion and exchange on this fundamental issue.

Task #10: Modelling and integrating data for TSA and SEEA at destination level

Together with the consideration of spatial boundaries for destinations there is a need to articulate how an accounting approach might be applied at destination level and so provide a basis for the integration of data across spatial scales. This does not imply that TSA or SEEA based accounts should be compiled at destination level but rather, through this task, it should be possible to describe how these accounting frameworks can be used to support the organization and compilation of destination level estimates, including ensuring the coherence of data across multiple data domains.

Theme 5: Sustainable tourism indicators

Task #11: Review and comparison of ST indicators sets and related research – confirm indicator themes and potential for use of statistical and administrative data

A key focus for the development of a statistical framework is the ability to compile indicators of progress toward sustainable tourism in a more standardized and comparable manner. Building on initial research to frame sustainable tourism in a statistical setting, this research task requires further investigation into the indicators that have been used to measure sustainable tourism and related assessments. The initial aim is to document the indicator themes and the actual indicators that have been used in various initiatives and then to examine the extent to which the indicators could be measured using statistically based or administrative data. This information will then point towards the areas of focus for the MST project in terms of ensuring relevance of the statistical framework for sustainable tourism decision making and also in terms of the potential to use statistical approaches.

To start this work a review of the indicators used in the UNWTO INSTO observatories would be useful and other examples should build upon this start (e.g. work at Harvard, UNEP, OECD, Eurostat, ETIS, etc.)

Task #12: Approaches to the communication of indicators and connections to policy uses (incl. SDG)

The development of a statistical framework does not imply the generation of a single composite indicator that points to movements in the sustainability of tourism activity. Rather a statistical framework can aim to provide a coherent database of information to support assessment of sustainability thus implying that a range of different indicators could be generated across the various domains and policy themes. In light of this situation it is relevant to investigate ways in which indicators can be grouped or presented to support informed discussion for policy and decision-making. This may require consideration of relevant thresholds or similar limits for particular themes in particular locations. This research task should investigate different approaches to this challenge of interpretation/use of indicators and their communication.

Task #13: Options for indicators for an SDG sustainable tourism indicator theme

Building on the findings from Task #11, it should be possible to develop a more limited set of indicators that could be measured on a regular basis to support monitoring of progress towards the SDG targets related to sustainable tourism. The relevant set of indicators should go beyond the “first glance” set of ST indicators for targets 8.9, 12.b and 14.7 and consider a broader suite of indicators (to monitor aspects of these targets that are currently not covered in the IAEG-SDG proposed indicators as well as to monitor the tourism component of other SDG targets where tourism is relevant but not explicitly mentioned).

Theme 6: Cultural and social dimensions of sustainable tourism

Task #14: Options for the measurement of cultural dimensions and local products

At this stage of the MST project the integration of measurement of the cultural dimension of sustainable tourism is not planned. While there may be some avenues towards the integration of this dimension, e.g. via cultural satellite accounts, this is not a current area of focus. At the same time, this is recognised as an important aspect of measurement for sustainable tourism and hence this task is designed to investigate possible approaches to the collection of data and the derivation of indicators for the cultural dimension in the short term, i.e. outside a more strict accounting framing. The review work in Task #5 is likely to provide a starting point for this assessment.

Theme 7: Data sources and methods

Task #15: Examine the potential of big data and geo-referencing

Especially for measurement at destination level there appears significant potential to harness big data and geo-referenced data to measure sustainable tourism. Much work is currently underway to examine these new data sources in the context of official statistics and also work is underway in considering these data sources for tourism measurement. This task is to investigate the current state of play and to then articulate the potential integration of these data with other sources of information within an accounting based statistical framework. For example, these data sources might be able to support the provision of more timely and more detailed estimates that are benchmarked to national level survey based information.

Task #16: Development of guidance on accounts compilation including development of a TSA compilation guide

To ensure the ongoing uptake of relevant accounting framework support for the compilation of accounts is an important consideration. Part of this will involve direct implementation support in pilot countries but, more generally, it is planned to develop relevant compilation guides for accounting in the first instance a Compilation Guide for TSA. Compilation guidance for SEEA accounts will be advanced through the SEEA research and implementation program.

Task #17: Potential approaches to the derivations of indicators in situations where accounts have not been developed

In a number of countries the development of accounts is likely to be a longer term ambition and in other countries accounts may only be able to be compiled on an irregular basis. In these situations, there will remain a demand for the type of information provided by TSA and SEEA accounts both for national policy development and reporting on SDGs and other international obligations. Given this demand, a useful area of research is to consider the alternative approaches to measurement that might be used by countries to compile TSA and SEEA consistent datasets and indicators without necessarily compiling accounts on an annual basis. This research task will examine the potential approaches.